Gabriel Steinhardt

The Product Manager's Toolkit®

Methodologies, Processes, and Tasks
in Technology Product Management

Second Edition

Springer

Management for Professionals

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Gabriel Steinhardt
Caesarea, Israel

Foreword

This book will help students of product management, product management practitioners, product management organizations, and corporations understand the value of product management and the distinct roles and responsibilities in product management. It will aid in the efforts to clarify role definitions, identify responsibilities, define processes and deliverables, and improve the ability to communicate with stakeholders.

For over seven years I have assisted Gabriel Steinhardt in his development of the product management body of knowledge, specifically the *Blackblot Product Manager's Toolkit*® (PMTK) product management methodology. I have met few people as dedicated to defining and standardizing the product management profession as Gabriel Steinhardt, who has made it his professional goal. The primary purpose of the *Blackblot PMTK Methodology*™ is to help companies and their product management teams become more successful in their product delivery efforts. With the release of this book edition, it is hoped that product management will further mature and be viewed as a structured and well-defined critical business function.

Product management is a discipline responsible for product planning (articulating the market problem) and product marketing (generating awareness, differentiation, and demand). Companies have come to appreciate the organizational value of other well-defined professional disciplines such as project management, quality management, and business analysis as well as the results achieved by the orderly implementation of these disciplines. Accordingly, standardized product management done consistently well can greatly increase the probability of product success and profitability.

Product management practitioners frequently perform a broad spectrum of roles with varying responsibilities and skill sets and communicate with both internal and external stakeholders such as sales, marketing communications, engineering, customer support, customers, partners, and suppliers. Identifying the various roles and responsibilities in the product management domain is imperative to understanding what needs to be accomplished in order to deliver a successful product. Product management is not a role performed in the interest of one or more product lines; it is

a distributed set of roles and related responsibilities covering definitive aspects of the product delivery process.

Defining roles and responsibilities in product management is only a very preliminary step. One also needs to understand how to do what needs to be done—creating deliverables that can be successfully used in the delivery of a product. In addition, a repeatable process that creates successful products needs to be documented, followed, audited, and improved upon. The *Blackblot PMTK Methodology*™ concepts and models in this book are intended to help facilitate the implementation of that process.

Product management in the technology industry has always experienced varied interpretation as to its character and internal structure. Often product management is performed informally or in a non-standardized form and organized differently in each company—commonly located in the marketing department or sometimes in the engineering department. In addition, although the product management profession has existed for many years, there has not been a product management best practice or standard that has been globally adopted.

This book provides the *Blackblot PMTK Methodology*™ as a holistic solution to all these concerns.

Daniel Stadler

Acknowledgments

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About the Author

Gabriel Steinhardt is Blackblot's founder and CEO and a recognized international technology product management expert, author, lecturer, and developer of practical tools and methodologies that increase product managers' productivity.

A marketing and information systems MBA with over two decades of experience in product management with technology products, Gabriel has assumed diverse leadership roles with major corporations and start-ups in marketing, product management, and technical undertakings.

Gabriel is the developer of the *Blackblot Product Manager's Toolkit*® (PMTK) product management methodology, a globally adopted best practice.

Chapter 1
Introduction

Product Management is an occupational domain which holds two professional disciplines: *Product Planning* and *Product Marketing*. This is because product functionality is built for the user via product planning and the product's value is presented to the buyer via product marketing. A somewhat expanded interpretation would be to view product management as an occupational domain that is based on general management techniques which are focused on product planning and product marketing topics.

A *Technology Company* is a business entity that either develops technology that is incorporated in a product or is used in the assembly or manufacturing of a product, or manufactures a product that contains technology and that same product relies on that technology to perform its core function. Many technology companies erroneously view product management as a collective term which describes the broad sum of diverse product-related activities, excluding sales and product development activities, which are performed in the interest of delivering a particular product to market. With such a broad, vague, and misleading definition it is possible to fit most anything (even product testing) into the realm of product management.

This commonly used vague definition of product management misleads and allows many people to place their own personal interpretation on the role of product management, and that accounts for the multitude of diverse definitions in the technology industry.

Every company is different and interprets product management differently—meaning that the product management discipline is not standardized as much as it could be across the technology industry. Further complicating the situation is that in each company there are individual stakeholders who often view and interpret product management very differently from each other.

For companies to be recurrently successful, rather than just lucky, a consistent understanding of product management must be present in the company and all aspects of product management must be fully addressed and managed efficiently. However, the contributing factors to both failure and success can be extremely complex to analyze. One can attempt to investigate why certain companies and

products have failed, only to quickly realize that the cause is multifaceted and that many factors need to be considered.

Product management is comprised of activities that profoundly impact a product's chances of success. For example, providing incorrect market requirements, erroneous pricing, or an inaccurate profiling of the target market can all be detrimental and critical. If just one of these aspects of product management is amiss, then the product's chances of success are greatly diminished. Therefore, in order to succeed a company must execute all fundamental tasks and follow all key processes in product management. Even though there is still a chance of failure, the probability of success is increased if a company implements and consistently follows a complete product management methodology.

Companies with formal and well-defined product management practices are companies which realize that product management is a core strategic function to the organization. These companies also realize that there is great importance in making sure that product management processes are sound, properly staffed, and implemented.

Some products are successful because of uncontrolled external factors, timing, or merely good fortune. Not all successful products have had great product management behind them, but it is reasonable that many product failures have had poor or no guidance from product management. Companies will be more successful for each dollar they invest in product development if they improve in the area of product management. The obvious conclusion is that combining a definitive product management methodology with disciplined technology development practices is the key to commercial success in the technology world.

The product management profession and the related body of knowledge have reached a greater level of maturity and acceptance in the technology industry. However, across the technology industry, drastically different duties and responsibilities are attributed to product management professionals. Diverse interpretations regarding the role of product management practitioners have only confused and stifled the ability to develop clear and consistent product management methodologies.

This book provides a consistent and holistic managerial approach to product management and is based on Blackblot's applicable work models and practical methodology that covers all aspects of product management.

This book describes key components and concepts of the *Blackblot Product Manager's Toolkit*® (PMTK) product management methodology and offers companies and product management professionals a practical primer for implementing an efficient product management practice in order to increase the practitioner's workplace productivity and improve a product's chances of commercial success.

Part I
Product Management Concepts

Chapter 2
Definition of Product Management

Defining the Product Management Domain and the Foundations of the *Blackblot PMTK Methodology*™

2.1 Introduction

The *Blackblot Product Manager's Toolkit*® (PMTK) is a comprehensive set of models and professional templates which constitute a complete product management methodology that illustrates notable best practices and processes to help create successful market-driven products.

At the very core of the *Blackblot PMTK Methodology*™ are two foundation rules which govern the entire methodology.

This chapter defines product management and presents the logic and rationales of how the two *Blackblot PMTK Methodology*™ foundation rules are derived.

2.2 User and Buyer

At the heart of the product management domain are the user and the buyer entities whose motivations can be illustrated with the following example.

A sand bucket and shovel is a child's toy. Before buying this product, the child's parents check the sand bucket and shovel for safety, price, and reliability. More than likely the parents' main interest in the sand bucket and shovel is the effect that the product will have on the child.

The parents buy the sand bucket and shovel and give them to the child who plays with them at the beach. The child will use the sand bucket and shovel to move sand, dig a hole, carry water, and more. The child's interest in the sand bucket and shovel is all about what they can do with this product.

From this example it is apparent that the parents are the *Buyer* entity of the product. The buyer is focused on the product's value which is derived from the benefits that the product provides in exchange for money. From this example it is also apparent that the child is the *User* entity of the product. The user is focused on

the product's functionality. The user's only concern is what they can do with the product.

2.3   Core Disciplines

The user is focused on the product's functionality. Companies build product functionality for the users through an activity called *Product Planning*. Product planning is based on having the *Customer Advocacy* skill, which means knowing the customers well so that the company can build the required product functionality for the users.

The buyer is focused on the product's value. Companies provide buyers with information about the product's value through an activity called *Product Marketing*. Product marketing is based on having the *Business Value* skill, which means knowing the product's business value well so that the company can inform potential buyers about the product's value.

Product Planning is defined as the ongoing process of identifying and articulating market requirements that define a product's feature set. Product functionality for the users is built by means of product planning processes.

Product Marketing is defined as outbound activities that are aimed at generating product awareness, differentiation, and demand. The product's value is presented to the buyers by means of product marketing activities.

2.4   Concept of Product Management

Every product simultaneously offers functionality for the user and positive or negative value for the buyer. Because the product's functionality and value are created together and depend on each other, the product planning and product marketing disciplines that build the product's functionality and tell about its value are also tightly connected. Together, the product planning and product marketing disciplines are called *Product Management*.

More elaborately, because the product's implications, functionality, and value are mutually dependent, the product planning and product marketing disciplines that represent the mechanisms for building product functionality and articulating its value, are inextricably linked. The union between product planning and product marketing activities is collectively referred to as *Product Management*.

The succinct definition of *Product Management* is an occupational domain which contains two professional disciplines: *Product Planning* and *Product Marketing*. The slightly expanded definition is that product management is an occupational domain that is based on general management techniques (a collection of activities in the areas of decision-making, employee motivation, and process application that

lead and direct a business organization) that are focused on product planning and product marketing activities.

The definition of product management is extremely critical to the consistent application of the product management profession. That leads to adopting the definition of product management as a core tenet of the *Blackblot PMTK Methodology*™, hence the *Blackblot PMTK Methodology*™ first foundation rule that "*Product management is comprised of product planning and product marketing.*" It is noted that not definitively separating the two disciplines of product planning and product marketing will result in a confusing overlap which causes unclear job descriptions and responsibilities in product management.

2.5   Problem Space and Solution Space

People's worlds are divided into problems and solutions. Problems are needs or difficulties which are answered with solutions. For example, staying warm in cold weather is a need and thermal clothing is the solution. Communication from a distance is a need and a mobile phone is the solution.

It is possible to philosophically categorize all the problems that people have as conceptually belonging to a big *Problem Space,* with all the related solutions grouped into one big *Solution Space*.

The problem space is about business and consumer problems. The solution space is about products and technology which solve those problems.

The user and the buyer are focused on solving their respective problems. Therefore, the user and the buyer are in the problem space. Product management is focused on the user and the buyer, so product management is also in the problem space.

Products and technologies belong to the solution space. Engineering is focused on products and technologies and as a result engineering is in the solution space.

More elaborately, within the *Blackblot PMTK Methodology*™, the problem space is defined as the conceptual market realm in which the problem (difficulty, a situation that requires change) resides. The solution space is defined as the conceptual product realm in which corresponding solutions (answers, anything that removes or controls the difficulty) to the problem reside.

The problem space and the solution space are abstract. However, the problem and the solution themselves can be actual or perceived and they can also be tangible or intangible. For example, the problem could be inefficient work (actual or perceived) and the solution could be to use faster machines (tangible) or apply better processes (intangible).

From a colloquial standpoint, the problem space relates to the world of business and consumer challenges and motivations—it is all about needs (states of felt deprivation). The solution space relates to the world of products and technology—it is all about the offerings that satisfy needs.

The user and the buyer are respectively focused on their quest for functionality and value. They are not focused on the product or technology. Accordingly, the user and the buyer reside in the problem space and therefore product management, which addresses the user and the buyer via the product planning and the product marketing disciplines, is also in the problem space.

These realizations are the rationale for the *Blackblot PMTK Methodology*™ second foundation rule that "*Product management resides solely in the problem space*."

By inference and exclusion, product management's counterpart is *Engineering*, which resides in the solution space. This is because the products and technologies reside in the solution space. Engineering is focused on products and technologies. Accordingly, engineering resides in the solution space.

2.6   Blackblot PMTK Methodology™ Foundation Rules

The aforementioned logic shapes the *Blackblot PMTK Methodology*™ *Foundation Rules* which are:

1. Product management is comprised of product planning and product marketing.
2. Product management resides solely in the problem space.

The *Blackblot PMTK Methodology*™ *Foundation Rules* identify, define, and explain the core concept of product management and are the very basic principles that the *Blackblot PMTK Methodology*™ is built upon.

2.7   Adjusted for Reality

The preliminary step to elevating the discipline and the profession of product management is to have a clear and succinct explanation of what product management is and what the role of a product manager is. It would also be helpful if the substantiated explanation were memorable and persuasive.

The fully rationalized methodological foundation rules of product management are correct but to overcome entrenched beliefs and static business cultures, often needed in the interim is a more flexible and broad definition that will find appeal with many. Precision is going to give way in the interest of overwhelming clarity.

The interim definition of product management should reflect what arguably is the most critical and primary activity which resides at the very core of product management. The key activity that is most identified with product management is product planning. This primarily hinges on the methodological argument of problem space and solution space relative to product management, as stated in the *Blackblot PMTK Methodology*™ second foundation rule.

The interim definition of product management would therefore be:

> *Product management is a market-focused corporate activity that uncovers potentially profitable market problems and communicates them in proper format to the company's product developers who then specify and build solutions to those problems.*

If such is the case, then the derived interim definition of a product manager would be:

> *A Product Manager is a market expert who seeks potentially profitable market problems and describes them to product developers.*

These interim definitions clearly convey that product management and the product manager are by far and only a market-focused activity and role, not a project, product, or technology-focused activity and role.

Furthermore, these interim definitions also embody and reiterate the critical arguments that (1) product management is a specialization, not a generalization, and that (2) product management is autonomous and not part of marketing or engineering.

It is possible to augment the interim definitions with supporting clarifications. This would mean adding statements such as "*Product management owns the problem and product development owns the solution*" or "*Product managers describe customer needs and the developers respond with product features.*"

For individual guidance, the product manager's credo is "*You're not managing a product. You're managing the problem which the product solves.*" This statement succinctly conveys that the role of a product manager is to deeply understand the market problem that needs to be solved and then to articulate every facet and nuance of that market problem to the development team.

Finally, it is important to describe what product management is but even more important, given all the confusion and misinterpretation that abound product management, to explain what product management is not. Product management does not include responsibilities that strictly belong to other areas such as product development, software development, project management, program management, system/product architecture, product design, user experience, product manufacturing, product logistics, product launches, release management, profit and loss accountability, etc.

2.8 Summary

The *Blackblot Product Manager's Toolkit*® (PMTK) is a market-driven product management methodology.

The *Blackblot Product Manager's Toolkit*® (PMTK) product management methodology's two foundation rules are its methodological foundation. They are also the solid basis for the product management domain's entire body of knowledge.

Chapter 3
Product Delivery Strategies

Examination of Common Product Delivery Strategies

3.1 Introduction

Every company claims it wants to deliver value to its customers, be profitable, and establish leadership in its core markets. Such assertions seem only natural and one would expect to be presented with a corresponding corporate strategy that supports such goals. However, closer inspection reveals that many companies often employ product delivery strategies that lead these companies far away from their business objectives.

Delivering products is a process that begins with a combination of innovation, technology, and market sensing. Each of these driving elements contributes to the initial product concept and its development, but over time, and depending on the company, some driving elements will demonstrate a stronger and more lasting impact on the product concept and its roadmap. This is not necessarily due to merit or market forces, but more commonly is an outcome of the corporate culture and business perspectives which dominate the company.

Certain corporate functions that embody the aforementioned driving elements take charge of directing the company's overall product delivery strategy. For example, in one USA software firm, a business unit manager noted, "*Marketing has had a relatively limited role in the past; technology is what has driven this company. We're a technology-oriented firm.*" In contrast, in a USA packaged-goods firm, a marketing manager said, "*Engineering has absolutely no sense of the consumer. They're a group of educated technology scientists who can do amazing things, but they need focus.*"

Corporate business goals and wants are relatively similar across diverse industries, but the methods they use to reach their goals vary greatly. This chapter explores these different approaches to product delivery strategies, known as technology-driven, sales-driven, and market-driven.

3.2 Technology-Driven: Take My Road

Some companies believe they know what is best for the customer. They operate under the notion that they can develop technology, design products based on that technology, and have entire markets buy their products because they are techno-logically superior. These technology-driven companies, whose product delivery strategy is determined by their engineering departments, often create products without thoroughly researching the market and without fully understanding the prevailing market requirements.

This sounds somewhat detached from end-user needs, and may very well be so, but a technology-driven approach has its advantages. It enables a company to rapidly deliver products to market since it skims and skips lengthy traditional market research, and consequently bases product design decisions on internal company expertise.

An example of a company who chose to strive forward with a plan to launch a new product in the market without having conducted market research first is that of Sir Clive Sinclair, a British entrepreneur who was also a brilliant engineer and consummate salesman. Sinclair trusted his intuition for all his product decisions. At the time, he believed that the moment had arrived where the general public was sufficiently interested in electronic wizardry to provide for a completely new market of inexpensive and relatively simple-to-use computers. Without conducting any market research whatsoever, in 1980 he ordered 100,000 sets of parts so he could launch at high volume his new ZX80 computer. By 1982, Sinclair's company revenue was £30 million, compared with £4.65 million the previous year.

Sinclair and his engineers had intuitively succeeded in assessing the combined potential of technological developments and changing consumer needs, as opposed to researching the market potential for an innovative product. Sinclair's business decisions proved enormously successful, yet very fortuitous.

Technology-driven products are often advanced and therefore appeal to early adopters and niche markets who seek the latest technological developments. Additionally, technology-driven products may become high-risk/high-reward ventures to be favored by speculative investors. Such products await a triggering event that causes a dramatic surge in demand. These events may range from the hypothetical (e.g. future governmental legislation that would promote vehicles with fuel cell engines) to the actual (e.g. sales of survival gear when people were confronted with the spectre of Y2K [year 2000 computer bug] or the tremendous demand for security equipment post 9/11 [September 11, 2001]).

Nevertheless this is the problem with being technology-driven. It is a risky approach to delivering products. Adopting a technology-driven posture has, over time, proven low growth potential due to failure to implement proper marketing activities and because of the isolated manner in which products are managed. Many technology-driven products are characterized as having complex or unnecessary features, and some technology-driven products are realistically unneeded.

At the Consumer Electronics Show (CES) in Las Vegas, Nevada, Gerard Kleisterlee, the CEO of Philips, quoted data from a Yankee Group survey:

Thirty percent of all recently introduced home networking products sold today were returned to the store because the consumer could not get them to work, and forty-eight percent of potential digital camera owners were delaying their purchase because they perceived the products to be too complicated.

This phenomenon of technologically advanced products that are commercially unsuccessful is a continuing reality and the conclusion is quite obvious. Although some companies may succeed with a technology-driven approach to product management and development, there is a bigger chance that driving the best technology to customers will not yield a prosperous outcome. This is simply because the company and its product are focused on providing better technology and not focused on closely matching customer needs and abilities with that technology.

3.3   Sales-Driven: A Cruising Taxi

A technology-driven company is focused on its technology and a sales-driven company is focused on maximizing short-term return on investment. Accordingly, the prime responsibility of most corporate departments in a sales-driven company is to help the sales channels with knowledge, ways to sell, and sales support.

Like a taxi driver cruising city streets looking for passengers who are heading to different locations, sales-driven companies cruise their markets seeking deals with customers who very often have different needs. As with the proverbial taxi driver who will deviate out of his way to accommodate the passenger going in the opposite direction, these companies will alter their product's feature set in order to accommodate the particular wishes of a specific customer.

There is nothing fundamentally wrong with being sales-driven and providing custom work. Generations of tailors have sewn fitted clothes for people of different shapes and sizes, and taxi drivers worldwide transport passengers to their varied destinations.

The advantage of being sales-driven is less risk because there are always unique business opportunities and individual needs to satisfy. A sales-driven product strategy can be a lifesaver and used as a survival mode tactic if market segments start deteriorating or are in a chaotic phase which precludes targeted marketing programs. The downside is that a sales-driven product strategy is a short-term approach that does not build highly sustainable product lines. Without those sustainable product lines it is very hard to build market leadership and promote company growth.

The eventual outcome of a sales-driven approach in technology companies is a plethora of product variants (produced via modification of core products) which are sold to different customers. These product variants are full of highly individualized

custom features that are uniquely developed, tested, documented, and supported. This situation invariably leads to resource duplication, wasted effort, loss of distinctive competence, and great difficulty in implementing product roadmaps.

Due to market dynamics, the majority of sales-driven companies struggle in the long run because there is nothing much to differentiate them from the competition, other than price which becomes their primary marketing tool.

3.4 Market-Driven: Driven to Success

To gain the status of being market-driven, a company has to engage its customers and listen to their needs. It is all a matter of timing since asking customers what they want during the sales process is not considered actually listening to the market. Being market-driven requires a proactive product management process, engaging customers before the product is planned, defined, designed, and developed.

Only by taking a long hard look at end-markets and paying attention to customers' demands, before proceeding to develop a technology platform or products, can a company be regarded as one that employs a market-driven approach to product management and development.

A case of sales-driven culture posing as market-driven happened to Big Blue. IBM® was the dominant force in the technology industry and synonymous with innovation and cutting-edge technology. IBM achieved its leadership position through a market-driven approach by using its massive sales force to determine customer needs. However, the company ran into trouble when it stopped listening for needs and focused on telling customers about its latest new product or technology.

Applying a market-driven approach demands commitment and discipline as it is a very procedural approach. Companies with an informal work culture and loose organizational structures fail at applying this methodology, and so do companies eager to rush into the market because of the lengthy time involved in executing all phases of the market-driven process. But when a market-driven approach is properly applied, the result is a product that will solve a pervasive market problem in an established market segment, and for which customers are willing to pay. Experience has shown that rewards do come for those who patiently follow the course.

Market-driven companies produce sustainable products with visibly notable targeted value. The biggest reward is that a market-driven product helps establish market leadership and revenue-growth potential.

3.5   Summary

A study conducted several years ago by querying top marketing executives working at one hundred leading USA technology companies, showed that despite all the talk about being market-driven and customer-focused, 54 % of respondents viewed their company as actually being technology-driven. Companies do understand which approach they should follow and publicly declare it, but indeed it is hard to mend ways and transition because becoming market-driven will demand a painful shift in corporate culture and business practices.

For those who take the path, success is lasting. In the technology world (e.g. Microsoft®) and the consumer goods industry (e.g. Procter & Gamble), a leadership position can be established and maintained by being a very effective market-driven organization that has superior skills in understanding, attracting, and keeping valuable customers with products that deliver real value. This is not just a cliché but a formula for success.

What ultimately prevails in companies is the understanding that product value is always determined by the customer, not by the company or its technology. This understanding in turn leads to the realization that developing technology that solves known market problems is better and more profitable than trying to discover markets that could possibly use an existing and newly developed technology.

Chapter 4
Product Management Team

Formalizing and Structuring the Responsibilities and Make-up of the Product Management Team

4.1 Introduction

The role of a product manager is challenging, complex, and often misunderstood. Across the technology industry, the *Product Manager* title is used in many ways to describe drastically different duties and responsibilities. Diverse interpretations regarding the role of the product manager have created for some an untenable situation where they struggle to define their own role.

Properly defining and structuring the roles and responsibilities of the product management team will enable the team members to be more efficient and productive, leading to better revenues and higher-quality products that meet customer needs.

This chapter explores the challenges faced by modern technology product managers and provides an established solution to formalize and structure the responsibilities and make-up of the product management team.

4.2 Your Role

Job titles are important and the role one plays in an organization is often identified by one's job title. In most cases, specific job titles allow an observer to construe the role and the scope of responsibilities associated with them, but often this is not the case when it comes to the world of product management. The myriad of interpretations and diversity that surround product management job titles, especially the *Product Manager* title, make it very difficult to ascertain which roles and responsibilities are associated with a specific product management job title.

Ask several product managers what their responsibilities are and you will get a variety of answers and descriptions. This situation can reach a point where several

product managers working at the same company and department provide very different perspectives on their position.

Many companies mistakenly accept a definition that presumes product management is a collective term used to describe the broad sum of diverse activities performed in the interest of delivering a particular product to market. Such a broad definition, used by many companies today, is the root cause of much grief and problems because it lacks the professional focus needed to be successful, and allows virtually any product-related task to be assigned to the product manager.

4.3   Jack of All Roles, Master of None

It is challenging for humans to multitask, and that is why people prefer to focus on a sole task or sequentially perform a few select tasks. The inherent difficulty of multitasking hinges principally on humans' limited ability to maintain a high level of cerebral focus when confronted with a multitude of dynamically changing issues. To a lesser degree, fatigue and lack of resources (primarily time) are also contributing factors to multitasking hardships.

According to the prevailing (yet erroneous) definition of product management as outlined earlier, it is clear that the nature of performing product management activities is the epitome of multitasking diverse tasks. Multitasking product management assignments is particularly challenging because it requires a multitude of complementary or differential skills. In addition, the multitasking of these assignments becomes profoundly more complex when product managers have several products to manage.

Such a broad colloquial definition of the product management profession is the result of individual and industry interpretations. These free interpretations invariably led to the ever-familiar challenges that the majority of product managers encounter daily. These challenges can be caused by a combination of the following: ambiguous role definition, imbalanced relationships with other departments, overlapping responsibilities, an overwhelming volume of activities, a lack of processes, poorly defined processes, no definitive methodology, and a shortage of uniform work tools in the profession.

The overall perceived obstacle the typical product manager encounters is the permeating lack of professional focus. One can be adequate at many things but it is difficult to excel at many. This is the reason many product managers view themselves as trapped in a never-ending juggling routine. Having too many tasks to juggle eventually leads to tasks being dropped and the outcome is poor overall performance by the product manager, which is not beneficial for the company.

Ostensibly, the title of *Product Manager* has proven itself more harmful than helpful. Other official and unofficial product management title variations, such as *Product CEO* or *Product Champion* or *Product Executive*, have failed because they are often accompanied by a blurred and wide-scoped job description that describes or implies that the product manager is the owner and, as a result, responsible for the

commercial success of the product. Being labeled or treated as a product CEO can be a daunting situation, since it nearly always means operating without the authority and resources available to a corporate CEO.

When a job title has an overly broad set of diverse activities (roles and responsibilities) associated with it, there is a high probability that performing to the expectations of that job title will result in failure. Obviously a semantic change is needed and this change is based on the well-known fact that being professional means being focused on a particular domain or discipline.

4.4   Breaking It Down

The two main disciplines that reside in the *Product Management* domain are *Product Planning* and *Product Marketing*. Product planning and product marketing are very different but, due to the collaborative nature of these two disciplines, some companies erroneously perceive them as being one discipline, which they call product management. Done carefully, it is very possible to functionally divide the majority of activities within the product management domain into two distinct disciplines (functions), product planning and product marketing, and yet retain the required synergy between those two disciplines.

Accordingly, *Product Management* is correctly defined as an occupational domain which contains two professional disciplines: *Product Planning* and *Product Marketing*. A slightly expanded definition is that product management is an occupational domain that is based on general management techniques that are focused on product planning and product marketing activities. The product planning and product marketing disciplines focus on the users' and buyers' needs. Therefore, the product management domain resides solely in the *Problem Space*, and the engineering domain resides in the *Solution Space*.

Product Planning is defined as the ongoing process of identifying and articulating market requirements that define a product's feature set. *Product Marketing* is defined as an outbound activity aimed at generating product awareness, differentiation, and demand. Product planning and product marketing are different and distinct professional disciplines because they foster different roles and different quality goals.

With these understandings in mind, it is easy to address the respective tasks of product planning and product marketing as belonging to the roles of a *Product Planner* and a *Product Marketer*. Whether these two roles are handled by two individuals or performed by one person is irrelevant. Indeed there are cases where one person, or two people sitting in one room, or different departments that collaborate, assume both disciplines. The point is that there is now a clear and unambiguous link between the job title and the job responsibilities.

It should also be clear that the disciplines of product planning and product marketing are inextricably linked because companies define product functionality for the user and market the product's value to the buyer. To clarify this point, the

intuitive and revisited example of this supposition is the child's toy. The parent is the *Buyer* and is interested in whether the toy is safe to use, will help the child grow smarter, will keep the child occupied, and is reasonably priced. Product value is therefore marketed to the buyer, the parent. The child only cares about product functionality: is the toy fun, engaging, and visually pleasing, and will it do what they want? The toy's functionality is designed for the *User*, the child, and not for the buyer. The same approach is taken with technology products where buyers are often not the users, and this approach means distinct product management roles that separately analyze and address buyer and user needs.

The recent fast-paced growth of technology industries and shifting interpretations of product management have created skewed responsibility sets for product managers. The already problematically broad definition of product management was further complicated when tactical activities were added to a product manager's job definition.

Tactical activities are assignments, usually self-contained and specific, that fulfill short-term business needs, such as delivering a presentation, writing collateral material, or assisting a salesperson. Such assignments are time-consuming and demand a disproportionate allocation of individual resources (mental focus, time, and physical effort) relative to their overall importance. By monopolizing the scope of work, tactical activities detract from product managers' ability to fulfill their assigned strategic responsibilities.

A strategic mission is one that aims to establish and plan the overall and long-term course of action a company should engage in to achieve corporate objectives. The strategic mission for the product marketer would primarily involve evaluating market opportunities and writing market plans that address these market opportunities. For the product planner, the strategic mission would be identifying market needs to deliver winning products that help a company become a market leader, market follower, or innovator.

4.5 Roles and Goals

Executive managers have very clear business goals that primarily center on achieving corporate profitability. Software developers, for example, also know what they aim for, and that usually is generating a lean and efficient programming code.

However, many product managers provide widely different answers when asked to convey the goal(s) of their job. They often find it quite difficult to provide a definitive answer, with this situation obviously stemming from an overly broad and task-oriented (not goal-oriented) job description. By breaking down the product management domain to its disciplines, it becomes feasible to clearly define the roles and goals of each discipline.

The product planner determines and defines product functionality by virtue of writing the market requirements, and therefore the prime goal is to have product buyers and users who are satisfied with the product. This satisfaction level means

contentment with the product's ability to solve business or consumer problems and satisfy needs, and pleased with the non-tangible aspects of product ownership such as service, price, warranty, status, or prestige.

The product marketer's goal is to have a satisfied sales force. This goal is somewhat indirect to the marketing actions being performed, but is an excellent predictor of how effective the product marketer's actions are in generating awareness, differentiation, and demand for the product. Salespeople have a relatively easy job when product marketers perform their roles well. The market environment, created by the actions of the product marketer, leads to a very favorable situation where the market buys the product as opposed to the salespeople actively selling the product.

Salespeople are very happy when the product sells itself, which really means that the sales cycle is minimal or reduced because of quality marketing actions initiated by product marketers. In short, product planning's quality goal is satisfied customers; product marketing's quality goal is a satisfied sales force.

After defining the strategic roles of the key disciplines within the product management domain, there is a need for a cooperative scheme, a team concept, to maximize the effectiveness of these strategic roles through collaboration, and complement them with outbound tactical support functions. Product management is not accomplished successfully by one person, but by a product management team who fulfill various roles and functions.

4.6   Blackblot Product Management Team Model

The product management team is a task group, comprised of four distinct roles, which organizationally reside in the product management department. The four roles in the *Blackblot Product Management Team Model* are the *Product Planner, Product Marketer, Sales Engineer,* and *Marketing Communications (MarCom) Manager*. These four roles are the basic providers of the planning, deliverables, and actions that guide the inbound-oriented product definition and the outbound marketing efforts (Fig. 4.1).

The primary responsibility of the product planner is to constantly research the market and identify market needs, which are later translated into market requirements that in turn will foster new products or new features to existing products. The product planner prepares the initiation documents that profoundly impact the product's success. These documents include the *Market Requirements Document* (MRD), product use cases, product roadmap, and the pricing model.

The primary responsibility of the product marketer is to analyze product-oriented business opportunities, formulate plans that evaluate those business opportunities, and plan and guide the subsequent marketing efforts. For example, the product marketer prepares the product business case and, following approval, writes the market plan.
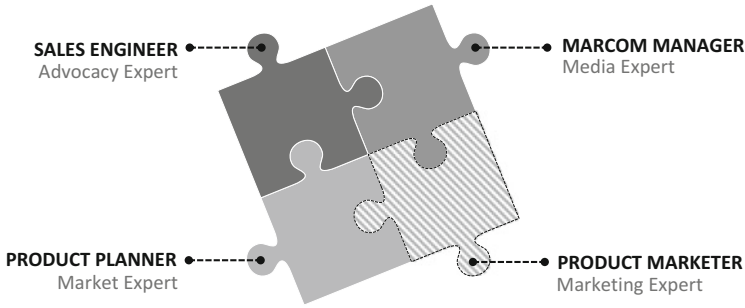
Fig. 4.1 Blackblot product management team model

The sales engineer is primarily responsible for outbound product-centric activities such as pre-sale support and product demonstrations. Sales engineers, relying on their technical skills, help customers understand how the product delivers the necessary value and functionality that address the customers' business or consumer problem.

The sales engineer's other objective is to provide critical input to product planners on customer needs and problems. Sales engineers often operate under titles such as *Product Evangelist, Technical Evangelist, Technical Sales Support, Pre-Sale Engineer, Outbound Product Manager,* or *Technical Product Manager,* yet regardless of the title they all perform a relatively similar set of tasks.

The MarCom manager is primarily responsible for creating interest and memorable presence through the conception and copywriting of all collateral material, advertising, direct response mail, web, and other types of communications media. This person is also tasked with maintaining a consistent image and positioning in the target market, according to messages and directives provided by the product marketer.

The product management team is managed by the *Director of Products* or *Vice President of Product Management* who provides overall product vision, product and market strategies, and team leadership. Other titles are sometimes used to designate this leadership position, such as *Director of Product Management* or *Chief Product Officer* (CPO), in order to indicate the encompassing nature of this role. This position is responsible for balancing corporate goals with long-term market trends and opportunities, and for directing, establishing, maintaining, and planning the overall policies and strategies for the product management department. The director of products role creates and manages the overall product management process and oversees its effective execution (Table 4.1).

Table 4.1 Blackblot Product Management Team Model (Summary Table)

Role	Responsibility	Goal	Expertise
Product Planner (strategic role)	Identify and articulate market requirements	Satisfied product buyers and users	Market expert
Product Marketer (strategic role)	Generate awareness, differentiation, and demand	Satisfied sales force	Marketing expert
Sales Engineer (tactical role)	Outbound product-centric activities, i.e. pre-sale support and product demos	Customer knowledge of product value and functionality	Advocacy expert
MarCom Manager (tactical role)	Conception and copywriting of all collateral material	Consistent image and positioning in the target market	Media expert
Director of Products (strategic role)	Balance corporate goals with long-term market trends and opportunities	Successful formulation and execution of the product and market strategies	Strategy and process expert

4.7 Odd Couple(s)

In startup companies it is common to see one individual assume all four roles listed in the *Blackblot Product Management Team Model*. That person will do market planning, deliver product demonstrations, formulate market requirements, and write collateral material.

It is obvious that *Product Manager* is a title assigned to a person who performs a single role or a combination of the four roles listed in the *Blackblot Product Management Team Model*. At some point in time, usually as the company grows, the roles are delegated to other individuals who specialize in the role assigned to them. However, for a wide variety of reasons and reasoning, it is quite common to see two roles coupled together in order to define a position that is entrusted to one person.

Frequently the product planner and sales engineer roles are combined into one position in which the person is charged with doing product demonstrations and providing pre-sale support because he/she is also defining the product, and thus has more expertise and in-depth product knowledge than the average salesperson.

Another possibility is the product marketer and MarCom manager combination, where this individual does all tasks that upper management may perceive to constitute marketing. This usually consists of actual market planning, writing copyright, and managing advertising.

A very prevalent situation in technology industries, such as the software development industry, is the combining of the product marketer and product planner roles. Corporate job descriptions for open positions that prefer candidates with a technical undergraduate degree and a *Master of Business Administration* (MBA) degree with a major in marketing are a clear indication that the company views the position as a combination of the two roles.

It does make sense to a certain level to have the product marketer and product planner roles cooperate with each other. Product success hinges on understanding

customer behavior and the business aspects of the industry in order to build value into a product. Complementing that ability is in-depth product knowledge, which is used to plan marketing actions that deliver meaningful messages about the product. The problem is that both the product marketer and product planner roles are strategic and each role demands a level of expertise that can only be truly achieved by professional focus.

In addition, people come from different educational or professional backgrounds and therefore naturally gravitate toward their comfort zone, eventually causing one of two roles which were assigned to them to receive more attention than the other. Under performing, or in the worst case scenario not performing some of the product management team roles, may dramatically impede the product's chances of marketplace success.

4.8 Roles and Activities

Any of the various couplings of roles, as previously outlined, can create workflow obstacles for the following conceptual reasons. Having one person simultaneously perform both strategic and tactical roles and activities, such as with the product marketer and MarCom manager combination, is very inefficient because tactical activities will always monopolize the person's time and demand increasingly more effort. On the other hand, having one individual perform two strategic roles, as with the product marketer and product planner combination, can be equally debilitating since each role demands an acute learning curve and full devotion.

It is acknowledged that the joining of roles is justifiable under a variety of circumstances, such as budget limitations, personnel quotas, company or department formulation, and product complexity. However, role coupling should always be regarded as a temporary or evolutionary measure—not as a permanent arrangement.

4.9 Role Coupling Guidelines

From both a methodological and functional perspective it is profoundly practical and imperative not to join roles that belong to the different spaces (problem space and solution space).

The first reason for this separation is because the solution space is a bottomless pit of tactical and technical activities which will completely monopolize a person's focus.

When a person is assigned a combination of roles from both the problem and solution spaces, the roles in the solution space will dominate because the individual often does not have enough details on the market problem and because the solution requires documenting many details and constant interaction with the engineers.

Accordingly, crucial strategic activities in the problem space (e.g. creating an MRD or business case) which later affect all activities in the solution space will not be properly performed if the person is consumed by their responsibilities in the solution space.

The second reason for separation is gravitating skills which is a dominant occurrence when mixing any roles. This means that people will naturally devote more time and effort to doing whatever they are more comfortable and natural with, effectively neglecting the other assigned roles. For example, a technically minded person will likely prefer to deal with technical documents even though assigned the product planner role.

Therefore, the primary guideline to follow when combining roles is to have all the roles that are being combined belonging to one space only. Do not mix and assign individual roles from both the problem and solution spaces. For example, a product planner and product marketer role combination (only the problem space) is not optimal but better than a product planner and any technical role combination (both the problem and solutions spaces).

The secondary guideline to follow when combining roles is to only join roles of the same character. For example, all assigned roles are strategic. Do not assign a person both strategic and operational roles.

In summary, the guidelines to joining roles are:

1. Only join roles from the same space.
2. Only join roles of the same character.

4.10   Organizational Solution

Product management is an encompassing domain of disciplines. Acknowledging that fact leads to the realization that it is extremely hard and often impossible to specialize and excel at performing all product management tasks. This is because being multifaceted and multidisciplined often results in lack of professional focus.

Adding to the situational difficulty is the expansive view of a product manager's job description, leading to product managers being assigned tactical activities, usually because others in the company simply do not want to do them. Tactical activities significantly impair the product manager's ability to perform crucial strategic tasks.

In some companies, the *Product Marketing Manager* and *Product Manager* are interchangeable titles as they both relate to the same function and individual. This inconsistency further causes functional problems within companies and across industries.

This problematic reality is not planned and is seldom the result of malicious intent. It is just that some companies believe in the laissez-faire approach where internal politics and forces shape corporate processes, responsibilities, and even the organizational structure. There is some advantage to having role ambiguity because it allows individuals to be proactive and define their role as they want it to

be. People can work within the ambiguity and chart their way to a desired job description. Unfortunately, more often than not, the fast-paced structured world of technology is not supportive of this approach because there is just too much inherent ambiguity or variance associated with the *Product Manager* title. Therefore, the solution is to abolish the *Product Manager* title from the corporate lexicon and use the clearer, more understandable and uniform titles of *Product Planner* and *Product Marketer*.

As a result of such action, a different organizational approach is required. Under the charge of the director of products, is the corporate product management department that holds product management teams. Each team, whether real or virtual, holds four roles (as described in the *Blackblot Product Management Team Model*) with the intent of having these roles eventually assigned to four separate individuals.

Tactical activities and logistics formerly imposed on the product manager will now go to the program manager or release manager, thus relieving those in product management from the tactical overload they routinely experience. The *Program Manager*, a role outside product management, is essentially the project manager for the entire product delivery project, and is tasked with applying a suitable product delivery process that ensures deliverables from all contributing corporate functions. The *Release Manager*, also a role outside product management, is responsible for handling all logistical and operational matters that pertain to the delivery of the product.

Properly defining and structuring the roles and responsibilities of the product management team will enable the team members to be more efficient and productive. This most likely will lead to better products, better marketing, and higher revenues.

4.11   Summary

Based on the *Blackblot PMTK Methodology*™, product management is a domain, not a role, which changes and evolves with the organization. It is a multifaceted and multidisciplined domain and there will always be a certain level of ambiguity involved with product management.

Applying a proper product management team concept and structure with well-defined roles and responsibilities, as outlined in the *Blackblot Product Management Team Model,* can significantly mitigate that ambiguity. This act is crucial whether the company is building or rebuilding the corporate product management function.

As a result of the team restructuring and the redefinition of roles, the newly attained occupational focus helps build professional expertise. The product planner can now devote time and effort to excel as a market expert and problem-teller, whose role is to perform customer advocacy better than everyone else in the company, while backing assertions with quantitative market/customer data. The product marketer is now focused on becoming a marketing expert, perfecting

corporate competency in using tools and executing techniques, processes, and tasks that promote winning products in the target market. All this decreases departmental rivalry and allows the engineers to develop their professional expertise as technology experts and problem-solvers.

Doing the right things and doing things right, especially in the early stages of company inception, will help those in product management to professionally grow and contribute fully according to their potential. Undoubtedly, companies will also benefit because members of the product management team will now be able to generate long-term value for their company by focusing more on strategy formulation.

The final deduction is that those involved in product management must be provided with clear job descriptions (roles, responsibilities, and goals) as well as focused goals and objectives. All talk and effort can prove quite futile without this basic premise.

Chapter 5
Product Definition Team

Establishing a Market-Driven Product Definition Process and Team to Match

5.1 Introduction

Product planning and product definition are critical starting points for the delivery of any new product. In many companies, there are recognized product development teams and product development processes, but often absent is a clear concept of a product definition team and a product planning process. This is the result of companies employing different product delivery strategies to plan, define, and develop products. Each strategy demands different areas of expertise and generates different dynamics, responsibility sets, and internal processes.

The common technology-driven approach to product delivery fosters a technology-focused product definition process, which primarily requires a deep understanding of technology and heavily relies on the competencies of development personnel. Conversely, the market-driven approach to product delivery promotes a market-focused product planning process, which primarily requires a deep understanding of buyer/user needs and hinges on the leadership and competencies of product management personnel. Both these approaches must be considered in the formation of the product definition team, so that a successful product is delivered.

The absence of clear guidelines for defining and structuring individual roles on a cross-departmental product definition team, coupled with the lack of a structured and documented market-driven product planning process, results in an inefficient product definition process. The risk to organizations is that of misconceived products, poor market acceptance, and subsequently wasted financial and resource investment. This inefficiency can be successfully countered with the concept of a well-defined team of individuals (belonging to both the product management and engineering departments) who have different roles and different domains of expertise, and who follow structured and repeatable product planning and product definition processes.

This chapter describes the *Blackblot PMTK Methodology*™ market-focused product planning process for technology companies and presents the *Blackblot Product Definition Team Model* which formalizes and structures the responsibilities and make-up of the product definition team that ultimately help products reach marketplace success.

5.2   Key Concepts

A business customer's or a private consumer's *Problems* are past, present, or future difficulties—situations that require change, and *Products* are essentially the solution—something that removes or controls that difficulty. The existence of a problem creates a *Need*—a state of felt deprivation, essentially a condition or motivation in which something is sought after to effect a change. Therefore, products solve a business customer's or a private consumer's problems and satisfy needs.

