Software Product Management

Prof. Dr. Dirk Riehle

Friedrich-Alexander University Erlangen-Nürnberg

PROD C01

Licensed under CC BY 4.0 International

Software Product Management (Recap)

(Software) product

• A man-made physical or virtual artifact offered for sale to customers in a market

(Software) product management

• The management of a company's products (along the product life-cycle) (across the product portfolio)

(Software) product manager

The person tasked with performing product management at a product company



What my friends think I do



What my mom thinks I do



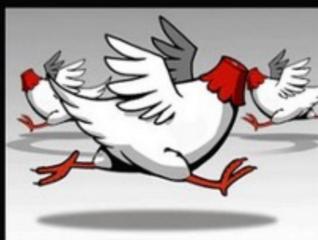
What society thinks I do



What my colleagues think I do



What I think I do



What I actually do

Main Questions (re: Products)

- 1. What? What should we be doing?
- 2. Why?
 Why should we be doing it?
- 3. When? When is the time for doing it?

Video From "The Pentagon Wars" [1]

The Bradley Vehicle

(10+ years in the life of a project manager)

Video Lessons

- Multiple stakeholders: Bargaining leads to suboptimal results
- Meddling stakeholders: Intervening in the tank design process
- Unclear market: From US military to foreign markets
- Cost explosion: With changing requirements, costs explode
- Inconsistent requirements: From fast and small to big with firepower
- Changing requirements: Lack of focus invalidates prior work
- Feature creep: From troop carrier to tank

Main Responsibilities