The need itself creates a *Want*—the request for specific objects that might satisfy the need, which in turn brings about *Demand*—a want for specific products coupled by an ability to pay for them. For example, hunger is a need that creates a want for nourishment or appetite suppressing medication or anything else that removes hunger.

A want for nourishment often generates demand in the market for affordable foods that can be obtained quickly, such as fast foods. Obviously, the same need can produce different wants and demands.

Subject to the market-driven approach, products are built to solve *Market Problems*—situations where the group or groups of customers, selected by a company to sell to, have unmet needs. Customers are domains that hold buyers and users, and customers are the virtual entities that take financial responsibility for purchasing a product. For example, the buyer of a network router is the company's *Chief Technology Officer* (CTO), the user is the network administrator, and the company itself is the customer since it pays for the purchase.

The existence of a market problem does not necessarily mean there is a *Market Opportunity*—a lucrative, lasting, and sizable market problem. Ascertaining the existence of a market opportunity, and consequently the worthiness of developing a product, is company specific and done via a series of evaluator steps. These evaluator steps, with respect to the market, include verifying that the market is big enough, the market need is strong enough, the market need is recognized by potential customers, and the projected business is sustainable over time.

In addition and with respect to the company, the evaluators include verifying that a competitive advantage is attainable, the business model is clear and understandable, and the company possesses the required resources or competencies, or can readily acquire them, to make the product successful.

Deficiencies in even one of the market opportunity evaluator steps mean that there is no market opportunity for that particular company. As a result, the existence of a market opportunity is always tested for relevance to a specific company or

companies. It is common that the existence of a market problem will mean a significant market opportunity for some companies, but not for others.

Companies want to verify the existence of a market opportunity so that they can potentially generate monetary profit, and then fully understand the market problem in order to build a product that will be its solution, and lastly, understand the need in order to market that solution.

It should be noted that there is no economic reason to build certain products if they do not solve a business or consumer problem. However, there might be marketing reasons that would justify their creation, for example, to demonstrate a particular technology or to be first in a possibly potentially lucrative market. Thus it may be reasonable to build certain products although there is no obvious market opportunity, given special company motivations.

5.3   Market Requirements

Market problems can be simple or complex. Most market problems have many facets, meaning they embody and represent multiple customer needs. In order to understand how to solve a market problem, the problem must be thoroughly described. Problem definition is obtained by listing all the users' and buyers' different needs, relevant to that market problem. These needs are referred to as *Requirements*. Since both users and buyers belong to customer domains, which in turn constitute a market, we refer to the users' and buyers' requirements for a particular solution to a particular market problem as *Market Requirements*.

A *Market Requirement* is properly defined as an aggregate unit of information which represents with sufficient detail the functionality that is sought to address a specific facet of a particular market problem. This is the full and comprehensive definition.

The product delivery process is mostly sequential and begins with identifying and articulating market requirements. Ambiguous market requirements will lead to flawed products and dissatisfied customers, but well-defined market requirements are the basis for a smooth development process and marketplace success.

Market requirements describe what the user needs to do, while product requirements detail the functionality that the product provides, which enables the user to do what is needed. Virtually all market requirements begin with the phrase "*The user shall be able to. . .*" and are matched with one or more product requirements that begin with the phrase "*The product shall provide. . .*".

For example, a market requirement such as "*The user shall be able to operate the product in Europe and North America*" would likely foster the following product requirement: "*The product shall operate with 220 volt and 110 volt electrical power grids.*" Clearly other product requirements can be provided to answer the market requirement, such as those that detail the product relying on commercially available portable battery power.

Again, it is evident that the same market requirement can be satisfied in different ways. It is crucial to properly identify and define market requirements because they are the basis that dictates the outcome of the innovation and development effort. Therefore, there is an imperative need for practices that aid in clearly identifying and articulating market requirements, and that create a strong framework for defining the product. The absence of these practices has the effect of compromising product success.

5.4   Blackblot Product Frames Model

The *Blackblot Product Frames Model* and the concept of *Product Frames*, components of the *Blackblot PMTK Methodology*™, are the conceptual building blocks that amount to the product's overall functionality.

Product planning is the ongoing process of identifying and articulating market requirements from which the product's feature set is ultimately defined. The *Blackblot Product Frames Model* is a descriptive model that demonstrates how product functionality is built and how, in total, the product solves the market problem. This model serves several objectives: to validate the product's functional completeness with respect to the market problem, to synchronize user/buyer needs with product features, and to provide a backbone for a product delivery process.

The inner workings of a single product frame show how a certain product feature addresses a particular facet of the market problem. The sum of all of the product frames defines a product that has overall functionality that solves the entire scope of issues presented by a market problem.

A *Product Frame* is comprised of four elements: market requirements, product features, product attributes, and technical specifications. These elements are interconnected in the following manner:

1. *Market Requirements* describe a user/buyer need.
2. Market requirements foster *Product Features*—product capabilities that satisfy a specific user/buyer need.
3. Product features generate *Product Attributes*—real characteristics or properties of the product.
4. Product attributes are built via a *Technical Specification*—a precise description of an attribute's implementation details.

Table 5.1 lists the product frame elements and their descriptions.

For example, people are confronted with hindered mobility in their homes at night when immediate darkness sets in following an electrical power outage. This is a very simple market problem that can be solved with a flashlight.

Listed in Table 5.2 is an example of a product frame that represents a solution to this common market problem.

Again, similar to a need being satisfied with different want/demand sets, it is clear a market requirement can be satisfied with different feature/attribute/specification combinations. This is a crucial concept that must be fully understood.

Table 5.1 Product Frame—Elements and Description (Summary Table)

Product Frame Element	Description
Market Requirement	A user/buyer need
Product Feature	Something the product does or has
Product Attribute	An actual trait of the product
Technical Specification	The attribute's implementation

Table 5.2 Product Frame—Flashlight (Summary Table)

Product Frame Element	Description
Market Requirement	*"The user shall be able to...find his/her way in dark"*
Product Feature	*"The product is capable of...emitting light"*
Product Attribute	*"The product physically has a...light bulb"*
Technical Specification	*"The attribute is implemented via...2w 1.5v DIN 7.1"*

For example, the market problem represented by the market requirement "*The user shall be able to find his/her way in the dark*", can be solved by products that emit light in various ways: chemical, combustion, electrical; or by products that enhance the ability to see in the night, such as infra-red night vision goggles. The attributes and technical specifications would change based on the selected technology but market requirements remain the same and independent of the solution or technology.

Direct linkage exists between product frame elements. This means that for every market requirement, there are one or more product features (created via the existence of product requirements) that are linked to it. The ability to verify this linkage is referred to as *Traceability* and is confirmed by establishing a literal association between market requirements and product requirements.

Assuming due process, lack of downward traceability exists when there are no product requirements assigned to an existing market requirement, and this means the functional solution is not whole and does not completely address the market problem. The lack of upward traceability, when there is no market requirement linked to an existing product requirement, means superfluous functionality is being built into the product for which the customer has no need.

5.5   Product Definition Foundation Documents

Several key foundation documents are prepared in the product planning process. The *Market Requirements Document* (MRD) contains a description of the market opportunity, market problem, and the resulting set of market requirements. The MRD defines product objectives in terms of user needs and from the user's perspective. This is the *User View* of the solution.

Table 5.3 Product Definition Documents and Product Frame Elements (Correlation Table)

Document	Product Frame Element
MRD	Market requirements
PRD	Product features
Tech. Spec.	Product attributes + product technical specification

Derived from the MRD is the *Product Requirements Document* (PRD) that provides a high-level description of the solution, intended use, and the set of features it provides. The PRD offers a solution that addresses the market problem and satisfies needs. The PRD defines product functionality and features from the solution's perspective. This is the *Product View* of the solution.

The *Technical Specification* (Tech. Spec.) is a highly detailed description of the solution's design, attributes, and standards, and is a guidebook on how to build the solution.

The foundation documents correspond, and are mapped to, the product frame. The MRD outlines the market requirements. The PRD describes the product and its features. Lastly, the Tech. Spec. document contains the product attributes and detailed technical specification information required to build the product.

Table 5.3 correlates the product definition documents with product frame elements.

It is very important to distribute the information used to define the product among several documents, especially for complex systems, and to be explicit about what is and what is not accurate at each level. This is because the product delivery process is phase-based, and aggregating information from different classes into one document will blur the document's and the writer's focus.

In product planning, this intermixing of information occurs when the MRD becomes an aggregate of business, market, and product information. The writer often finds it easier to specify a solution than to identify the underlying market need, and the common outcome is a document that is laden with product requirements that are likely to be detached from market needs.

Finally, it is important for each document to be clearly written in explicit terms and form because it becomes the input to the next phase of the product delivery process.

5.6 Blackblot Product Definition Team Model

Different roles are required to create a product. These roles require different skill sets, and in some cases even a different psychological make-up, to successfully plan, define, and build a product that meets customers' expectations.

Extreme due diligence is needed during the product planning and product definition processes to properly and accurately define a product. This requires people who possess different skills, abilities, backgrounds, experience, education,

personalities, and other qualities or characteristics. Professional and distinct roles are needed to create the foundation documents required to accurately define the product. Hence, in order to be successful, a team approach is implemented, bringing together a cohesive set of individuals who have unique qualities to perform all that is needed to define a successful product.

The *Blackblot Product Definition Team Model* designates four roles that all product definition teams must have:

1. *Product Planner*—a market expert who is able to articulate the market problem and needs.
2. *Product Architect*—a product expert who is able to create a high-level design for the solution.
3. *Lead Developer*—a technology expert who is able to describe how to build and implement the solution's design.
4. *Product Developer*—a development expert who is able to build and implement the solution's design.

These four roles make the *Blackblot Product Definition Team Model* depicted in Fig. 5.1. The structure implies peer collaboration without any organizational hierarchy. The *Product Developer* does not produce any product definition deliverable as the other three members of the *Blackblot Product Definition Team Model* but is considered a major contributor to the product definition process.

The product planner researches the market, identifies the market opportunity, and articulates user and buyer needs in the form of market requirement statements. The product planner's job is to do all of these and produce a deliverable which is a complete and accurate *Market Requirements Document* (MRD).

The product architect understands the market opportunity, interprets market requirements, and knows technology and development processes. The product architect's job is to devise a functional solution to the market problem according to the market requirements that are outlined in the MRD. The product architect's deliverable is the *Product Requirements Document* (PRD). The product architect creates a PRD that is useable by the lead developer.
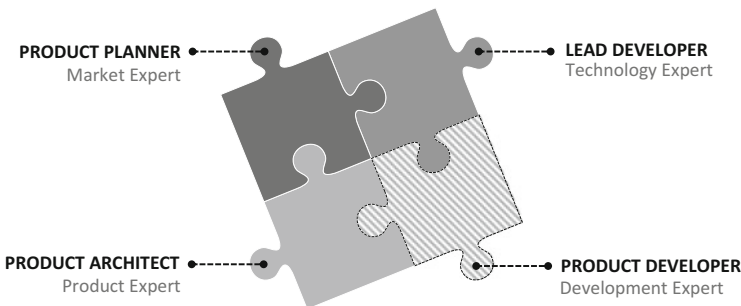
Fig. 5.1 Blackblot product definition team model

Table 5.4 Product Definition Team Members Roles (Summary Table)

Role	Responsibility	Product Frame	Deliverable	Expertise
Product Planner (strategic role)	Articulate market problem	Market requirements	MRD *(What to solve)*	Market expert
Product Architect (tactical role)	Devise functional solution	Product features (via product requirements)	PRD *(How to solve)*	Product expert
Lead Developer (technical role)	Design product implementation	Product attributes and specifications	Tech. Spec. *(How to build)*	Technology expert

The lead developer understands products and is an expert in technology. The lead developer's job is to design the product's implementation guidelines, subject to the prescribed set of measurable product features. The resulting deliverable is the technical specification.

Table 5.4 summarizes the roles of product definition team members.

Members of the product definition team need to be able to collaborate with each other. They not only lead the development of each of their foundation documents, but also act as reviewers of each of the other foundation documents in order to ensure that product definition continues to be consistent and clear, avoiding requirement dilution or scope creep.

Scope Creep is a situation where uncontrolled modifications, mostly additions, are made to the product's feature set. Scope creep occurs when the product's feature set is not fully defined, not fully documented, or not properly controlled.

Members of the product definition team work together with one goal in mind: to define a product in a viable way that actually solves the market problem and satisfies needs. This is done via a process that fosters an environment that is free of egos, free from political agendas, and free of personal goals and objectives. The focus is on the user and the buyer and their needs, and on properly conveying those needs to the development team.

5.7 Product Delivery Process

The product definition team works together to create a solution that solves the market problem. Each member performs a role that is focused on a particular aspect of the product delivery process.

Each individual provides data that inspires his/her peer's deliverable, and is an integral part of the discussion around feature set definition, tradeoffs, scheduling, and budgets. Each role has clear ownership of decisions that pertain to the specified deliverables for which the role is responsible.

The product delivery process consists of phases in which participating individuals are responsible for a specific product framework document. The team members have shared responsibilities, as well as individual responsibilities. Each team member takes a leadership role during the product delivery process, and contributes where and when needed to deliverables owned by other team members.
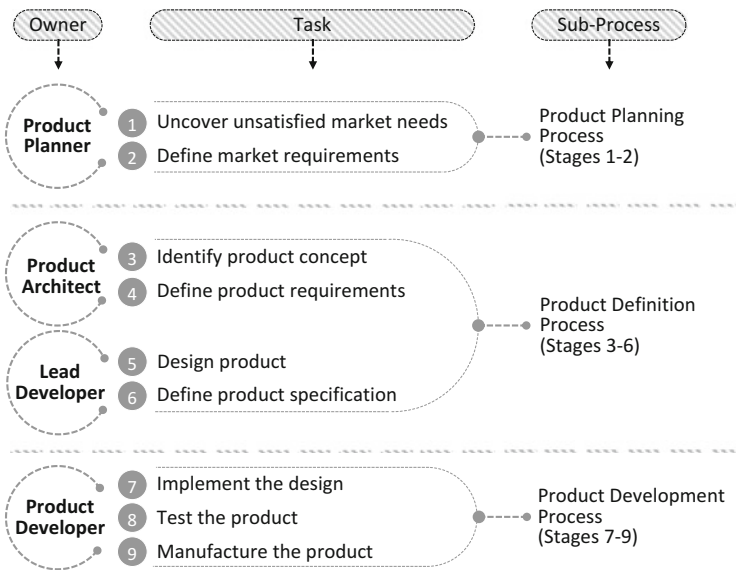
Fig. 5.2 Product delivery process and sub-processes

For clarification, the *Product Delivery Process* is a company-wide project aimed at ensuring deliverables from all contributing corporate functions, in the interest of bringing a product to market. The product delivery process, often called a *Product Program* and managed by a program manager, is an umbrella term that contains many corporate sub-processes, among them three key sub-processes which are the product planning process, the product definition process, and the product development process.

At an abstract level, the product delivery process is as shown in Fig. 5.2.

The entire product delivery process is comprised of stages one through nine. Stages one and two constitute the product planning process which is owned by the product planner. Stages three through six constitute the product definition process which is co-owned by the product architect and the lead developer. The remaining stages, seven through nine, form the product development process which is owned by the product developer and is executed by the product developer and other members of the product development team. The first six steps of the product delivery process, which are the product planning and the product definition processes, are the main focus of this chapter and critical to the success of the eventual product development effort.

Many companies, especially those who are technology-driven, go directly to stage three (identify product concept), skipping the first two stages, meaning they do not actually perform product planning and they do not create a true MRD. Instead, their primary focus is on executing autonomous product definition.

The product delivery process inspires constant feedback and interface between the product management department and the engineering department, and

effectively coordinates market analysis and technical design efforts that eventually allow for building a successful product.

Regarding organizational placement, the product planner position belongs in the product management department, while the product architect and lead developer usually reside within the engineering department. However, with the right individuals and corporate mindset, it is also possible to have the product architect position placed in the product management department.

Through the actions and deliverables of the product definition team, and via execution of the product definition process, market requirements are translated into product requirements, which themselves are translated into engineering design requirements and specifications, to be used by the product developers.

It is imperative that roles and responsibilities of the product definition team members are profoundly clear and known to everyone in the company, and are consistently communicated and interpreted in the same manner by anyone involved in the product delivery process. There must be corporate acceptance that the product management department owns and controls the product's market requirements, while the engineering department owns the solution and the product development project schedule. This is a critical factor for the successful execution of the product planning and product definition processes.

5.8 Summary

In many instances, product definition teams base design direction on documentation that contains product features rather than specific market requirements. The disconnect from market needs is further amplified as companies often frame their market world view and define products in terms of what the company has to offer rather than what the customer actually wants. Countering this phenomenon should be and is the realization that product planners outline what customers want, and that the engineers respond with what they can build and how long it will take to bring the product to market.

There are many possible partitions and terminologies surrounding the product planning and product definition processes. Indeed, the details of the product delivery process vary from company to company, but the fundamentals are the same and revolve around clear market and product requirements, and a well-understood methodology.

According to *Blackblot PMTK Methodology*™, the way to produce successful market-driven products is by properly structuring a product definition team (demonstrated in the *Blackblot Product Definition Team Model*) and governing the team's actions with well-defined product planning and product definition processes, within the context of a market-focused product delivery process. The key to making this happen is the notion that product planners are problem-tellers and market experts, while engineers are problem-solvers and technology experts.

Chapter 6
Crafting Market Requirements

Methodology to Identify and Articulate Market Requirements

6.1 Introduction

Crafting market requirements is arguably the most important step of the product planning process, after uncovering the market problem. Identifying and articulating market requirements is a task owned by the product planner, who records them in a document aptly named the *Market Requirements Document* (MRD).

Writing market requirements is in part an art form, and this chapter focuses on demystifying the task of crafting quality market requirements using a comprehensive and structured methodology called the *Blackblot Procedural Requirements Management Model*, a component of the *Blackblot PMTK Methodology*™.

This chapter builds on the concepts and terminology previously introduced in the *Blackblot Product Definition Team* chapter.

6.2 Voice Of the Customer

Voice Of the Customer (VOC) is a process for eliciting needs from customers. It embodies a market-driven approach that involves spending time with current and future customers to determine past, present, and future market problems that customers need to solve in order to meet their business goals and objectives.

The VOC process is based on in-depth interviews that lead interviewees through a series of situations in which they have experienced, and perhaps found, solutions to the market problem being investigated.

Executing the VOC process are members of the product definition team which is comprised of individuals with different roles and responsibilities. Product definition team members, primarily the product planner and product architect, contribute to this process which should ultimately yield a product that meets customer needs and expectations.

After the VOC process is complete, the next step is to build the MRD, which serves as the blueprint for driving the product concept and its functionality.

6.3   Market Requirements Document

The product planner is the in-house market expert, and has a deep understanding of the most acute market problems that are dealt with by the company. With the support of the product management team and paired with the help of outside research and consulting talent, the product planner produces one of the key product management reference documents—the *Market Requirements Document* (MRD).

The MRD is a written representation of the overall functionality that users seek in order to address a particular market problem. Therefore, the MRD represents or describes the *User View* of a solution to the market problem.

Since the market constantly changes and evolves, so does the product planner's understanding of the market problems that exist. As such, the MRD becomes a living document that reflects market change via the revised functionality the solution must hold.

The MRD only describes desired functionality. It does not describe the specific features and attributes that the solution should have to solve a particular market problem. The solution to the problem and its features are documented in a subsequent document called the *Product Requirements Document* (PRD).

The MRD is intended for all those in the company or outside of it who contribute to the product delivery program, including executive management, usability specialists, product marketers, documentation writers, engineers, and testers.

The MRD captures the essential information that is required as input to devise a functional solution to a specific market problem. In general, the goal when writing an MRD is to present as much information as clearly and concisely as possible within a consistently organized format so that engineers can first determine if a product concept can be developed, and then describe a suggested solution (product) and its features.

6.4   Blackblot Procedural Requirements Management Model

The *Blackblot Procedural Requirements Management Model* (*Blackblot PRM Model*) is a methodology to create market requirements. This model serves several objectives: to provide a structured approach to crafting market requirements, establish a market requirement's internal structure, and validate a market requirement's integrity.

A *Market Requirement* is an aggregate unit of information which represents with sufficient detail the functionality sought by users to address a specific facet of a particular market problem. This is the full and comprehensive definition of a market requirement. Unlike product requirements, market requirements are lasting and do not expire when technology or the solution evolve.

The sum of all market requirements collected describes the total functionality needed to address the whole market problem. By understanding the overall functionality that is described by the sum of market requirements, it is possible to construe the scope of the market problem. Essentially, the market problem is described by the sum of market requirements, and the market problem scope is described by the overall functionality that is in the market requirements.

Market requirements are built using four components: directive, constraints, rationales, and sources. The essential component of a market requirement, that must be present in any market requirement, is the directive. Constraints, rationales, and sources are considered vital components, and their presence is strongly desired in any market requirement.

The four market requirement components are defined as follows:

- *Directive*—instruction that guides what is to be accomplished
- *Constraints*—limitations imposed on the solution
- *Rationales*—reasoning that supports a claim
- *Sources*—information that validates a claim

Each market requirement is composed of a directive, which is further defined by constraints and rationales, which are further supported by sources. Ideally, all rationales should be accompanied by the source from which they came, thus providing credence to the assertion made by the rationale.

Rationale and source sets can be attributed to either directives or constraints, since directives and constraints can both be viewed as claims. Therefore, the market requirement would optimally have rationale and source combinations assigned to the directive and to each constraint.

The relationship between the market requirement's components is depicted by the market requirement's internal structure, as mandated by the *Blackblot PRM Model* (Fig. 6.1).

The relationship between the components is one-to-many throughout the internal structure, when viewed top-down. The directive can have several rationales supporting it; the directive can have many constraints assigned to it; a rationale can have many sources validating it; a constraint can have several rationales supporting it.

Defined in this manner, the directive is a compulsory (essential) component, while the others are considered discretionary (vital) components in support of the directive, as well as each other.

Fig. 6.1 Market
requirement's components
and internal structure
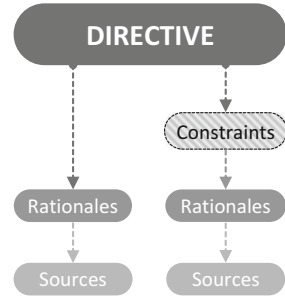
6.5   Directive

As previously described, the essential component of the market requirement is the
Directive. It is a statement which is phrased as an instruction that guides and directs
the functionality being sought by the user. The directive explains what is to be
accomplished.

The directive is the most important part of the market requirement, and the way
it is crafted and supported with data will profoundly impact the market require-
ment's quality. It will also determine the quality and form of the proposed solution.

Market requirements detail functionality—essentially the solution a user seeks
to a defined market problem. At the basic level, all market requirement directives
are related to the user, and are consistently phrased in the same manner. For
example:

User [persona] <shall/should> be able to <functionality>.

The special conventions used in the directive statement are:

- Square brackets "[ ]" denote optional arguments
- Pointed brackets "<>" denote mandatory arguments
- Slash symbol "/" denotes the "OR" logical operator

Special note is made to the matter of directive conditioning, which defines the
market requirement's relative priority.

All crucial market requirement directives must include the verb *shall* for con-
sistency. Functionality that has the *shall* directive conditioning is obligatory and
must be present in the solution. Market requirements that have the *shall* directive
conditioning signify the product's core functionality—the product's functionality
backbone. There is no prioritization required with the *shall* directive conditioning,
as that functionality is inherently considered most essential.

All desirable market requirement directives (i.e. beneficial but not critical to the
core product) must include the verb *should* for appropriate prioritization. The
functionality represented in market requirements that have the *should* directive
conditioning is optional, yet worth having in addition to the core functionality.
Prioritization levels are used with the *should* directive conditioning because that
functionality is considered worthwhile yet supplementary to the core functionality.

Prioritization of *should* directive conditioning is done with sub-qualifiers:

- *Should (high)*—include if at all possible
- *Should (medium)*—desirable feature
- *Should (low)*—include only if resources permit

As such, the expanded and more advanced syntax of a market requirement's directive is:

User [persona] <shall/should[(high/medium/low)]> be able to <functionality>.

The directive is the most important component of the market requirement. Directives themselves have their own foundation elements and structure. All directive elements must exist within each directive so that the directive itself is valid.

Directive elements are:

- *Event*—trigger that initiates requirement
- *Entity*—persona to which it applies
- *Action*—strong verb (shall/should)
- *Criteria*—pass/fail metric(s)

For example, parsing the directive "*User Bob shall be able to find a dropped flashlight*" confirms this directive holds all required elements. The event is the "*dropped flashlight*", the entity/persona is "*User Bob*", the action is "*shall*", and the criteria is "*find*".

Ultimately, the structure of a useful market requirement allows it to be easily modified and understood by non-technical and technical persons who will be acting on it in the future. This is important because there will be times when the people who originally wrote the market requirement are not available to continue work on the MRD. Such a scenario makes a strong case for why market requirements need to stand on their own and be self-sufficient for future use.

Incidentally, people often view the market requirement directive as being synonymous with the entire market requirement unit of information. This happens because the directive is the most dominant component of a market requirement, but clearly the two are not the same.

6.6 Constraints

The market requirement's directive provides the gist of the functionality that is being sought by the user to address a particular facet of a market problem. The true underlying market need embodied in a directive will be lost if the directive is ambiguously worded, or if the directive is expressed with broad or subjective terms, such as *easy* or *fast* or *friendly*. Such expressions and wording will lead to very different personal interpretations of the directive. Accordingly, the proposed solution and scope will vary considerably.

This inevitably will lead to a disconnect between the desired functionality the market requirement attempted to convey, and the actual functionality that will be proposed.

For example, the directive "*User shall be able to find a dropped flashlight*" allows considerable interpretative leeway to any reader even though it is the essence of the functionality being sought. In order to guide the reader to better understand the environment to which the directive relates, constraints must be introduced. *Constraints* are limitations imposed on the solution, and are another component of the market requirement.

In the following example, the directive previously used in the example is revised and interjected with constraints: "*User shall be able to quickly find a dropped flashlight in the dark.*" However, the directive remains flawed in several respects.

From the outset, the directive did not detail the terrain where the flashlight was dropped, which could be snow, mud, sand, water, grass, concrete, etc., any of which would profoundly impact the type of solution needed to provide the required functionality. The same would apply to the added constraints, which are the subjective terms of *quickly* and *dark*.

Rectifying ambiguity is accomplished by quantifying the directive: "*User shall be able within ten seconds to find in one foot deep snow a dropped flashlight in the dark.*"

Additional information can be introduced to define the meaning of *dark*, the height from which the flashlight was dropped, and more.

It is immediately apparent that the directive must be qualified using constraints, and that the constraints must be quantified. Directives will present different implications and different optimal solutions when they are differently qualified and quantified. This means that market requirement constraints must be as scalable and measurable as possible, because what is not measured cannot be controlled.

The objective in writing high-quality market requirements that are properly constrained is to provide anyone reading the directive, particularly the product architect, with enough information to propose a way to accurately and efficiently provide the needed functionality. There is a balance, however, as too many details and constraints will impede creativity and innovation.

6.7   Rationales and Sources

The product delivery process is lengthy, and the product planner is often challenged by others involved in the process to explain why a particular directive or a specific constraint was introduced. Additionally, when dealing with complex products with long development cycles, it helps to document the reasons why certain functionality was requested. When adequately captured, the reasons can be used during re-evaluation, and for marketing purposes.

Rationales and sources support the directive. The *Rationale* represents the logic and justification of a directive or constraint, while the *Source* provides the rationale with credibility based on data or respected opinions.

Constraints are meant to intentionally limit the options open to the architects of the solution. Because of their impact, each constraint should be accompanied by a rationale and a source. The sources may come from a variety of origins, including customers, customer support, development, research, sales channels, research papers, or consulting firms.

Rationales are used to document the reason for a given market requirement, and allow future readers of the MRD, especially the product architect and product developers, to be able to completely understand the market requirement in the absence of further explanation.

Readers need to know the reason for which a particular directive or constraint was introduced, and rationales are the given explanation. Rationales provide the justification and backup for a directive or constraint, allowing readers to gain a better insight as to the merit of that component.

Sources are very important and they allow any rationale or constraint to be backed up by documentation, surveys, statistics, or views of market analysts. Sources complement the rationales, and prove that the rationales are not mere opinions of the writers, but actual justifications supported by facts.

The rationales and sources provide more helpful information to those faced with writing the PRD—the next important document in the product development cycle. In general, it is optimal when rationales and their related sources are assigned to all directives and constraints within all market requirements.

6.8   Presentment Modes

A well-defined and valid market requirement will include all four of its components. Once defined, there are two ways to present a market requirement—*Story Mode* and *Data Mode*.

With *Story Mode* all components are interwoven into the directive, and the result is a long sentence or paragraph that holds the entire market requirement's required information. Story mode is helpful when dealing with simple products without too many constraints, or when the developers prefer the narrative, flowing form of knowledge transfer.

An example of story mode representation would be:

User shall be able within ten seconds to find in one foot deep snow a dropped flashlight in the dark.

With *Data Mode*, a less verbose directive is presented and supplemented with data in the form of bullet points, which hold the other market requirement components. Data mode is helpful when the product is complex, subjected to many constraints, and is of a deep technical nature. The data mode approach is more

suited for technology products, while the story mode is favored by those who deal with consumer goods.

An example of data mode representation would be:

Directive: "*User shall be able to find dropped flashlight.*"

Constraints:

* Terrain: Snow (<one foot deep)
* Recovery Time: Quickly (<ten seconds)
* Visibility: Darkness (<five candela)

An example of a more complete market requirement with samples of constraints, rationales, and sources might be (using fictitious data and sources):

1. *Directive:* "*User shall be able to find dropped flashlight.*"

   1.1. *Rationales:*

      1.1.1. *Loss of flashlight impairs critical navigational abilities and limits spotting by rescue force in 75 % of rescue cases*

         1.1.1.1. *Source: Red Cross report*

   1.2. *Constraints:*

      1.2.1. *Terrain: Snow (<one foot deep)*

         1.2.1.1. *Rationales: Over 20 % of hikers have lost flashlight in snow*

            1.2.1.1.1. *Source: USFS Survey*

      1.2.2. *Recovery Time: Quickly (<ten seconds)*
      1.2.3. *Visibility: Darkness (<five candela)*

Another type of naming convention that can be used to document a complex market requirement is through the use of notation identifiers (versus outline numbers). For a market requirement, the identifier convention is the letters MR proceeded by product initials followed by a tracking number. For example, a market requirement for a product named MGL would be MGL.MR200, the market requirement's rationale would be MGL.MR200.R10, the market requirement's constraint would be MGL.MR200.C10, the constraint's rationale would MGL.MR200.C10. R10, and so forth.

Gaps should be introduced into the identifiers, so future components can be inserted without the need for renumbering. The key with any notation or numbering system is that it allows the referencing of components in a clear and consistent manner.

6.9 Complete Structure

Table 6.1 describes the complete structure of a market requirement record.

Table 6.1 Complete Structure of a Market Requirement Record

Field	Description
MR Identifier	A unique identifier using a consistent name convention
MR Name	A short name for easy reference to the market requirement
Directive	An instruction that guides and directs functionality being sought by the user. Each directive addresses a facet of the market problem. The directive format is: "*User [persona] <shall/should[(high/medium/low)]> be able to <functionality>*"
Priority	"Shall" directive conditioning—critical functionality "Should" directive conditioning—desirable functionality (high, medium, low)
Rationales	A list of all possible rationales; the reasons that support the introduction of this market requirement
Sources	Each rationale must be supported by a source. Sources are a list of references and information origins that validate the market requirement
Constraints	A list of all possible constraints; the limitations imposed on the solution relevant to this particular market requirement. Each constraint should be supported by its own rationale and source
Rationales	A list of all possible rationales; the reasons that support the introduction of this constraint
Sources	Each rationale must be supported by a source. Sources are a list of references and information origins that validate the market requirement
Persona	Names of all personas applicable to this market requirement
Use Case	A use case statement or use case identifiers applicable to this market requirement. Entry of use case information is applicable only if a product or product concept actually exists
Buying Criterion	A Boolean indicator that this market requirement will foster a product feature used as a buying criterion
Differentiator	A Boolean indicator of whether this market requirement will foster a product feature that is a key differentiator, relative to competing products

6.10   Verifying Wholeness

Each market requirement needs to be tested for wholeness to ensure that it is viable and useable in the next step of the development process. To help verify the wholeness of each market requirement, there are six qualifiers called "*The Six Cs of a Market Requirement*".[1] They are as follows:

- *Complete*—all four directive components and key information are present
- *Consistent*—requirements do not conflict
- *Correct*—accurate description of user needs
- *Clear*—only one semantic interpretation
- *Criterial*—verified using a pass/fail metric
- *Concise*—complexity and clutter have been eliminated to enhance universal understanding

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[1]Larry L. Wear, Ph.D., Writing Requirements, 2002.

Once a market requirement or set of market requirements has passed the wholeness test, it is then ready to be placed into the MRD.

6.11 Market Requirements and Engineering

The MRD is a critical part of the development process. After the MRD is developed and finalized, it will get used by someone else in the product process. As a result, the MRD has to be a standalone document that can be used successfully by the next person in the development process to develop the right product for the intended customer.

The MRD and its market requirements become input to the PRD. When the product planner completes and finalizes the MRD, it is passed on to the product architect who is responsible for creating the PRD. The PRD should not be started until the MRD has been finalized.

6.12 Market Requirements Database

There are several ways to create and store market requirements. Typically the MRD is stored as a textual document and the most common way of doing so is with MS-Office tools, as many product managers are familiar with Microsoft Word or Excel. While word processors are good at producing textual documents, they have deficiencies that significantly decrease their ability to provide a suitable platform for creating market requirements. Word processors and spreadsheets are not good at querying information, sorting and baselining data, maintaining relationships between statements, and linking information internally and across documents. They are however inexpensive and easy to learn and use.

There are other more effective and efficient methods and means for building market requirements and an MRD. An example of an alternate method is using a database to store and create all market requirements. For some products, a market requirements database can be more useful than a document for accessing and utilizing the various directive components, arguments, operators, metrics, and supporting material.

The database method utilizes a computerized database and application software that aid in the generation of market requirements and an MRD. Implementing market requirements in an electronic medium can facilitate the crafting of market requirements such that they are particularly useful further down the product delivery process.

Every market requirement can be presented to the reader via a table of data, essentially a database record with data fields. In addition, the volume of market requirements can be organized in database form and formatted in structural representations that can be managed relatively easily using a computer.

A database is also helpful when there is a new product launch and decisions need to be made with regard to first release functionality. Customer critical items that are universally acceptable form the bulk of the initial release. However, requirements that did not make the first release, but are relevant to the product roadmap, can be considered for the next development cycle.

Once complete, the MRD is used to create the PRD which will contain the descriptions of all of the functionality that will go into a product. The PRD represents or describes the *Product View* of a solution to the market problem.

The matter of traceability—the linkage between market requirements and product requirements—is of great importance to product planners so they can verify that the product is not lacking needed functionality, or conversely, has no superfluous features that should be eliminated. Databases are a clear choice to monitor traceability between market requirements and product requirements.

There are several software applications on the market that were built for managing requirements of all kinds (market, product, technical). These applications are very much the same in principle—essentially database systems with configurable or fixed data entry screens and query mechanisms. However, these applications are designed to handle data, not enforce processes, and thus, to a large extent, the majority of them do not guide the product planner through a built-in methodology. Consequently, the methodology used with any general requirements management software application tool is the product planner's actions as applied to that application.

6.13   Summary

This chapter introduced the *Blackblot Procedural Requirements Management Model*, a structured way of capturing user needs, and presented a set of concepts to better articulate those user needs as market requirements. Because market requirements are crucial to the product definition process, their quality immensely impacts the development process and the product's level of suitability to customer needs. With so many potential interpretations of the nature of a market requirement, the definitions and components presented in this chapter help demystify the inherent ambiguity in the industry surrounding what a market requirement is, and its purpose.

Each market requirement must be tested and verified against consistent guidelines so that it is valid for use in the product definition process. Once all market requirements are complete, they form a *Market Requirements Document* (MRD), which represents a true commitment to customers by addressing their problem.

Once the MRD is complete, it is used as input to generate the *Product Requirements Document* (PRD). Software applications that use databases as an alternative to textual documents improve the management of the entire product delivery process, and ensure the much needed traceability between market requirements and product requirements.

Writing quality market requirements demands a very special skill set of product planners. They must possess superb linguistic skills, a profound comprehension of the market's and customers' needs, a deep understanding of the product delivery process, mastery of the market requirement's structure, and competency at crafting market requirements. While familiarity with markets is crucial, the key to developing quality market requirements is often determined by understanding the mechanics and methodologies for creating them.

The aim is that by understanding the *Blackblot PMTK Methodology*™ concepts introduced in this chapter, the product planner will have a framework for producing complete, clear, and concise market requirements. These will serve as the key to reducing the risk of product failure, and increasing the chance for product success in the marketplace.

Chapter 7
Concept of Marketing

Insight into the Concept, Structure, and Elements of the Marketing Domain

7.1 Introduction

Marketing is an instructive business domain that serves to inform and educate target markets about the value and competitive advantage of a company and its products. The goal of marketing is to build and maintain a preference for a company and its products within the target markets.

Volumes have been written about the marketing domain and what it entails, but little has been noted about how it is ordered and organized. Bringing the needed clarity to the essence of the marketing domain, the *Blackblot Marketing Model* maps the marketing activities within the marketing domain, presents the division and location of departments identified with the marketing domain in the corporate organizational hierarchy, and describes the types of strategies and plans related to the marketing domain.

This chapter provides insight into the concept, structure, and elements of the marketing domain from the Blackblot perspective as defined in the *Blackblot PMTK Methodology*™.

7.2 Business Domains

A *Domain* is a sphere of knowledge. In the context of doing business, a *Business Domain* is considered to be a fundamental corporate activity and essential to the company's ability to function or exist.

Business domains include business-related functions such as executive management, operations, engineering, manufacturing, product management, and marketing. Business domains themselves are vast, layered, and made of different elements. All the business domain elements are based on a common collection of knowledge areas and processes.

Table 7.1 Blackblot Marketing Model—Business Domain Concept Definitions (Summary Table)

Term	Description
Business Domain	Fundamental corporate activity that is based on a sphere of knowledge
Discipline	Knowledge area or activity that is governed by processes
Method	Plan or course of action
Mode	Particular form or way of achieving goals
Technique	Procedure used to accomplish a specific activity or task

A business domain is comprised of a specific set of *Disciplines*, which are knowledge areas or activities that are governed by processes. Each discipline is accomplished using *Methods*, which are a set of plans and organized actions that are achieved via the execution of modes. A *Mode* is a particular way that the method gets applied or acted on, via the use of techniques. A *Technique* is a procedure that is used to accomplish a specific activity or task.

The layers of a business domain are organized and sequenced in the following hierarchical manner:

Business Domain > Disciplines > Methods > Modes > Techniques

Table 7.1 summarizes the business domain concept definitions.

Most companies implement the elements in the business domain by using a conjoint approach. Without attesting to its merit, a characterization of this very commonplace implementation is as follows:

1. Within a particular domain, the majority or virtually all disciplines are constantly being executed.
2. Within each discipline, several methods are used concurrently with one particular method being the dominant one.
3. Within each method, several modes are used alternately.
4. Within each mode, a multitude of techniques are used concurrently or alternately.

By using the business domain concept it is possible to explain the internal structure and relationships of the marketing domain.

7.3   Marketing Domain

Marketing is an instructive business domain that serves to inform and educate target markets about the value and competitive advantage of a company and its products. *Value* is worth derived by the customer from owning and using the product. *Competitive Advantage* is a depiction that the company or its products are each doing something better than their competition in a way that could benefit the customer.

Marketing is focused on the task of conveying pertinent company and product-related information to specific customers, and there are a multitude of decisions

(strategies) to be made within the marketing domain, regarding what information to deliver, how much information to deliver, to whom to deliver, how to deliver, when to deliver, and where to deliver. Once the decisions are made, there are numerous ways (tactics) and processes that could be employed in support of the selected strategies.

The goal of marketing is to build and maintain a preference for a company and its products within the target markets. The goal of any business is to build mutually profitable and sustainable relationships with its customers. While all business domains are responsible for accomplishing this goal, the marketing domain bears a significant share of the responsibility.

Within the larger scope of its definition, marketing is performed through the actions of three coordinated disciplines: *Product Marketing*, *Corporate Marketing*, and *Marketing Communications*.

7.4   Marketing Domain Disciplines

The *Product Marketing* discipline is an outbound activity aimed at generating product awareness, differentiation, and demand. The *Corporate Marketing* discipline is an outbound activity aimed at generating awareness and differentiation to the company. The *Marketing Communications* discipline is the employment of a mix of media vehicles that support marketing objectives.

Table 7.2 summarizes the marketing domain concept definitions.

Table 7.2   Blackblot Marketing Model—Marketing Domain Concept Definitions (Summary Table)

Term	Description
(Marketing Domain) Definition	Instructive business domain that serves to inform and educate target markets about the value and competitive advantage of a company and its products
(Marketing Domain) Task	Convey pertinent company and product-related information to specific customers
(Marketing Domain) Goal	Build and maintain a preference for a company and its products within the target markets
(Marketing Domain) Disciplines	Product Marketing, Corporate Marketing, and Marketing Communications
Value	Worth derived by the customer from owning and using the product
Competitive Advantage	Depiction that the company or its products are each doing something better than their competition in a way that could benefit the customer
Product Marketing	Outbound activity aimed at generating product awareness, differentiation, and demand
Corporate Marketing	Outbound activity aimed at generating awareness and differentiation to the company
Marketing Communications	Employment of a mix of media vehicles that support marketing objectives

7.5   Blackblot Marketing Model

The *Blackblot Marketing Model* is comprised of three components:

1. Structured representation and mapping of the marketing activities within the marketing domain (marketing activities is everything that is being done in the marketing domain).
2. Structured representation of the division and location of marketing-related departments in the corporate organizational hierarchy.
3. Description of the types of strategies and plans in the marketing domain.

Based on the layered manner of description and by a graphic and tabular presentation, the *Blackblot Marketing Model* serves several objectives:

- Foster clearer understanding in the application of marketing activities.
- Provide a structured approach to mapping the elements of the marketing domain.
- Aid in building efficient corporate departments and structures that perform marketing activities.

Table 7.3 summarizes the marketing domain elements.

Table 7.3 Blackblot Marketing Model—Marketing Domain Elements (Tabular Form)

Marketing Disciplines	Marketing Methods	Marketing Modes	Marketing Techniques
Product Marketing	Value emphasis	Messaging model	Market research, value and positioning messages, messaging plan...
	Feature emphasis	Feature comparison	Competitor analysis, product comparison...
	Price emphasis	Cost-plus, going-rate	Skimming, penetration, diversification, discrimination...
	Product branding	Uniqueness, labeling	Loyalty programs, community relations, alliances, symbols, ideas...
Corporate Marketing	Corporate branding	Personification	Loyalty programs, community relations, alliances, symbols, ideas...
	Analyst relations	Engagements, resources	Knowledge databases, briefing sessions, demos, visits...
Marketing Communications	Advertising	Entertainment, information	Copyrighting, budgeting, creative, Internet, print, radio, TV...
	Graphic arts	Signals, imagery, perception	Presentations, sales tools, stationery, colors, logos, packaging...
	Public relations	Relationship, media coverage	Press releases, events, lobbying...

Additional elements can be added to this component of the *Blackblot Marketing Model*; however, the current mapping is relatively whole and effectively encompasses the essence of the marketing domain. See Fig. 7.1 for a graphical presentation of the marketing domain component of the *Blackblot Marketing Model*
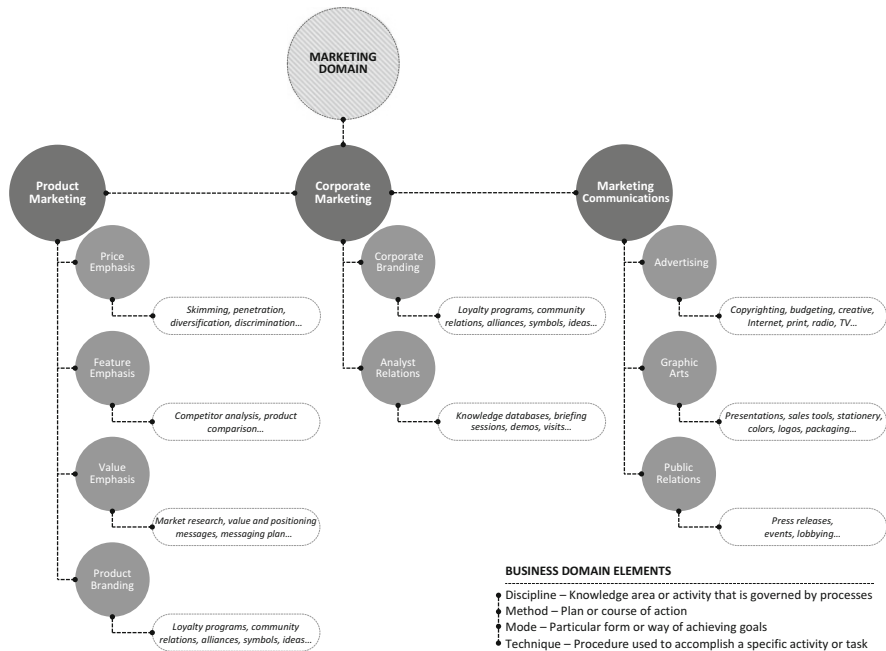
Fig. 7.1 Marketing domain

7.6   Product Marketing Methods

The goal of the *Product Marketing* discipline is to generate product awareness, differentiation, and demand. There are three principal methods to achieving this goal.

Each of these principal methods concentrates on one of the various aspects of the product: price, features, or value. The price emphasis method is called *Price Competition*. The features emphasis method is called *Comparative Marketing*. The value emphasis method is called *Value Marketing*.

In the price emphasis method, the goal of product marketing is reached by emphasizing and communicating to the market the price of the product as a marketing signal. For example, touting the product's high price may signify a premium product and attempt to positively effect a perception of quality via inference. The goal of the price emphasis method is to create a situation where the customers primarily consider the product's price as the main buying decision factor.

In the feature emphasis method, the goal of product marketing is reached by emphasizing and communicating to the market the existence or merit of the product's features in comparison to the features of other competing products.

The goal of the feature emphasis method is to create a situation where the customers primarily consider the product's feature set as the main buying decision factor.

In the value emphasis method, the goal of product marketing is reached by emphasizing and communicating to the market the value the product holds relative to the customer and comparatively to the value offered by other competing products. The goal of the value emphasis method is to create superior perceived value and prove superior actual value. *Superior Perceived Value* is a state where customers perceive the product (bought from a particular company) gives a net value more positive than its alternatives, and *Superior Actual Value* is a state where the product factually gives customers a net value more positive than its alternatives. The result of these states would be a situation where the customers primarily consider the product's value as the main buying decision factor.

The price emphasis and feature emphasis methods (price competition and comparative marketing) are considered significantly easier to implement than the value emphasis method (value marketing). This is because the price emphasis and feature emphasis methods convey simple quantitative concepts that are easy to understand and require minimal interpretation by the customers. Conversely, the value emphasis method relays abstract and qualitative concepts which project conjecture and argumentation, and thus are more challenging to grasp.

Another method in the product marketing discipline is product branding. *Product Branding* is the process of building and maintaining a brand at the product level. A *Brand* is an identity, made of symbols and ideas, which portrays a specific offering from a known source. Product branding is executed concurrently with one or more of the principal methods in product marketing.

The process of product branding and the derived brand are often the result of a deliberate and conscious effort by the company, but can also be an unintentional by-product resulting from the execution of any of the three principal methods of product marketing. Product branding is therefore not considered a principal method on its own since the formation of a brand can be the outcome of applying any of the three principal methods in product marketing.

7.7 Corporate Marketing Methods

The corporate marketing discipline objectives are supported by two principal methods: corporate branding and analyst relations.

Corporate Branding is the process of building and maintaining a brand at the institutional level. Corporate branding aims to create a favorable image and a positive identity relative to the company, with customers (existing and potential) in the target market. The goal of corporate branding is to leverage corporate brand equity in support of product brand equity.

Analyst Relations is a bi-directional information exchange with financial analysts and industry analysts to inform and favorably influence them. Financial analysts are individuals often employed by investment banks, who provide private

and institutional investors with valuable perspectives on the market in support of investment decisions. Industry analysts are individuals often employed by research firms, who present companies with knowledge and perspectives on a selected industry in support of business decision-making. Analyst relations attempts to indirectly influence customers via the analysts. The goal of analyst relations is to sway analysts so they in turn positively affect potential investors and customers with their recommendations.

7.8   Marketing Communications Methods

From a domain perspective, the marketing communications discipline is viewed as an implementation function to the product marketing and corporate marketing disciplines. Marketing communications manages and employs different media vehicles in order to communicate information about the company and its products to the target audience.

The information that is conveyed is provided to marketing communications by product marketing and corporate marketing, and is designed to serve these disciplines' respective interests. The core and most crucial form of information provided to marketing communications is referred to as *Messages*, which are ideas about the company and its products that will be communicated to the target markets.

The marketing communications discipline objectives are supported by three principal methods: advertising, graphic arts, and public relations.

The *Advertising* method, which is non-personal communication from an identified sponsor using mass media, is used to convey messages about the company and its products to the target audience.

The *Graphic Arts* method, which is the conception and copywriting of all collateral material, is responsible for maintaining a consistent image and visual positioning in the target market.

The *Public Relations* method, actions that promote and distribute information for a company, is focused on encouraging media coverage of the company and its products, and building a virtual relationship between the company and its target audience.

7.9   Corporate Organizational Structures

The various disciplines of the marketing domain are usually assigned to corporate departments of similar names which own these disciplines. These departments guide and/or execute multiple and specific discipline-related methods, modes, and techniques to enable the discipline to fulfill its business goal.

Table 7.4 Blackblot Marketing Model—Corporate Organizational Structure (Tabular Form)

Product Management	Marketing	Operations	Engineering	Business Management
Product Marketing	Corporate Marketing	Business Development	Development	Accounting
Product Planning	Marketing Communications	Distribution	Quality Assurance	Administration
		Program Management	User Experience	Executive Management
		Release Management		Human Resources
		Sales		Information Technology
		Support		Legal Services

Product Marketing, Corporate Marketing, and Marketing Communications are the three marketing domain disciplines. See Fig. 7.2 for a graphical presentation of the corporate organizational structure component of the *Blackblot Marketing Model*

Because of the different interpretations and views of the marketing domain and of the marketing disciplines, there is neither a consistent place nor uniform allocation of the relevant corporate departments in the organizational corporate structure. The corporate departments which represent the three marketing disciplines are occasionally aggregated to one corporate division called *Marketing*, sometimes grouped along with disciplines from other domains, and sometimes scattered among different corporate divisions.

The *Blackblot Marketing Model* also includes a structured representation of the corporate organizational structures, and shows the division and location of marketing-related departments in the corporate organizational hierarchy. As with the representation of the marketing domain, the model uses a layered manner of description and a graphic and tabular presentation.

Table 7.4 summarizes the corporate organizational structure.

Some disciplines from other business domains are occasionally grouped with the marketing disciplines and placed within the marketing corporate division. Commonly interjected into the marketing corporate division are the sales and business development disciplines which actually belong to the operations domain.

The *Sales* discipline is centered on the act of personally interacting with and persuading potential customers to buy the product. The *Business Development* discipline encompasses the actions that improve the performance of the enterprise, its access to markets, and its ability to compete, by creating strategic relationships with logistical, content, and technological partners. Both the sales and business development disciplines are actually part of the supportive operations business domain and therefore do not belong in the marketing domain.
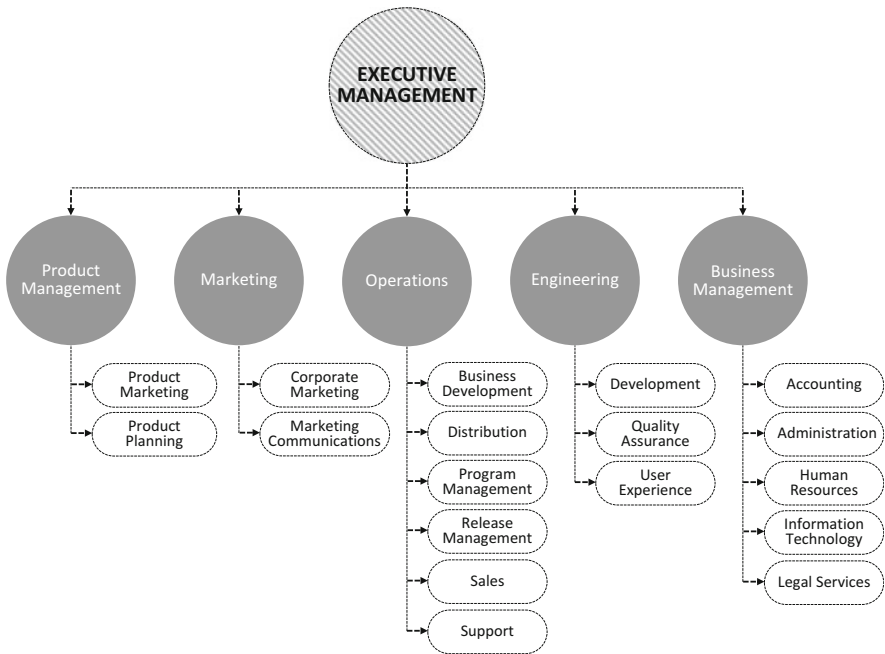
Fig. 7.2   Caption: corporate organizational structure

7.10   **Marketing and Strategies**

In the generic business sense, *Strategy* is the coordinated set of long-term decisions that help achieve corporate objectives. Every strategy has two goals: to provide more value than the competition, and to help build a sustainable competitive advantage. Inside the marketing domain there are two key decision-making areas that form the two marketing-related strategies: market strategy and marketing strategy.

The *Market Strategy* is decisions that define target markets, set marketing objectives, and outline how to build a corporate competitive advantage. The market strategy is determined by roles in both the product marketing and product planning departments with contributions from other corporate departments, notably the executive management department.

The *Marketing Strategy* is decisions that determine how to achieve marketing's goal (build and maintain a preference for a company and its products) in a particular target market, through the selection and application of marketing mixes. The *Marketing Mix*, originally known as *The Four Ps*, is a combination of product, price, place [distribution], and promotion activities that are applied to a particular target market. The general idea is to combine (mix) the variables to generate an optimal, positive, and desired response in the target market. Diverse and numerous

Table 7.5 Blackblot Marketing Model—Marketing Domain Strategies (Summary Table)

Term	Description
Strategy	Coordinated set of long-term decisions that help achieve corporate objectives
Market Strategy	Decisions that define target markets, set marketing objectives, and outline how to build a corporate competitive advantage
Marketing Strategy	Decisions that determine how to achieve marketing's goal in a particular target market, through the selection and application of marketing mixes
Product Strategy	Decisions that build and enhance products to fit market needs, and outline how to build a product competitive advantage. (Product strategy belongs to the product management business domain)

combinations of marketing methods, modes, and techniques can be selected and applied to create a marketing mix. The marketing strategy is mostly determined by roles (who focus on the promotion element of the marketing mix) in the marketing communications department with contributions from other corporate departments, notably the product marketing department.

Although extraneous to the marketing domain, an influential strategy on marketing activities is the *Product Strategy*, which is decisions that build and enhance products to fit market needs and outline how to build a product competitive advantage. The product strategy belongs to the product management business domain and is determined by roles in the product planning department.

Table 7.5 summarizes the marketing domain strategies.

7.11 Marketing and Plans

The decisions that are made at the strategy level are documented and used as directives in the formulation of plans which guide marketing activities. Inside the marketing domain there are two plan types: market plan and marketing plan.

The *Market Plan* is a description of the long-term goals and messages delivered to the target market relative to a particular company or product. The market plan documents the market strategy, but when prepared in support of the product marketing discipline it also documents certain elements of the product strategy, which pertain to building a product competitive advantage. Market plans are created by roles in the product marketing department (relative to the product) and in the corporate marketing department (relative to the company).

The *Marketing Plan* hinges upon the guidelines set forth in the market plan and is a description of the selection and application of marketing mixes in the target market. The marketing plan contains the marketing strategy and is created by roles in the marketing communications department, with contributions from the corporate marketing department, but primarily from the product marketing department.

The marketing strategy is permeated on an ongoing basis by various marketing activities, but is also expressed by very specific and focused measures taken in the market. Such measures are planned and noted in the *Marketing Program*, which is a

Table 7.6 Blackblot Marketing Model—Marketing Domain Plans (Summary Table)

Term	Description
Market Plan	Description of the long-term goals and messages delivered to the target market relative to a particular company or product
Marketing Plan	Description of the selection and application of marketing mixes in the target market
Marketing Program	Description of the short-term marketplace effort designed to obtain a specific marketing goal

Table 7.7 Blackblot Marketing Model—Marketing Domain Plan/Strategy/Department Mapping (Summary Table)

Plan Type	Market Plan	Marketing Plan
Strategy Type	Market strategy and elements of the product strategy	Marketing Strategy
Corporate Department	• Product Marketing (relative to the product) • Corporate Marketing (relative to the company)	Marketing Communications

description of the short-term marketplace effort designed to obtain a specific marketing goal. Examples of marketing programs include events (conventions or conferences), advertising campaigns, and limited-time discounting promotions.

Table 7.6 summarizes the marketing domain plans.

Table 7.7 summarizes the marketing domain plan/strategy/department mapping.

It is noted that support strategies and plans, which are more operational and tactical in nature, are derived from the market plan and the marketing plan. These include strategies and plans for advertising, analyst relations, and public relations.

7.12   Summary

This chapter focused on clarifying the marketing domain and the *Blackblot Marketing Model* that strives to create a complete and consistent view of the elements, structure, corporate departments, strategies, and plans that belong to the marketing domain.

The basic underlying premise of the *Blackblot Marketing Model* is that the essence of marketing is about communicating information to customers. Marketing's main task is to convey pertinent company and product-related information to specific customers, in support of marketing's goal which is to build and maintain a preference for a company and its products within the target markets.

Definitions abound as to what marketing is and its purpose. Some definitions are very expansive and some more focused. At the heart of these diverse definitions are different perceptions which view marketing mainly as a process, an activity, or a corporate department, or all of them combined. Consequently, the abundance of interpretations that proliferate in the industry creates different corporate structures

and role definitions to support them. Some even view the term marketing as loosely synonymous with sales or advertising.

By understanding the concepts, definitions, and structures of the *Blackblot Marketing Model*, those responsible for marketing now have a complete and clear framework for executing marketing activities and assigning them to the appropriate corporate departments. This will serve as a key to more efficient use and management of the company's marketing function with the aim of increasing the chance of product success in the marketplace.

Chapter 8
Value-Marketing Model

Presenting the Value Marketing Method and Marketing Messages Model

8.1 Introduction

Marketing is an instructive business domain that serves to inform and educate target markets about the value and competitive advantage of a company and its products. Within the larger scope of its definition, marketing is performed through the actions of three coordinated disciplines, named *Product Marketing, Corporate Marketing,* and *Marketing Communications*.

The goal of the product marketing discipline is to generate product awareness, differentiation, and demand. Three principal methods are used to achieve this goal and each of them emphasizes one of the various aspects of the product: price, features, or value. The price emphasis method is called price competition. The features emphasis method is called comparative marketing. The value emphasis method is called value marketing.

This chapter describes the underlying concepts of the value marketing method and how to perform value marketing. Supporting this task is the *Blackblot Value-Marketing Model*, a collective name for several work models and their supporting definitions. This model's components present, map, and structure the process and different activities necessary to execute the value marketing method.

This chapter also builds on the concepts and terminology previously introduced in the *Product Delivery Strategies*, *Product Management Team*, and *Concept of Marketing* chapters.

8.2 Value Concept

From a marketing perspective, *Value* is defined as the worth derived by the customer from owning and using the product. Attribution of value to a product is the outcome of a dynamic human reasoning process which infers from subjective

interpretation the gap between the customer's perception of the product's quality, and the expenses incurred by the customer from buying and using the product.

Several different formulas were introduced over the years in an effort to explain and represent value. Some formulas are rudimentary and simple, and some are complex and may include cultural, emotional, social, mental, and psychological coefficients to indicate the highly perceptive nature of value. In all cases, the value formulas are intuitive and/or mathematical expressions, and are sometimes errone-ously called the cost/benefit ratio, which is actually a financial term (financial return for each dollar invested).

The most basic value formula is Value = Benefits − Costs$_{[customer]}$, where *Benefits* are product features that are desirable to the customer, and *Costs*$_{[customer]}$ are the aggregate expenses incurred by the customer from buying and using the product (essentially *Total Cost of Ownership* or TCO).

[Note: Costs$_{[customer]}$ are different than Costs$_{[manufacturer]}$, which are the aggre-gate expenses incurred by the manufacturer in the process of manufacturing, selling, and supporting the product.]

In a sales-driven company, the sales people wish to increase the product's value by lowering the price of the product, which is part of the costs$_{[customer]}$. In a technology-driven company, the engineers wish to increase the product's value by inflating the product's feature set (benefits). In a market-driven company, the product's value is proactively determined by the product planner according to market needs.

Depending on how the value formula is applied, the outcome of the application can be either *Perceived Value*, which is an unsubstantiated estimation of worth that the customer obtains or could potentially obtain from owning and using the product, or *Actual Value*, which is the measured and validated worth that the customer or similar customers factually obtain from owning and using the product.

Customers will always prefer to base their decisions and opinions on actual value rather than perceived value, because actual value is inherently more realistic and somewhat more objective. Actual value is always based on actual components (actual benefits and actual costs$_{[customer]}$). However, perceived value can either be based solely on perceived components, or on perceived and actual components. To create perceived value it is enough that one variable in the value formula is of the perceived type.

Ultimately, positive value (either actual or perceived) derived from owning and using a product is what customers seek and will pay for.

Table 8.1 summarizes the value concept definitions.

8.3   Value Formula Scale

The value formula holds three components (value, benefits, and costs), each of which is expressed on a different scale, yet can be intuitively compared via normalizing the scales.

Table 8.1 Blackblot Value-Marketing Model—Value Concept Definitions (Summary Table)

Term	Description
Value Formula	Value = Benefits − Costs[customer]
Value	Worth derived by the customer from owning and using the product
Benefits	Product features that are desirable to the customer
Costs[customer]	Aggregate expenses incurred by the customer from buying and using the product (essentially *Total Cost of Ownership* or TCO)
Perceived Value	Unsubstantiated estimation of worth that the customer obtains or could potentially obtain from owning and using the product
Actual Value	Measured and validated worth that the customer or similar customers factually obtain from owning and using the product
Product Quality	Market's perception of the degree to which the product can consistently meet or exceed customers' expectations
Customers' Expectations	Hopes for deriving benefits from the product and establishing a rewarding relationship with the vendor

Costs are predominantly defined in monetary terms, but can also be expressed in non-monetary terms. Benefits are amorphously defined as the usefulness or utility the product's features can provide. Accordingly, value can be expressed either on a monetary or utility (non-monetary) scale, or ostensibly both.

Comparing variables of different scales is done by the customer via a very unscientific, intuitive process of converting one measurement scale to the measurement units of another scale. In practicality, this is done by either monetizing the product's utility (usefulness) units, or transforming an amount of money to utility units. Both transformations are based on the known utility that other alternative products can provide for that amount of money.

Depending on the given situation, value could therefore be expressed as a combination of monetary and/or non-monetary units of value, all of which could be completely subjective. Monetary units are considered intuitively easier to measure and justify than non-monetary units of value. Overall, value can be actual or perceived, tangible or intangible, and can be monetary, non-monetary, or a combination of both.

In a *Business to Consumer* (B2C—transaction of goods or services between businesses and private individuals) scenario, when dealing with consumer products which are used for personal gain, the more logical use of the value formula is by converting the costs element to utility units that can be compared to the value formula's benefits utility units. The resulting value is therefore subjectively and wholly expressed in utility units.

In a *Business to Business* (B2B—transaction of goods or services between businesses) scenario, when dealing with products which are used to perform business tasks to help make or save money, the more logical use of the value formula is by converting the value formula's benefits element to monetary units and comparing them directly with the costs element. The resulting value is subjectively expressed in monetary units.

Many products will hold both utility and monetary value, and both these forms of value scales will influence the customer to buy and continue using the product. However, it is cognitively difficult to jointly consider these two very different scales of value. Thus, the customer often focuses on one value scale as the key factor to consider, while the other value scale is regarded as an advantageous or positive (compelling) attribute. Again, value is something customers want and will pay for, no matter how it is expressed.

8.4   Value Concept Application

In most cases it is difficult for customers to calculate a monetary or non-monetary value amount. Customers will often rely on their intuition in an attempt to understand and realize the level of value the product holds for them.

Customers therefore first intuitively attribute a level of value to a product, relative to the degree to which the product solves the customers' market problem. The customers try to determine the degree of the product's *Resultant Value Proposition*, which is an implicit promise a product holds for customers to deliver a fixed combination of gains in time, cost, and status. This proposition reflects the product's main and relevant benefit, in absolute terms, to the customer and is what primarily is needed of the product.

Common business-oriented resultant value propositions, which are based on the benefits derived from features, include cost savings, improved usability, streamlined business processes, ability to perform entirely new tasks, automation of previously manual tasks, improved productivity, reduced rework, or conformance to standards or regulations.

Companies try to communicate the resultant value proposition to the customers and demonstrate that their products hold *Actual Resultant Value*, which is a fixed combination of gains in time, cost, and status the product factually delivers to customers. Customers try to determine the type, relevancy, and magnitude of the resultant value proposition the product holds for them, and corroborate that with available information (public knowledge or own experience) about the actual value proposition.

After customers ascertain the type, relevancy, and magnitude of the resultant value proposition the product holds, they need to comprehend and compare to other products the value received in relative terms, proportionate to the costs. The *Relative Value Proposition* is an implicit promise a product holds for customers to deliver a desired ratio of benefits and costs$_{[customer]}$. It is a notion that the customers use to differentiate products of seemingly similar value, although their respective absolute benefits and costs may be different.

Common relative value propositions, which are based on the ratio between benefits (features) and costs (TCO), include:

- Many more features for more TCO
- More features for the same TCO
- More features for less TCO
- Same features for less TCO
- Fewer features for much less TCO

[Note: The term features is loosely interchangeable with benefits, and is used here for convenience only.]

Companies try to communicate to customers the relative value proposition of their products and demonstrate that their products hold *Actual Relative Value*, which is a ratio of benefits and costs[customer] the product factually delivers to customers. Customers try to determine whether the type of relative value proposition the product holds corresponds to their perception of quality, and corroborate the relative value proposition with the actual relative value.

It is not exactly known which factors affect the psychological approach customers take to select the relative value proposition that they will wish for in the product, although financial viability is clearly an overriding factor. Companies may attempt to influence and shape the customers' desired relative value proposition, but it is ultimately the customer who decides which relative value proposition best fits them. However, if a company knows that its target market is comprised of customers with a definitive affinity to a particular relative value proposition, then that company can choose to offer a product with an actual value proposition that matches the particular relative value proposition being sought.

Traditionally it has been considered that the relative value proposition of European products made by highly developed countries such as Switzerland or Germany is "*many more features for more TCO*". Goods from various developing Asian countries were often considered to have a relative value proposition of "*fewer features for much less TCO*", although this proposition is changing as these countries develop.

Perceived value is therefore the summation of the resultant value proposition and the relative value proposition. Accordingly, actual value is the summation of the actual resultant value and the actual relative value. These formulas can be expressed as:

Perceived Value = Resultant Value Proposition + Relative Value Proposition

Actual Value = Actual Resultant Value + Actual Relative Value

Table 8.2 summarizes the value concept application definitions.

Table 8.2 Blackblot Value-Marketing Model—Value Concept Application Definitions (Summary Table)

Term	Description
Resultant Value Proposition	Implicit promise a product holds for customers to deliver a fixed combination of gains in time, cost, and status
Actual Resultant Value	Fixed combination of gains in time, cost, and status the product factually delivers to customers
Relative Value Proposition	Implicit promise a product holds for customers to deliver a desired ratio of benefits and costs$_{[customer]}$
Actual Relative Value	Ratio of benefits and costs$_{[customer]}$ the product factually delivers to customers
Perceived Value Formula	Perceived Value = Resultant Value Proposition + Relative Value Proposition
Actual Value Formula	Actual Value = Actual Resultant Value + Actual Relative Value

8.5   Internal Value Marketing Dynamics

The ultimate goal of the value marketing method is to achieve *Superior Perceived Value*, a state where customers perceive that the product gives a net value more positive than its alternatives. Superior perceived value is essentially the manifestation of the customer's belief in a powerful resultant value proposition coupled with an assumption that the product's relative value proposition level is what is being sought.

Companies try to create superior perceived value and prove *Superior Actual Value*, a state where the product factually gives customers a net value more positive than its alternatives. In a market-driven company, the *Product Planner* in effect defines the product's value and the *Product Marketer* is tasked with presenting that value to the market in order to achieve superior perceived value.

From a more holistic perspective, companies go through a sequential process where they first attempt to uncover the existence of a market problem. The companies then verify the availability of a market opportunity, continue to build a product that will solve the market problem (essentially performing product planning, product definition, and product development), then create superior perceived value, and finally prove superior actual value. The latter part of the process is essentially executing value marketing activities to perform product marketing. If this process is done properly then the company would be able to realize the financial potential in the market opportunity.

Summarily, the value marketing method of product marketing tries to create superior perceived value and prove superior actual value.

Table 8.3 summarizes the value marketing dynamics definitions.

Table 8.3 Blackblot Value-Marketing Model—Value Marketing Dynamics Definitions (Summary Table)

Term	Description
Superior Perceived Value	State where customers perceive the product gives a net value more positive than its alternatives
Superior Actual Value	State where the product factually gives customers a net value more positive than its alternatives

8.6 External Value Marketing Dynamics

In the customer's value estimation process, the value formula is initially used to ascertain if the product's perceived value is a positive figure (meaning the product has some explicit worth to the customer). At this point the customer also surmises the tangible and intangible facets of the purported value, such as cost-savings (tangible), morale, reputation, image, or status improvement (intangible). This part of the process is completely intuitive.

After the customer has established that the product has some positive perceived value, the customer then attempts to realize and validate the type, relevancy, and magnitude of the product's resultant value proposition, and conjointly comprehend the product's relative value proposition.

The next step the customer takes is to try to factually quantify and qualify the specific type of value that the product actually holds. The customer now attempts to obtain information that would attest to the product's actual value. With the collected information the customer is able, with some degree of confidence, to infer the product's actual value.

The customer surveys the industry for competing products and, through information gleaned from the market, possibly concludes that the product has superior perceived value. The resulting action would be to purchase the product.

If the customer concludes that the product does not have superior perceived value, then the product would be deemed unsuitable, and the customer's value estimation process would revert to the original starting point. The value estimation process (Fig. 8.1) would then restart and apply to a different product that potentially has superior perceived value.

After purchasing the product, through use and ongoing tracking, the customer can independently and empirically measure the product's actual value (actual resultant value and actual relative value).

Based on all this experience with the product and other market data about the experience others had with the product, the customer can realize whether the product indeed does or does not hold superior actual value.

The following flowchart summarizes the external value marketing dynamics.

[Note: In the flowchart the term ResVP means resultant value proposition, and the term RltVP means relative value proposition.]
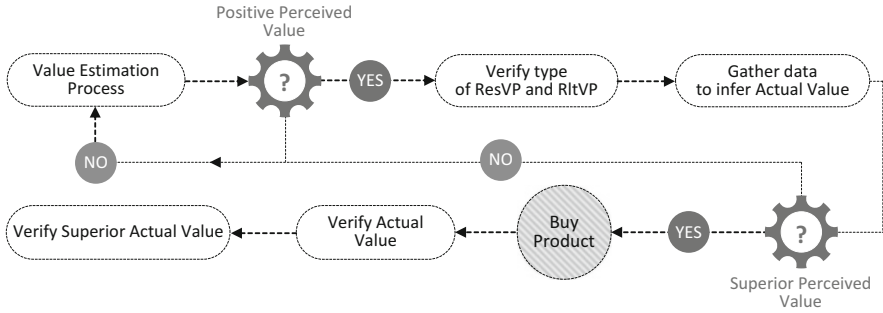
Fig. 8.1 Value estimation process

8.7   Creating Superior Perceived Value

The goal of the product marketing discipline is to generate product awareness, differentiation, and demand. The value emphasis method (value marketing) supports the achievement of that goal by creating superior perceived value, since superior perceived value is a major determining factor in the customer's buying decision. The following is a top-down explanation of the logics and process of creating superior perceived value.

Every method in product marketing is guided by strategies, which are documented in different plans within the marketing domain (see the *Concept of Marketing* chapter). In the generic business sense, *Strategy* is the coordinated set of long-term decisions that help achieve corporate objectives. Every strategy has two goals:

1. Provide more value than the competition.
2. Help build a sustainable competitive advantage.

While value is a relatively complex concept, competitive advantage is a rather simple idea. *Competitive Advantage* is a depiction that the company or its products are doing something better than their competition in a way that could benefit the customer.

Relative to value marketing, the most important plan which guides the course of marketing activities to follow is the market plan. The *Market Plan* is a description of the long-term goals and messages delivered to the target market relative to a particular company or product. The market plan documents the market strategy, but when prepared in support of the product marketing discipline it also documents certain elements of the product strategy, which pertain to building a product competitive advantage.

The *Market Strategy* is decisions that define target markets, set marketing objectives, and outline how to build a corporate competitive advantage. The *Product Strategy*, which is decisions that build and enhance products to fit market needs, and outline how to build a product competitive advantage.

In accordance with the goals of the contained market and product strategies, the market plan outlines marketing messages about the value and competitive advantage of the product, while simultaneously being synchronized with the corporate competitive advantage. Building a competitive advantage at either the corporate or product level is accomplished through devotion to quality.

As mentioned previously and from a marketing perspective, *Quality* is the market's perception of the degree to which the company or product can consistently meet or exceed customers' expectations. *Customers' Expectations* are the hopes for deriving benefits from the product and establishing a rewarding relationship with the vendor.

Therefore, exceeding the hopes of the customers in deriving benefits from the product will yield a product competitive advantage, and exceeding the hopes of the customers in establishing a rewarding relationship with the vendor will yield a corporate competitive advantage. Customer expectations management is really about a promise a company makes to its customers, a promise of quality.

The promise of corporate quality, and the origin of a corporate competitive advantage, is when the company delivers a relationship more rewarding than the customers had expected to receive. This promise is conveyed to the customers primarily via corporate marketing activities.

The promise of product quality, and the origin of a product competitive advantage, is when the product delivers more benefits than the customers had expected to get. This promise is conveyed to the customers primarily via product marketing activities.

The embedded conclusion is that market strategy also states the reward which customers get from establishing a relationship with the company, and that the product strategy also depicts specific benefits, perceived as quality, which customers get by owning and using the product.

Competitive advantage is based on quality, and so it can be deduced that an overall competitive advantage the market perceives will hinge upon both corporate quality and product quality. Accordingly, the (overall) competitive advantage formula can be represented as the summation of quality values:

$$\text{Competitive Advantage} = \text{Corporate Quality} + \text{Product Quality}$$

If the product holds positive value (perceived or actual) and the company has an overall competitive advantage, then the market could perceive that the value provided by the company and its product is more than the value provided by the competitors. This state is called superior perceived value and it can be presented as an intuitive formula:

$$\text{Superior Perceived Value} = \text{Competitive Advantage} + \text{Value}$$

Superior perceived value is the condition which value marketing strives to achieve. This condition is attained by distilling information and data about the overall competitive advantage and product value into messages that are communicated to the target market. The messages attempt to influence customers to form an opinion that the product gives a net value more positive than its alternatives. Superior perceived value is thus achieved once that opinion is formed.

Table 8.4 Blackblot Value-Marketing Model—Creating Superior Perceived Value (Summary Table)

Term	Description
Strategy	Coordinated set of long-term decisions that help achieve corporate objectives. Every strategy has two goals: 1. Provide more value than the competition 2. Help build a sustainable competitive advantage
Competitive Advantage	Depiction that the company or its products are each doing something better than their competition in a way that could benefit the customer
Market Plan	Description of the long-term goals and messages delivered to the target market relative to a particular company or product
Market Strategy	Decisions that define target markets, set marketing objectives, and outline how to build a corporate competitive advantage
Product Strategy	Decisions that build and enhance products to fit market needs and outline how to build a product competitive advantage
Quality	Market's perception of the degree to which the company or product can consistently meet or exceed customers' expectations
Customers' Expectations	Hopes for deriving benefits from the product and establishing a rewarding relationship with the vendor
Competitive Advantage Formula	Competitive Advantage = Corporate Quality + Product Quality
Superior Perceived Value Formula	Superior Perceived Value = Competitive Advantage + Value
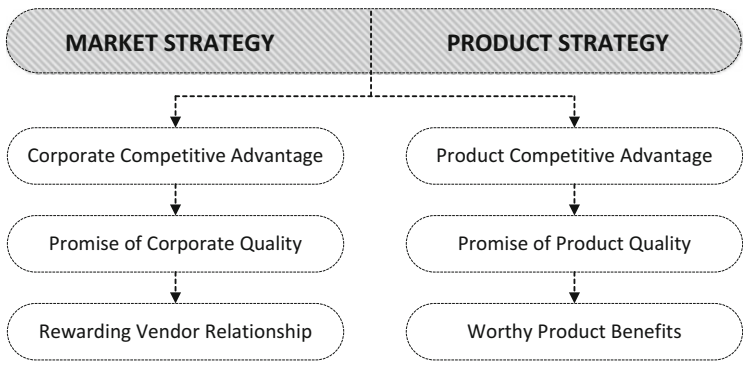
Fig. 8.2 Schematic presentation and relationships of the entities that help build superior perceived value

Table 8.4 summarizes the definitions related to the logic and process of creating superior perceived value.

Figure 8.2 schematically presents the relationship between the entities that help build superior perceived value.

8.8   Product Marketing Messages

Product marketing is aimed at generating product awareness, differentiation, and demand for a particular product.

Creating differentiation is accomplished via the communication of positioning messages which attempt to affect the customer's perception of a product or service as compared to its competition. *Positioning* is the customer's unique psychological placement of the relative qualities of a product or company with respect to its competitors.

Stimulating demand is influenced via the communication of value messages that convey to the customer the product's value propositions—the worth derived from owning and using the product. Establishing product awareness is a by-product of issuing the positioning messages and the value messages.

Messages are ideas to be communicated, often corroborated by facts, yet foundational knowledge is required in order to formulate messages. Foundational knowledge for preparing positioning messages is primarily the positioning statement that was crafted for the product and the product's *Sales Axioms*, which are the fundamental concepts which the product is built upon. The foundational knowledge required for preparing value messages is more elaborate.

8.9   Value Messages' Foundational Knowledge

The foundational knowledge to build value messages is based on the product's different value propositions, quality factors, and the product's unique selling proposition.

The *Unique Selling Proposition* (USP) is a key statement that describes the distinct and compelling value of the product, which sets the product apart from other competing products. The USP concept relates to the product's unique value asset, as it is both a competitive differentiator and a source of worth to the customer. The USP concept is therefore loosely related to the value concept. The same notion can be applied to a company and that is referred to as distinctive competency or *Core Competency*, which is a company's unique ability to deliver value while differentiating itself from the competition.

Regarding quality factors, customers often consider the following elements as a signal that depicts *Corporate Quality*:

- *Honesty*—fair pricing
- *Facilitation*—attention to convenience
- *Assistance*—dedication to customer service
- *Caring*—dedication to customer satisfaction

Customers often consider the following elements as a signal that depicts *Product Quality*:

- *Usability*—ease of operation
- *Productivity*—scope of useful features
- *Longevity*—how long a product lasts
- *Reliability*—how long before breakdowns
- *Durability*—how long without degradation

Customers often consider the following elements as a signal that depicts *Service Quality*:

- *Tangibles*—equipment, facilities, and people
- *Responsiveness*—promptness in helping
- *Reliability*—promising and delivering
- *Assurance and Empathy*—caring attitude

Based on the aforementioned, the following are the six *Value and Quality Factors* which build superior perceived value and which will be used as foundational knowledge to create value messages:

1. Promise of Corporate Quality
2. Promise of Product Quality
3. Company Core Competency
4. Resultant Value Proposition
5. Relative Value Proposition
6. Unique Selling Proposition

Table 8.5 presents hypothetical examples of the value and quality factors for different types of companies.

Logically, the promise of corporate quality and the company core competency factors are foundational knowledge elements that are used for corporate branding via corporate marketing activities. These corporate-related value and quality factors are listed so they can be referenced, and care taken to ensure they are synchronized (and do not contradict) with the other product-related value and quality factors.

The foundational knowledge, once established, will be used to aid the creation of marketing messages. These messages will be communicated to the target market via a messaging model and plan.

Table 8.5 Examples of the Value and Quality Factors for Different Types of Companies

Company Type	Large Software Company	Large Consultancy Firm
Promise of Corporate Quality	Fair Pricing	Responsiveness
Promise of Product Quality	Functionality	Comprehensiveness
Company Core Competency	Distribution	Business Knowledge
Resultant Value Proposition	Increased Productivity	Efficiency
Relative Value Proposition	Same features for less TCO	More features for same TCO
Unique Selling Proposition	Usability (Better UI)	Pragmatism

8.10   PMTK Market Messaging Model

The *PMTK Market Messaging Model* is a collective name for three sub-model components:

1. PMTK Product Positioning Messages Model
2. PMTK Product Value Messages Model
3. PMTK Marketing Messages Model and Plan

The product positioning messages must reflect a product feature or capability and the derived benefit to the customer, relative to the market problem. Building product positioning messages is done by first establishing a product positioning statement (such as Regis McKenna's two-sentence positioning statement), defining three to four key marketing messages that reinforce the product positioning statement, and providing two to three data points that validate each key marketing message. Each data point must be based on measurable, objective, factual, provable information, and each message must be supported with data points the customer can actually verify.

Figure 8.3 schematically presents the PMTK product positioning messages model.

The product value messages must reflect a perceived monetary or material or psycho-social worth that the customers shall gain from owning and using the product. Building product value messages is done by first establishing the product's
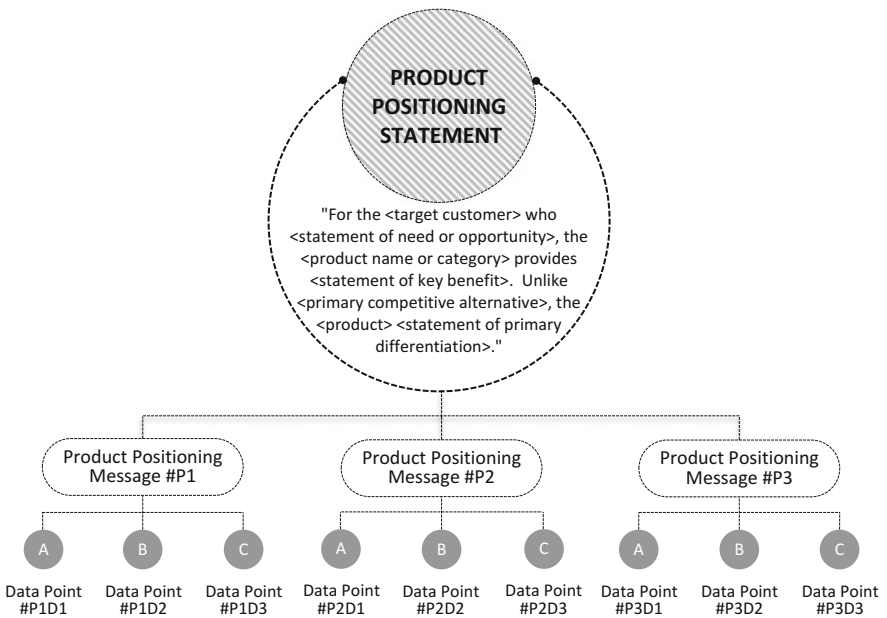
Fig. 8.3 PMTK product positioning messages model
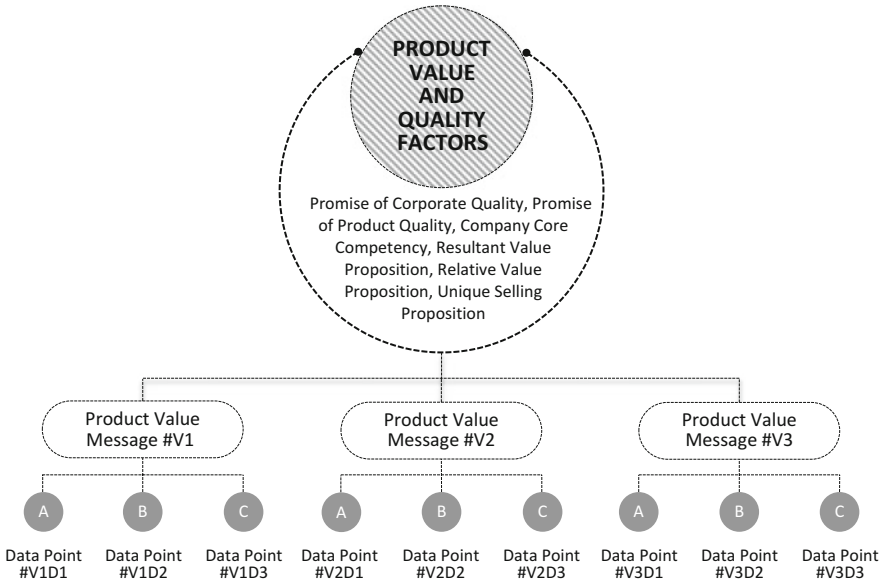
Fig. 8.4 PMTK product value messages model

six value and quality factors, defining three to four key marketing messages that convey the product's value and quality factors, and providing two to three data points that validate each key marketing message. Figure 8.4 schematically presents the PMTK product value messages model.

8.11 PMTK Marketing Messages Model and Plan

The PMTK marketing messages model and plan provide guidance for the manner in which the marketing messages will be introduced to the target market.

Table 8.6 describes the elements of the PMTK marketing messages model.

Once determined, the elements of the PMTK marketing messages model form a plan that guides the marketing activities. Table 8.7 presents an example of a PMTK marketing messages plan.

The PMTK marketing messages plan is the last step in implementing the value marketing method. It contains all the high-level content that is necessary to perform any type of promotional activities on behalf of the product.

The marketing messages plan is provided to all relevant internal departments and external partners who will operationally communicate the marketing messages to the target market. These partners specifically include: marketing communications, corporate marketing, analyst relations, investor relations, public relations, and advertising firms.

Table 8.6 Blackblot Value-Marketing Model—PMTK Marketing Messages Model

Messages	Ideas to be communicated
Media	Selection of media vehicles that will be employed to communicate the messages, including: public relations, advertising, sales, electronic marketing, direct marketing, telemarketing (key selection factors: reach, frequency, and impact)
Schedule	The marketing messages frequency of appearance along a timeline. Common schedules include: continuous (ongoing and uninterrupted marketing messages exposures), intervals (periods of marketing messages exposures that are regularly interspaced), and blink (very brief marketing messages exposures that are irregularly interspaced)
Sequencing	Order and pattern of presenting the marketing messages
Proof Support	Rotation of data point inclusion

Table 8.7 Blackblot Value-Marketing Model—PMTK Marketing Messages Plan (Example)

Messages	Message_A, Message_B, Message_C
Media	Print advertising and telemarketing
Schedule	Continuous/60 days, intervals (on/12 days-off/7 days)
Sequencing	Order (Message_C, Message_A, Message_B) Pattern (2* Message_C, 1* Message_A, 3* Message_B)
Proof Support	Rotate data point every third exposure

The messages in the PMTK marketing messages plan will be wrapped and embedded into media vehicles such as advertisements. The messages will also be conceptually reflected in all possible visual and written elements of the product such as packaging, logo, tagline, user manual, and tutorials.

8.12   Summary

This chapter described, according to the *Blackblot PMTK Methodology*™, the underlying concepts of the value marketing method, a part of the product marketing discipline of the marketing domain, and outlined how to perform value marketing through the use of marketing messages.

As with any marketing method, results are not guaranteed. This is because marketing methods attempt to foretell and alter human behavior, and therefore their outcome is most challenging and least predictable. Marketing is an inexact science and, since humans are considered emotional and irrational by their own fabric, the results of all marketing activities are probabilistic and unpredictable, and typically there are no definitive best practices.

By understanding the concepts, definitions, and structures introduced in this chapter, those responsible for marketing now have a complete and clear framework for creating marketing messages that pertain to the product's positioning and value propositions.

Carefully formed clear and targeted marketing messages are the basis for virtually all promotions, communications, advertising, sales, and other marketing activities. These messages will help promote a more efficient use and management of the company's marketing function with the aim of properly appealing to potential customers. The outcome will be marketplace success.

Chapter 9
Extending Product Life Cycle Stages

Exploring the Product Life Cycle Model and Ways to Extend the Life of a Product

9.1   Introduction

Businesses are always seeking better ways to grow profits and maximize revenue from the sale of products or services. Revenue allows a company to maintain viability, invest in new product development, and improve its workforce, all in an effort to acquire additional market share and become a leader in its respective industry.

A consistent and sustainable revenue stream from product sales is key to any long-term investment, and the best way to attain a stable revenue stream is a *Cash Cow*. Cash cows are leading products that command a large market share in mature markets. Cash cows display a *Return On Investment* (ROI) that is greater than the market growth rate, and thus produce more cash than they consume. The question is therefore: How can a company develop a cash cow product? One way of doing so is by applying relevant product planning and/or product marketing strategies, aka competitive moves, at the various stages of a product's life cycle.

The *Product Life Cycle Model* (PLC Model) is a relatively new theory which identifies the distinct stages affecting sales of a product, from the product's inception until its retirement. Companies that successfully recognize these stages and subsequently apply a custom *Marketing Mix* (combination of product, pricing, promotion, and place [distribution] activities) at each stage, are able to sustain sales and defend or win market share. By deliberately extending the length of time spent at each of the PLC stages through different tactics, companies are also able to realize much of the revenue potential a product can offer.

This chapter introduces the PLC Model, and its merits and faults are addressed. Considerations, ways, and reasons to extend PLC stages are explained. Examples are provided to show how product planning and product marketing strategies can be used at different PLC stages to help establish market dominance and drive sales. This chapter relates to consumers and consumer goods. *Consumers* are individuals or households that buy and use goods and services created by industries.

9.2   Product Life Cycle Model Assumptions

At the core of the PLC Model are the following simple assumptions:

- All products have limited life spans.
- Product sales pass through different and distinct stages.
- Each stage presents a different challenge, which calls for the application of a customized marketing mix.

9.3   Product Life Cycle Model Stages

A PLC is traditionally viewed, from a marketing perspective, as being comprised of four distinct stages: introduction, growth, maturity, and decline (Fig. 9.1).

In the *Introduction* stage, the product is introduced to the market through a focused and intense marketing effort designed to establish a clear identity and promote maximum awareness. Many trial or impulse purchases will occur at this stage. Next, consumer interest will bring about the *Growth* stage, distinguished by increasing sales and the emergence of competitors. The growth stage is also characterized by sustaining marketing activities on the vendor's side, with consumers engaged in repeat purchase behavior patterns. Arrival of the product's *Maturity* stage is evident when competitors begin to leave the market, sales velocity is dramatically reduced, and sales volume reaches a steady state. At this point in time, mostly loyal consumers purchase the product. A continuous decline in sales signals entry into the *Decline* stage. The lingering effects of competition, unfavorable economic conditions, new fashion trends, etc. often explain the decline in sales.
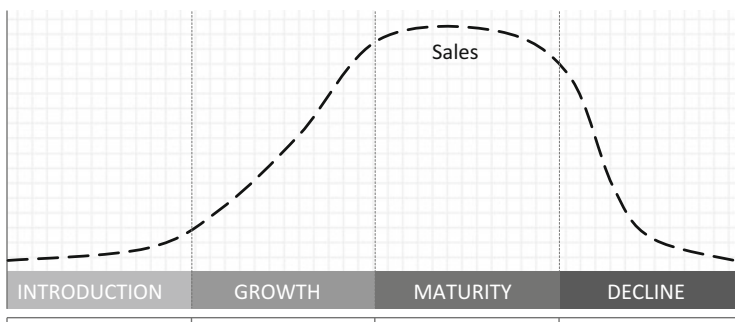
Fig. 9.1   Product life cycle model stages

9.4   Reasons for Extending the PLC

Understanding and extending the PLC stages allows a company to fully exploit market opportunities, and defend or establish a competitive advantage through a lasting market presence. The main business reason for extending the PLC is to gain more sales through longer presence in the marketplace. The main marketing reason is, since not all consumers are alike, certain consumer types will adopt a product at different stages of the product life cycle. By extending each stage of the PLC there is a better chance of exposure to the relevant consumer group. Extending the PLC should not be confused with extending the life of the product, which applies to enhanced durability, reliability, or technical quality.

9.5   Strategies for Extending the PLC

The nature and type of applicable strategies to extend the PLC will vary with each stage, and the level of variation depends on the product type, market conditions, consumer audience, and projected PLC timeline. It is hard to predict a transition from one PLC stage to another (because of measurement lags) and proactively react to the change with targeted action. However, through proper marketing mix design and contingency planning, it is possible to apply various product planning and product marketing strategies at the beginning of a particular stage when it arrives. The underlying approach with any of the following strategies is targeted improvement.

9.6   Product Planning Strategies for Extending the PLC

- *Product Diversification*—creating different product variants.
  Microsoft's family of Windows 9.x operating systems allowed the software giant to continuously extend the life cycle of this desktop computer operating system. Windows 95, Windows 98, Windows 98SE, Windows ME, Windows XP are among the better-known variants. Coca-Cola's vanilla flavored drink is an example and a variant to the venerable Classic Coca-Cola drink.
- *New Product Uses*—applying the core product to different uses.
  Apple Computer has been very innovative and successful by finding additional uses for its Macintosh computer, such as desktop publishing and strong graphics and animation capabilities. Apple's Digital Hub concept extends the Macintosh's functionality even further to serve as a center for managing multi-media files from cameras, DV recorders, scanners, and MP3 devices. On the retail side, in the world of *Consumer Packaged Goods* (CPG), Arm & Hammer

devised over several decades a multitude of deodorizing uses for their core product, baking soda.
- *Changing Product Layers*—altering the product features and creating different product families.
  Hewlett-Packard's InkJet and LaserJet printers are examples of product families that share the same technological core. In addition are Jell-O's product families of puddings, colored gelatins, and snacks, which are all based on raw gelatin.

9.7 Product Marketing Strategies for Extending the PLC

- *Re-Positioning*—changing the product's perceived values and intent in the mind of the consumer.
  Microsoft's Windows NT was designed as a multitasking, multithreaded, multifunctional desktop operating system. It was based on work done by Microsoft for IBM's OS/2 and in terms of its feature set resembled Unix more than it did Novell's NetWare. NetWare, a Network Operating System (NOS) and Novell's flagship product dominated the File&Print server market in the early 1990s to the tune of a 75 % market share. Through massive and prolonged positioning efforts, Microsoft was able to persuade corporate IT departments that Windows NT could be more than just a powerful desktop computer operating system, and could replace NetWare as the departmental File&Print server. Novell tried unsuccessfully to shield NetWare from Windows NT by attempting to position UnixWare (Novell's Unix based operating system) against Windows NT.
- *Co-Branding*—enhancing (or diluting) the product's brand equity by association with another strong brand.
  In an attempt to boost sales, IBM announced a joint effort with J.D. Edwards & Company to market a specialized IBM eServer called the IBM eServer for J.D. Edwards, optimized to run J.D. Edwards' collaborative commerce software for small to medium size businesses. These types of co-branding initiatives are nearly always an attempt to capitalize on synergy between brands and products.
- *Re-Packaging*—literally placing the product in a new package to revive its appeal.
  This is common practice in retail markets with the introduction of new labels, different container sizes, and different container types, such as Colgate's toothpaste in a tube or pump dispenser. In the computer software world, virtual re-packaging is done through the introduction of a new visual Graphical User Interface (GUI) while application functionality remains relatively unchanged.
- *Re-Branding*—a drastic and costly measure used to disassociate the brand from the previous values with which the brand has been associated.
  The key concern with such a move is maintaining existing market share. For example, IBM re-branded its eCommerce software application, Net.Commerce to WebSphere Commerce. It also re-branded its line of servers as eServer

(formerly Netfinity). This was an attempt by IBM to make a fresh entry and position itself as a competitor in the world of Unix and Intel based servers dominated by Sun Microsystems and Dell Computers. Sometimes companies re-brand themselves in an effort to build new reputation and brand equity—Datsun/Nissan vehicles, Borland/Inprise software products, and GTE/Verizon telecomm services.

- *Increasing Frequency of Use*—encouraging consumers to break away from traditional molds of product usage.
  Chivas Regal was always considered a fine Scotch whisky to be consumed on special occasions such as weddings, or given as a gift. Through a worldwide advertising campaign, Chivas was able to increase consumption by delivering a consistent message about the brand's broader appeal.
- *New Markets and Segments*—this strategy is an attempt to penetrate non-traditional markets or consumer segments.
  Companies are able through exploratory research to discover the potential of geographically remote markets (Asia, Africa, and the former Soviet Bloc) or new consumer segments (seniors, minorities, and women). Subaru specifically targeted women as a new automotive consumer segment, realizing their strong potential as first-owner buyers.
- *Pricing and Special Offers*—pricing is a positioning tool and a way to influence sales through the use of various price, payment schemes, and models.
  Price manipulation can take place at all stages of the PLC, including the *Introduction* phase. For example, only six months after its launch, Microsoft reduced the price of the Xbox game console in North America by about 30 %.

9.8 Strategy Application Within the PLC Model

Planning which product planning and product marketing strategies to apply, and when, should be part of any long-term approach. Since there are so many diverse products, markets, and companies, it is difficult to provide a definitive, single method for strategy selection and application.

However, some general guidelines can be followed to help ensure marketing mix effectiveness in promoting a PLC stage extension. Once a decision to extend a PLC stage has been made, the following elements must be factored into the planning:

- The company's product line's business strategy—leader, follower, innovator.
- The company's marketing policies—soft or hard product launches, traditional choice of media vehicles, pricing policies, sales channels selection, etc.
- External constraints—government regulations, distribution networks, cultural barriers, politics, tariffs, and taxes, etc.

Sometimes a certain strategy may seem applicable to all PLC stages. Price manipulation is an example of something that can be used at all stages of the PLC to help influence sales and serve as a flexible way to rapidly react to

		Re-Packaging	
	Product	Co-Branding	Re-Positioning
	New Product Uses	Product	Increasing
Increasing	Changing Product	New Product Uses	New Markets and
Pricing	Pricing	Pricing	Pricing
INTRODUCTION	**GROWTH**	**MATURITY**	**DECLINE**
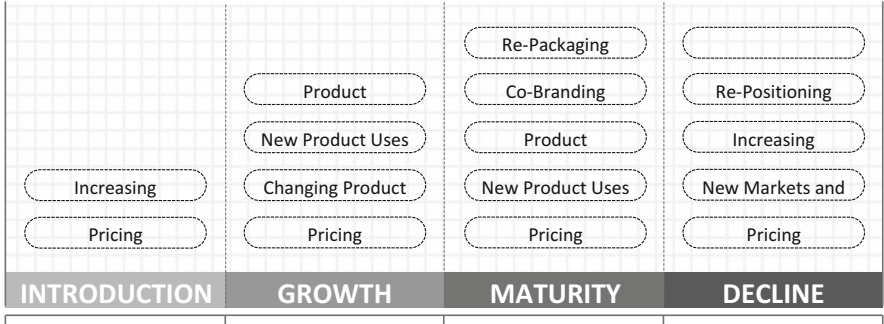
Fig. 9.2 Strategy application within the PLC model

competition. The drawback of repeatedly applying a certain strategy or using several strategies at once is that it may confuse the consumers. Exercising any such combined approach should be well justified.

Figure 9.2 notes the strategies considered most applicable to their respective PLC stage.

9.9   Limitations of the PLC Model

It is difficult to foresee transitions in PLC stages since the key indicators are sales which are always calculated with some lag. Therefore, the realization that a stage transition has occurred is nearly always in retrospect. In addition, fluctuations in sales will produce erroneous conclusions. Therefore, declining sales do not necessarily mean the product has reached the decline phase, and the resulting conclusion to retire the product and divert resources is wrong.

Products, companies, and markets are different; therefore not all products or services go through every stage of the PLC. There have been many cases where products have gone straight from introduction to decline, usually because of bad marketing, misconceived features, lack of value to the consumer, or simply a lack of need for such a product. However, even if products were to go through every stage of the PLC, not all products and services spend the same length of time at each stage. This adds another level of complexity in determining which PLC stage the product is in and, consequently, which strategy to apply.

Finally, the PLC Model is inefficient when dealing with brands or services. A *Brand* is an identity, made of symbols and ideas, which portrays a specific offering from a known source. Brands apply to both companies and products. Brands have a life cycle of their own, and products belonging to a certain brand will experience a very different life cycle than the brand itself. For example, Dell and Mercedes-Benz are very strong brands whose life cycle is marginally affected by the failure of any of the products they hold. Apple Computer's Lisa, Newton (market failures), iMac,

and iPhone (market successes) are proof that brands and products have different PLCs although they are closely related.

9.10   Benefits of the PLC Model

Managers are always in need of predictive tools to help them navigate a seemingly chaotic market, and the PLC Model gives managers the ability to forecast product directions on a macro level, and plan for timely execution of relevant competitive moves.

Coupled with actual sales data, the PLC Model can also be used as an explanatory tool in facilitating an understanding of past and future sales progression. The PLC Model aids in making sense of past events as part of any extrapolative and interpretive approach to building strategy. Once a product strategy or product line strategy has been formulated, the PLC Model can be used as part of an ongoing strategy validation process, since it reflects on market trends, customer issues, and technological advancement.

Companies always anticipate the emergence of new competitors and therefore must prepare in advance to battle the competition and strengthen their product's position. The PLC Model has advantages in planning long-term offensive marketing strategies, particularly when markets and economies are stable. Nevertheless, most products die and once products are dead they hold no substantial revenue potential and represent a toll on a company's resources. By combining the elements of time, sales volume, and a notion of evolutionary stages, the PLC Model helps determine when it becomes reasonable to eliminate dead products.

9.11   Summary

Keeping a product alive for decades is a sign of successful PLC extensions, and brand/product combinations such as Heinz Ketchup, Hershey Chocolate and Gillette's Safety Razor are clear indicators of such extensions. Through consistent PLC management, a company will be able to improve products and become a marketplace leader. The role of the product marketing department is to understand the Product Life Cycle theory and identify the critical PLC stages. This will aid the planning and execution of an effective marketing mix, designed to support business (revenue, profit) and marketing (market share, loyalty, growth) objectives.

The PLC Model can and has been effectively used by business managers to support decision-making at every stage of a product's life cycle. Although the PLC Model itself is subject to many interpretations with some advocates theorizing five or even six stages, it will always remain fairly flexible and adaptive to many product categories.

The PLC Model is yet another tool managers have when dealing with dynamic and complex situations that abound in the world of proactive product planning and product marketing.

Part II
Product Management Editorials

Chapter 10
Defining Product Management

10.1 Outbound and Inbound Activities in Product Management

10.1.1 Introduction

Product management is often described as representing outbound and inbound activities. Specifically, it is argued that product marketing is outbound while product planning is inbound.

This review explains what outbound and inbound activities are, and that the product management domain, fundamentally product marketing and product planning, is simultaneously both outbound and inbound.

10.1.2 Outbound and Inbound Activities

In their generic meaning, outbound and inbound activities, aka upstream and downstream activities, refer to the interaction efforts and the bi-directional flow of information between a company and its target markets.

In the context of the product management function, product planning and product marketing individually perform both outbound and inbound activities.

Product planning queries users in the market for information that will generate market requirements, which shapes the product (inbound), and then provides the users in the market with a product that solves the market problem (outbound).

Product marketing queries buyers in the market for information that will help buyers evaluate the product's value (inbound), and then in different ways, for example, sales, advertising, social media, provides the buyers in the market with the information that they need to make a buying decision (outbound).

Some perspectives in the industry refer to outbound activities as being primarily marketing activities that attempt to affect the buying behavior of customers, and to inbound activities as the company's information gathering efforts and some internal work to help build products.

10.1.3   Summary

The overly simplified perspective results in encompassing catchy phrases such as "*Product management listens to the market and product marketing talks to the market*." Indeed this rudimentary approach to explaining the interaction between product management and the market is easy to remember but is also fundamentally incomplete because all entities in product management individually perform both outbound and inbound activities.

10.2   Product Management Organizational Placement

10.2.1   Introduction

This review provides the historical context and explains which department product managers should belong and report to.

10.2.2   History of Placement

The product management function's placement in the corporate organizational structure has gone through an evolution.

During the mid-1970s–mid to 1980s, product management was designated as a part of engineering. The origin of this decision was because executive management wanted someone from development to act as an interface between development and (1) other internal corporate functions and (2) customers in the market. This placement failed because the developers discredited product management as being ill-informed on technology and therefore unworthy of writing product and technical requirements. For technical people, writing market requirements was a low priority and deep technical knowledge was highly valued.

Consequently, during the mid-1980s–mid to 1990s executive management moved product management and placed it as a part of marketing. The move was made because of the failure in placing product management in engineering and because of the growing understanding that product management (actually product planning) is inextricably linked to product marketing. This placement also failed because
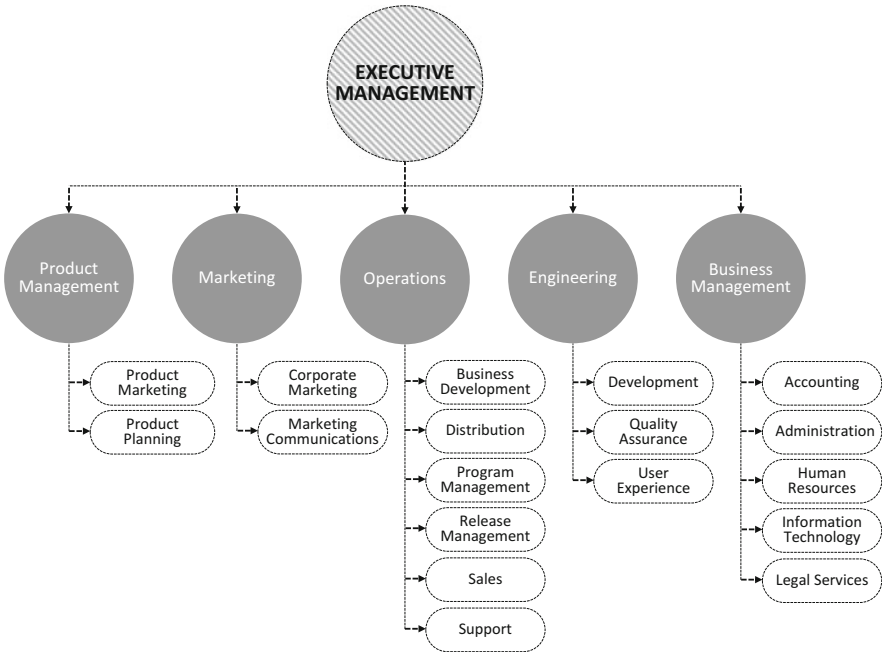
Fig. 10.1 Blackblot corporate organizational structure

product management, when placed in marketing, became a demo resource for the sales people and a product information resource for MarCom to help with writing content about the product (datasheets, website, press releases, etc.)

Ultimately, during the mid-1990s–mid to 2000s there was the realization that product management (product planning and product marketing) is truly an autonomous corporate entity and accordingly should have its own first level placement in the corporate organizational structure (Fig. 10.1).

10.2.3   Summary

Nowadays and rightfully, the product management function is led by either a *Vice President of Products*, *Vice President of Product Management*, or *Chief Product Officer* (CPO). Product managers (actually product planners) and product marketers belong and report to the product management department.

10.3 Product Marketing Organizational Placement

10.3.1 Introduction

This review explains why product marketing needs to organizationally reside within the product management team as opposed to with the marketing department.

10.3.2 Organizational Placement Considerations

A company's organizational structure is influenced by two main considerations which are (1) the separation of corporate entities according to their mission to avoid conflict of interests and (2) the grouping of corporate entities according to some logical affinity to facilitate better collaboration and deliverables.

Product management is the most critical function in a company's product group. The product management domain is comprised of two disciplines: product marketing and product planning. Both these disciplines are highly strategic and they guide activities of other tactical and operational units in the company.

The marketing department is comprised of *Corporate Marketing* (outbound activity aimed at generating awareness and differentiation of the company) and *Marketing Communications* (mix of media vehicles that support marketing objectives). Corporate marketing is mostly focused on building a brand at the institutional level (company) while marketing communications is focused on its tactical and operational responsibilities.

More poignantly, corporate marketing and marketing communications are activities which are indirectly related to the buyer of the product while product marketing is directly related to the buyer of the product.

Due to their direct relation to the product and the constant conjoint implications the product has on both the user and the buyer, there is more logical affinity between product marketing and product planning than between product marketing and corporate marketing or marketing communications.

The product management department's organizational placement is as an autonomous corporate entity with its own first level placement in the corporate organizational structure.

10.3.3 Summary

The correct organizational placement of the product management department (comprised of product planners and product marketers) is the outcome of understanding what product management is and what its role is within the company.

10.4   The Fallacy of Generalizing

10.4.1   Introduction

This review explains and deconstructs one of the biggest fallacies in the product management profession—the generalization of product management and of the product manager.

10.4.2   Product Manager Title

Most technology startups and companies are formed by technical people with a background in product development or manufacturing. The founders of these companies are primarily focused on technology and often remain deeply involved with the most minute technical product decisions, even when the company grows dramatically.

For technical people, technical knowledge and technology are highly valued and considered the company's core competency. Since the founders of these companies are very technical people, they shape the company according to their own mindset and personal comfort zones. This means that in these technology-driven organizations, the product managers are very often relegated to doing anything that the salespeople do not know how to do and everything that the product developers do not want to do.

The *Product Manager* title consequently becomes grossly misunderstood and a catch-all phrase for a multitude of shifting responsibilities which also include tasks offloaded from other corporate functions. At many startups and companies, product management and product manager have become euphemisms for nearly anything and everything.

Compounding the problem is the workplace experience which makes us all wiser but can also be misleading. People tend to conceptualize and frame their world view according to their work experience. Therefore, some people who have worked at companies in which the product manager did anything and everything tend to apply an ideology to their experience. The main rationale supporting this ideology is the anecdotal reasoning of "*At my former workplace we did it like this; therefore, it's advocated that…*" which has very little substantive merit.

Many people, based on their own misled experience, mistakenly perpetuate the notion that the product manager does anything and is responsible for everything related to the product, just as the startup founder did with his early product and a CEO does in relation to a company.

10.4.3   CEO of the Product

The startup founder and the company CEO are always responsible for commercial success, so now through inference the product manager also becomes responsible for the product's commercial success. This is wrong because *Profit and Loss* (P&L) is a measurement criterion that is reserved for executive management, which has corporate authority, responsibility, and accountability. The misconception now becomes even more entrenched.

Thus were born the *CEO of the Product* or *Product CEO* or *Mini-CEO* designations, synonymous with the *Product Manager* title. With such a hazy and broad definition it is possible to fit almost anything into the realm of product management. Some companies arbitrarily tack the most obscure responsibilities on the product manager, just because they do not know where else to put those responsibilities. So when people explain and justify that "*Every company applies product management differently*" as if it were proper, they are actually describing a markedly flawed situation that exists without any rational legitimacy.

Some companies realize the political benefits of promoting and maintaining the notion of a product manager as CEO of the product. This is because it allows the company to give the product manager a sense of personal clout and prestige without affording him/her the real authority and salary of a real CEO. In addition, the all-inclusive title is vague enough to hold the product manager overwhelmingly responsible for the product (politically desirable) and also grants the company the flexibility to add more job responsibilities in the future. Lastly, having one person perform several roles is always economical (fewer salaries) and can decrease internal strife if the roles inherently have friction points. This is the unabashed reality.

10.4.4   Summary

Product management is an extremely well-ordered and well-disciplined profession that is meant to be practiced by specialists, not generalists. Companies are meant to be run by executive management generalists who preside over professional specialists, and being professional means being focused.

10.5   Misconceptions About Product Management

10.5.1   Introduction

There is a prevailing misconception about what a product manager's job is all about. This review explains what might be the source of this confusion and why nearly every product manager's job description is different.

10.5.2   A Flurry of Interpretations

First and foremost, there is a lack of understanding of the function of product management and hence the great variance in job descriptions for a product manager, especially in the technology industry.

The reason for the misconception is that an early lack of proper subject matter consolidation in product management and the fast-paced growth of technology industries have caused companies to mistakenly accept a definition that presumes that product management is a collective term that is used to describe the broad sum of diverse activities performed in the interest of delivering a particular product to market. Excluding sales and product development, which are naturally reserved for the sales people and the technical engineers, this means that virtually everything else that needs to be done to support the product delivery program can be assigned to the product manager.

Another key and contributing factor to the confusion is that the different internal culture and dynamics in each company create a different set of roles (role mosaic) that are assigned to the product manager. In each company the internal culture and dynamics shape the roles of a product manager very differently each time they are formed and they are the cause of the acute variance in the product managers' job descriptions. This is a markedly flawed situation that needs rectifying.

A common scenario is that in many companies the scope of responsibilities for product managers evolves somewhat erratically. It all begins with a primary role or task that is attributed by the company to the product manager. For example, the primary task could be to write market requirements. Over time the dynamics at the company cause more roles and tasks to be assigned to the product manager. The new and different roles and tasks include anything such as product testing, program management, product demos, sales support, writing marketing collateral, managing product launches, and so forth. So in the end a role mosaic for a product manager's job is formed and it is very different each time it is created, and different from the role mosaics that are created at other companies.

10.5.3   Summary

A situation with a multitude of inconsistent definitions of product management is damaging for companies and employees alike because ambiguity stifles the ability of product management professionals to effectively perform their roles and develop their careers.

Chapter 11
Practicing Product Management

11.1 Maturity Model for Product Management

11.1.1 Introduction

There have been a handful of attempts at creating a maturity model for product management. In nearly all instances, the approach taken is heavily based on the *Capability Maturity Model* (CMM) from Carnegie Mellon University.

This review offers a different approach to gauge the level of maturity of the product management practice at the company.

11.1.2 Capability Maturity Model (CMM)

While the CMM was originally developed to objectively assess competency in software development, it can also be employed to foster process improvement in other fields. The CMM has also been used to formalize and optimize business processes. In essence, the CMM is based on a tiered structure in which each evolving level represents supposedly better practices and processes.

The CMM is conceptually correct but complex, cumbersome, and laborious to apply. In addition, the CMM is a general framework that does not provide specific guidance on implementation. Both these notions run contrary to any methodology's core values of efficiency and practicality.

To complicate matters, some of the purported attempts to create a maturity model for product management have been misguided to the point where the model is primarily evaluating maturity in software requirements and product development, not product management.

11.1.3   Gap Analysis and Performance Review

PMTK Gap Analysis is a simple procedure for assessing how well product management tasks are being performed. This procedure is focused on rudimentary assessment, not measurement, of product management tasks. It is designed to foster a realization and then a discussion about the priorities, quality, and maturity of the product management practice at the company. Gap analysis does assessment on product management activities, but does so in qualitative form.

Very loosely based on CMM ideas, but with a determined emphasis on ease of use, practicality, and applicability is the performance review. The *PMTK Performance Review* provides a maturity model for product management, but also does much more.

The issue of *Key Performance Indicators* (KPI) relative to product management is handled in the *Blackblot PMTK Methodology*™ by the performance review. More in tune with the quantitative concept of KPI, the performance review measures non-financial performance indicators in product management. With the performance review it is possible to generate a *Figure Of Merit* (FOM). FOMs are scores that indicate levels of performance and allow for baseline improvement and/or perform ongoing comparative measurement of performance.

11.1.4   Summary

In addition to generating FOMs, the performance review indicates, via directional and practical indicators, the particular flaw in product management the company has and suggests which actions (or documents) need to be taken (or revisited) in order to improve performance.

Accordingly, within the *Blackblot PMTK Methodology*™, the *PMTK Gap Analysis* and the *PMTK Performance Review* tools together suffice to provide a practical maturity model for product management without the complexity and burdensome nature of the CMM.

11.2   The Necessity of Product Management at Startups

11.2.1   Introduction

Many startups do not have official product managers to begin with. That comes later in the life of the young company and many founders consider this to be a legitimate evolution.

This review puts forward the argument that it is essential to formalize and officially recognize a product management function at all phases in the life cycle of a company.

11.2.2   Product Management at Startups

Product management is the most strategic and critical function relative to a company's product operations. An official and recognized product management function is an elementary part of the company's initial structure along with executive management.

Executive management is responsible for leading the company's business operations, and product management is responsible for leading the company's product operations.

Most startups are formed by technical people with a background in development or manufacturing. For technical people, technical knowledge and technology are highly valued and considered the company's core competency.

Consequently, many startups incorrectly view product management as a tactical or managerial activity. In fact, product management is not a tactical or managerial activity but a very strategic, important, and preliminary component of delivering a product to market.

The reality is that startups always perform product management even if it is done unofficially. In many startups, product management duties are performed by the startup's founders or members of the development team.

11.2.3   Summary

In practice, whether officially or unofficially, product management is introduced and applied in a company from its outset. Startups that fully recognize the importance of product management often formally apply professional product management to their product operations from the very beginning, rather than initially performing product management haphazardly and later on officially recognizing it.

11.3   A Primer to Market Segmentation

11.3.1   Introduction

Marketing is an instructive business domain that serves to inform and educate the target market about the value and competitive advantage of a company and its

products. The *Target Market* is the group or groups of customers selected by a company to sell to.

The *Overall Market* for a product consists of all the customers who share a common need that could be satisfied by the product. *Market Segmentation* is the division of the overall market for a product into groups of customers who have common characteristics. One or more of these groups will constitute the company's target market for the product.

This review provides a primer to market segmentation.

11.3.2   Theory of Market Segmentation

The theory of market segmentation is based on the premise that various customers, who share a common need that could be satisfied by the product, may differ from or be similar to each other in their characteristics and behavior. The theory maintains that homogeneous customer groups are likely to respond similarly to specific marketing activities.

By identifying and understanding the different customer groups (market segments) within the overall market, marketing activities that are uniquely targeted at particular customer groups (market segments) are more likely to efficiently and economically induce the sought-after customer behavior and yield the desired results.

11.3.3   Performing Market Segmentation

After identifying and defining the overall market for a product, market segmentation, a two-step process, can take place. The first step is to segment the market, which means to divide the overall market into groups (market segments) using one or more factors.

There is an endless list of factors that can be used to divide the market into common groups. Age, gender, income, and lifestyle are typically used segmentation factors for consumer markets. Industry type, company size, distribution channels, revenue, and sales volume are some of the segmentation factors that are often applied to divide markets who deal in business-oriented products.

A reasonable approach that fits both consumer and business markets is to progressively segment the overall market by using the geographic, demographic, and technologic segmentation factors, in that order.

For example, a mobile software development company has created a mobile application in the English language for vegetarians. Disregarding the company's many possible considerations in the decision-making process, the company decides to focus only on the USA and ignore any other English-speaking countries (geographic). Within the USA, the company decides to focus only on female vegetarians

(demographic). The mobile application is presently compiled for Apple's iOS mobile operating system that runs on Apple's iPhone smartphones (technologic). Accordingly, this segmentation exercise has provided a single market segment that can be viewed as "*female vegetarians in the USA who own an Apple iPhone and speak English*"—which is now this company's target market.

Careful note should be made to maintain that market segments are distinct overall market subsets that are derived from the application of the last segmentation criterion. This means that market segments differ from each other by only one segmentation criterion.

For example, the statement "*small (fewer than 10,000 employees) cellular operators in Asia and large (over 10,000 employees) cellular operators in North America*" represents two different markets, not two market segments. This is because the customer groups differ from each other by two segmentation criteria (geography and size). Conversely, the statement "*men under the age of thirty in the USA and men under the age of thirty in Western Europe*" represents two market segments as the customer groups differ from each other by only one segmentation criterion (geography).

If the first step in the market segmentation process presents several market segments, then the second step in the market segmentation process is to select the market segment or segments, essentially the target market, which the company is best able to serve and market to. Coincidently, small overall markets or small market segments are often referred to as niche markets.

11.3.4   Summary

The benefits of employing market segmentation are a clearer understanding of the needs and wants of selected customer groups, greater precision in selecting promotional vehicles and techniques, more effective use of marketing dollars, and more effective product positioning.

However, the limitations of market segmentation are that it is a costlier approach than the non-segmented approach, it is difficult to choose the best criteria to segment by, and it is difficult to select the best segment or segments to work with.

11.4   The Connection Between Market-Driven Product Management and Marketplace Success

11.4.1   Introduction

Product management is a core business function that is of profound significance for technology companies. This is due to the fact that technology companies and their

products' probability of success are deeply affected by the maturity level and type of product management that is being practiced in the organization.

This review explains the relationship between market-driven product management and a product's chances of marketplace success.

11.4.2 Roots in Tradition

There has been a historical tendency for technical and manufacturing-oriented people to create and manage technology businesses. These technology companies often remain and operate as a reflection of their founder's business perspective where providing the best technology is assumed to be an automatic guarantee of success. Consequently, pure technology-driven or sales-driven companies, particularly when they are financially successful, are reluctant to consider market-driven product management practices. These companies may ponder the effect and importance of market-driven product management on their products' chances of marketplace success, yet are hesitant to introduce true market-driven product management practices even when they are most needed and justified by market conditions.

11.4.3 Evolution of Technology Companies

Many technology companies begin as being technology-driven with an exclusive focus on creating better technology. The dominant function in the technology-driven company is its engineers. After the technology and related products have been developed the technology-driven company seeks customers to (1) generate revenue and (2) help better adapt the product's feature set to the customers' needs. This move usually signals a transition to being sales-driven (aka custom-job-driven), a product delivery strategy that is focused on customizing the technology or product to the specific needs of an individual customer and generating as much short-term *Return On Investment* (ROI) as possible from that individual customer. The transition to being sales-driven often implies a shift in the company's internal centers of power with considerable influence moving from the engineers to the sales people. From this point on, technology companies usually solidify their character with a technology-driven or sales-driven mindset because it is familiar and undisruptive.

11.4.4 Crossing the Revenue Chasm

The *Chasm Model*, first published in 1991 in the book *Crossing the Chasm* by Geoffrey A. Moore, includes a graphic representation (Fig. 11.1) of a product's life
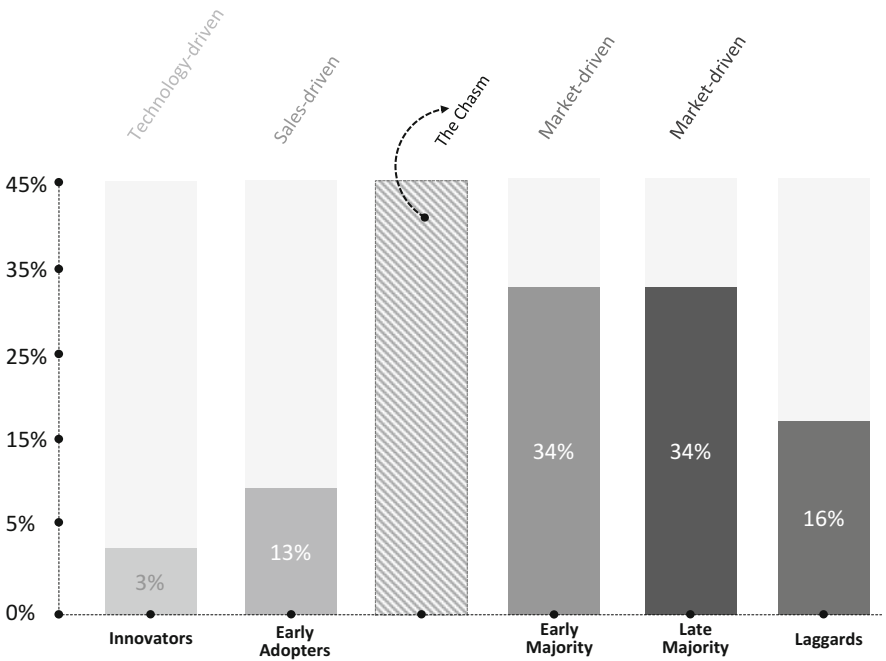
Fig. 11.1 Technology adoption model

and sales cycle as well as customer segmentation of the product's target market. The *Chasm Model*, aka the *Technology Adoption Model*, deliberates different marketing strategies and tactics that could be applied at the different phases in the product's life and sales cycle. The key point is that as markets evolve, the different customer segments have very different expectations of product functionality and how it is marketed to them.

Moore argues that there is a chasm, an evolutionary obstacle that needs to be transcended so that the company can move from selling to the limited early markets of a product (innovators and early adopters—16 % of the overall market) and begin to capitalize on the product's true financial potential by selling to the larger mainstream markets (early and late majorities—68 % of the overall market). Many companies fail to make that necessary change, to cross the chasm and achieve the exponential marketplace success. For many companies, not crossing the chasm is the slow beginning of sunk costs and forgone revenues.

As markets develop the business philosophies also must change. The failure to cross the chasm mainly occurs because companies fail to timely modify their product planning and product marketing practices. The early markets are served by the technology company via a mixture of (firstly) technology-driven and (secondly) sales-driven product delivery strategies. However, after exhausting the limited financial potential of the early markets, the technology company, for reasons mostly rooted in internal power politics and the prevailing technology-

focused business culture, will not adopt a market-driven product delivery strategy which is the only way to reap the financial potential of the mainstream markets.

The reluctance to change is predominantly because such a move will cause a shift in the company's internal centers of power with considerable influence moving from the engineers and/or the sales people to the product managers. The focus of the company will also shift, from resources being allocated towards technology development and product customization, to heavily engaging in processes to fully understand the customers' needs in order to better define and market the product.

11.4.5   Summary

Technology companies are founded with a relatively good understanding of the market need but they do not maintain the market sensing process via instituting and reinforcing product management practices. The culture of the technology-driven organization is intrinsically concentrated on technology and consequently decisions are perpetually made from a technical, production, or sales perspective.

After two to three years of engaging in technology-driven and sales-driven product delivery strategies, the company's sales will usually either stabilize or slowly stagnate, unless it adopts and confidently applies a market-driven product delivery strategy. Reversal of fortunes is always feasible by embracing a heightened receptivity to market needs that is combined with efficient product planning and product marketing processes.

The question that technology companies ask themselves is "*Why is it critical to introduce market-driven product management practices?*" The answer is that technology companies ultimately must follow market-led principles in order to financially succeed in the long term. The only corporate function and methodology that can implement market-led principles to help a technology company cross the revenue chasm is market-driven product management.

11.5   An Algorithmic Model for Product Feature Prioritization

11.5.1   Introduction

Product feature prioritization is a key and critical activity in the product definition process. This review explains how to efficiently prioritize future product features according to the *Blackblot PMTK Methodology*™.

11.5.2   Product Features

A *Product Feature* is primarily a product's functional capability that satisfies a specific customer need. The sum of all of the product's features is referred to as the *Product Feature Set* and it represents the reality of all that a product can do.

The product, by merit of its feature set, is the solution to the market problem which customers wish to solve. This obviously means that any given product feature set will have a direct bearing on the product's chances of achieving marketplace success. In addition, the selected product feature set immediately impacts the development effort and subsequent marketing and operational activities.

Every product feature has to be developed, tested, fixed, documented, marketed, sold, supported, and possibly terminated at some point in time. The business implications and accumulated costs can be immense if certain product features in the product feature set are unnecessary or less desired by the customers.

It is therefore critical to select the best product features and optimize the product feature set to fit market needs, subject to budgetary and scheduling constraints. A key component of the product feature selection process is feature prioritization.

11.5.3   Product Feature Selection Process

The product feature selection process has three objectives:

1. Identify redundant or missing features
2. Build product versions and roadmap
3. Analyze and prioritize features

Identifying redundant or missing features is accomplished via traceability between representations of market problem facets (e.g. market requirements) and the defined product functionality (e.g. product requirements) which addresses those facets. Defining product versions and a roadmap is dependent on and also an outcome of feature prioritization, so this means that the centerpiece component of the product feature selection process is the product feature prioritization activity.

The most commonly used and arguably the most biased and ineffectual way of prioritizing product features is a simple unstructured debate. The product stakeholders, primarily team members from the product management and product development departments, convene for a series of periodical prioritization meetings in which they argue feature preferences and negotiate feature prioritizations. These meetings are notoriously lengthy without much progress being made, except for one or two meetings near critical milestones such as an upcoming product launch where quick resolutions are compelled.

The prioritization meetings can be long and rife with internal bickering on areas of ownership and final decision-making when there is an internal lack of clarity on the division of ownership and responsibilities concerning the product.

Sometimes more structure is brought to the debate by centering the discussion on market-related considerations such as the pervasiveness and urgency of the feature being reviewed. Sometimes an arbitrary score that is based on a preset series of numbers is assigned to each feature. But all of these have a marginal effect in bringing about a speedy or optimized resolution because the market considerations and the arbitrary numbers are profoundly subjective. The dreaded unstructured or semi-structured debates are not the right tool to prioritize product features.

The lack of a solid product feature selection process and structured prioritization method may also lead to *Scope Creep*, a situation where uncontrolled modifications, mostly additions, are made to the product feature set. Scope creep occurs when the product feature set is not fully defined, not fully documented, or not properly controlled.

Incidentally, scope creep may also be the result of *Research-oriented Development*, a situation where product development begins while there is incomplete, ambiguous, or missing information about the market problem. This forces further study of the market and causes occasional readjustments to the product feature set, whilst the product is being developed, as more market knowledge is gained. Whatever the cause may be, scope creep is a most undesirable negative phenomenon because it almost always adversely impacts the project schedule and budget, as well as possibly catalyzing the re-architecting of the product.

11.5.4   Prioritization via an Algorithmic Model

Prioritization via an algorithmic model overcomes many of the deficiencies of prioritizing via unstructured debates. A simple Boolean-based (data with only two possible values) algorithmic model that is applied in a product features matrix will arguably yield a far better feature prioritization and faster. A Boolean-based model forces its users to make unequivocal decisions, whereas with a scale-based model the participants will very quickly gravitate to repeatedly selecting the intermediate values of the scale.

The premise of an algorithmic model is to be able to consistently and uniformly perform product feature prioritization in a finite number of steps. The product feature prioritization algorithmic model is fundamentally built on qualifying a feature via four core parameters that can be supplemented with additional parameters and data if so desired.

The algorithmic model for product feature prioritization is comprised of the following four core parameters:

1. *Dependency*—a measure of how dependent other features are on this feature (High/Low).

2. *Fundamental*—the product will not work properly without this feature, from a technical perspective (Yes/No).
3. *Differentiator*—the feature is a key differentiator, relative to competing products (Yes/No).
4. *Importance*—product management's measure of importance of this feature, from a product marketing and/or product planning perspective (High/Low).

The product features matrix lists the product's features, coupled with selected values for each of the four core parameters for each feature.

With this data it is now possible to calculate an interim support variable named *Urgency*, which is the estimated urgency of developing the feature. The urgency variable is calculated automatically as High for all features which are either *Fundamental* (Yes) or which have a High *Dependency*. The *Differentiator* parameter is held for reference purposes and possible future inclusion into the calculation formula.

The next step is to automatically calculate the *Priority* final variable for various *Importance* and *Urgency* combinations. The priority variable represents the prioritization level of the said feature and is calculated according to the following logic (variable combination and its meaning):

1. *P1*—high importance and high urgency (this feature will be in product and as robust as possible).
2. *P2*—high importance and low urgency (this feature will be in product, but implementation may be reduced or optimized).
3. *P3*—low importance and high urgency (this feature will only be in product if time allows).
4. *P4*—low importance and low urgency (this feature will wait until a future version).

After completing the attribution of values for the four core parameters for each feature, the product features matrix is ready and presents a list of prioritized product features. At this point, with the product's features prioritized, it is also easier to group features to create distinct product versions and a roadmap.

Table 11.1 is an example of a *Product Features Matrix* with features prioritized via an algorithmic model:

Table 11.1 Example of a Product Features Matrix with Features Prioritized Via an Algorithmic Model

Feature	Dependency	Fundamental	Differentiator	Importance	Urgency	Priority
Feature A	High	Yes	Yes	High	High	P1
Feature B	Low	Yes	No	High	High	P1
Feature C	Low	No	Yes	High	Low	P2
Feature D	Low	Yes	Yes	Low	High	P3
Feature E	Low	No	Yes	Low	Low	P4

11.5.5   Summary

Product feature prioritization can be a daunting and exhausting task, disliked by many because of the perceived ambiguity and the undue negotiations that may accompany it. Yet with the right tool, the algorithmic model for product feature prioritization that is incorporated in the *Blackblot PMTK Methodology*™, this extremely critical activity can be accomplished far more easily and faster than ever before.

11.6   The Importance of Having a Product Management Methodology

11.6.1   Introduction

This review explains why it is important to have a product management methodology, such as the *Blackblot PMTK Methodology*™, and how to identify a sound methodology.

11.6.2   Defining Methodology

A methodology is a set of well-documented (and time-tested) principles and methods which govern a particular discipline or body of knowledge. The methodology, with its principles and methods, is an unambiguous guide to applying the discipline to some benefit.

With all endeavors and particularly when dealing with complex projects of any kind, a methodology is critical to help achieve the desired results and eliminate any trial and error experimentation.

A methodology with its tenets and orderly steps creates a repeatable doctrine with reproducible results, and lends itself to be evaluated and analyzed in order to implement corrective action that will improve the end result, such as time reduction, cost reduction, or improved quality.

11.6.3   Identifying a Sound Methodology

A sound methodology which embodies a solid conceptual foundation must possess the characteristics of being *Consistent*, *Holistic*, and *Practical*.

Consistency in a methodology is achieved when the relation between the various propositions in the methodology are all true at the same time. A methodology is

consistent when all of its internal components (particularly models) do not contradict each other. An inconsistent methodology is unusable.

Holism in a methodology is achieved when the methodology wholly views and presents the entire discipline as a unified entity and also conjointly details all the internal components within the discipline. A methodology is holistic (complete) when all its tenets exist and when it fully describes all the internal components within the discipline. When a methodology is not holistic (incomplete) it cannot be used effectively.

Practicality in a methodology is achieved when the methodology explicitly depicts all the pragmatic aspects of all the components within the discipline. A methodology is practical when it definitively explains and describes the actual activities that are necessary to obtain the desired results. An impractical methodology lacks or partially describes the functional actions required to obtain results, and is therefore realistically unemployable.

11.6.4   The Importance of Having a Product Management Methodology

Applying a solid product management methodology that translates into standardized processes can greatly increase the probability of product success and profitability. While there is no way to prove a direct correlation between a methodology and financial rewards, it is understood that a solid methodology helps reduce the risk of failure at all levels and increases the chances of success. Ultimately, a methodology is about following the definitive steps that foster efficiency, focus, and success.

Empirically, not all successful products have had great product management behind them but it is clear that many product failures have had poor or no guidance from product management. Therefore, combining a definitive product management methodology with disciplined technology development practices is the key to commercial success, especially in the world of technology.

Product management is comprised of many activities that profoundly impact a product's chance of success. In order to succeed, a company must execute all fundamental tasks and follow all key processes in its product management methodology. That demands a well-defined, well-documented product management methodology that is realistically capable of effectively embracing the complete product management body of knowledge (tasks, processes, deliverables, and roles). Having a product management methodology and following it will help companies to better compete in today's competitive markets.

11.7   Summary

Any product management methodology that is selected must provide a consistent and holistic approach to product management at both the conceptual and practical levels. This means that the methodology must explain the underlying fundamental concepts of product management and also present the details of how to practically apply the methodology in business.

11.8   Programmatic Tools for Product Management

11.8.1   Introduction

There are no real programmatic tools presently available on the market for product management and this has resulted in a situation where the best tool for product management currently available is the Microsoft Office desktop application suite.

This review provides the background to this situation.

11.8.2   Programmatic Tools

The term programmatic has a dual meaning of being programmed (such as a software application) but also as having a plan (methodology).

Most of the software tools currently available for managing products are not for product management (problem space) but for product development (solution space). All the popular Agile software development tools, technical requirements, and project management for product development tools are really designed for engineers in the solution space, not for product planners or product marketers in the problem space.

Some of the requirements management applications currently available are essentially databases with an *Application Programming Interface* (API) and scripting language that allow you to create your own processes, screens, and reports, but these tools do not offer a proven product management methodology that is integrated into the product. You have to build everything yourself. Some tools offer a very specific and narrow capability such as feature prioritization or roadmap management.

Product planners are seeking an application with a methodology to document the market problem which needs solving, while the application vendors wish to sell seats/licenses. The whole situation is akin to people wishing to learn how to write letters while the vendors wish to sell word processors. It is just a gap in the respective objectives.

With regard to relevant features in a product management tool for product planners, the application must embody a methodology that is based on best practices, yet is configurable and customizable enough to allow for internal company variances in doing product management. At its core, the application for a product planner must provide a way to create a *Market Requirements Document* (MRD), or any other structured representation of the market problem, with all the necessary supporting elements such as use cases. It would be highly desirable if the application would bridge the problem space and the solution space and provide the capability, along with bi-directional traceability, for creating *Product Requirements Documents* (PRD) and roadmaps, and would go even further to allow the creation of the product's technical specifications.

As a result of this situation where no real programmatic tools are presently available on the market for product management, most product planners document the market problem, usually in the form of an MRD, as a textual document and the most common way of doing so is with MS-Office tools, as many product managers are familiar with Microsoft Word or Excel.

While word processors are good at producing textual documents, they have deficiencies that significantly decrease their ability to provide a suitable platform for creating market requirements. Word processors and spreadsheets are not good at querying information, sorting and baselining data, maintaining relationships between statements, or linking information internally and across documents. They are however inexpensive to buy and implement and are easy to learn and use.

11.8.3   Summary

Presently there are no real programmatic tools available on the market for product management. An application for managing product marketing activities would be a different matter and an application that would allow for synchronizing product planning phases with product marketing phases is even further away.

Chapter 12
Product Management Career

12.1 Mastering the Product Management Interview

12.1.1 Introduction

Assuming a role in product management reflects a natural career growth path and has nowadays become the obvious stepping stone to executive management positions in the company. Given that any role in product management is so intricate, the product management interview itself has also become quite intricate.

This review describes the inner workings and structure of the modern strategic product management interview and how to better master it through understanding it.

12.1.2 Product Management as the Talent Pool

During the 1960s, it was the company's technical people who were primarily considered for executive management positions. The company's *Chief Engineer*, *Vice President of Engineering*, and *Chief Technology Officer* (CTO) were its top acting executives and they were often promoted to be the company's next *Chief Executive Officer* (CEO).

During the 1970s, it was the finance people who were regarded as a good fit for executive management positions and during those times the company's *Chief Financial Officer* (CFO) was very often the natural candidate to become the company's CEO. During the early 1980s, it was the top grossing sales people who were promoted to executive management positions, and during the late 1980s, it was the company's strategic marketing people.

From the 1990s to date, companies overwhelmingly view the product management team as the true talent pool and management reserve from which their future executives are drawn.

Companies have realized that no other role in the organization, not in engineering, finance, sales, or marketing, prepares a person to successfully hold a top executive position as effectively as a role in product management. This is because product management professionals need to be good at a multitude of topics including finance, marketing, product, technology, customer interaction, public addressing, diplomacy, politics, and more.

Therefore, it is product management professionals who are in the best position to assume leadership roles given their accumulated market and customer knowledge, ongoing collaborative work, exposure to a multitude of corporate functions (sales, finance, marketing, engineering, etc.), and intrinsic role duties that develop the multidisciplinary skills that are required of a company executive.

12.1.3   Job Interview Concept

The *Job Interview* is a procedure that evaluates a prospective employee (aka candidate) for a position in the company.

An interview is an ongoing exchange of information between company employees (interviewers) and a candidate to determine whether there is a match between the candidate's professional history, skill sets, and past workplace contributions and the job's description, requirements, and needs.

The interview is a reciprocal exchange during which the candidate is also evaluating the interviewers (the candidate's future team members and peers) and the company. Seemingly unprofessional and poorly carried out interviews by interviewers can discourage a good candidate from accepting the job if they have more than one job offer to consider.

From the company's perspective, the objective of the interviewing process is to verify that the candidate can successfully perform the core functions of the job, and to create conversational dynamics that help establish a notion of whether the candidate will fit in with their assigned team on a social level.

The candidate's overall *Fit* for the job is evaluated by the interviewers on three levels: personal fit, team fit, and professional fit. The impression of personal and team fit is formed during interpersonal interaction with the team members and is done on an emotional and unscientific level. Establishing professional fit is done in a more structured and rationalistic way through an interactive, in person, questioning process.

12.1.4   Domain Expertise and Functional Expertise

At companies hiring for product management positions, establishing the candidate's professional fit is often done by focusing solely on the candidate's *Domain Expertise*. The interview questions center on, and attempt to expose the candidate's knowledge in, the technical and business aspects of the product, industry, market, and technology.

That industry knowledge, a person's workplace and career experience in a particular field or industry, constitutes domain expertise and it is very much valued by companies. Many companies hire employees primarily for having domain expertise. This is the old way of doing things, yet still is very commonly used.

Most overlooked by employers during product management interviews is the candidate's *Functional Expertise*, which is the ability to use tools and execute techniques, processes, and tasks that create winning products. Correctly using tools, understanding product management methodologies, knowing and managing complete product management processes, and executing core product management tasks, are all fundamentally required to do a job in product management.

True professionals in product management must effectively possess both domain expertise and functional expertise, and much more. Companies with mature product management practices have come to realize this, and it is reflected in the modern product management interview which these companies employ to screen candidates for modern product management positions.

12.1.5   Modern Product Management Interview

Modern product management interviews are more organized, efficient, and successful in screening candidates. They query candidates on their domain expertise, functional expertise, and additional key areas. The questioning process has become considerably more structured, which helps to more accurately establish the candidate's level of professional fit.

Those in the field of product management must possess a multitude of skills with a cumulative emphasis on strategic thinking and numerical analysis. Responsibilities may vary from company to company, but the core job function often encompasses formulating market requirements and contributing to the search for the most productive way to build long-term value for a product.

Hiring managers, when looking for qualified product managers, carefully consider and query candidates on the four business competency components: domain expertise, functional expertise, soft skills, and strategic aptitude. Therefore, the modern product management interview process has been designed to uncover and assess candidates' capability levels in these four competency areas.

Domain Expertise: specific industry experience and technological know-how

- Industry experience
- Workplace accomplishments
- Appropriate blend of education, training, and credentials

Functional Expertise: knowledge in processes, tools, and techniques to plan and market products

- Writing quality market requirements
- Ability to execute specific product management tasks
- Understanding of relevant terminology and definitions
- Knowledge of product management processes and procedures
- Familiarity with product definition and management team structures

Soft Skills: non-technical skills, mostly communicative (written, verbal, and presentation), used in business

- Thought leadership
- Communication skills

Strategic Aptitude: long-term planning and decision-making abilities that help achieve corporate objectives

- Professional development
- Executing a product definition process
- Product and market strategy formulation
- Selecting and applying a product management methodology

12.1.6 Modern Product Management Interview Questions

The structure of the modern product management interview dictates the potential interview questions which will be asked relative to each of the four competency areas.

Domain Expertise: questions in this area focus on the candidate's work history, industry experience, and technological know-how. For example:

- Describe the positions you held and the challenges you overcame in previous roles.
- Describe the industry's dominant players, their success and mistakes.
- Describe the advantages and disadvantages of a particular technology or product.

Functional Expertise: questions in this area focus on the candidate's knowledge in processes, tools, and techniques to plan and market products. For example:
Questions on Product Planning

- Describe the structure of an MRD and the methodology for writing quality market requirements.
- Describe the process you would follow to create a product's pricing model.

- Describe the overall product planning process.
- Describe the structure of a product definition team and its roles.

  Questions on Product Marketing

- Describe the structure of a market plan.
- Describe the process you would follow to create a product differentiation or demand.
- Describe the overall product marketing process.
- Describe the role of a product marketer.

Soft Skills: questions in this area focus on the candidate's human interaction skills which relate directly to communicating and managing relationships with others in a professional environment's social structure.

Strategic Aptitude: questions in this area focus on the candidate's potential to assume in the future broader leadership roles that demand strategic planning and decision-making abilities. These questions center on managing people, executing overall and broad product management processes, applying a product management methodology, and product and market strategy formulation.

12.1.7   Summary

Mastering the modern product management interview is done by understanding the interview's fundamental structure, and by preparing to display knowledge and competence with confidence in all four key areas. Coupled with being amicable and constantly working towards being an authority in the profession, this is the formula for a solid career in product management.

12.2   Transitioning From a Technical Role to a Job in Product Management

12.2.1   Introduction

Questions on whether and how to transition from a technical role to a job in product management are commonplace. The motivations and contemplations about this career move are diverse and personal.

People might view the possible transition as a promotion, a quest for professional self-development, the desire for more control over the product, or an escape from the tedium of a technical world. Whatever the reason may be, making this move should be considered as a very personal career choice, because a job in product management is unlike anything else in the company.

This review explores the considerations associated with transitioning from a technical role to a job in product management.

12.2.2   The Technical Role

Any role in product management will require a disposition and accomplishments very different than those in the technical world. While the technical role is extremely focused and hinges on a well-honed technical competency, the job in product management is the epitome of its opposite.

The technical role is held by a specialist in the solution space. The job in product management is commonly, rightfully or not, that of a generalist in the problem space. Anyone in product management is compelled to know their business domain (software, networking, storage, cellular, etc.) and must also be able to correctly understand and use product management tools and methodologies, and manage or partake in complete product management processes. The knowledge and skill requirements are vast.

Product management professionals are like Swiss army knives. They often need to be good at a multitude of topics including finance, marketing, product, technology, customer interaction, public addressing, diplomacy and politics, and more. There is no other job at the organization that prepares a person to be an executive manager as product management does, and that is why the product management team nowadays is considered the talent pool and management reserve from which a company's future executives are drawn.

Hence, product management professionals are in the best position to assume leadership roles, given their accumulated market and customer knowledge, ongoing collaborative work and exposure to a multitude of corporate functions (sales, finance, marketing, development, etc.), and intrinsic role duties that develop the multidisciplinary skills that are required of an executive manager. For anyone seeking an executive management position, a path is also available via product management.

12.2.3   Knowing the Objective

Before investing in product management training and certification, reading books, blogs, and articles, or volunteering to partake in product management tasks at one's company, the first step for anyone considering a job in product management is to convincingly and thoroughly explain to themselves why they wish to make a career transition and why to a job in product management and not anything else. What is the endgame?

The second step is to realize that the transition is not merely about acquiring a new skill set with new responsibilities but involves something of a personality

change that is not easy to accomplish in a grown person. The move is all about an internal change of mindset, from strict technical thinking to more amorphous and probabilistic business thinking. Is it the right move, personality and propensity-wise?

People should consider leaving their current technical position and moving to product management only if they feel challenged and excited by the prospect of becoming embroiled in problem space market-think (not solution space product-think) and wish to make uncertain yet possibly very rewarding business decisions that in their very nature run contrary to deterministic technical decisions.

12.2.4   Summary

The technical people who make a successful move to product management are often very capable individuals who have exhausted their abilities in the technical/solution space and have realized the path and drive to grow and maximize their potential in the business/problem space.

12.3   Product Management Training: An Overview and Is It Worth It?

12.3.1   Introduction

Training in essence is the transfer of accumulated knowledge and experience by some to others. It is a long-established way to share information with people in a manner that when done properly promotes an understanding of the subject matter and develops practical skills.

Product management professionals must be ready to address the very different work challenges they constantly encounter. They must possess highly diverse and uncommon skill sets in order to perform their daily routines.

Product management training provides students with theoretical and practical content that they can apply at their workplace to be more productive. The training also helps establish a baseline for attaining functional expertise. Any true product management training program is solidly built upon a training theory that is aimed at generating proper skill build-up and professional competence—which is what the company and the practitioner require.

This review explains the forces that shape contemporary product management training programs.

12.3.2   Reasons for Training

The value of training depends on what the individual or organization is trying to accomplish and there could be many motivations for such. There are numerous independent and conjoint reasons that drive companies to have their product managers and product teams partake in professional product management training. Some of these motivations include:

- Imparting new and specific product management skills.
- Building consistent skills among existing product managers.
- Instilling business discipline in anticipation of company growth.
- Creating and educating a team of new and inexperienced product managers.
- Educating new and inexperienced product managers joining an existing product team.
- Compulsory training as part of a quality improvement certification, such as ISO 9001.
- An integral part of the professional development of every product manager at the company.
- Training and subsequent certification to gauge and rank the company's product managers.
- Streamlining the methods, processes, and responsibilities between product management and product development.
- Standardizing product management practices across business units, particularly after mergers or acquisitions.
- Revamping current product management practices with a more consistent and efficient product management methodology.
- Training and subsequent certification as a marketing tool to promote internal morale and project an external image of professionalism.
- Transition from a sales-driven product delivery strategy to a market-driven product delivery strategy, because of the desire to expand current market share or enter new markets.
- Transition from a technology-driven product delivery strategy to a market-driven product delivery strategy, because of productization demands placed on the company by its customers.

12.3.3   Training Subject Matter

Formal product management training programs have evolved alongside the discipline itself, but unlike the standardized training programs that are available worldwide for universal subject matter such as computer programming or project management, the plethora of product management training programs offered by different vendors are extremely inconsistent. They are all based on and advocate drastically different concepts and teach markedly different practices.

There is ongoing interest and discussion about product management and this has generated a lot of digital information about product management on the internet in the form of articles, blog posts, presentations, webinars, group discussions, etc. The resulting overwhelming mass of digital information reflects the diversity and opposing interpretations as to how to define, explain, describe, and organizationally place product management.

Product management training vendors equally offer classroom-based training programs that drastically differ and present curriculums that advance their own particular perspective on product management.

Some vendors promulgate the idea that product management is a generalization (aka *CEO of the Product*) and not a specialization. With such a broad definition it is possible to fit almost anything into the realm of product management and indeed these vendors' highly generalized training curriculums are reflective of that. Some vendors view product management as being overwhelmingly and inextricably tied to product development and thus their training curriculums are very technical and focused on the development project. Other training vendors' curriculums are deeply rooted in theoretical academia and some curriculums are limited to being wholly centered on sharing one specific instructor's previous workplace experience.

Regardless of the particular perspective that the vendor is promoting, the center-piece of the curriculum must be a consistent and complete product management methodology. Otherwise, and without any methodological foundation, all the unfounded assertions put forward in the training curriculum constitute subjective supposition and conjecture and they are not cogent arguments by any measure. Such assertions can be easily disproved with methodological counterarguments.

A methodologically-based professional product management training program should provide the following:

- A structured approach to product management, resulting in less time spent arriving at product management decisions.
- A comprehensive set of tools, concepts, models, and procedures, resulting in a more effective execution of product management processes.
- A clearer understanding of the product management process and its principles, resulting in greater potential to deliver successful products.
- Conventions on "how to do" and not just "what to do", resulting in more efficient effort spent on performing the appropriate product management activities.
- A comprehensive approach to product management that considers the most relevant contributing factors, resulting in more complete and realistic product management decisions.

12.3.4   Vendor Offering

Beyond the subject matter being taught, some vendors compete on price and others compete on quality. As with passenger cars, consumer electronics, and any modern

product or service, some product management training programs offer more "features" than other programs. The old adage of "*the more you pay the more you get*" is profoundly relevant here.

All vendors with their very different product management training curriculums offer some positive value relative to their price points. At one end of the spectrum are the low-end and less costly vendors who are often dubbed *PowerPoint Companies* because their entire offering hinges on a single MS-PowerPoint presentation file which they employ to deliver their training. These vendors usually compete on price and arguably they do not offer anything substantial beyond the classroom experience. In some cases, the low-end vendors' offering is an obvious disjointed collection of product management products and services bundled together to provide a more cohesive brand image.

At the other end of the spectrum are the high-end and costlier training vendors with an international reach who provide a host of products and services that include a progressive training program, an international certification program, professional templates, a systematic workbook, psychometric tests, a knowledge base, computerized retention aids, consulting and implementation services, and even more. The core of the vendors' offering is a robust product management methodology and all parts of the entire offering are fully synchronized and share communality in all aspects (terminology, roles, processes, deliverables, etc.).

Some vendors offer a single rudimentary course while others offer a more complete occupational core and advanced skills training program that is formulated to provide the required knowledge, skills, and tools. It is noted that although not many do so, some vendors erroneously equate the product manager role with the Agile/Scrum product owner role and thus offer a misguided Agile/Scrum training program under the guise of product management.

12.3.5 Training Experience

The training experience offered by the different vendors varies immensely. The differences in training experience go even further in matters such as training pedagogy. Effective learning depends on experiences appropriately designed and facilitated by knowledgeable instructors.

Because students have different learning styles the training program must apply a pedagogy that uses different ways to present the material so that the training is collaborative, contextual, and active, with instructors taking the role of facilitators. Product management content might be difficult or boring for some people and the right pedagogy can create a substantially more pleasant and effective learning experience.

When it comes to delivering training programs, there is no real way of knowing which delivery format is intrinsically better. However, a delivery format and the associated pedagogy are always chosen depending on the audience, venue setting, and content. The objective in selecting a delivery format is to promote content

understanding and retention and make the overall training experience as positive and as meaningful as possible.

In general, the classroom delivery mode, a discourse given before an audience with multiple instances of audience interaction or involvement in the form of discussions, exercises, and drills, is considered to be most effective when delivering complex and diverse product management content to a small group of students. Some low-end vendors avoid the classroom delivery mode since it is time-consuming, intensive, and potentially more challenging for the instructor because of the many questions the audience may ask.

12.3.6   Curriculum Customization

It is impossible to accurately satisfy the specific needs of different companies or individuals with the same universal curriculum. Obviously there is not and cannot be a curriculum which unadjusted would fit the training requirements of all companies.

To compensate for the different needs and before any alterations, the product management training curriculum must first be generic (in respect of a company's specific needs) yet be very comprehensive and address virtually all needs commonly encountered by most companies.

Using the generic content as the foundational base, customization is often done at the curriculum and instructor level. Adjustments to the curriculum are made by altering the focus and time spent on specific topics within the curriculum. Further customizations to the training delivery are dynamically made by the instructor who steers all discussions to focus on the company's deliverables and challenges, thus making the training experience more contextual.

Ultimately it is up to each and every company to merge their own needs, culture, and existing processes with the information they were introduced to during the training in order to produce a desired internal change or effect.

12.3.7   Self-Study

Classroom-based training programs are considered the best means of learning the desired subject matter, and they provide notable advantages which include a knowledgeable instructor, peer interaction, and a disciplined and structured study environment.

However, for reasons that include budgetary concerns, individual learning pace, geographic location, timing and regional availability, and industry needs, self-study is a viable option and nowadays there are plenty of resources to do that.

If one is interested in self-learning then, other than the selection of published product management books, there are plenty of free or low-cost resources available on the internet to help better one's knowledge in product management.

First and foremost and as the starting point in self-learning, it is recommended to seek and learn what product management is according to the different perspectives that abound and determine which definition makes most sense.

12.3.8   Summary

Product management is comprised of many activities that profoundly impact a product's chances of success. In order to succeed a company must execute all fundamental tasks and follow all key processes in product management. Consequently, only a professionally designed product management training program can effectively teach the sheer magnitude of the product management body of knowledge (tasks, processes, deliverables, and roles) that a company requires in order to compete in today's competitive markets.

In addition, product management professionals are considered nowadays to be the talent reserve from which the future executive officers of the company are drawn. Therefore, only a professionally designed product management training program can properly prepare and equip professionals with the knowledge, skills, and tools to be ready for the strategic thinking and type of decision-making that are required in executive management roles.

Functional expertise acquired via professional training and domain expertise gained through real work experience—both backed with individual motivation and commitment to the product management profession—are the driving elements towards product and career success.

12.4   Product Management Certifications: A Bit of History and Are They Worth It?

12.4.1   Introduction

Product management is an established profession. It has formally been in existence for several decades and is a well-recognized corporate function for many industries, particularly in the technology sector. Companies require efficient product management processes, coupled with competent people, to execute those processes. Many individuals have built successful and respectable professional careers in various product management roles. Officially recognizing the expertise is a natural progression.

This review explains the forces and background that shaped contemporary product management certifications.

12.4.2   Early Market Dynamics

Discussions about the need for a product management certification started to appear in the late 1990s on several of the online communities that were dedicated to product management.

Much of the talk centered on the lack of existing options that would allow a person to validate their professional competency or assess it in others. In addition, many practitioners, HR managers, and recruiters lamented that there was no reliable way to evaluate product management professionals, and, as a result, companies and organizations were employing various inaccurate criteria, hastily conceived tests, and implausible interview styles in order to identify or qualify a candidate's or an employee's product management skill set.

Indeed, people sensed at that time that the product management profession had reached a point of maturity and acceptance which would justify opportunities for certifying expertise. The author of this book was one of those people.

This was in the early 2000s and in response to that growing need in the market for a product management certification, the author of this book pioneered, designed, and wrote all the questions and content for Pragmatic Marketing's (a product management training company from Arizona, USA) original *Pragmatic Marketing Certified Practitioner* (PMCP) certification program. It was a yearlong effort.

The PMCP certification program was highly respected and consisted of a single high-stakes test that was delivered via Prometric test centers (Prometric is a global test delivery and administration provider, based in the USA). High-stakes certification programs, an industry accepted classification, are regarded as having tests that can dramatically, positively or negatively, impact an individual's career, salary, and chances of getting hired and promotion. These programs are expensive and their tests are delivered in a proctored environment. High-stakes tests strive to be credible and reliable but are hard to study for, difficult to successfully pass, and can have a 30 % or higher failure rate.

Such was the PMCP certification—it was an advanced certification program ahead of its time and it was terminated after about three years. The PMCP certification program was a forerunner and the void left by its elimination was quickly filled by variations of low-stakes product management certification programs.

Low-stakes certification programs are regarded as having simple, general, and generic multiple-choice quizzes, and have virtually no impact on one's career parameters. These low-stakes tests do not require much effort or time to study for and have abnormally high pass rates.

While the need for a product management certification was publicly recognized, lurking in the background is always the question of what subject matter should the certification be based and the individual tested on. The low-stakes tests by their own

design are very general. Accordingly, the low-stakes product management certification programs content converged and they became based on a collection of disjointed and freely available generic public domain content, maybe coupled with some theoretical/academic content and proprietary models to provide more legitimacy. These simple tests are not worthless but career-wise they are definitely worth less and their entire value is intrinsically limited to being a self-assessment tool, at best.

Alas, product management remains misunderstood and ill-defined by many, mistakenly generalized and detrimentally misperceived to be responsible for everything related to the product. There are still people struggling to this very day to define what product management is. Therefore, in the past and still today, building a neutral product management certification is a futile task since there are a confounding number of inconsistent and conflicting product management misinterpretations floating about.

12.4.3   Past Lessons Learned

In the mid-2000s, Blackblot started to get requests, mainly from large enterprises and multinational corporations, for a test that would assess practitioners on a defined set of best practices and proven methods of performing specific tasks in product management. The companies wanted credible validation that candidates and employees understood and comprehended the relevant subject matter.

With hindsight relative to the *Pragmatic Marketing Certified Practitioner* (PMCP) certification program it was rather obvious that the market was not yet ready for another high-stakes certification program. It was also evident that large companies and serious professionals were much averse to low-stakes certification programs.

The *Blackblot PMTK Methodology*™ was already established by the mid-2000s and, following careful consideration, the Blackblot certification program was built by the Blackblot team around the *Blackblot PMTK Methodology*™, and positioned as a medium-stakes certification program with an intermediate rating of difficulty. It was another yearlong effort.

Medium-stakes certification programs are regarded as personal achievements that enhance professional development, and can impact the certification candidate's career, as well as the effectiveness of the organizations that employ those individuals. Such certifications are taken independently with open book materials and delivered over the Internet. The whole idea is to fairly verify that the candidate knows the material through learning. Candidates will pass the test if they study and fail if they do not.

12.4.4   Being Certified has Some Value

Being certified is really about investing in one's self. It is an intangible investment that demands much effort and yields probabilistic returns in both the short term and long term. True high and medium-stakes professional certifications also provide individuals with means to demonstrate their commitment to their profession, and set themselves apart from others in the same profession. It is also an asset that is often used by companies to ensure that they have competent personnel.

But a realistic perspective is warranted. An individual's career progression and employment are based on a multitude of shifting factors which include experience, track record, education, training, certification, pedigree, timing and opportunities, and a host of personal, social, cultural, political, and emotional considerations. Especially today, nothing ensures getting hired, provides a measure of job security, or guarantees a steady income.

12.4.5   Summary

The reality is that being accredited with any good certification will not directly lead to and has little impact on getting job interviews or promotions since most employers presently place little value on the credential for the specific purpose of job hiring or workplace promotion.

On the upside, the majority of certified individuals affirm that a credential is a positive career differentiator. In addition, the overwhelming majority of certified individuals profess that a credential has asserted their position as a trusted authority in product management and validated their skills and commitment to the product management profession.

Evidently it seems that obtaining an advanced certification credential nowadays will not yield major career opportunities or changes. Conversely, being befittingly certified is a notable achievement that undeniably manifests in positive peer/ employer recognition and higher professional esteem.

12.5   The Future of Product Management is in a Movement

12.5.1   Introduction

The product management domain faces unique contemporary challenges. Overcoming these challenges does not require technological breakthroughs or previously unbudgeted resources. Reliable and supported principles, tools, and methods for practicing product management are mature and available. Highly capable and

educated human talent is there. But something is curtailing the growth of product management and limiting its potential benefits for businesses.

This review presents the product management domain's most acute present challenge and proffers a way to overcome it.

12.5.2 Orderly Ways

The methods that modern companies use to develop products are deeply rooted in the ways of the distant past. Significant traits of the orderly, efficient, and tool-based managerial and developmental processes, the enablers of complex manufacturing projects that were the mainstay of factories of the industrial age, are still being practiced today.

Various managerial and developmental job titles and roles in related professional domains such as program management, product management, project management, and product development, all grew out of the USA's post-World War II defense industry. They then crossed over into the business world and were primarily adopted by the technology sector. These job titles and roles were then fused with the managerial and developmental processes of the time to provide the contemporary methods that companies use today to develop consumer and business products.

Over the years the different professional domains have reached acceptance, maturity, recognition, and subject matter consolidation. The project management domain is a fine example of such with the *Project Management Institute* (PMI) organization acting as a recognized central accreditor body, and the *Project Management Body of Knowledge* (PMBOK) as the accepted convention of uniform guidelines to apply project management.

The PMI's founding was driven by several key individuals and corporations in the USA that all shared the same perspectives on project management. Their motivation was to standardize the project management discipline so that there would be better communication and collaboration on joint projects. These circumstances and motivations do not exist in regard to product management, especially among competing companies.

12.5.3 Lag in Product Management

The product management domain is different than the other professional domains by considerably lagging behind in being properly understood. While great strides have been made and there is some noticeable improvement, the current situation is that there is a profound lack of understanding of what product management truly is and consequently there are far-reaching interpretative variances about the product management domain's scope and constitution, and even in regard to its importance or relevance.

For many, lingering is the pervasive absence of clarity on how to define product management, where it fits, how it interfaces within the organization, and what its

goals are. All this has created a chaotic environment which is hindering the contribution that the product management domain can make to businesses and impeding the career progression of product management professionals.

All business domains are shaped and governed by some form of foundational rules. The product management domain is no exception. Without a methodological foundation, unfounded opinions are erroneously presented as tautological positions. This has resulted in misconceived notions which put forward baseless statements of what product management is, while being wholly based on conjecture, skewed workplace experiences, and mere personal preference or interpretation. Without offering principles to govern product management, the stated position immediately descends to generalization and consequently considers product management as responsible for everything and anything. There are many who mistakenly accept and perpetuate such unsubstantiated engrossing interpretations.

12.5.4   Generalization and Trivialization

Generalizing is easy and is employed by some product management training and certification vendors. This allows the vendor to offer a program that is comprised of disjointed subject matter while using some proprietary but mainly free public domain content. Sometimes a single rudimentary "plan-build-launch" style graphic model is propped on top of the program's content and misrepresented as a methodology (for competitive purposes) or as an open framework or flexible method (particularly when the offering is incomplete). Some opportunistic vendors have tried to offer new programs that promote patently skewed perspectives of product management, such as *UX Product Management*, *Lean Product Management*, and *Agile Product Management*—but all these defective ideas have already withered or are fading away on their own. Yet again, without a solid methodological foundation these vendor-specific programs offer very little support to the advancement of the product management profession.

The digital sphere has proven itself as the breeding ground for the development of ideas and content. Serious product management ideas and debates have found sanctuary on various Internet platforms but there is a sense that quality content and true thought leadership in product management are being overwhelmed by the noise created by masses of generic and arguably trivial product management content. The Internet has become inundated with scores of posts in the form of "three tips, tricks, things, mistakes, topics, facts, signs, lessons, questions, reasons, ways, ideas, rules every product manager should. . .". The contributory value of such posts to the advancement of the product management profession is questionable to say the least.

Joining the cycle that perpetuates the generalization and trivialization of product management are trends from product development which include attempts to discredit product management and invalidate its necessity. This is particularly evident in the software industry where product management, program management, and quality assurance are being portrayed as stifling innovation and slowing the pace at

which a product can be developed. This view is a reflection of a grand power struggle and self-serving efforts by elements in the product development community to centralize all ownership and control of product delivery in the hands of the development team.

These combined forces erode the respectability of the product management domain and they discourage the cohesion necessary to build a professionally recognized and stable product management community. But it really does not have to be this way.

12.5.5   Quest for a Popular Movement

Moving forward, the product management domain and its practitioners face many challenges. Because of the current market structures and forces it is not likely that a respected central body and a product management body of knowledge (similar to PMI and PMBOK) will emerge in the near future. On the way to conformity and solidarity in the product management world, more creativity, enlightenment, and individual contribution are needed. A positive culture that is based on intellect and rationales has to first evolve.

There are people who are moved by others and people who move others. What the product management domain needs is a global movement of movers, disparate but like-minded organizations and individuals who will positively promote the product management domain according to the following three principles:

1. Acknowledgment that product management is unequivocally governed by methodological foundational rules, not opinions or interpretations.
2. Recognition that product management is a specialization, not a generalization.
3. Realization that product management is autonomous and distinct, not part of or subservient to any other domain or organizational department.

Models, processes, roles, and tasks are a very big part of product management, but ultimately, the rise of product management is not dependent on techniques, products, or technology—it hinges on people.

12.5.6   Summary

Product management has immense potential and a very bright alternative future, but only if it is consistently and correctly understood. The future of the product management domain is in the hands of forward-looking people who consistently and correctly explain product management to workplace peers, executive management, and customers, and participate in or support the emergence of a product management movement.

Chapter 13
Agile Software Development

13.1 The Need for a New Breed of Agile

13.1.1 Introduction

Agile is a popular approach for software development with many companies adopting and implementing it. Product management interfaces regularly with product development, and accordingly a new and modern set of effective guidelines that will bridge product management methodologies and Agile practices is needed.

However, misinterpretations of Agile methods are hindering the effectiveness that the Agile concept can bring to companies and disrupting critical product management practices which are needed for companies to succeed in the marketplace.

This review explores Agile methods' need to transition to the next phase in their evolution so that they can overcome present challenges in Agile methods and so that product management and product development can efficiently interface with each other.

13.1.2 A Brief Background to Agile

There are factors concerning the make-up of Agile methods which are the source of many misinterpretations and most of them hinge on conflicting interpretations. This section provides clarity and a common terminology about the general topic of Agile.

Agile (aka lightweight software development) is a conceptual framework for software development that is based on historical and pre-existing iterative and incremental development principles (such as the Waterfall and Spiral models), and promotes continuous planning, development, and testing work.

A paraphrasing of the general ideas that the Agile framework advocates is documented in the *Manifesto for Agile Software Development* which was drafted in 2001 by seventeen USA-based software developers. The *Agile Manifesto* details some preferred values and principles but lacks any methodological rules.

The objective of the software developers who authored the *Agile Manifesto* was to fix or find a better way of doing custom/contract software development projects, as evident in the "*customer collaboration over contract negotiation*" value and some of the accompanying principles that are present in the *Agile Manifesto*. Specifically, it is worth noting that the *Agile Manifesto*, its values, and principles, were not originally related to commercial software development.

The *Agile Manifesto* and the Agile framework are both only about producing software in a lightweight manner. Therefore, Agile's proper characterization is *Agile Software Development*. Phrases such as *Agile Project Management, Agile Product Development, Agile Product Management, Agile Product Planning, Agile Product Engineering, Agile Product Delivery*, etc. are all misleading characterizations and should be avoided.

13.1.3   What Agile Is, What Agile Is Not

The Agile framework espouses short development cycles in which the software product is developed in a flexible manner, meaning that the development team is self-managing and non-hierarchical, development work prioritization is adaptive, and team interaction and collaborative decision-making are highly encouraged. The Agile framework is intended to allow the delivery of a software product in stages, providing additional validation or fine-tuning of the software's feature set with each delivery stage. This should help avoid or mitigate undue contract negotiations in a custom/contract software development project when the product's feature scope is modified well into the project, as nearly always happens.

The Agile framework is not, and was not meant to be, an experimental, discovery, or research-driven software development technique. With its roots firmly in software, the Agile framework does not, and was not meant to, validate product concepts (validated by the product architect role) or generate market requirements (documented by the product planner role). The Agile framework already assumes the solution to be software, so therefore there is no other product concept to explore.

The term *Agile* has also become synonymous with a group of Agile-inspired software development methods, such as Scrum, DSDM, Crystal, FDD, and XP, which all reside in the solution space—designing and building a product. Agile software development methods describe processes, deliverables, and roles which relate primarily to the design, specification, implementation, and verification of a software product. Agile software development methods are not product management methodologies such as the *Blackblot PMTK Methodology*™, since the product management domain resides in the problem space (identifying and articulating market problems from a product planning perspective).

13.1.4   Scrum Software Development

Scrum is a software development method which is based on Agile framework principles and values. It is the most popular Agile-inspired software development method being used today. Estimates claim that about 70 % of software development companies who use an Agile method employ Scrum.

The book *Software in 30 Days: How Agile Managers Beat the Odds, Delight Their Customers, And Leave Competitors in the Dust* by the creators of Scrum, Ken Schwaber and Jeff Sutherland, reveals a major issue with Scrum which has cascading implications and dire consequences for software companies and their product management and product development teams.

The backdrop to this major issue is that in technology-driven or sales-driven companies, product management is overwhelmingly considered to be a part of or subservient to product development. Because of the business culture of these companies in which technology and engineering practices dominate, product management is required to conform and apply any product development framework presently being used by the development team, be it Waterfall, Agile/Scrum, or anything else. Crucial product management practices which are so critical to a company's commercial success then disappear.

13.1.5   It All Starts with Something Called the Product Backlog

In Scrum there are *Artifacts*, a term that is not explained in the Schwaber and Sutherland book, but it is very reasonable to assume for the most part that artifacts are very broadly somewhat like documents. A major artifact is the *Product Backlog*. Quoting from the aforementioned book, "*The product backlog is an ordered list of everything that might be needed in the product and is the single source of requirements for any changes to be made to the product*."

According to the *Blackblot PMTK Methodology*™, there are three types of requirements that pertain to a product:

1. *Market Requirements*—define the user's problem.
2. *Product Requirements*—define a high-level description of the solution, its intended use, and the set of features.
3. *Technical Requirements*—highly detailed descriptions of the solution's design, attributes, and standards.

The different types of requirements are traditionally detailed in separate documents. From Schwaber and Sutherland's Scrum book it is clear that Scrum regards the product backlog as a single repository and an aggregator of all prioritized types of requirements related to the product.

The product backlog replaces and unifies previous Waterfall model style requirements documents, specifically the *Product Requirements Document* (PRD) and the *Technical Requirements* (Specs). It is unclear if the authors of Scrum intended the product backlog to also contain *Market Requirements Document* (MRD) information because, although Scrum explicitly places itself in the solution space as expected, it does not definitively exclude itself from the problem space, although it neither claims to be in or own the problem space in addition or instead of product management. Anyway, the fundamental novelty in product backlog is just the rearrangement and re-packaging of the different types of requirements.

Scrum also states that "*The product backlog is an ordered list of everything that might be needed in the product...*".

This means that the product backlog can contain many other things in addition to all the different types of requirements. Supporting this broad perspective and again quoting from the aforementioned book, "*The product backlog lists all features, functions, requirements, enhancements, and fixes that constitute the changes to be made to the product in future releases.*"

On a minimalistic level and structurally, the product backlog is a prioritized list of *Product Backlog Items* (PBI). Unfortunately, Scrum does not define what a PBI is nor how it is structured. The PBI can possibly represent the market problem, the solution, the work, corrections to the work (bugs), and just about everything and anything directly or loosely related to the product and the development project. So according to the stated logic and definition, any variation and mutation of a product backlog is acceptable.

Because of the very broad language used in Scrum to define a product backlog and the lack of a decisive definition of a PBI, people had no choice but to place their own interpretation on the parameters, purpose, and structure of the product backlog and a PBI. Consequently the PBI is the subject of a wide range of extreme and inconsistent interpretations, and in practice PBIs have been structured as product requirements, use cases, user stories (the most common interpretation of a PBI), bug reports, enhancement requests, work statements, or anything else. This creates an untenable situation for product management because there is no definitive counterpart in development to interface with.

Furthermore, the product backlog is regarded in Schwaber and Sutherland's Scrum book as, "*...the single source of requirements...*".

It is utterly problematic to have different types and levels of information mixed and stored in one place. By aggregating all diverse product and project information in one centralized container it is very easy and quick to lose focus and context of the information. It becomes increasingly difficult and challenging—as the product grows—to realize the market problem or the scope and architecture of the solution that is being developed. In addition, the different levels and types of information should be investigated and managed by different roles that have different types of expertise, education, background, and experience.

The limited number of Scrum artifacts draws credence from one of the *Agile Manifesto's* values which states "*working software over comprehensive documentation*". As an example of a prevalent misinterpretation, people have skewed this

value to the extreme, drastically eliminating different types of critical documentation and relying solely on the product backlog—even for complex software applications which are built via lengthy development projects and large teams. Scrum is not a one-size-fits-all magical solution that fits every software development project and via which everything will be cheaper and quicker.

Conversely, the Scrum premise of aggregating information into a single repository runs contrary to the *Blackblot PMTK Methodology*™ that advocates leveling information. One of the *Blackblot PMTK Methodology*™ minor rules clearly states that, "*It is critical to level information, especially for complex systems, and be explicit about what is and what is not accurate at each level.*"

13.1.6   The Three Roles in Scrum

Scrum supports three roles which are the development team, the Scrum master, and the product owner.

The *Development Team* is a cross-functional group of individuals who collectively possess the required skills to perform the required software development work. The *Scrum Master* is an authoritative role that is responsible for enacting Scrum values and practices. The development team and the Scrum master are rather clearly defined so let's focus on the *Product Owner*, a cardinal role in the Scrum software product development method.

13.1.7   The Product Owner Role in Scrum

The *Product Owner* role is a managerial role that is responsible for defining, prioritizing, and maintaining *Product Backlog Items* (PBI) which are contained in the product backlog. Because the PBI is not defined in Scrum and therefore the product backlog can contain "everything", by inference and consequence the product owner now becomes the responsible role for managing "everything".

The development team may do different things but it is only responsible for core development work and the programming code. Consequently, the product owner must perform and assume responsibility for any complementary work that is not core development work. So by a perfectly legitimate interpretation in accordance with Scrum guidelines, the product owner role can be extended to be also the executor and responsible party for market research, product architecture, project budgeting, release management, launch management, and much more... just about anything that is in the product backlog which is not related to coding or testing.

Managing work prioritization in a product backlog is very different than understanding market research and documenting the market problem—again, the skills required just for these two tasks demand different types of expertise, education, background, and experience.

In many companies the product owner role is assumed by a former product developer who usually considers the move a promotion, or by a former product manager who often considers the move a demotion. Coincidently and among other factors, when the product owner role is given to a former product manager, this confuses some people to equate the product owner role with the product manager role and regard the move as a legitimate and natural thing—which it is not.

The source of this confusion is due to the lack of Scrum's explicit placement in the company's processes: Scrum explicitly owns the solution space as expected, but it does not definitively exclude itself from the problem space, although it neither claims to be in or own the problem space. The basic lack of clarity on the separation of problem and solution spaces in Scrum is the primary source of many difficulties and inefficiencies.

Compounding the difficulty, in Scrum there is an insufficient number of roles which do not cover all the different types of tasks required in a software development project.

There is a common denominator that is being voiced by virtually all product owners. The reality is that *Product Owner* has become a job title that represents a collection of several roles; one of them is the original product owner role that is responsible for managing the product backlog. Due to the very fluid original definition of a product owner in the Scrum method, internal politics, and (usually) a technology-driven culture, the *Product Owner* job title can now also represent the roles of *Product Manager, Program Manager, Product Architect, Release Manager, Launch Manager*, and more... This is similar to the company dynamics that try to generalize product management and the product manager.

Given the extremely loose job description, virtually all product owners report an excess of roles, too many to be effective. In addition, the roles vastly differ in character and mindset with some assigned roles emanating from both the problem and solution spaces, which only compound the difficulties.

Analysis of the aforementioned demonstrates that in order to successfully implement Scrum, from the role and artifact perspective, the following guidelines should be followed:

1. The product owner resides solely in the solution space.
2. The product owner only manages the product backlog.
3. The product backlog only represents a prioritized list of required software development work.

These guidelines work and fix Scrum deficiencies. However, the problem with these guidelines is that they contradict some basic tenets in Scrum which do not officially provide for managerial roles other than the product owner, and do not support artifacts or documentation other than the product backlog—which does not allow obvious leveling of different types of information.

This beckons the realization that Agile methods in general and Scrum in particular are ready for the next phase in their evolution. Indeed Agile methods are useful but must evolve to compensate for present Agile methods' deficiencies.

The practitioners and companies are clearly ready for a new breed of Agile-inspired software development methods.

13.1.8 Shaping the Future of Agile Methods

There are presently different forces trying to shape the future of Agile methods. On the extreme there are voices who wish to consolidate all power with the development team. With Scrum, the call is to abolish the product owner role and transfer its responsibilities to the development team. The premise in this blatant power play is that a company only needs brilliant and multitalented developers who will guide and manage themselves and make all relevant product decisions. No checks and balances are needed, no specialization or professional focus, no separation of problem and solution spaces, and so on. . . The voices argue that everything will be done more quickly and cheaply, a very enticing proposition but mostly unrealistic.

The "Jack of all trades, master of none" approach to defining roles does not produce better products, nor will it contribute to one's professional and career development. It will only produce overwhelmed generalists in the development team who will argue among themselves about who is responsible for what. Tasks will not be done or will be done poorly and delivery times and quality of work will suffer. At the end of this experiment, the individuals will find themselves neither qualified nor competent in any field—and that could eventually be very bad for one's future employment potential.

Another way to reach the next phase is to fix the Agile methods' inconsistencies in roles and deliverables. Agile methods, particularly Scrum, have clearly defined practices regarding the processes (especially the ceremonies in Scrum) but roles and deliverables, as we have seen, present various difficulties. In addition, Agile methods in their current form are not suited to large and complex projects because of their disconnection from systematic market research and their lack of overarching central planning and management that are needed for big projects. The point is that pure Agile methods, particularly Scrum, do not scale well at all.

Disciplined Agile Delivery (DAD) is an Agile-inspired software development method which tries to overcome present Agile and Scrum deficiencies. DAD recognizes and introduces an *Architecture Owner* role which corresponds to Blackblot PMTK's product architect role. DAD replaces Scrum artifacts with a documenting approach called *Agile Modeling*.

Scaled Agile Framework (SAFe) is another Agile-inspired software development method which tries to overcome present Agile deficiencies. In SAFe there is recognition of all the traditional roles in product delivery programs. So in addition to the product owner there are provisions for all the traditional roles in disciplines such as product management, program management, and release management. SAFe also includes *Software Architect* roles.

It is likely that all Agile methods will continue to evolve and other Agile-inspired software development methods will emerge. Specifically, all contemporary Agile methods' role definitions, deliverables, and interfaces to other disciplines require consolidation.

A formulation for the next breed of Agile methods to be successful is that it must adhere to the following new values:

1. Solution space
2. Information leveling
3. Role specialization
4. Clear interfaces

This means that the next breed of Agile methods must not transcend the solution space, and must explicitly decouple levels of information of different types, promote role specialization and not role generalization, and establish clear interfaces to adjacent disciplines—specifically to product management and user experience (UX).

13.1.9 Summary

Agile methods need to undergo a period of maturity and subject matter consolidation to achieve the same consistency, practicality, and holism that have been achieved with the *Blackblot PMTK Methodology*™ in the product management domain. The majority of forces guiding Agile methods are moving in the right direction with companies and practitioners alike ready for the next breed of Agile methods.

13.2 The McDonaldization of the Development Team

13.2.1 Introduction

Software development processes are constantly evolving. The last decade has seen a rise in the popularity of Agile software development methods that have radically changed the manner in which companies develop software and manage their development teams.

Every corporate process impacts the company's employees for good or bad. Adding or detracting structure and autonomy with the company's workforce can spell the ascent or decline of that company.

The Agile Scrum development team follows relatively non-traditional rules which govern the interaction, decision-making, and status of its members. According to Schwaber and Sutherland, the authors of Scrum, an Agile-inspired

software development method, the Scrum development team is supposedly struc-
tured and empowered by the company to organize and manage their own work,
which should bring about more overall efficiency and effectiveness.

However, there are some major potential pitfalls to the guidelines which govern
the Scrum development team. This review explores the possible personal and
corporate impacts of shaping the development team according to Scrum rules.

13.2.2   The Industrial Revolution

The Industrial Revolution of the eighteenth and nineteenth centuries ushered in a
range of dramatic inventions, such as the steam engine and machine tools, which
were later coupled with more efficient manufacturing operations. It was an age that
transformed the world with far-reaching implications on people's standards of
living, geopolitics, and social structures. But the Industrial Revolution's effect on
work conditions and labor was immediate.

One of the eventual and most visible outcomes of the Industrial Revolution was
the assembly line, a manufacturing process in which the product is built sequen-
tially with interchangeable parts by interchangeable workers who perform one
specific manufacturing task. This concept of replaceable workers who only fulfill
one manufacturing task will be a reoccurring theme in some industries in our
modern times.

The manifestation of the assembly line is automobile production, and nothing in
popular culture exemplifies the assembly line more than the 1913 Ford Model T
production line. For the most part, workers on the Ford Model T production line
were relegated to repeatedly performing the same specialized task every day.
Although vehicle production itself was highly efficient and economical, various
physical, social, and emotional problems soon emerged among the production line
workers.

Fritz Lang, the famed Austrian film director at the turn of the previous century,
was strongly affected by the alienation and anonymity of the assembly line worker
at the Ford automobile factory. Lang's 1927 futuristic movie *Metropolis* stresses
the maddening and dehumanizing impact of repetitive work without specialization.

13.2.3   The McDonald Way

The McDonald Brothers, Dick and Mac, modeled the operations of their very first
hamburger restaurant in San Bernardino, California, after Ford's assembly line
concept. The general idea was to break down the food preparation and serving
processes to simple autonomous tasks which would be performed by workers who
could be easily trained and easily replaced. The workers would also be

interchangeable which would allow shifting them as needed from one station to another with relative ease and minimal cost.

In his 1993 book *The McDonaldization of Society*, sociologist George Ritzer reflects on the macro and micro impacts on societies and companies when they develop a business culture that reflects the characteristics of a McDonald's fast-food restaurant.

Ritzer contends that McDonald's restaurants are extremely efficient operations that focus on maximizing speed of delivery and volume of service. He asserts that McDonald's restaurants view and present quantity (large food portions) and fast service as equaling quality of company and product. As with the early Ford automobile factory, part of the McDonald way is its interchangeable and replaceable labor force which follows highly repetitive, routine, predictable, and controlled processes.

13.2.4   The Scrum Development Team

In Scrum the development team is self-organizing and takes guidance from the Scrum master but is without a designated leader. Accountability belongs to the development team as a whole and all team members are equal and may perform any required role or task.

These guidelines are reminiscent of mild to extreme socialist economic models which aspired to create a classless social order with collective labor and common ownership for the purpose of production. According to Schwaber and Sutherland, "*Scrum recognizes no titles for Development Team members other than Developer, regardless of the work being performed by the person; there are no exceptions to this rule*." This is very evocative of the 'comrade' form of address that was so commonplace in the former Soviet Union...

The communist social experiment was a failure in every conceivable aspect, probably because for the most part it was utterly totalitarian. While communist societies and the Scrum development team are managed very differently to say the least, it would serve us well to be mindful of the impacts of communism, particularly with regard to the lack of individuality and the systematic preference for the collective process and its outcome, over the participating individual.

So what can we expect when we take a software development team which is comprised of highly competitive and smart individuals, often with strong personalities to match their talent, disregard their expertise and experience, and put them in a standardized process that officially homogenizes them? A utopian happy and productive team? A dystopian *Lord of the Flies* style fight for control? Or maybe just semi-efficient work from semi-disgruntled workers?

It is obvious that generically labeling every individual on the development team as *Developer*, and uniformly viewing him/her as such, is preferred by the company. The developer is now considered as a standard worker who can be tasked with any development chore, moved from one development team to another, and easily

replaced by another or a new developer—just like a McDonald's restaurant worker. This is the McDonaldization of the development team.

13.2.5 Summary

Any situation where people are stripped of their individuality, lose their ability to differentiate themselves, and lack the option to fairly compete with others and be recognized for their expertise, is a situation where people gradually lose motivation to better themselves and consequently the company. Needless to say, a worker class who by design do everything will find themselves neither qualified nor competent in any one field—and that eventually will drive down the worker's earning and employment potential.

Modern software developers, as all people, strive to assert their individuality within a team of peers, and need to focus on the quality of their work instead of quantity (sprint speed, burndown). It is wrong and counter-intuitive to take competitive and skilled workers and McDonaldize them via the Scrum way.

European guilds of the Middle Ages were professional associations that valued the craftsmanship and workmanship skills of their members. The general premise of the guild was that every profession became more specialized over time and that the guild's members were experienced and confirmed experts in their craft.

It is correct to apply the same notions which guided medieval guilds to modern software development teams. The world will always be built upon expertise and professionalism.

13.3 Origins of the Product Manager vs Product Owner Dilemma

13.3.1 Introduction

The product management domain and the product manager role in the software industry were thrown into flux with the emergence of Agile/Scrum software development practices and the accompanying *Scrum Product Owner* role.

The upheaval in software companies that committed themselves to Agile/Scrum was initially relegated to confusion on how the traditional product manager and the new Scrum product owner roles should be reconciled. Are these two roles essentially the same? Are these two roles fundamentally different? Should or can these two roles be integrated into one capacity? Should one role be canceled in favor of the other? Can one person assume and successfully fulfill both roles?

At many software companies, the product manager vs product owner dilemma was ultimately resolved by officially abolishing the *Product Manager* title and

having only Scrum product owners, or by redefining and expanding the product manager role to also include the responsibilities of the Scrum product owner role.

This review presents the events and circumstances which elevated Agile/Scrum to its high level of popularity, provides an alternative critiquing viewpoint on the merit of Agile/Scrum practices, and explains and analyzes some of the impact Agile/Scrum had on software companies and on the product management domain and the product manager role.

13.3.2 Business Motivation for Faster Delivery

There is a business backdrop that helped Agile/Scrum software development practices become so popular. Business executives are always looking for better ways to improve their businesses. It could be the employment of new technology, the application of more efficient internal processes, the acquisition of cheaper labor or reduction of labor, or just about anything that can legitimately help a business succeed in achieving its business objectives.

The motivation to change a company's internal processes and use a new method is due to the perception that the new method promises to deliver a combination of gains in time, cost, and quality. In business, that promise which is made explicitly or implicitly allures the business stakeholder with a pledge to ultimately decrease costs and/or increase revenue.

Affecting the decision-making process at companies is the fact that the world we live in is quickly changing and becoming more dynamic. Customers expect value, innovation, and technological advancements, which they take for granted and want fast. Consequently, rapid delivery has become a perceived necessity for the survival of companies and this market dynamic has put more pressure on company executives to find ways to more rapidly deliver products to market.

The release of the document known as the *Agile Manifesto* was timely and it also tapped directly into the increased business motivation of accelerated delivery.

13.3.3 Timing Is Everything, the Agile Manifesto

The *Agile Manifesto*, a proclamation document listing preferred values and principles related to custom software development, was published in 2001. The context of the *Agile Manifesto* was custom software development and its objective was to provide a better way of building custom software for customers in a manner that would be productive and would reduce undue negotiations with the customer.

The *Agile Manifesto* is an attempt at creating a framework, a basic conceptional structure—a collection of ideas. Frameworks are overwhelmingly theoretical and primarily comprised of organized recommendations which pertain to a particular aspect of doing business.

The *Agile Manifesto* is a simple, perfunctory framework document that does not provide any revelation or any innovation whatsoever. There are thousands of similar book chapters, articles, and blog posts to be found that list ways, tips, rules, guidelines, etc. to better deliver software. The *Agile Manifesto's* espoused values of communication, collaboration, discovery, and experimentation are all worthy values which one will find being applied in many industries and institutions throughout the centuries.

The *Agile Manifesto's* background is rooted in lightweight software development. The concept of lightweight software development has been around under different names since the 1960s. It is based on iterative and incremental development principles, and promotes continuous planning, development, and testing work. Modern lightweight software development began to re-emerge in the late 1990s with method variations such as *Extreme Programming* (XP), Crystal Clear, Scrum, and *Feature-driven Development* (FDD).

Two of the co-authors of the *Agile Manifesto*, Ken Schwaber and Jeff Sutherland, collaborated during the late 1990s to create Scrum which is a lightweight software development method. In 2001, Ken Schwaber and Mike Beedle (another *Agile Manifesto* co-author) published a book titled *Agile Software Development with Scrum*. These two publications and several other coinciding events caused the concept of lightweight software development to become synonymous with and recognized as *Agile Software Development*, and also to be heavily associated with Scrum.

The timing of the *Agile Manifesto's* publication and the release of Schwaber and Beedle's Scrum book during the dotcom meltdown was perfect. Everybody was reeling from the effects of the late 1990s dotcom implosion and the ensuing early 2000s high-tech sector recession. There was a void in the market and an ongoing search for a faster delivery method that would help to quickly bring products to market, and do so faster and with lower costs than the software development methods that were used during the dotcom era. Lightweight software development methods were viewed as possible candidates.

The *Agile Manifesto*, the Scrum book, and the Scrum method itself were perfectly positioned time-wise to offer an alternative and supposedly better way of developing software. The success of the *Agile Manifesto* and popularity of Scrum were overwhelmingly due to happenstance and circumstance.

13.3.4   The Rise of Scrum

For many software companies, the search for a rapid delivery technique culminated in Scrum. Capitalizing on the aforementioned supporting events and relations, Scrum became the most popular Agile-based software development method with over 70 % of Agile adoptions being Scrum. For many people the terms Scrum, Agile, and Agility all became synonymous, intertwined, and interchangeable.

Selecting Scrum as the company's new software development method was easy for many company executives because of the wholly unsubstantiated promises, such as "*With Scrum you build a prototype in three months whereas with Waterfall it will take a year*", that were being circulated and propagated by people and companies with a vested interest. There was also the bandwagon or herd effect, a situation where newcomers blindly adopt trends merely because others have done so before them.

Yet, Scrum is remarkably crude with obvious undertones of generalization, relabeling, and sports culture.

For example, Scrum generalizes the most fundamental components of a development method such as documentation by having one product backlog document instead of several requirements and project documents, and by deconstructing specialized roles and replacing them with homogeneous developers and one generalized project manager, titled *Product Owner*. The *Scrum Product Owner*, a key role in Scrum, is just a renamed and generalized title for a software development project manager (with some added responsibilities under Scrum).

Scrum also relabels the most fundamental components of the development method. For example, documents are renamed to be artifacts, meetings renamed to be ceremonies, and postmortems renamed to be retrospectives. Nothing is really new or even improved.

Furthermore, Scrum is seemingly patterned after American popular sports culture. The concepts of Scrum are very similar to American football with downs (sprints), quarterback (product owner), coach (Scrum master), team huddle and locker sessions (ceremonies), etc.

All this generalization, relabeling, and sports game patterning makes Scrum conceptually very simple. Indeed, rapid delivery requires simplification and more peer collaboration. Processes must become more simplified and adaptable. However, the increased fluidity, simplification, and speed in delivery nearly always mean less precision in the product development process and in the resulting product feature set.

Scrum is simple and easy to grasp, which is an advantage and part of the reason for its popularity. Scrum is so simple that any novice only needs to undergo a two-day course to be trained and certified as a *Scrum Master*.

But Scrum does not provide any clarity on some extremely cardinal topics which would indicate how to govern Scrum and how Scrum should fit in and interface with other methodologies being practiced at various company departments such as marketing and product management. For example, does Scrum attempt to encroach into the problem space, reside solely in the solution space, or outright own both spaces? There are so many voids in Scrum at every conceivable level, conceptual to operational, which render Scrum as markedly incomplete.

Exacerbating the already flawed structures and missing information in Scrum is the fact that the authors of Scrum occasionally used colloquial or amorphous language in their books and writings. Consequently, the situation of Scrum becoming popular but simultaneously being unclear and incomplete overnight gave rise to an army of Agile/Scrum consultants, advisors, and experts whose job was to

interpret Scrum for the masses, just like clergymen explaining scripture to their flocks, and help software companies implement Scrum.

Scrum, by its own design, was successful only in proving itself as a flawed and incomplete method for software product development. Although it may seem counter-intuitive, Scrum's practices are actually restrictive and are inappropriate for managing complex business and technical undertakings.

Ultimately, Scrum did not yield the promised results, with about 50–80 % of Scrum adoptions failing.

When a food recipe consistently fails in numerous restaurants around the world, people eventually realize that changing the geography, kitchenware, chef, and kitchen staff will not help since the problem is the recipe. When it came to Scrum, many people, particularly the Scrum consultants, were for obvious reasons reluctant to blame the method for its own failure to deliver and instead blamed the practitioners for their supposed lack of commitment, lack of discipline, and an unaccommodating company culture. The misguided explanation often repeated was "*Processes do not cause failures. People cause failures.*"

In the brilliant "Zero Defects Code" memo, Chris Mason, the author and a Microsoft developer, states "*The point of enumerating our problems is to realize that our current methods, not our people, cause their own failure.*" So while clearly individual personalities and business cultures always have a bearing on a project's outcome, so does the process. A bad process can corrupt anything and anyone.

The practitioners themselves did not like getting blamed for Scrum's pitfalls and the executives were disappointed that Scrum had failed to deliver the promised improvements. But at this point in time the damage had already been done.

13.3.5   The Impact on Product Management

Scrum fundamentally harms the product management domain and the product manager role in the software industry. For technical people, technical knowledge and technology are highly valued and considered the company's core competency. The authors of the *Agile Manifesto* and Scrum are very technical people and that is reflected in their notions in which product development is the core and other corporate functions, such as product management, are overwhelmingly considered to be a part of or subservient to product development.

Based on this mindset, it did not seem outlandish to the authors of Scrum and its supporters to opine that product management is required to conform to and apply any product development framework presently being used by the development team, be it Waterfall, Agile/Scrum, or anything else.

Furthermore, in their *Scrum Guide* book (2012), Schwaber and Sutherland explicitly advocate that product managers be retrained to become Scrum product owners. This guideline alone had an immediate detrimental effect on product managers and the product management domain being practiced at software companies. At the individual level, many product managers, and other people assuming

other critical roles which were folded into the Scrum product owner role, lost their jobs as their roles were not officially designated in Scrum. At the company level, crucial product management practices which are so critical to a company's commercial success disappeared because there was nobody at the company to practice them. There were additional negative ripple effects that touched product marketing and user experience.

Regardless of whether their original job title was retained or modified, many product managers were converted into product owners. Yet again, the blurring effect had taken its course and now Agile/Scrum, a lightweight software development method, was considered to be a form of product management. This introduced and caused the phrase *Agile Product Management*, the epitome of an utter oxymoron, to become prevalent. The road to coining the new job title of *Agile Product Manager*, a euphemism for *Scrum Product Owner*, was short.

Scrum and all the other Agile software development methods are not product management methodologies since the product management domain resides in the problem space (identifying and articulating market problems from a product planning perspective). Anybody practicing Scrum or any other Agile software development method is invariably in the solution space. Accordingly, a person assuming the capacity of a Scrum product owner must be a member of the technology/ development/engineering team.

The converted product manager now found himself constantly serving the development team and acting as a Scrum product owner, a managerial role that according to scrum is responsible for defining, prioritizing, and maintaining *Product Backlog Items* (PBI) which are contained in the product backlog. The problem is that by Scrum's own definition the Scrum product backlog contains everything related to the product, and therefore by inference the Scrum product owner becomes responsible for everything related to the product. This is a formula for an unavoidable failure because the product owner role cannot intrinsically scale to accommodate complex or large software development projects.

13.3.6   The Impact on Software Companies

Scrum negatively impacts software companies and their employees. Especially notable is the rudimentary nature of Scrum which impedes software companies who are engaged in developing intricate and complex software products or serving sophisticated markets.

In the short term and because of the adoption of Scrum, people were fired, retrained, and relocated. In the long term, the move to Scrum fundamentally altered the software company's processes, culture, and mindset, often without betterment. But there are alternatives.

Software companies that are adversely affected by Scrum go through a process of realization, recognition, and then stages of phasing out Scrum and phasing in a different method. Scrum's pitfalls have created a market dynamic to replace Scrum

with better thought-out alternatives such as flexible implementations of Waterfall, *Scaled Agile Framework* (SAFe), *Disciplined Agile Delivery* (DAD), and also adaptations of *Rational Unified Process* (RUP).

Needless to say, the new Agile methods have all capitalized on the experience drawn from Scrum to bring back very clear delineations between product management and product development, to reinstate and recognize the product manager role as being wholly distinct from any product development role, to introduce leveled documentation, to promote role specialization, and more, all of which are contrary to Scrum's principles.

13.3.7   Summary

Henry Louis Mencken, a shrewd American writer and journalist, said that "*For every complex problem there is an answer that is clear, simple, and wrong*." Scrum is that clear, simple, and wrong answer to a strong need in the software industry for a rapid delivery method. After more than a decade of experience, even the staunchest Agile consultants have come to terms with reality and moved on to focus on other forms of Agile methods and principles instead of Scrum.

The Agile/Scrum experiment hurt many in the software industry. It had a profound negative impact on many people's careers, completely skewed the product management domain, disrupted the relationships and interfaces between different corporate departments, and failed to deliver the promised benefits.

There are many very important lessons to draw from the Agile/Scrum experiment. Among them are that successful companies rely on professional business functions that have efficient interfaces between them and that there is absolutely no substitute for a solid process that is supported by logical thinking.

Chapter 14
Ancillary to Product Management

14.1 Product Management to Product Development Ratio

14.1.1 Introduction

In regard to staffing, the key metric and focus of hiring managers and recruiters in the product management world for quite some time has been what would be considered to be a good ratio of product engineers to product managers.

This review explains the guidelines to understanding and the limitations concerning the ratio of product engineers to product managers at technology companies.

14.1.2 Estimation and Factors

There is no credible industry data about the recommended or actual ratio between product engineers and product managers in technology companies. Over the years there have been some surveys conducted by different entities in an attempt to uncover the optimal ratio but these surveys are not statistically valid.

There is a prevalent and unsubstantiated estimation that the actual ratio of product engineers to product managers in software companies in the USA is about one product manager to every seven product developers (1:7). Another unsubstantiated estimation is that the actual ratio of sales managers to product managers in software companies in the USA is about one product manager to every three sales managers (1:3).

The primary factors which affect the ratio between product engineers and product managers are:

1. The scope of product functionality that is needed in order to satisfy user needs. This functionality is planned by product management.

2. The intricacy level of the technology that is required to provide the desired product functionality. This technology is developed and/or implemented by product engineering.

Rationalization of these primary factors means, for example, that a functionally limited but technologically complex product will command a higher product engineers to product managers ratio than a functionally broad product that relies on simple technology. To a lesser extent, the ratio will also depend on secondary factors such as the product manager's level of professional competency and the number of products managed by the product manager.

14.1.3   Summary

Since all the aforementioned primary and secondary factors vary greatly between different companies, the ratio will also vary greatly. Therefore, attempting to search for or calculate the recommended or optimal ratio between product engineers and product managers will always prove an elusive task.

14.2   The Defining Role of the Product Architect

14.2.1   Introduction

The *Product Architect* is a critical role that is responsible for product definition. At technology companies this role is assumed by an experienced technical and business savvy individual who frequently interacts with peer roles in both product management and product development.

The product manager's primary objective to constantly research the market problem, understand customers, and become a market expert is a colossal endeavor. Equally challenging and rewarding is the product architect role which is entrusted with envisioning a solution that bridges technology and balances the company's strategic vision with the market problem.

Modern markets are characterized by sophisticated and demanding customers and superbly designed products that are based on advanced technology. In response to this phenomenon, the discipline of *Product Architecturing* and the role of the product architect have evolved to become more structured and formalized. Companies nowadays completely rely on the product architect to transform ideas, technology, strategy, and business context into a vision of winning products.

Career-wise, the product architect role has become a highly influential fixture at technology companies as product architecturing itself has become prominent. Very competent and creative individuals with deep technological expertise, business

acumen, and a broad and unique skill set are required for this role, which has made it most respected.

This review describes the nature and importance of the product architect role.

14.2.2   Background

Technology companies went through an evolution of roles in which the original job descriptions were much generalized and essentially an aggregate of several roles. The cause for generalization was that the technology companies' founders previously undertook financial, executive, technical, developmental, sales, and marketing responsibilities all upon themselves. It was only natural for the technology companies' founders to frame any individual capacity at their growing organizations as a reflection of themselves and how they personally worked. The founders often did everything related to the product. They understood the market problem, defined the solution, and developed the product—as individuals or team leads.

Roles at technology companies must be specialized nowadays due to scalability and/or complexity demands. Based on the principles of the *Blackblot PMTK Methodology*™, product-related roles are consolidated around the boundaries of *Problem*, *Solution*, and *Implementation*.

The relevant conclusion from the role consolidation is that the overall *Product Delivery Process*, the making and bringing of a product to market, is comprised of three sub-processes:

1. *Product Planning*—seeking, identifying, and articulating the market problem that customers need to solve.
2. *Product Definition*—(a) devising a functional solution to the market problem and (b) designing product implementation.
3. *Product Development*—implementing the design and manufacturing the product.

The *Product Manager* (aka *Product Planner*) role serves the key task of product planning. The role of *Product Developer* (aka *Product Engineer*, or *Software Programmer, Software Developer,* or *Software Engineer* in the software industry) is responsible for the task of product development.

In the absence of a dedicated and recognized intermediary role to perform product definition, technology companies wholly relegate the task of product definition to the product manager or to the product developers. Depending on the company and on the functional and technical complexity of the product being developed, some technology companies split the responsibilities within product definition between product management and product development, assigning to the product manager the responsibility of devising the functional solution and assigning to the product developers the responsibility of designing the product's implementation.

This problematic allocation of roles and responsibilities was and still is being practiced by many technology companies.

14.2.3   Gap in Product Delivery

The product manager is utterly devoted to researching and studying the market problem and customers' needs while the product developers are deeply focused on the technical and developmental aspects of the product.

The growing complexities of building technology products made technology companies realize that product definition could no longer be assumed by people from product management and/or product development. A dedicated role for performing product definition was required to bridge the gap between the product manager and the product developers. Accordingly, this internal dynamic inspired companies to recognize and create the discipline of product architecturing and the role of product architect.

Initially the newly formed role of product architect was responsible for the entire *Product Definition* sub-process, in defining the solution and the product's functionality, and also specifying the product's architecture (designing the product's implementation).

However, it was soon made evident that one dedicated role is insufficient to handle the product definition of functionally complex products and/or where intricate technology is employed. Two roles are required—one role to devise the functional solution and a second role to specify the product's architecture. The product architect role was thus split into two variants that together performed product definition.

14.2.4   Types of Architects

Based on the internal elements of the product definition sub-process, the product architect role is fine-tuned into two role variants:

1. *Functional Architect* (aka *Product Architect*, *Solution Architect, Business Analyst, Requirements Engineer, Requirements Manager*) who is responsible for devising a functional solution to the market problem according to how the market problem is described in the *Market Requirements Document* (MRD) or in any other similar technique which represents the market problem as provided by the product manager.
2. *Technical Architect* (aka *System Architect*, *System Engineer*, or *Software Architect* in the software industry) who is responsible for designing the internals of the product (specifying the product's implementation) in conformance to the prescribed set of measurable features which are outlined in the *Product*

Requirements Document (PRD) or any other similar technique which represents the functional solution as provided by the functional architect.

Because of the precision brought about by the more acute definitions of the types of architects, *Product Architecturing* can be properly defined as a discipline which describes the arrangement and internal interaction of the product's components that collectively provide the product's aggregate functionality. In lay terms, product architecturing is a discipline that is focused on the formation, structure, and design of a product. The *Technical Architect* is thus the role that truly owns and is responsible for product architecture. The primary deliverables of the technical architect are the product's various technical specifications.

The functional architect and the technical architect roles both belong to the development team, and depending on the maturity of product delivery practices at the company, there can be some overlap at times between these two roles or they can be distinctly separate.

In the software industry the functional architect is focused on features, capabilities, and scope of the product while the software architect is a very proficient software developer who makes technical and structural design choices relative to the product and dictates technical standards, software coding standards, operating and development environments, and technical infrastructure and metrics.

Titles, role assignments, and their combinations vary greatly among different technology companies. At some companies the functional architect and the technical architect roles are both assigned to one individual who is titled *Product Architect*. At other companies the functional architect and the technical architect are decoupled and owned by separate individuals with respective titles. And at some companies the functional architect and the technical architect roles are partially or wholly assigned to the product manager, erroneously of course.

For historical reasons rooted in the interest of clarity and distinction, in the *Blackblot PMTK Methodology*™ the functional architect role is consistently referred to as *Product Architect* and the technical architect role is referred to as *Lead Developer*.

14.2.5   *Product Architect Role Description*

The *Product Architect* (aka *Functional Architect*) has domain expertise in a particular technology or product type, from an engineering perspective.

The product architect is a tactical role that is owned by a product expert who creates a high-level design for the product. The product architect understands the market opportunity, interprets market requirements, and is well-versed in technology and development processes.

The primary deliverable of the product architect is the *Product Requirements Document* (PRD), which is a high-level description of the functional solution, its intended use, and the set of features it provides that address the market problem and

satisfy needs. Through the PRD, the product architect articulates the product's architectural vision and structure, and specifies the features that the market requirements prescribe. The product architect often contributes to other supporting documents including the product features matrix, product roadmap, and technical specification documents.

The product architect must be able to communicate well with both external and internal organizations. External to the company, the product architect communicates and works with contract development firms, technology partners, and customers. Internally, the product architect communicates and works with organizational functions such as engineering, product marketing, and product planning. The product architect also acts as a communication interface between the product planning team and the product development team.

14.2.6   Product Architect Skill Set

The following set of skills, listed in alphabetical order, is essential to the *Product Architect* role:

- *Business Skills*—ability to comprehend the business context and market problem that drive the building of a product.
- *Conceptualization Skills*—ability to create product architecture, and evaluate and foresee the applicability of diverse architectural designs relative to the product.
- *Engineering Skills*—ability to advocate and relate to different product development methods and modeling techniques.
- *Leadership Skills*—ability to rally and gain backing from internal stakeholders in order to build organizational support for the proposed architecture.
- *Mentoring Skills*—ability to counsel teams and individuals to wholly understand and effectively implement the proposed architecture.
- *Technology Skills*—ability to understand in depth, analyze, and select current and emerging technologies that are pertinent to the product and company.
- *Visionary Skills*—ability to create and articulate architectural and technical visions for the product.

14.2.7   Product Architect Role Overview Table

Table 14.1 provides an outline of the *Product Architect* role's general profile and a list of its key characteristics.

Table 14.1 Product Architect Role Overview Table

Attributes/Role	Product Architect
Alias	Functional Architect, Solution Architect, Business Analyst, Requirements Engineer, Requirements Manager
Expertise Type	Domain expertise
Expertise Focus	Product expert
Essential Function	Devise a functional solution
Primary Deliverables	Product Requirements Document (PRD)
Support Deliverables	Product features matrix, roadmap (contributory role)
Internal Interfaces	Engineering, product marketing, product planning
External Interfaces	Contract development firms, technology partners, customers
Education	Technical undergraduate degree (specific or diverse subjects)
Mindset	Technical, formalized, deterministic

14.2.8 Summary

The product architect is an extremely critical and distinct role that is responsible for devising a functional solution to the market problem and defining the product feature set, which creates the correct user experience and allows the user to complete the desired task.

Product architecturing is encompassing, dynamic, and multifaceted, and so are its practitioners. Regardless of the actual title or the selected software development method that is being employed, the product architect is a key influential role at the intersection of technology, business, and design. Companies' and their products' chances of achieving marketplace success greatly depend on a well-defined product architecturing process and very capable practitioners who possess a myriad of qualities.

In summary, the product architect is a key leadership position within the development team with this role providing the proposed product's architectural approach and the required guidance to the product developers. The product architect is also the bridge and interface between the problem space and the solution space—between product management and product development.

14.3 Program Manager Is the Product CEO

14.3.1 Introduction

The very colloquial term of *Product CEO* or *CEO of the Product* refers to an encompassing role description of complete and overall responsibility by one person for a product project, with that person also owning all monetary considerations and

project management. This term is very often assigned to the product manager, but is the product manager really the CEO of the product?

"Leading a cross-functional team without direct authority", *"Experienced in management and conversant in business, technology, user experience, and marketing"*, *"Guiding how the product will be made and marketed"*, and *"Responsible for product delivery"* are common characterizations of product managers and the job they do. All these statements overwhelmingly allude to general management responsibilities and a supervisory role. While being rather accurate descriptions of what is being done by someone, these characterizations rightfully belong to the program manager, not to the product manager.

This review explains the program manager role and the reasons why the program manager is the true CEO of the product.

14.3.2 Lockheed U-2 Aircraft

Built during the days of the Cold War in the 1950s, the Lockheed U-2 high-altitude reconnaissance aircraft is a remarkable achievement even by modern standards and it is still in use today. The U-2 was designed, built, and flown by remarkable people, and the entire U-2 program was managed by a remarkable man.

Clarence "Kelly" Johnson was the U-2 program manager. Superbly capable and regarded as an organizing genius, Mr. Johnson was highly revered, won numerous awards and honors, and was considered to be the quintessential program manager. Mr. Johnson was a role model for future program managers and his management principles were emulated by many.

A project manager supervises the execution of one project from beginning to end. On the other hand, the program manager supervises the execution of multiple simultaneous projects that are all related and working towards the same goal.

Because of the culture of the time and Mr. Johnson's talent and fame, the title and role of program manager would carry from the USA's post-World War II defense industry into the emerging high-tech and technology sectors (Fig. 14.1).

14.3.3 Microsoft at a Crossroads

During the late 1980s, Microsoft by its own account was profoundly disappointed in its new product development programs. Many of the software products then produced by Microsoft including the graphic operating systems and the desktop productivity tools were very buggy and nearly all had shipped late. The blame for the bad outcome was eventually assigned to the arguably faulty product delivery processes that were at the time being used by Microsoft.

There was very serious concern at Microsoft and an initiative to rectify this problematic situation was launched. To lead the initiative, Bill Gates recruited

Fig. 14.1 Program manager Kelly Johnson (L) and famed Pilot Francis Gary Powers (R) with U-2 in background. 1966 US Air Force handout photo

veteran IBM employee Mike Maples to review and fix Microsoft's product delivery processes. The initiative culminated, after several years of work, in 1993 with the introduction of the *Microsoft Solutions Framework* (MSF) which is a collection of guidelines and models for software product delivery. One of the key models in MSF is the *MSF Team Model* (Fig. 14.2).

The *MSF Team Model* appropriately places the program manager role at the top of the team model as an indication of the role's supervisory status and clearly designates the program management function as responsible for overseeing project progression and product delivery, managing risk factors, and having the final say and authority over the product's functional design. The program manager is a generalist who guides the product delivery program, and manages all the other corporate functions so that they work in unison and jointly bring a product to market.

The program manager is a uniquely multifaceted leadership role which interfaces with diverse corporate functions and leads them without authority. Program managers are good, but not experts, at a multitude of topics including projects, finance, marketing, product, technology, customer interaction, public addressing, diplomacy and politics, and more.
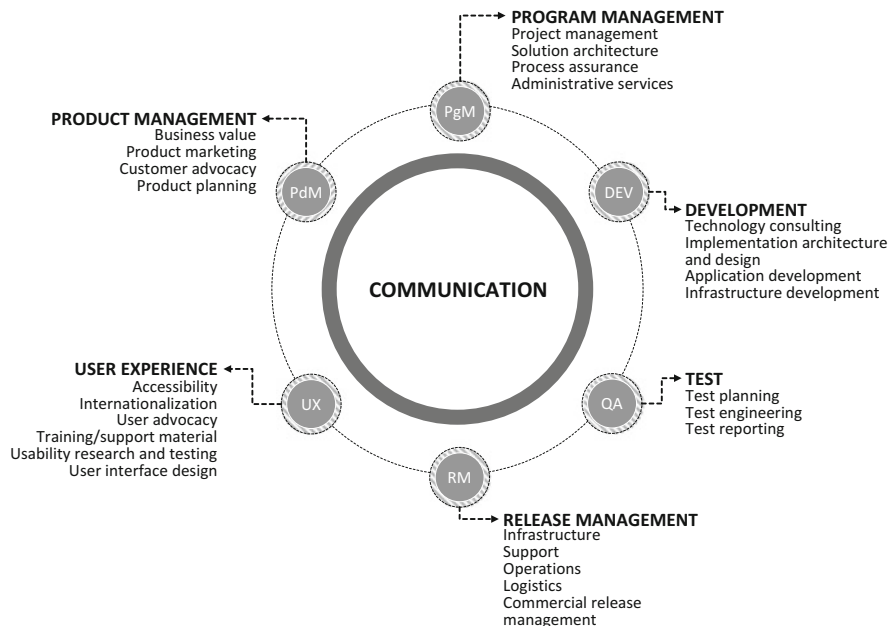
Fig. 14.2 Microsoft Solutions Framework (MSF) team model

14.3.4   Flurry of Combinations

For reasons rooted in limited budgets, entrenched traditions, internal politics, and conflict avoidance, companies knowingly and sometimes unknowingly aggregate roles and assign them to one person with one title. This is very easy to do and can be done with very little resistance regarding product management because the title and the profession are profoundly misunderstood. Ultimately and unfortunately, a falsehood if repeated and reinforced often enough becomes an accepted norm.

The demarcation between the product management function and the other corporate functions (as shown in the *MSF Team Model*) has thus become blurred, particularly with regard to program management and product development. More often than not, companies erroneously demand the product manager to also act as a program manager and/or as a product architect. At some software companies the product manager is also forced to act as a Scrum product owner.

14.3.5   Summary

The product manager is not the CEO of the product as this is a notion that is applicable only to the program manager. At some companies the product manager is incorrectly tasked with program management responsibilities and hence the

confusion. It is the program manager who is the true CEO of the product, not the product manager.

14.4   The User eXperience (UX) Domain

14.4.1   Introduction

User eXperience (UX) is a domain which has been in existence for several decades with contemporary growing awareness of it and its importance, particularly in technology companies. Presently UX is most often used in relation to digital products that have some form of digital interface.

Although UX is an autonomous entity it is sometimes mistakenly confused or overlapped with the product management or product development domains.

This review explains the basic concepts and roles in UX and how they relate to the *Blackblot PMTK Methodology*™.

14.4.2   Fundamental Concepts

User eXperience (UX) is an occupational domain that is broadly responsible for shaping the sensory, behavioral, and emotional aspects of a user's interaction with the product.

Within the UX domain there are two disciplines: *Sensory Design* and *Interaction Design*. Each of these disciplines has related competencies (Fig. 14.3).

Sensory Design's related competency is a feel for esthetics, knowing well what would be pleasing and appealing to the user's different senses (sight, sound, touch, etc.) This competency can be broadly defined as relating to sensory appeal.
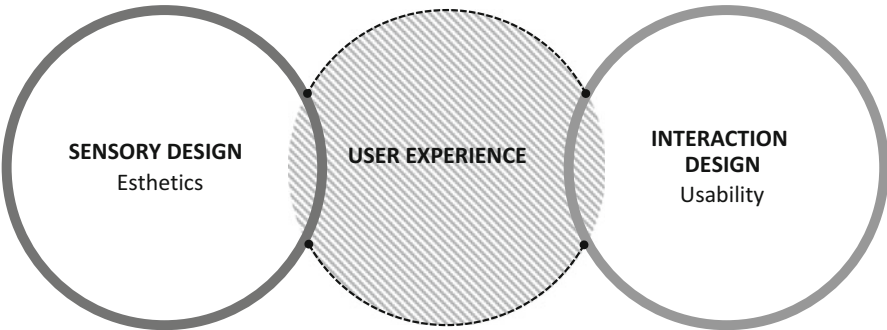
Fig. 14.3 Blackblot user experience domain
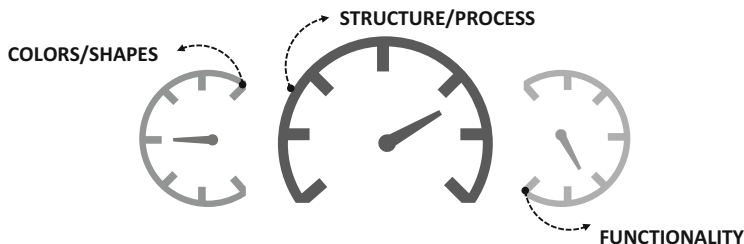
Fig. 14.4 Blackblot UX elements

Interaction Design's related competency is an understanding of usability, the ease with which a product can be effectively employed by the user. This competency can be broadly defined as relating to ease of use.

Together, *Esthetics* and *Usability* combine to create an experience that evokes *Emotions*.

In virtually any product, service, or product feature it is possible to recognize three distinct elements: functionality, colors/shapes, and structure/process. For example, an automobile's dashboard dials give us readings on the vehicle's speed, fuel level, engine revolutions, etc. (functionality); the dashboard dials and indicators are displayed in different colors and are shaped in a certain way (colors/shapes); and the dials are presented in a structure that possibly invites a regimented viewing process (structure/process). The functionality element is defined by product management and built by product development, while the colors/shapes (sensory design) and the structure/process (interaction design) are determined by UX (Fig. 14.4).

In more detail, the sensory design discipline relates to aspects such as images, lines, shapes, colors, size, proportions, sounds, material, weight, and texture. The interaction design discipline relates to aspects such as navigation, grouping, structure, and layout.

The encompassing goal of the UX domain is to shape the product's appearance and the user's interaction with the product in a manner conducive to a positively pleasing, esthetic, and usable product. Ultimately, UX seeks to optimize *Usability* and *Esthetics*.

14.4.3   User Experience Roles

The roles in the UX domain according to the *Blackblot UX Team Model* are: *Sensory Designer, Interaction Designer, User Interface Designer,* and *Usability Engineer* (Fig. 14.5).

The encompassing job title in the UX domain is the *UX Expert* which represents a mix of one or more UX-related roles. Often used, *UX Designer* and *UX Architect* are job titles which are synonymous with *UX Expert*.

Fig. 14.5 Blackblot UX
team model
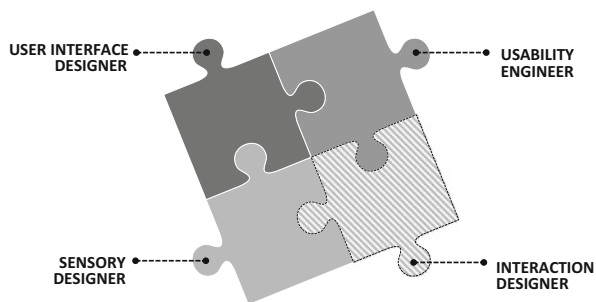
In some cases the tasks of *User Interface* (UI) *Design* and *Usability* are not performed by the UX expert, but rather by other distinct individuals who specialize in these specific tasks and are respectively referred to as a *UI Designer* and a *Usability Engineer*.

14.4.4   UX vs UI and Usability

UI Design is focused on defining in intricate detail the product's interface. The product's interface can conceptually be regarded as the parts of the product which bi-directionally interact with the user. Usability is an activity that focuses on evaluating and optimizing the level of ease and convenience at which the product can be employed by humans.

Sensory design and interaction design are both at their core strategic planning activities in UX. Conversely, UI design and usability are both at their core tactical and execution-oriented activities, and are regarded as primary tasks within the UX domain.

14.4.5   User Experience Placement

The UX domain resides in the solution space and its activities are integrated into product development. Accordingly, the UX department is organizationally located under the *Engineering* unit, with *Development* and *Quality Assurance*. See the *Blackblot Corporate Organizational Structure* diagram (Fig. 14.6).

The rationale of placing UX under *Engineering* and adjacent to *Development* is because the UX function is in the solution space and focused on shaping the interaction (not functionality) the user has with the product. For corroborative reference, the *Microsoft Solutions Framework* (MSF) team model diagram clearly regards the UX function as distinctly autonomous and separate from product management and from product development (Fig. 14.7).
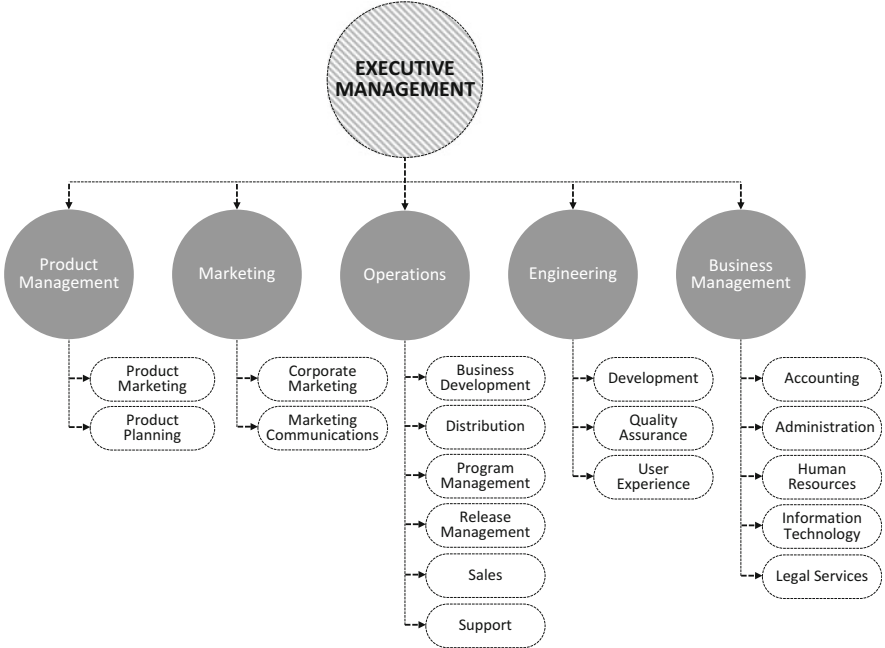
Fig. 14.6 Blackblot corporate organizational structure
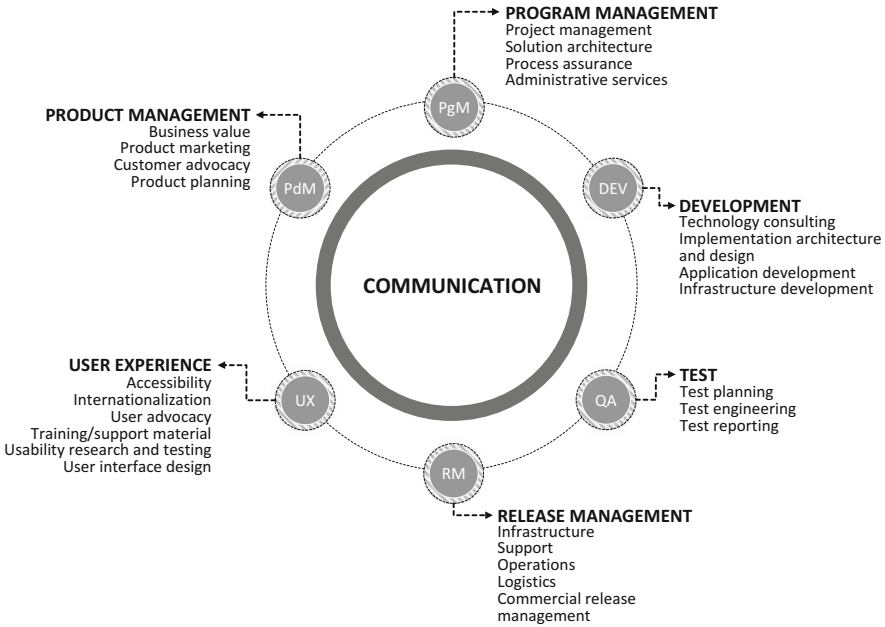
Fig. 14.7 Microsoft solutions framework (MSF) team model

14.4.6   *User Experience and* Blackblot PMTK Methodology™

The *UX Expert* primarily interacts with the *Lead Developer*, an interfacing role in the *Blackblot Product Definition Team Model*. The design specifications which are prepared by the UX expert are added and become a part of the lead developer's collective technical specifications documents for the product.

The UX expert may also interact with the product architect, a dominant role in the *Blackblot Product Definition Team Model*. The UX expert's input may also relate to personas and use case scenarios that can be integrated into the product architect's *Product Requirements Document* (PRD).

The UX expert is guided by market problem information that is found in the *Market Requirements Document* (MRD), a document which is written by the product planner.

The chain of interaction between the different roles in the product delivery program is based on their objectives and consequent deliverables. The product planner first notes the market problem in the MRD, and following that the product architect notes the solution in the PRD, a document that provides a high-level description of the solution, intended use, and the set of features it provides that address the market problem and satisfy needs. Now the UX expert and the lead developer come into play in further detail to respectively design the product from a UX and technical perspective (Fig. 14.8).

The UX expert and the lead developer are responsible for the product's two main facets. The UX expert is tasked with providing a guide to building the product's *Externals* (UX, aka *Dashboard*) while the lead developer is tasked with providing a

Fig. 14.8 Blackblot product management delivery process

Product Planner
1 Uncover unsatisfied market needs
2 Define market requirements

Product Architect
3 Identify product concept
4 Define product requirements

Lead Developer
5 Design product → User Experience
6 Define product specification

Product Developer
7 Implement the design
8 Test the product
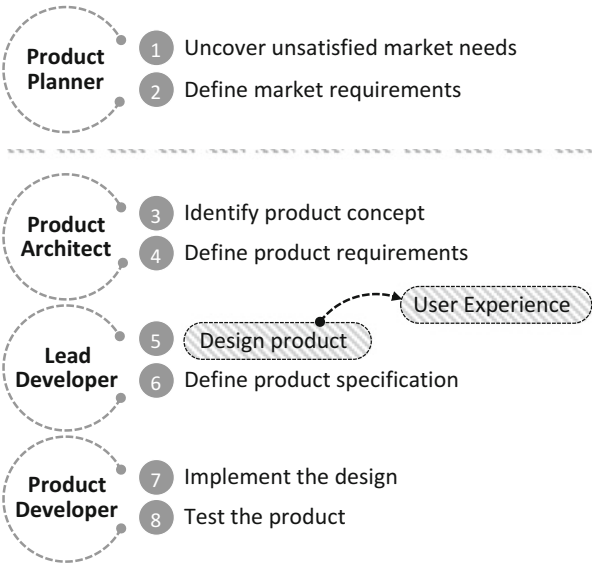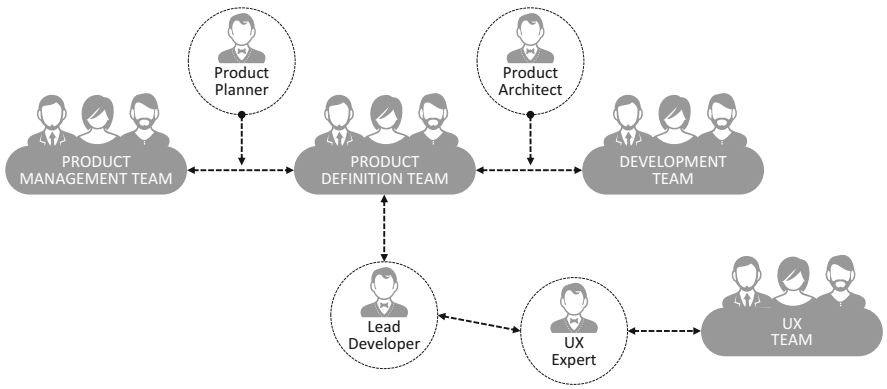
Fig. 14.9 Blackblot team linkages

guide to building the product's *Internals* (technical, aka *Engine*). The product's externals and internals are joined to create a functional, usable, and esthetic product (Fig. 14.9).

14.4.7   Summary

The plethora of role titles in UX, the interjection of related fields such as *User Interface* (UI), misleading phrases such as *UX Product Management*, *UX Story Telling,* or *UX Product Design* which sometimes attempt to describe the same thing, have all created a mass of digital information that has done more to confuse than to clarify.

UX is an autonomous domain and corporate function which can be explained and understood by using proven methodological rationales.

This review outlines a clear and determined view of UX and its corporate placement, with rationales which conform to the *Blackblot PMTK Methodology*™ foundation rules.

Part III
Product Manager's Toolkit® (PMTK)

Chapter 15
Blackblot PMTK Methodology™ Product Management Glossary

Clear Definitions that Establish a Common Understanding, Better Internal Cooperation, and Standard Corporate Processes

15.1 Blackblot PMTK Methodology™ Glossary

Perspectives abound as to what the marketing and product management disciplines are responsible for and how to define them. These interpretations vary significantly to a point where job titles and their associated responsibilities are interpreted very differently by different companies. This diversity also influences the professional terminology that shapes corporate processes.

It is therefore useful to have a set of clear definitions that help establish a common understanding. The following are term definitions as they are used throughout the *Blackblot Product Manager's Toolkit*® (PMTK) product management methodology.

Blackblot Term	Blackblot PMTK Methodology™ Definition
Actual Relative Value	The ratio of benefits and costs[customer] the product factually delivers to customers
Actual Resultant Value	A fixed combination of gains in time, cost, and status the product factually delivers to customers
Actual Value	The measured and validated worth that the customer or similar customers factually obtain from owning and using the product
Actual Value Formula	Actual value = actual resultant value + actual relative value
Advertising	Non-personal communication from an identified sponsor using mass media
Allowances (Pricing)	A conditional refund in form of a deduction from the list price in exchange for customer action. Allowances are often accomplished in two forms: Trade-in (pricing)—an item of property given in part payment upon purchase; Rebate (pricing)—customer receives reimbursement for a portion of the purchase price, in exchange for customer information

(continued)

Blackblot Term	Blackblot PMTK Methodology™ Definition
Analyst Relations	The bi-directional information exchange with financial analysts and industry analysts to inform and favorably influence them
Bait Pricing	Pricing that aims to attract customers with low prices with intent to sell higher-priced items
Base Price	The initial price of a product before any alteration
BDM Buyer	Business Decision Maker buyer. The person who has the ultimate decision-making power to purchase a product or not
Benefits	Product features that are desirable to the customer
Blackblot Product Frames Model	A descriptive model that demonstrates how product functionality is built and how, in total, the product solves the market problem
Blackblot Product Manager's Toolkit® (PMTK)	PMTK is a comprehensive set of tools and accompanying methodology that illustrates notable best practices and processes which help create successful market-driven products
Brand	An identity, made of symbols and ideas, which portrays a specific offering from a known source
Business Case	Examination of a potential market opportunity on a product level
Business Competence	The set of professional skills and knowledge that relate directly to performing product management
Business Development	Actions that improve the performance of the enterprise, its access to markets, and its ability to compete by creating strategic relationships with logistical, content, and technological partners
Business Plan	Examination of a potential business opportunity on a company level
Business Products	Products intended for resale, for use in producing other products, or for providing services in an organization. Business products are used for making money
Business Strategy	Decisions that support being a leader, follower, or innovator in a specific line of business
Business to Business	The transaction of goods or services between businesses (B2B)
Business to Consumer	The transaction of goods or services between businesses and private individuals (B2C)
Buyer	The entity that decides to obtain the product
Captive Product (Pricing Tactic)	An imbalanced price ratio between a product's components which are sold separately. The main system component is underpriced and the consumables or support services are overpriced. The captive product pricing tactic can be quickly and easily accomplished via product system decoupling
Client	The entity that is the receiver of goods or services
Company Core Competency	A company's unique ability to deliver value, while differentiating itself from the competition
Competitive Advantage	A depiction that the company or its products are each doing something better than their competition in a way that could benefit the customer
Competitive Advantage Formula	Competitive advantage = corporate quality + product quality
Conditional License	Expiring ownership and usage rights to a product. Can be renewable and non-renewable

Blackblot Term	Blackblot PMTK Methodology™ Definition
Consumer	An individual or household that buys and uses goods and services created by industries
Consumer Problem	A marketplace situation in which consumer needs remain unsatisfied (B2C). The solution is a whole product
Consumer Products	Products intended for use by household consumers for non-business purposes. Consumer Products are used for personal gain
Corporate Branding	The process of building and maintaining a brand at the institutional level
Corporate Marketing	An outbound activity aimed at generating awareness and differentiation to the company
Corporate Mission Statement	A formal statement that a company makes about its reason for existing briefly describing the company's general business direction and the value customers should expect to receive
Corporate Quality	A state in which the company delivers a relationship more rewarding than customers expected
Corporate Vision Statement	A message that summarizes the company's purpose and intent and describes how, in the future, its products and activities shall affect the world
Costs$_{[Customer]}$	The aggregate expenses incurred by the customer from buying and using the product (essentially Total Cost of Ownership or TCO)
Credibility	The quality of being believable or trustworthy
Credit Terms	Schedule for delayed payment(s)
Customer	The entity (consumer or company) that takes (financial) responsibility for purchasing the product. Often the realm to which the buyer and user belong
Customers' Expectations	The hopes for deriving benefits from the product and establishing a rewarding relationship with the vendor
Demand (Economics)	Quantity of a product that will be bought in the market at various prices for a specified period
Demand (Marketing)	Wants for specific products coupled by an ability to pay for them. The demand formula is Demand = want + buying power
Demand-based Pricing (Pricing Tactic)	Rapidly adjusting prices per customer according to market characteristics
Derived Price	Price that is determined based on attributed benefit
Disclaimer	Denial of responsibility to events occurring during product ownership to discourage current or future legal action
Discrimination (Pricing Tactic)	Charging different market segments different prices for same product. There are several levels of discrimination: First Level—price discrimination that is based on the ability to pay (charge per income). Second level—price discrimination that is based on artificial obstacles (same price yet coupons, advance purchase, restricted use). Third level—price discrimination that is based on external factors (gender, age, geography, or profession)
Diversification (Pricing Tactic)	Creating product variants with distributed price points
Domain Expertise	Knowledge in the technical and business aspects of the product, industry, market, and technology

(continued)

Blackblot Term	Blackblot PMTK Methodology™ Definition
Durability (Product)	How long the product maintains a level of performance without degradation
Dynamic Pricing (Pricing Tactic)	Rapidly adjusting prices per customer according to customer characteristics
End-User License Agreement (EULA)	Perimeters of usage and ownership rights granted to the customer
Expert User	A user that has considerable experience with the product and utilizes many advanced features (power user)
Functional Expertise	Knowledge in processes, tools, and techniques to plan/market products
Global Discount	Universal, non-discriminatory, non-conditional deduction from the list price, for enticement purposes
Goods	Tangible products we can possess. Segmented to durable and non-durable
Graphic Arts	The conception and copywriting of all collateral material
High-tech Company	A business entity that either develops technology that is incorporated in a product or is used in the assembly or manufacturing of a product, or manufactures a product that contains technology and that same product relies on that technology to perform its core function
Impact	A positive or negative consequence that will most likely occur when embarking on a product development and delivery project
Industry	A group of companies which produce and sell a particular product type
Innovation	The introduction of a product that is new or substantially improved. Innovation is the process of converting and commercializing an invention into a product
Innovation (Formula)	Innovation = invention + utilization
Invention	An idea which represents a revolutionary or evolutionary change. Invention improves an existing solution or offers a conceptually new solution to a problem
Licensing	A method of providing rights to usage and ownership to a product, for a specified price and/or term
Licensing Mix	A combination of perpetual and term licenses relative to a particular product
Longevity (Product)	How long a product lasts
Loss Leader	A product that is priced below cost to attract consumers to buy other items
Management By Objectives (MBO)	A systematic approach for instilling flow and structure in one's work by setting clear, achievable, measurable, and challenging goals
Manufacturer	The entity that produces the product or service
Margins	Direct financial gains by selling
Market Intelligence	An ongoing real-time market data collection and analysis process. Market intelligence builds a body of knowledge
Market Opportunity	A lucrative, lasting, and sizable market problem. Market opportunity = market problem + volume + duration + earning potential

(continued)

Blackblot Term	Blackblot PMTK Methodology™ Definition
Market Plan	A description of the long-term goals and messages delivered to the target market relative to a particular company or product
Market Problem	A consumer, product, or technology problem in the target market
Market Requirement	An aggregate unit of information which represents with sufficient detail the functionality that is sought to address a specific facet of a particular market problem
Market Requirements Document (MRD)	A written representation of the overall functionality that users seek in order to address a particular market problem
Market Segmentation	A division of the overall market for a product into groups of common characteristics
Market Strategy	Decisions that define target markets, set marketing objectives, and outline how to build a corporate competitive advantage
Market-driven	A product delivery strategy that is based on producing and delivering products that the market needs
Marketing	An instructive business domain that serves to inform and educate target markets about the value and competitive advantage of a company and its products
Marketing Communications	The employment of a mix of media vehicles that support marketing objectives
Marketing Mix	A combination of product, price, place [distribution], and promotion activities that are applied to a particular target market
Marketing Plan	A description of the selection and application of marketing mixes in the target market
Marketing Program	A short-term marketplace effort designed to obtain a specific marketing goal
Marketing Strategy	The decisions that determine how to achieve marketing's goal in a particular target market, through the selection and application of marketing mixes
MSRP	Manufacturer's Suggested Retail Price. The price the manufacturer recommends that the seller offers the product for
Need	A state of felt deprivation (condition or motivation in which something is sought after to effect a change)
Niche Market	A small overall market or small market segment
Novice User	A user that is new to the product (newbie)
Odd/Even Pricing	Ending the price with certain numbers to influence buyers' perceptions of the price or product
One-time Fee (Licensing)	A one-time fixed charge that enables constant use of the product
Overall Market	All customers who share a common need
Payment	The actual economic sacrifice a customer makes to acquire certain rights to a product
Payment Forms	Means of payment such as cash, credit card, check, or wire transfer
Payment Terms	Payment conditions such as currency type, letter of credit and purchase prerequisites
Penetration (Pricing Tactic)	Briefly charging a relatively low price upon product launch
Perceived Value	An unsubstantiated estimation of worth that the customer obtains or could potentially obtain from owning and using the product

Blackblot Term	Blackblot PMTK Methodology™ Definition
Perceived Value Formula	Perceived value = resultant value proposition + relative value proposition
Perpetual License	Non-expiring ownership and usage rights to a product
Personal Competence	The set of individual personality traits which enable individuals to manage themselves independently and capably
PMTK MVP Model	A market-value centric pricing process which guides sets of managerial decisions that help determine a product's price. The *Blackblot PMTK MVP Model*™ is comprised of three distinct components that effectively act as sequential stages in the pricing process: *pricing scheme, pricing formula,* and *price mix*
Positioning	The customer's unique psychological placement of the relative qualities of a product or company with respect to its competitors
Price	A specification of what a seller wants in exchange for granting right of ownership or use to a product. The price formula is Price = costs + margins
Price Discounts	Deductions from the list price
Price Elasticity of Demand	Percentage change in quantity demanded that occurs in response to a percentage change in price
Price Lining	Pricing of products in a product family with corresponding price points
Price Mix	A price-related aggregate of information and conditions that the customer is presented with
Price Modifiers	Conditional deduction from the list price
Price Psychology	Dynamic human reasoning process which infers from a product's price, price comparisons, and price changes, diverse messages about the product and company, and accordingly influences buying decisions
Price Reductions	Universal, non-discriminatory, and non-conditional official list price decreases
Price Variables	Price changes based on product characteristics
Pricing	The act of setting a price
Pricing Formula	A calculative structure that allows the application of pricing changes to specific markets or competitive regions
Pricing Objectives	A description of what a company wants to achieve through pricing its products
Pricing Scheme	An outline of the overall pricing approach which encompasses the principles for pricing the specific product
Pricing Strategy	The primary method to pricing that relies on a particular pricing decision factor
Pricing Tactics	Pricing actions which are dependent on the particular life cycle stage of the product that is being priced
Problem	A difficulty. A situation that requires change
Product	Any offering that satisfies needs. Represents a collection of tangible and intangible assets
Product Attribute	A real characteristic or property of the product
Product Branding	The process of building and maintaining a brand at the product level

(continued)

Blackblot Term	Blackblot PMTK Methodology™ Definition
Product Bundling	An aggregate of products sold collectively at a price that is lower than the sum of their prices. The price of the set of products is lower than the total of individual products. Bundling is often accomplished in two forms: Direct bundling—customer must buy the entire package. Indirect bundling—customer cannot buy product X without also buying Y, in fixed proportions
Product Category or (Classification)	A term synonymous with *product line* in the context of competing products
Product Family	A set of derived products that share the same technological foundation. Members of a product family are called *product variants*
Product Feature	A product capability that satisfies a specific user/buyer need
Product Group	A set of products coupled or packaged together to form a new unified offering. Members of a product group are called *product members*
Product Line	A set of products that are technologically different yet provide similar functionality that serve the same target market needs
Product Management	An occupational domain which contains two professional disciplines: product planning and product marketing. Expanded definition: An occupational domain that is based on general management techniques that are focused on product planning and product marketing activities
Product Marketing	Outbound activities aimed at generating product awareness, differentiation, and demand
Product Mix	An entire set of products offered by a company. A collection of product units, product lines, product families, and product groups
Product Planning	The ongoing process of identifying and articulating market requirements that define a product's feature set
Product Portfolio	A product line in which the products are properly diversified and balanced along the timeline and stages of the product life cycle model
Product Problem	An industry situation in which product requirements are unmet (B2B). The solution is a product component
Product Quality	The market's perception of the degree to which the product can consistently meet or exceed customers' expectations
Product Requirements Document (PRD)	A high-level description of the solution, intended use, and the set of features it provides that address the market problem and satisfy needs
Product Review	An independent inspection, analysis, and evaluation of a product by a trusted industry thought leader (often a journalist)
Product Roadmap	A high-level schedule of future product releases with brief descriptions of market requirements and features for those releases
Product Strategy	Decisions that build and enhance products to fit market needs, and outline how to build a product competitive advantage
Product Type	A set of products that serve the same specific target market needs, which are technologically and functionally similar
Product Unit	An individual product that may be offered separately from any other product
Productivity (Product)	The product's scope of useful features

Blackblot Term	Blackblot PMTK Methodology™ Definition
Professionalism	The characteristic of being a skilled practitioner; an expert
Project Documents	The basic documents for managing the development project, including schedules, project milestone criteria, test plans, development plans, and resources
Public Relations	The actions that promote and distribute information for a company. Focused on encouraging media coverage of the company and its products, and building a virtual relationship between the company and its target audience
Quality (Marketing)	The market's perception of the degree to which the company or product can consistently meet or exceed customers' expectations
Quality (Technological)	The highest MTBF (mean time between failures) and lowest MTTR (mean time to repair) of a product
Recurring Fee (Licensing)	A fixed charge that enables limited time use of the product, but is renewed periodically at regular intervals
Relative Value Proposition	An implicit promise a product holds for customers to deliver a desired ratio of benefits and costs[customer]
Reliability (Product)	How long before the product malfunctions
Reliability (Service)	The company's record of promising and delivering
Resultant Value Proposition	An implicit promise a product holds for customers to deliver a fixed combination of gains in time, cost, and status
Risk	A factor or event that may jeopardize the product/project from achieving the anticipated benefits or increase the cost and/or schedule of the product/project
Risk Contingency	Actions and incurring cost to be used in the future should the risk occur, thereby ceasing to be a risk and becoming a fact (after damage occurs)
Risk Mitigation	Actions and incurring cost to proactively change exposure to a risk while it is still a risk (before damage occurs)
Sales	The act of interacting with and persuading potential customers to buy the product
Sales-driven	A product delivery strategy that is based on producing and delivering products that a customer wants
Scenario	A succession of uses cases
Seller	The entity that sells the product or service
Services	Intangible products that we pay for and use but can never own
Site License Discount	Discount provided to a large quantity purchase. The number of product licenses acquired is estimated
Skilled User	A user that is comfortable using the product to perform job tasks (average user)
Skimming (Pricing Tactic)	Briefly charging a relatively high price upon product launch
Social Competence	The set of human interaction skills which relate directly to communicating and managing relationships with others in a professional environment's social structure
Soft Skills	Non-technical, communicative, and personal abilities used in business
Solution	An answer which removes or controls the problem

(continued)

Blackblot Term	Blackblot PMTK Methodology™ Definition
Strategic Aptitude	The long-term planning and decision-making abilities that help achieve corporate objectives
Strategy	A coordinated set of long-term decisions that help achieve corporate objectives. Two common goals of any strategy are to: (1) provide more value than the competition, (2) help build a sustainable competitive advantage
Subscription Fee (Licensing)	A one-time fixed charge that enables limited time use of the product
Superior Perceived Value	A state where customers perceive the product gives a net value more positive than its alternatives
Superior Perceived Value Formula	Superior perceived value = competitive advantage + value
Supply	Quantity of a product that will be offered to the market by suppliers at various prices for a specific period
Tactical Activities	Assignments, usually self-contained and specific that fulfill short-term business needs
Tactics	A set of actions taken to fulfill a strategy
Target Market(s)	The group or groups of customers selected by a firm to sell to
TDM Buyer	Technology Decision Maker buyer. The person who has the authority to decide what technology will be used by the company to do work or to develop products
Technical Specification (Tech. Spec.)	A highly detailed description of the solution's design, attributes, and standards
Technology Problem	Challenges in applied science. The solution is scientific research
Technology-driven	A product delivery strategy that is based on producing and delivering products that we conceive
Unique Selling Proposition (USP)	A key statement that describes the distinct and compelling value of the product, which sets the product apart from other competing products
Usability	Ease of operation
Usage Fee (Licensing)	A charge per unit of measure that is tallied at regular intervals
Use Case	A specific way of using the product by performing some part of its functionality
User	The entity that interacts with the product
Value	The worth derived by the customer from owning and using the product
Value Formula	Value = Benefits − costs$_{[customer]}$
Voice Of the Customer (VOC)	The process for eliciting needs from customers. It embodies a market-driven approach that involves spending time with current and future customers to determine past, present, and future market problems that customers need to solve in order to meet their business goals and objectives
Volume Price (Discount)	Discount provided to a large quantity purchase. The exact number of product licenses acquired is stated
Want	A request for specific objects that might satisfy the need

Chapter 16
Blackblot PMTK Methodology™ Roles

Description of the Roles Contained within the *Blackblot Product Manager's Toolkit*® (PMTK) Methodology

16.1 Introduction

This review provides an outline of roles in product management that conform to the *Blackblot PMTK Methodology*,™ as described in the *Blackblot Product Management Team Model* and *Blackblot Product Definition Team Model*. The role descriptions in this review are presented in a manner that provides easy integration with a job description template, which can be published and used for recruiting individuals for open positions in the company.

16.2 Key Definitions

A *Job* is a workplace labor position, which is labeled with a work title and assigned to a particular person, and represents a collection of diverse duties, tasks, and obligations. A job description is in essence a documented statement of the terms and conditions of an employment opportunity.

A *Role* is an occupational activity with a focused set of tasks and a clear and definitive goal, which demands a specific level of expertise in order to be successfully accomplished. A role description is in essence a documented statement of the functionality that is to be performed.

One or more roles are commonly combined to create a job and thus the owner of a job can be assigned several roles. For example, the designation *Product Manager* is a generic job title and a loosely defined collective term that is used to describe a combination of roles. Accordingly, a job description is an aggregate of the prescribed employment conditions and the assigned role descriptions.

16.3   Types of Expertise

The discipline of product management consists of several roles that require specific types of expertise. The following nomenclature is used to describe the types of expertise required for each product management role, as defined by the *Blackblot PMTK Methodology*™.

   Domain Expertise is knowledge in the technical and business aspects of the product, industry, market, and technology. *Functional Expertise* is the ability to use tools and execute techniques, processes, and tasks that create winning products. Each expertise type (domain or functional) may have a specific expertise focus (market, industry, product, or process). For example, a person can have domain expertise in the software industry (expertise type) and be a market expert (expertise focus).

16.4   Education and Mindset

In most cases, the person assuming a product management-related role will have at least an undergraduate degree level of education in a specific or related field to the product or market, or will have an equivalent number of years of work-related experience. The following nomenclature is used to describe the educational requirements for each product management role as defined by the *Blackblot PMTK Methodology*™.

- *Undergraduate Degree*—BS/BA degree in any subject
- *Graduate Degree*—MS/MA/MBA degree in any subject
- *Technical Undergraduate Degree*—BS degree in a particular field of science such as mathematics, physics, computer science, or engineering
- *Technical Graduate Degree*—MS degree in a particular field of science such as mathematics, physics, computer science, or engineering

   It should also be noted that different roles usually favor different mindsets, with *Mindset* being a mental attitude that determines how people interpret and respond to situations.

16.5   Product Planner Role Description

This section describes the *Product Planner* role. The product planner has domain expertise in a particular market. *Product Planning* is a discipline that is focused on executing an ongoing process of identifying and articulating market requirements that define a product's feature set.

   The product planner is a strategic role that is owned by a market expert who articulates the market problem and needs. The product planner researches the market, identifies the market opportunity, and articulates user and buyer needs in the form of market requirement statements.

   The primary deliverable of the product planner is the *Market Requirements Document* (MRD), which reflects a complete, accurate, and true understanding of

the market and its needs. Other supporting documents that might be prepared include product use cases, product roadmaps, and pricing models.

The prime goal of the product planner role is to create satisfied product buyers and users. This satisfaction level means contentment with the product's ability to solve business or consumer problems (in a market) and meet their needs.

The product planner must be able to communicate well with both external and internal organizations. External to the company, the product planner communicates and works with customers to determine their problems and identify market requirements. Internally, the product planner communicates and works with organizational functions such as engineering, product marketing, and sales. The product planner also acts as a communication interface between the product management team and the product definition team.

16.6   Product Planner Role Skill Set

The following set of skills, listed in alphabetical order, is essential to the *Product Planner* role:

- *Authoring Skills*—ability to articulate and document the customers' market problem in a manner that encapsulates knowledge and represents a true understanding of the market and its needs.
- *Interpersonal Skills*—ability to build strong rapport and relationships with customers so as to gain in-depth understanding of customers' problems and needs.
- *Interview Skills*—ability to interview customers in order to comprehensively understand their market problem.
- *Language Skills*—ability to communicate, in written and verbal form, with diverse audiences, internal and external to the company, in a clear and comprehensible manner.
- *Methodological Skills*—ability to structure and craft market requirements using a formal and structured methodology.
- *Process Skills*—ability to implement and/or follow the product planning process component of the product delivery process.
- *Research Skills*—ability to perform market research, market analysis, and competitive intelligence studies.

16.7   Product Planner Role Overview Table

The product planner role overview table (Table 16.1) provides the role's general profile and a list of its key characteristics.

The role overview table is by no means an unwavering recommendation or a precise depiction of either the role or the qualities the person assuming the role should possess, or must have, in order to succeed at this role.

Table 16.1 Product Planner Role Overview Table

Attributes/Role	Product Planner
Alias	Product Manager
Expertise Type	Domain expertise
Expertise Focus	Market expert
Essential Function	Identify and articulate market requirements
Professional Goal	Satisfied product buyers and users
Primary Deliverables	Market Requirements Document (MRD)
Support Deliverables	Roadmap, pricing model
Internal Interfaces	Engineering, product marketing, sales
External Interfaces	Customers
Education	Undergraduate degree (specific or diverse subjects)
Mindset	Formalized, deterministic
Skill Set	[Skills listed in the Role Skill Set section]

16.8   Product Marketer Role Description

This section describes the *Product Marketer* role. The product marketer has functional expertise in the discipline of product marketing. *Product Marketing* is a discipline that is focused on outbound activities aimed at generating product awareness, differentiation, and demand.

The product marketer is a strategic role that is owned by a marketing expert who analyzes product-oriented market opportunities, formulates plans that evaluate those market opportunities, and then creates plans that guide the subsequent marketing efforts.

From a deliverables perspective, the product marketer drives the making of the product business case, and following approval writes the market plan. Other supporting documents that might be prepared include product positioning, competitor analysis, and value documents. The product marketer also assists and guides with the formulation of a product launch plan, provides content and selection to marketing collateral, and provides content to product press releases.

The product marketer is focused on enhancing the company's competency in using marketing tools and executing techniques, processes, and tasks that aim to generate awareness, differentiation, and demand for the product.

The prime goal of the product marketer role is to have a satisfied sales force. The market environment, as created by the actions of the product marketer, leads to a very favorable situation where the market buys the product as opposed to the salespeople actively selling the product. Accordingly, the marketing actions initiated by the product marketer contribute to shorter sales cycles and higher sales revenue over a period of time.

The product marketer must be able to communicate well with both external and internal organizations. External to the company, the product marketer communicates and works with various vendors that provide the company with marketing tools and services. Internally, the product marketer communicates and works with organizational functions such as sales, MarCom, and corporate marketing.

16.9   Product Marketer Role Skill Set

The following set of skills, listed in alphabetical order, is essential to the *Product Marketer* role:

- *Abstraction Skills*—ability to comprehend and summarize conceptual ideas and notions that apply to the different stages of the product's marketing life cycle.
- *Analytical Skills*—ability to perform a risk-adjusted, cost-benefit analysis, and evaluation of market opportunities.
- *Marketing Skills*—ability to select and apply the right marketing tools to given market scenarios, and execute marketing techniques, processes, and tasks.
- *Planning Skills*—ability to develop and implement a product marketing process that generates awareness, differentiation, and demand for the product.
- *Psycho-social Skills*—ability to understand, factor-in, and consider the market's relevant emotions, beliefs, and behaviors in the selection of marketing actions.

16.10   Product Marketer Role Overview Table

The product marketer role overview table (Table 16.2) provides the role's general profile and a list of its key characteristics.

Table 16.2   Product Marketer Role Overview Table

Attributes/Role	Product Marketer
Alias	Product Marketing Manager
Expertise Type	Functional expertise
Expertise Focus	Marketing expert
Essential Function	Evaluate market opportunities and plan/guide marketing efforts
Professional Goal	Satisfied sales force
Primary Deliverables	Business case, market plan
Support Deliverables	Value documents, positioning statements
Internal Interfaces	Sales, MarCom, corporate marketing
External Interfaces	Vendors of marketing tools and services
Education	Graduate degree (BA, but often an MBA degree)
Mindset	Conceptual, probabilistic
Skill Set	[Skills listed in the Role Skill Set section]

16.11   Product Architect Role Description

This section describes the *Product Architect* role. The product architect has domain expertise in a particular technology or product type, from an engineering perspective. *Product Architecturing* is a discipline that is focused on the formation, structure, and design of a product.

The product architect is a tactical role that is owned by a product expert who creates a high-level design for the product. The product architect understands the market opportunity, interprets market requirements, and is well-versed in technology and development processes. The product architect's main task is to devise a functional solution to the market problem according to the market requirements that are outlined in the *Market Requirements Document* (MRD).

The primary deliverable of the product architect is the *Product Requirements Document* (PRD), which is a high-level description of the functional solution, its intended use, and the set of features it provides that address the market problem and satisfy needs. Through the PRD, the product architect articulates the product's architectural vision and structure, and specifies the product's components and interfaces which create the features that the market requirements prescribe. The product architect contributes to other supporting documents including the product features matrix, roadmap, and technical specification documents.

The prime goal of the product architect role is to have satisfied product developers. This means that the product's design and its architecture are compatible with the company's current internal development processes and technologies. Consequently, the product's design and its architecture conform to the development team's competencies, schedule, and technical quality demands.

The product architect must be able to communicate well with both external and internal organizations. External to the company, the product architect communicates and works with contract development firms, technology partners, and customers. Internally, the product architect communicates and works with organizational functions such as engineering, product marketing, and product planning. The product architect also acts as a communication interface between the product planning team and the engineering team.

16.12   Product Architect Role Skill Set

The following set of skills, listed in alphabetical order, is essential to the *Product Architect* role:

- *Business Skills*—ability to comprehend the business context and market problem that drive the building of a product.

- *Conceptualization Skills*—ability to create product architecture, and evaluate and foresee the applicability of diverse architectural designs relative to the product.
- *Engineering Skills*—ability to advocate and relate to different product development methods and modeling techniques.
- *Leadership Skills*—ability to rally and gain backing from internal stakeholders in order to build organizational support for the proposed architecture.
- *Mentoring Skills*—ability to counsel teams and individuals to wholly understand and effectively implement the proposed architecture.
- *Technology Skills*—ability to understand in depth, analyze, and select current and emerging technologies that are pertinent to the product and company.
- *Visionary Skills*—ability to create and articulate architectural and technical visions for the product.

16.13   Product Architect Role Overview Table

The product architect role overview table (Table 16.3) provides the role's general profile and a list of its key characteristics.

Table 16.3 Product Architect Role Overview Table

Attributes/Role	Product Architect
Alias	Requirements engineer, requirements manager, solution architect, business analyst, systems analyst
Expertise Type	Domain expertise
Expertise Focus	Product expert
Essential Function	Devise a functional solution
Professional Goal	Satisfied product developers
Primary Deliverables	Product Requirements Document (PRD)
Support Deliverables	Product features matrix, roadmap (contributory role)
Internal Interfaces	Engineering, product marketing, product planning
External Interfaces	Contract development firms, technology partners, customers
Education	Technical undergraduate degree (specific or diverse subjects)
Mindset	Technical, formalized, deterministic
Skill Set	[Skills listed in the Role Skill Set section]

16.14   Sales Engineer Role Description

This section describes the *Sales Engineer* role. The sales engineer has domain expertise in a particular technology or product type from a sales perspective. *Sales Engineering* is a discipline that is focused on a consultative style of interaction with customers to help them realize the value and functionality of a product.

The sales engineer is a tactical role that is owned by an advocacy expert who is primarily responsible for outbound product-centric activities, such as pre-sale support and product demonstrations. The sales engineer, relying on his/her technical skills, helps customers understand how the product delivers the necessary value and functionality that address the customers' business or consumer problem. Another objective of the sales engineer is to provide critical input or feedback to the product planner regarding customer needs and problems. All this is accomplished via frequent on-site customer visits and public engagements at conferences and conventions.

The sales engineer understands the business context and the market problem relative to the product, is well-versed in the product's internals and feature set, and is a consummate communicator.

From a deliverables perspective, the sales engineer drives the making of company and product presentations, product demo scripts, and product review guides. Other supporting documents that might be prepared include win/loss analysis questionnaires and reports, and marketing collateral.

The prime goal of the sales engineer role is to ensure that customers have adequate knowledge of the value that a product holds and an understanding of its functionality.

The sales engineer must be able to communicate well with both external and internal organizations. External to the company, the sales engineer communicates and works with customers, reviewers, analysts, and journalists. Internally, the sales engineer communicates and works with organizational functions such as engineering, product marketing, and product planning.

Sales engineers often operate under titles such as *Product Evangelist, Technical Evangelist, Technical Sales Support, Pre-Sale Engineer, Outbound Product Manager,* or *Technical Product Manager*, yet regardless of the title they all perform a relatively similar set of tasks.

16.15   Sales Engineer Role Skill Set

The following set of skills, listed in alphabetical order, is essential to the *Sales Engineer* role:

- *Business Skills*—ability to comprehend the business context and market problem that drive the building of a product.
- *Interpersonal Skills*—ability to build strong rapport and relationships with customers so as to gain in-depth understanding of customers' problems and needs.
- *Interview Skills*—ability to interview customers in order to comprehensively understand their market problem.
- *Language Skills*—ability to communicate, in written and verbal form, with diverse audiences, internal and external to the company, in a clear and comprehensible manner.
- *Technology Skills*—ability to understand the technologies incorporated in the product or used in its assembly or manufacturing.

16.16   Sales Engineer Role Overview Table

The sales engineer role overview table (Table 16.4) provides the role's general profile and a list of its key characteristics.

Table 16.4 Sales Engineer Role Overview Table

Attributes/Role	Sales Engineer
Alias	Product Evangelist, Technical Evangelist, Technical Sales Support, Pre-Sale Engineer, Outbound Product Manager, Technical Product Manager
Expertise Type	Domain expertise
Expertise Focus	Advocacy expert
Essential Function	Outbound product-centric activities, i.e. pre-sale support and product demonstrations
Professional Goal	Customer knowledge of product value and functionality
Primary Deliverables	Company and product presentations, product demo scripts, product review guides
Support Deliverables	Win/loss analysis questionnaires/reports, marketing collateral
Internal Interfaces	Engineering, product marketing, product planning
External Interfaces	Customers, reviewers, analysts, journalists
Education	Technical undergraduate degree (specific or diverse subjects)
Mindset	Technical, formalized, deterministic
Skill Set	[Skills listed in the Role Skill Set section]

16.17   MarCom Manager Role Description

This section describes the *MarCom Manager* role. The MarCom manager has functional expertise in the discipline of marketing communications. *Marketing Communications* (MarCom) is a discipline that is focused on the application of a mix of media vehicles that support marketing objectives.

The MarCom manager is a tactical role that is owned by a media expert who is primarily responsible for creating interest and memorable presence through the conception and copywriting of all collateral material, advertising, direct response mail, web, and other types of communications media.

The MarCom manager, relying on language, creative, and artistic skills, is primarily engaged in art direction of the company's collateral documents and media deliverables. Other responsibilities include media placement and scheduling, campaign management and measurement, budgeting and budget tracking, and advertising management (conception, pricing, placement, and scheduling).

The prime goal of the MarCom manager role is to ensure a consistent image and positioning in the target market, according to messages and directives provided by the product marketer.

The MarCom manager must be able to communicate well with both external and internal organizations. External to the company, the MarCom manager communicates and works with advertisement agencies, creative/design bureaus, and production houses. Internally, the MarCom manager communicates and works with organizational functions such as sales, product marketing, and corporate marketing.

16.18   MarCom Manager Role Skill Set

The following set of skills, listed in alphabetical order, is essential to the *MarCom Manager* role:

- *Budgeting Skills*—ability to prepare and track a spending plan that will be used to fund the planned media activities.
- *Creative Skills*—ability to devise new forms of creative expression by way of symbols, ideas, and notions, in an original, novel, or unconventional way.
- *Cultural Skills*—ability to perceive and realize the manner in which to adapt and create content that is compatible with the target market's local customs, nuances, norms, and behaviors.
- *Language Skills*—ability to communicate, in both written and verbal form, with diverse audiences, internal and external to the company, in a clear and comprehensible manner.
- *Negotiation Skills*—ability to perform a leadership role in a process of searching for an agreement that satisfies all parties which have competing interests.
- *Project Management Skills*—ability to perform the overall planning and coordination of tasks, scheduling, and resource assignments aimed at producing a deliverable.

16.19   MarCom Manager Role Overview Table

The MarCom manager role overview table (Table 16.5) provides the role's general profile and a list of its key characteristics.

Table 16.5   MarCom Manager Role Overview Table

Attributes/Role	MarCom Manager
Alias	Market Communications Manager
Expertise Type	Functional expertise
Expertise Focus	Media expert
Essential Function	Conception and copywriting of all collateral material
Professional Goal	Consistent image and positioning in the target market
Primary Deliverables	Art direction of collateral and media deliverables
Support Deliverables	Media placement and scheduling, campaign management and measurement, budgeting, budget tracking, advertising management
Internal Interfaces	Sales, product marketing, corporate marketing
External Interfaces	Advertisement agencies, creative/design bureaus, production houses
Education	Undergraduate degree (specific or diverse subjects)
Mindset	Artistic, imaginative, creative
Skill Set	[Skills listed in the Role Skill Set section]

16.20   Director of Products Role Description

This section describes the *Director of Products* role. The director of products has solid functional expertise in the product planning and product marketing disciplines, acute strategy formulation expertise, and complete understanding of product management tools and processes.

The director of products is a highly strategic and encompassing role that is owned by a strategy and process expert who leads the product management team by providing overall product vision, product and market strategies, and team leadership.

The director of products is responsible for balancing corporate goals with long-term market trends and opportunities, and for directing, establishing, maintaining, and planning the overall policies and strategies for the product management department.

On the strategic level, this role formulates the company's product and market strategies and drives their implementation, while balancing corporate goals with long-term market trends and market opportunities.

On the tactical level, this leadership position provides coaching and mentorship to the product management team members and is responsible for furnishing them with resources, tools, and uniform processes to do their respective jobs. The director

of products role creates and manages the overall product management process and oversees its effective execution.

From a deliverables perspective, the director of products directs, supports, and contributes primarily to the making of the product business case, market plan, and *Market Requirements Document* (MRD). The director of products also guides and assists with the formulation of a product launch plan and the value documents.

The prime goal of the director of products role is to continuously oversee the successful formulation and execution of the product and market strategies and to achieve better consistency in the internal application of the product management discipline.

The director of products must be able to communicate well with both external and internal organizations. External to the company, the director of products communicates and works with customers and partners. Internally, the director of products communicates and works with organizational functions such as sales, MarCom, corporate marketing, and engineering.

16.21   Director of Products Role Skill Set

The following set of skills, listed in alphabetical order, is essential to the *Director of Products* role:

- *Analytical Skills*—ability to engage in creative problem solving and draw conclusions that orient towards correction and improvement.
- *Business Skills*—ability to comprehend the business context and market opportunity that drive the building of a product.
- *Decision-making Skills*—ability to make sound decisions by exercising analysis and resoluteness.
- *Interpersonal Skills*—ability to build strong rapport and relationships with internal and external organizations.
- *Leadership Skills*—ability to exercise guidance and influence within the product management team and the company to forge commitment and consensus.
- *Mentoring Skills*—ability to counsel, assist, and share knowledge and experience with teams and individuals to facilitate improved job performance.
- *Process Skills*—ability to develop and implement a structured product management process that promotes a more effective execution of product management procedures and operations.

16.22   Director of Products Role Overview Table

The director of products role overview table (Table 16.6) provides the role's general profile and a list of its key characteristics.

Table 16.6 Director of Products Role Overview Table

Attributes/Role	Director of Products
Alias	Director of Product Management
Expertise Type	Functional and domain expertise
Expertise Focus	Strategy and process expert
Essential Function	Lead the product management team by providing overall product vision, product and market strategies, and team management
Professional Goal	• Continuously guide the successful formulation and execution of the product and market strategies • Achieve better consistency in the internal application of the product management discipline
Primary Deliverables	Business case, market plan, Market Requirements Document (MRD)
Support Deliverables	Product launch plan, value documents
Internal Interfaces	Sales, MarCom, corporate marketing, engineering
External Interfaces	Customers, partners
Education	Graduate degree (BA, but very often an MBA degree)
Mindset	Conceptual, formalized, creative
Skill Set	[Skills listed in the Role Skill Set section]

Chapter 17
Blackblot PMTK Methodology™ Models

Description of the Models Contained within the *Blackblot Product Manager's Toolkit*® (PMTK) Methodology

17.1 PMTK Core Models

- *PMTK Action Model*—an operational master work model that demonstrates the process and phases of performing and correlating product planning tasks with product marketing tasks. Also a reference framework which governs the sequence of using *Blackblot PMTK Methodology*™ templates.
- *PMTK Flow Model*—applying the *PMTK Action Model* in a stage-gate like fashion.
- *PMTK Task Model*—synchronizing PMTK templates with Blackblot's concepts of a product management team and a product definition team.

17.2 PMTK Support Models

- *PMTK Action-Team Model*—synchronization of *PMTK Action Model* with *Blackblot Product Management Team Model*.
- *PMTK MVP Pricing Model*—illustration of a practical product pricing process.
- *PMTK PRM Model*—illustration of a market requirement's internal structure.
- *PMTK Problem Echelon Model*—illustration and mapping of the various problems handled by the industry and the market.
- *PMTK Product Tree Model*—illustration of the ways product functionality can be divided or grouped to make a better offering.

17.3   PMTK Concept Models

- *Blackblot Product Management Team Model*—illustration of the responsibilities and make-up of the product management team.
- *Blackblot Product Definition Team Model*—illustration of the responsibilities and make-up of the product definition team.
- *Blackblot Product Frames Model*—illustration that demonstrates how product functionality is built.
- *Blackblot Marketing Model*—illustration that maps the various marketing activities within the marketing domain.

17.4   PMTK Core Models

17.4.1   PMTK Action Model

R E S E A R C H	▼ Product Planning ▼				L E A R N I N G
	Planning ▶	Definition ▶	Development ▶	Maintenance ▶	
	Describe market problems and needs	*Define solutions to market problems*	*Build solutions that solve market problems*	*Sales channels support and product revisions*	
	Market Requirements	Features Matrix	Pricing Model	Win/Loss Analysis	
	Use Cases	Product Roadmap	Product Evangelism	Customer Visit	
	▼ Product Marketing ▼				
	Evaluation ▶	Strategy ▶	Readiness ▶	Execution ▶	
	Examine opportunities to serve the market	*Formulate the market approach*	*Prepare market tactics and MarCom activities*	*Deliver value and build competitive advantage*	
	Business Case	Corporate Mission	Company Profile	Company Presentation	
	Competitor Analysis	Product Positioning	Product Backgrounder	Product Presentation	
	Product Comparison	Value Documents	Collateral Matrix	Lead Generation	
		Market Plan	Launch Plan	Marketing Review	

| E X E M P T	▼ Process Efficiency ▼				F O R M A L
	People ▶	Decisions ▶	Deliverables ▶	Learning ▶	
	Instill flow and structure at work	*Bring closure and secure commitment*	*Present and share work output*	*Assess and measure performance*	
	Meeting Rules	Decision-making	Generic Templates	Gap Analysis	
	Management By Objectives	Deliverable Sign-Off	Bundle Book	Performance Review	

17.4.1.1   PMTK Action Model Description

The *PMTK Action Model* is the operational master work model that demonstrates the process and phases of performing and correlating product planning tasks with product marketing tasks. It is also a reference framework which governs the sequence of using *Blackblot Product Manager's Toolkit*® (PMTK) templates.

The top section of the *PMTK Action Model* illustrates product planning tasks and the bottom illustrates product marketing tasks. Overlapping the product planning and the product marketing tasks illustrates how these respective tasks can be correlated for maximum effect. The overlapping also allows proper sequencing and job planning.

In the *PMTK Action Model* the flow of events (or phases) is from left to right, and the flow of tasks is from top to bottom. The *PMTK Action Model* contains a component that depicts tools which promote process efficiency since product management is comprised of extremely well-ordered and well-disciplined processes.

17.4.2   PMTK Flow Model

- **Product Planning**
- Product Marketing
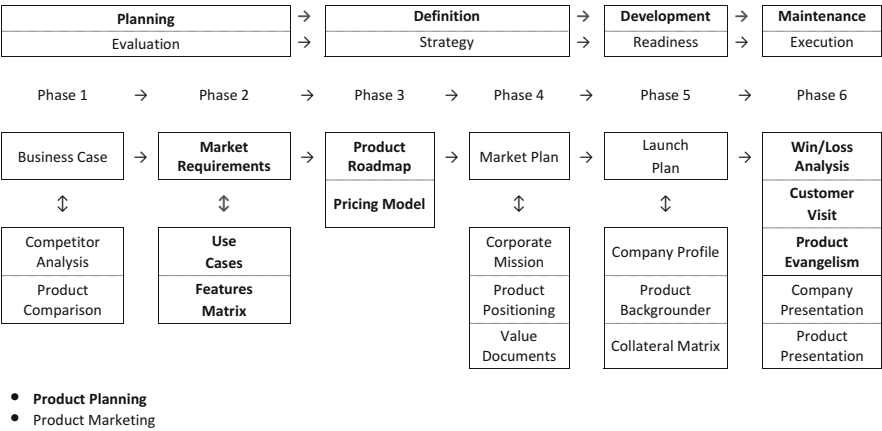
17.4.2.1   PMTK Flow Model Description

The *PMTK Flow Model* demonstrates the internal flow and interaction between product planning and product marketing deliverables, and maps them to the entire product management process. The goal of this model is to help managers apply the *PMTK Action Model* in a traditional milestone or stage-gate like fashion.

17.4.3   PMTK Task Model

Documents and Tasks				
PMTK Document	**(O)wner / (W)riter**	**Contributor(s)**	**Audience**	**Audience Dept.**
Product Planning				
Market Requirements				
PRM Market Requirements – Description of the market opportunity, market problem, and the resulting market requirements.	Product Planner	Product Architect	Internal	•Development •Executive Management •Product Marketing •Product Planning •Program Management •Quality Assurance •Sales Force •User Experience
PRM Product Requirements – High-level description of the functional solution, intended use, and the set of features it provides, that addresses the market problem and satisfies needs.	Product Architect	Lead Developer	Internal	•Development •Product Planning •Program Management •Quality Assurance
PMTK Market Requirements – Description of the product and the market into which the product will be introduced. An inclusive approach in which business information and market and product requirements are all bundled together in the same document.	Product Planner	Product Architect	Internal	•Development •Executive Management •Product Marketing •Product Planning •Program Management •Quality Assurance •Sales Force •User Experience
Use Cases – Ways various users put the product to use and under which scenarios.	Product Planner	Product Architect	Internal	•Development •Product Planning •Program Management •Quality Assurance
Features Matrix – Managing actual product characteristics.	Product Architect	Product Planner	Internal	•Development •Product Planning
Product Roadmap – Plan or vision that describes a product's evolution.	Product Planner	Product Architect	Internal	•Development •Executive Management •Product Marketing •Product Planning •Program Management •Quality Assurance •Sales Force •User Experience
			External	•Customers •Sales Channels
Pricing Model – Building a product pricing model.	Product Planner	Product Marketer Product Architect	Internal	•Executive Management •Product Marketing •Product Planning •Program Management •Quality Assurance •Sales Force •User Experience
			External	•Partners •Sales Channels
Win/Loss Analysis				
Win/Loss Analysis Questionnaire – Process whose output helps to improve products and develop better sales functions.	Product Planner	Sales Engineer	Internal	•Executive Management •Product Planning •Program Management •Sales Force
Win/Loss Analysis Report – Process whose output helps to improve products and develop better sales functions.	Product Planner	Sales Engineer	Internal	•Executive Management •Product Planning •Program Management •Sales Force
Customer Visit – Planning customer visits with the intent of better understanding their needs.	Product Planner	Sales Engineer	Internal	•Product Planning

Documents and Tasks				
PMTK Document	**(O)wner / (W)riter**	**Contributor(s)**	**Audience**	**Audience Dept.**
Product Marketing				
Business Case – Examination of a potential market opportunity on a product level.	Director of Products (O) Product Marketer (W)	Product Planner Product Architect Sales Engineer	Internal	•Development •Executive Management •Product Marketing •Product Planning •Program Management
			External	•Investors •Partners
Competitor Analysis – Study of competing companies, partially via their products.	Product Marketer	Product Planner	Internal	•Corporate Marketing •Executive Management •Product Marketing •Product Planning •Program Management •Sales Force
Product Comparison – Tabular comparison of competing products.	Product Marketer (O) Product Planner (W)	Product Architect	Internal	•Corporate Marketing •Executive Management •Product Marketing •Product Planning •Program Management •Sales Force
Corporate Mission – General business direction and company purpose.	Product Marketer	Director of Products	Internal	•Corporate Marketing •Executive Management •Product Marketing •Product Planning •Program Management
			External	•Customers
Product Positioning – Clear and focused messages that communicate the product's value proposition to multiple audiences.	Product Marketer	Director of Products Product Planner	Internal	•Corporate Marketing •Executive Management •Product Marketing •Product Planning •Program Management
Value Documents				
Sales Axioms – Fundamental concepts the product is built upon.	Product Marketer (O) Product Planner (W)	Product Architect	Internal	•Product Marketing •Product Planning
Problem/Solution/Feature/Benefit (PSFB) – Outlining a product's ability to address the overall customer problem by merit of its feature scope and capabilities.	Product Marketer (O) Product Planner (W)	Product Marketer Product Architect	Internal	•Product Marketing •Product Planning
Unique Selling Proposition (USP) – Key value differentiator which sets the product apart from other competing products.	Product Marketer	Product Planner	Internal	•Product Marketing •Product Planning
Market Plan – Description of the long-term goals, and messages delivered to the target market, relative to a particular product.	Product Marketer	Product Planner	Internal	•Executive Management •Corporate Marketing •Product Marketing •Product Planning •Program Management •Sales Force
Marketing Communications				
Company Profile – Overview description of a company.	Product Marketer (O) MarCom Manager (W)	Product Planner	Internal	•Corporate Marketing •Executive Management •MarCom •Product Marketing •Sales Force
			External	•Job Applicants •Customers •Investors

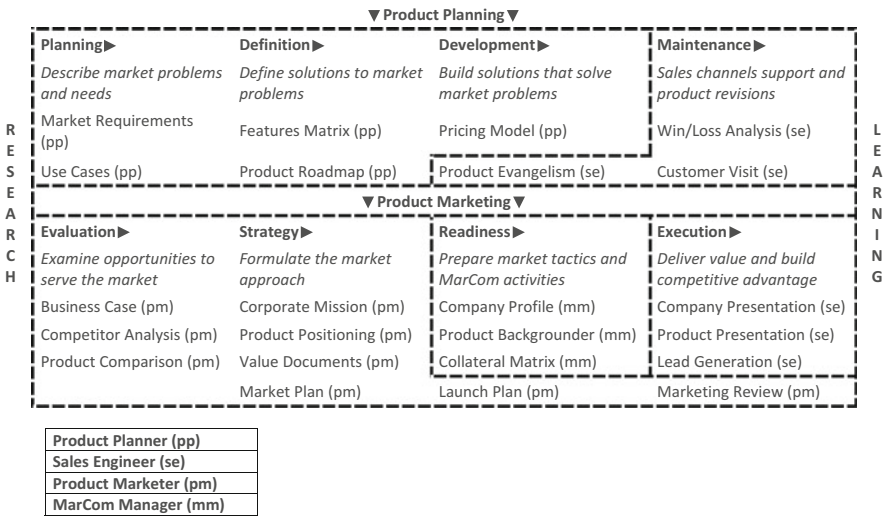|				
Product Backgrounder – Product/service overview information at a glance.	Product Marketer (O) MarCom Manager (W)	Product Planner	Internal	• Corporate Marketing • Executive Management • MarCom • Product Marketing • Product Planning • Program Management • Sales Force
			External	• Customers
Collateral Matrix – List of various marketing communications collateral items.	Product Marketer (O) MarCom Manager (W)	Product Planner	Internal	• MarCom • Product Marketing • Program Management
Press Release Questionnaire – Eliciting targeted information for creating meaningful press releases.	Product Marketer (O) MarCom Manager (W)	Product Planner	Internal	• MarCom • Product Marketing • Program Management
Sales Support				
Company Presentation – Broad overview of a company for internal and external audiences.	Product Marketer	Director of Products	Internal	• Corporate Marketing • Executive Management • MarCom • Product Marketing • Sales Force
			External	• Customers • Investors
Product Presentation – Broad overview of a product for internal and external audiences.	Product Marketer (O) Sales Engineer (W)	Product Planner	Internal	• Executive Management • MarCom • Product Marketing • Product Planning • Program Management • Sales Force
			External	• Customers • Investors
Lead Generation – Process to discover and qualify prospective customers.	Director of Sales	Product Marketer MarCom Manager	Internal	• MarCom • Product Marketing • Program Management • Sales Force

Teams and Roles

Product Management Team Model

Role	Responsibility	Goal	Expertise
Product Planner (strategic role)	Identify and articulate market requirements	Satisfied product buyers and users	Market expert
Product Marketer (strategic role)	Generate awareness, differentiation, and demand	Satisfied sales force	Marketing expert
Sales Engineer (tactical role)	Outbound product-centric activities, i.e. pre-sale support and product demos	Customer knowledge of product value and functionality	Advocacy expert
MarCom Manager (tactical role)	Conception and copywriting of all collateral material	Consistent company image and positioning in the marketplace	Media expert
Director of Products (strategic role)	Balance corporate goals with long-term market trends and opportunities	Successful formulation and execution of market and product strategies	Strategy and process expert

Product Definition Team Model

Role	Responsibility	Deliverable	Expertise
Product Planner (strategic role)	Articulate market problem	Market Requirements Document (*What to solve*)	Market expert
Product Architect (tactical role)	Devise functional solution	Product Requirements Document (*How to solve*)	Product expert
Lead Developer (technical role)	Design product implementation	Technical Specification (*How to build*)	Technology expert

17.4.3.1   PMTK Task Model Description

The *PMTK Task Model* synchronizes various PMTK templates with the *Blackblot Product Management Team Model* and *Blackblot Product Definition Team Model*. The goal of this model is to help managers assign tasks to the appropriate team roles by defining the owner, writer, and contributor(s) of every PMTK document.

17.5   PMTK Support Models

17.5.1   PMTK Action-Team Model

	▼ Product Planning ▼		
Planning▶	**Definition▶**	**Development▶**	**Maintenance▶**
Describe market problems and needs	*Define solutions to market problems*	*Build solutions that solve market problems*	*Sales channels support and product revisions*
Market Requirements (pp)	Features Matrix (pp)	Pricing Model (pp)	Win/Loss Analysis (se)
Use Cases (pp)	Product Roadmap (pp)	Product Evangelism (se)	Customer Visit (se)
	▼ Product Marketing ▼		
Evaluation▶	**Strategy▶**	**Readiness▶**	**Execution▶**
Examine opportunities to serve the market	*Formulate the market approach*	*Prepare market tactics and MarCom activities*	*Deliver value and build competitive advantage*
Business Case (pm)	Corporate Mission (pm)	Company Profile (mm)	Company Presentation (se)
Competitor Analysis (pm)	Product Positioning (pm)	Product Backgrounder (mm)	Product Presentation (se)
Product Comparison (pm)	Value Documents (pm)	Collateral Matrix (mm)	Lead Generation (se)
	Market Plan (pm)	Launch Plan (pm)	Marketing Review (pm)

R E S E A R C H (left vertical label)   L E A R N I N G (right vertical label)

Product Planner (pp)
Sales Engineer (se)
Product Marketer (pm)
MarCom Manager (mm)

17.5.1.1   PMTK Action-Team Model Description

The *PMTK Action-Team Model* is a graphic representation that maps and synchronizes the *PMTK Action Model* with the *Blackblot Product Management Team Model*.

17.5.2   PMTK MVP Model
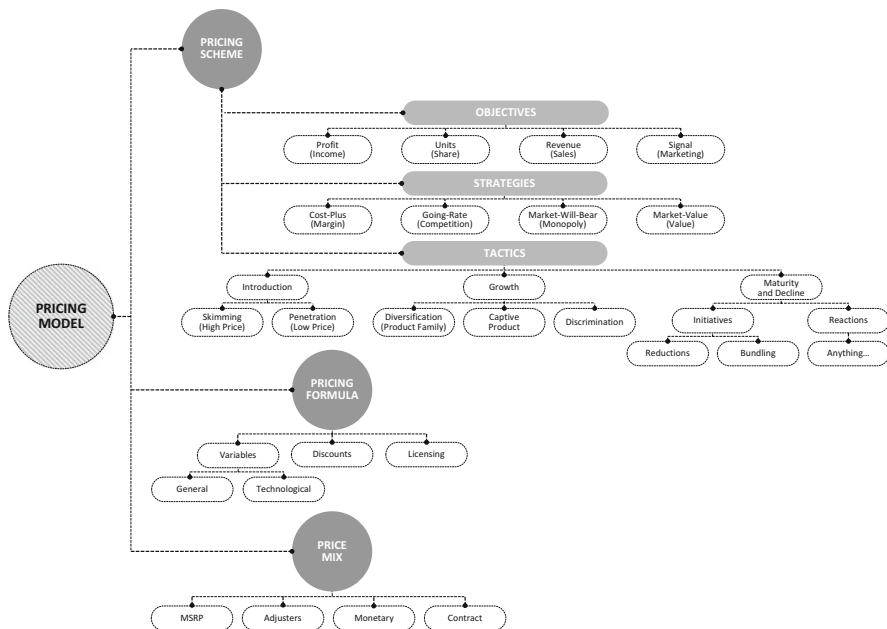
### 17.5.2.1   PMTK Market-Value Pricing Model Description

Developed by Blackblot, the *PMTK Market-Value Pricing Model* (MVP Model) is a market-value centric pricing process which guides sets of managerial decisions that help determine a product's price. Price is the specification of what a seller wants in exchange for granting right of ownership or use to a product. Pricing is the act of setting a price.

The *PMTK MVP Model* is comprised of three distinct parts that effectively act as sequential stages in the pricing process:

1. *Pricing Scheme*—outline of the overall pricing approach which encompasses the principles for pricing the specific product (how to achieve).
2. *Pricing Formula*—calculative structure that allows the application of pricing changes to specific markets or competitive regions (how to calculate).
3. *Price Mix*—price-related aggregate of information and conditions that the customer is presented with (how to present).

The *PMTK MVP Model* is designed to be used in conjunction with the *MVP Pricing Model* spreadsheet and the *MVP Pricing Model* template.

17.5.3   PMTK PRM Model
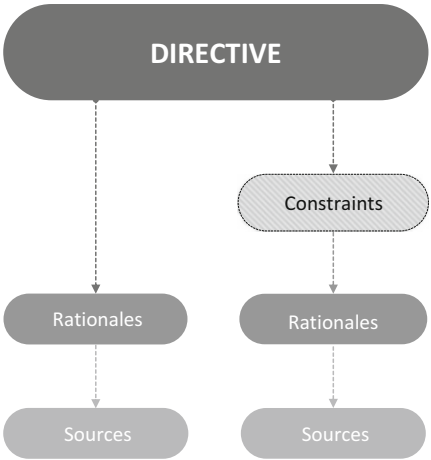
PRM MODEL ELEMENT	DESCRIPTION
Directive	Instruction that guides what is to be accomplished
Constraints	Limitations imposed on the solution
Rationales	Reasoning that supports a claim
Sources	Information that validates a claim

17.5.3.1   Blackblot Procedural Requirements Management Model Description

A market requirement is an aggregate unit of information which represents, with sufficient detail, the functionality sought by users to address a specific facet of a particular market problem. This is the full and comprehensive definition of a market requirement.

Developed by Blackblot, the *Blackblot Procedural Requirements Management Model* (PRM Model) is a methodology to create high-quality, usable market requirements. This model serves several objectives:

- Provide a structured approach to crafting market requirements.
- Establish a market requirement's internal structure.
- Validate a market requirement's integrity.

By understanding the overall functionality that is described by the sum of market requirements, it is possible to construe the scope of the market problem. Essentially,

the market problem is described by the sum of market requirements, and the market problem scope is described by the overall functionality that is in the market requirements.

Market requirements are built using four components: directive, constraints, rationales, and sources. The essential component of a market requirement, that must be present in any market requirement, is the directive.

17.5.4   PMTK Problem Echelon Model
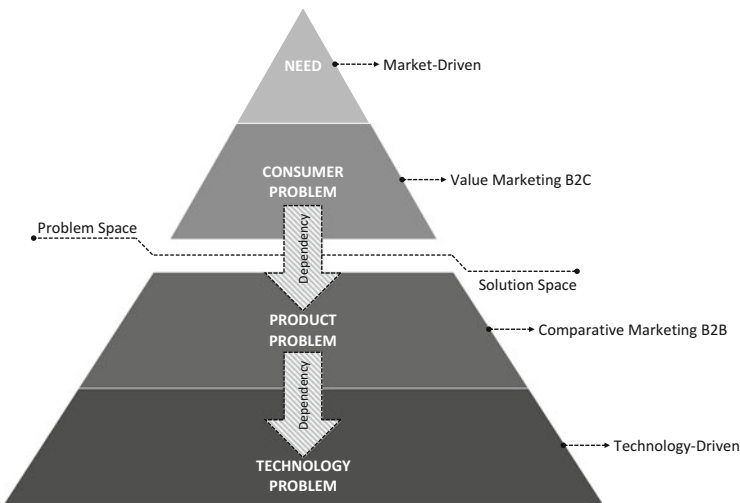
17.5.4.1   PMTK Problem Echelon Model Description

Developed by Blackblot, the *PMTK Problem Echelon Model* is a descriptive model that demonstrates the inner workings of value-chains and helps to map the various problems handled by the industry and the market.

This model serves several objectives: to structure and simplify the analysis of market problems in product management, to explain how technology finds uses and applications, and to demonstrate the sequence of events in which market dynamics generate market problems which are then followed by products and technology that solve them.

17.5.5   *PMTK Product Tree Model*
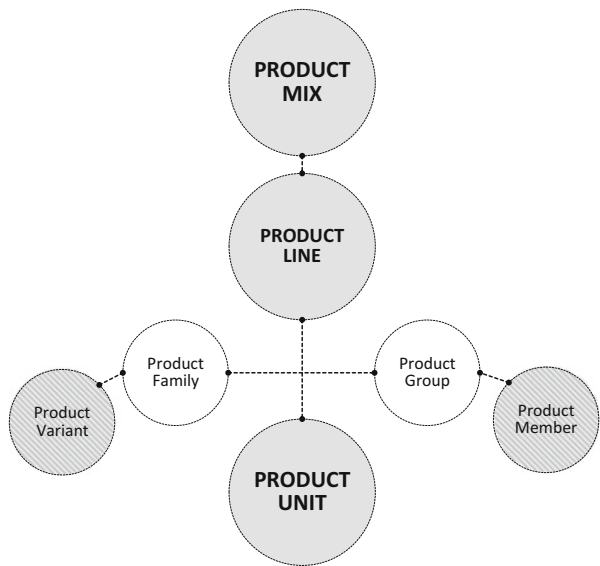
TERM	DEFINITION
Product	Any offering that satisfies needs. Represents a collection of tangible and intangible assets.
Product Unit	Individual product that may be offered separately from any other product.
Product Mix	Entire set of products offered by a company. Collection of product units, product lines, product families, and product groups.
Product Line	Set of products that are technologically different yet provide similar functionality that serves the same target market needs.
Product Family	Set of derived products that share the same technological foundation. Members of a product family are called *Product Variants*.
Product Group	Set of products coupled or packaged together to form a new unified offering. Members of a product group are called *Product Members.*
Product Portfolio	Product line in which the products are properly diversified and balanced along the timeline and stages of the product life cycle model.
Product Type	Set of products that serve the same specific target market needs, and are technologically and functionally similar.
Product Category or Class(ification)	Synonymous to *Product Line* in the context of competing products.

17.5.5.1   PMTK Product Tree Model Description

The *PMTK Product Tree Model* serves as the basis for discussion on the ways product functionality can be divided or grouped to make a better offering.
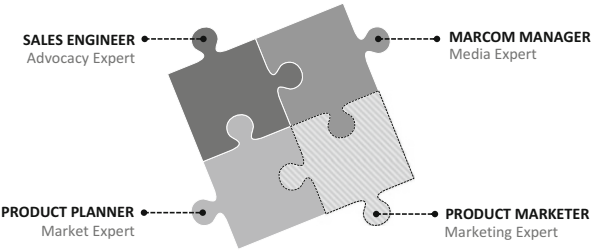
17.5.5.2   PMTK Product Tree Model Relationships

- Product unit is not a container entity.
- Product unit, product family, and product group may also be viewed as being a *Product Member or Product Variant.*
- Product unit can be part of a product line, product family (product variant), or product group (product member).
- Product families contain products designated as *Product Variants.*
- Product groups contain products designated as *Member Products.*
- Product lines can contain product families, product groups, and product units.
- Product mix can contain several product lines.
- Product mix, line, family, and group are all container entities.

17.6   PMTK Concept Models
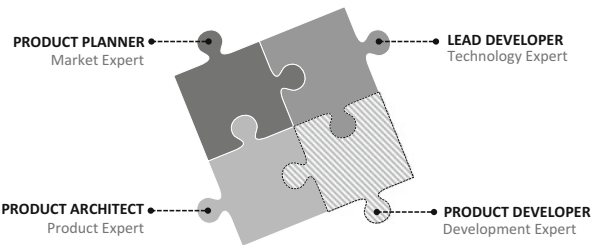
17.6.1   Blackblot Product Management Team Model

Role	Responsibility	Goal	Expertise
Product Planner (strategic role)	Identify and articulate market requirements	Satisfied product buyers and users	Market expert
Product Marketer (strategic role)	Generate awareness, differentiation and demand	Satisfied sales force	Marketing expert
Sales Engineer (tactical role)	Outbound product-centric activities, i.e. pre-sale support and product demos	Customer knowledge of product value and functionality	Advocacy expert
MarCom Manager (tactical role)	Conception and copywriting of all collateral material	Consistent company image and positioning in the marketplace	Media expert
Director of Products (strategic role)	Balance corporate goals with long-term market trends and opportunities	Successful formulation and execution of market and product strategies	Strategy and process expert

17.6.1.1 Blackblot Product Management Team Model Description

The product management team is a task group, comprised of four distinct roles, which organizationally reside in the product management department. The four roles in the *Blackblot Product Management Team Model* are the P *roduct Planner, Product Marketer, Sales Engineer, and Marketing Communications (MarCom) Manager*. These four roles are the basic providers of the planning, deliverables, and actions that guide the inbound-oriented product definition and the outbound marketing efforts.

The *Blackblot Product Management Team Model* addresses the organizational challenges faced by modern technology product managers and resolves them by formalizing and structuring the responsibilities and make-up of the product management team.

17.6.2 Blackblot Product Definition Team Model

Role	Responsibility	Product Frame	Deliverable	Expertise
Product Planner (strategic role)	Articulate market problem	Market requirements	MRD (*What to solve*)	Market expert
Product Architect (tactical role)	Devise functional solution	Product requirements	PRD (*How to solve*)	Product expert
Lead Developer (technical role)	Design product implementation	Product attributes and specifications	Tech. Spec. (*How to build*)	Technology expert

17.6.2.1 Blackblot Product Definition Team Model Description

Different roles are required to create a product. These roles require different skill sets, and in some cases even a different psychological make-up, to successfully plan, define, and build a product that meets customers' expectations.

Extreme due diligence is needed during the product planning and product definition processes to properly and accurately define a product. This requires people who possess different skills, abilities, backgrounds, experience, education,

personalities, and other qualities or characteristics. Professional and distinct roles are needed to create the foundation documents required to accurately define the product. Hence, in order to be successful, a team approach is implemented, bringing together a cohesive set of individuals who have unique qualities to perform all that is needed to define a successful product.

The *Blackblot Product Definition Team Model* designates four roles that all product definition teams must have:

1. *Product Planner*—a market expert who is able to articulate the market problem and needs.
2. *Product Architect*—a product expert who is able to create a high-level design for the solution.
3. *Lead Developer*—a technology expert who is able to describe how to build and implement the solution's design.
4. *Product Developer*—a development expert who is able to build and implement the solution's design.

17.6.3   *Blackblot Product Frames Model*
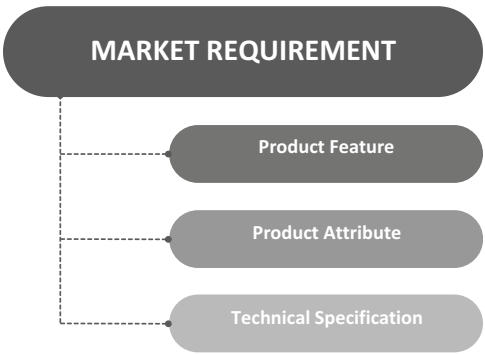
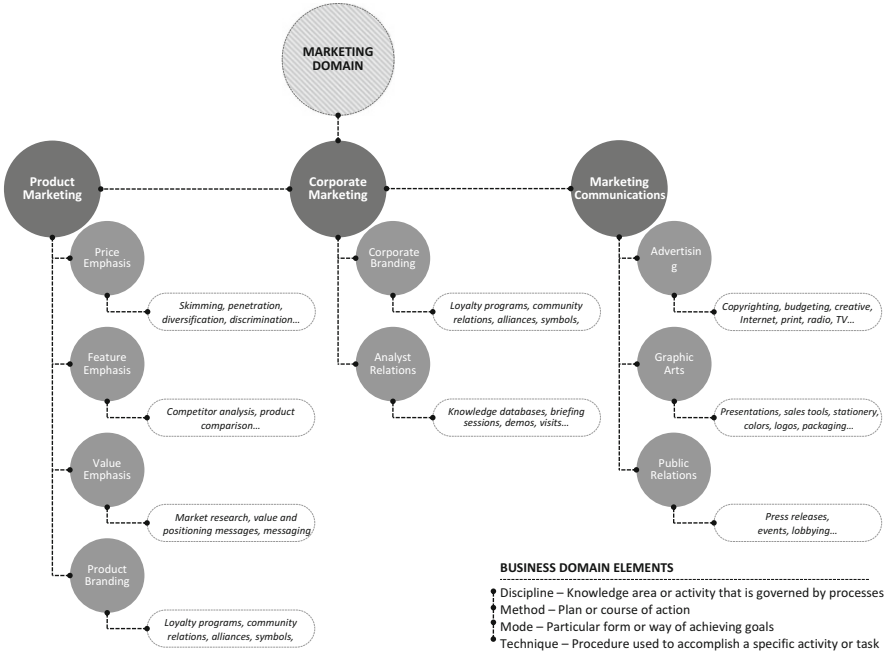| Product Frame Element	Description
Market Requirement	A user/buyer need
Product Feature	Something the product does or has
Product Attribute	An actual trait of the product
Technical Specification	The attribute's implementation

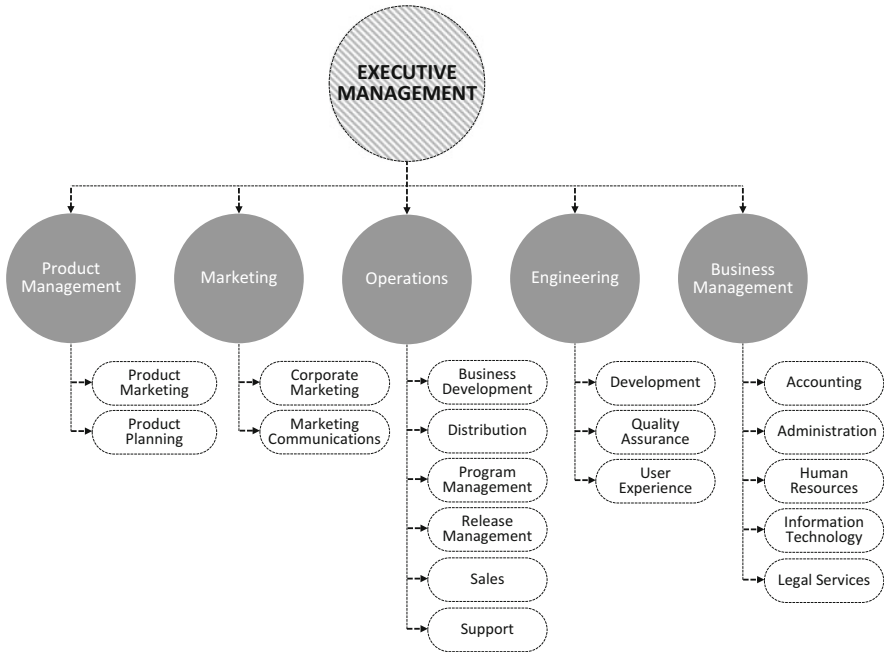### 17.6.3.1   Blackblot Product Frames Model Description

Product planning is the ongoing process of identifying and articulating market requirements from which the product's feature set is ultimately defined. Developed

by Blackblot, the *Blackblot Product Frames Model* is a descriptive model that demonstrates how product functionality is built and how, in total, the product solves the market problem. This model serves several objectives: to validate the product's functional completeness with respect to the market problem, to synchronize user/ buyer needs with product features, and to provide a backbone for a product definition process.

The inner workings of a single product frame show how a certain product feature addresses a particular facet of the market problem. The sum of all of the product frames defines a product that has overall functionality that solves the entire scope of issues presented by a market problem. A product frame is comprised of four elements: market requirements, product features, product attributes, and technical specifications.

17.6.4   Blackblot Marketing Model

Blackblot Marketing Model – Marketing Domain Elements (Tabular Form)			
Marketing Disciplines	Marketing Methods	Marketing Modes	Marketing Techniques
Product Marketing	Value emphasis	Messaging model	Market research, value and positioning messages, messaging plan…
	Feature emphasis	Feature comparison	Competitor analysis, product comparison…
	Price emphasis	Cost-plus, going-rate	Skimming, penetration, diversification, discrimination…
	Product branding	Uniqueness, labeling	Loyalty programs, community relations, alliances, symbols, ideas…
Corporate Marketing	Corporate branding	Personification	Loyalty programs, community relations, alliances, symbols, ideas…
	Analyst relations	Engagements, resources	Knowledge databases, briefing sessions, demos, visits…
Marketing Communications	Advertising	Entertainment, information	Copyrighting, budgeting, creative, Internet, print, radio, TV…
	Graphic arts	Signals, imagery, perception	Presentations, sales tools, stationery, colors, logos, packaging…
	Public relations	Relationship, media coverage	Press releases, events, lobbying…

Additional elements can be added to this component of the *Blackblot Marketing Model*; however, the current mapping is relatively whole and effectively encompasses the essence of the marketing domain.

Blackblot Marketing Model – Corporate Organizational Structure (Tabular Form)				
Product Management	**Marketing**	**Operations**	**Engineering**	**Business Management**
Product Marketing	Corporate Marketing	Business Development	Development	Accounting
Product Planning	Marketing Communications	Distribution	Quality Assurance	Administration
		Program Management	User Experience	Executive Management
		Release Management		Human Resources
		Sales		Information Technology
		Support		Legal Services

Blackblot Marketing Model – Marketing Domain Strategies (Summary Table)	
Strategy	Coordinated set of long-term decisions that help achieve corporate objectives.
Market Strategy	Decisions that define target markets, set marketing objectives, and outline how to build a corporate competitive advantage.
Marketing Strategy	Decisions that determine how to achieve marketing's goal in a particular target market through the selection and application of marketing mixes.
Product Strategy	Decisions that build and enhance products to fit market needs, and outline how to build a product competitive advantage. (Product strategy belongs to the product management business domain.)

Blackblot Marketing Model – Marketing Domain Plans (Summary Table)	
Market Plan	Description of the long-term goals and messages delivered to the target market relative to a particular company or product.
Marketing Plan	Description of the selection and application of marketing mixes in the target market.
Marketing Program	Description of the short-term marketplace effort designed to obtain a specific marketing goal.

Blackblot Marketing Model – Marketing Domain Plan/Strategy/Department Mapping (Summary Table)		
Plan Type	**Market Plan**	**Marketing Plan**
Strategy Type	Market Strategy and elements of the Product Strategy	Marketing Strategy
Corporate Department	• Product Marketing (relative to the product) • Corporate Marketing (relative to the company)	Marketing Communications

17.6.4.1   Blackblot Marketing Model Description

Marketing is an instructive business domain that serves to inform and educate target markets about the value and competitive advantage of a company and its products. The goal of marketing is to build and maintain a preference for a company and its products within the target markets.

The *Blackblot Marketing Model* maps the marketing activities within the marketing domain, presents the division and location of departments identified with marketing in the corporate organizational hierarchy, and describes the types of strategies and plans related to the marketing domain.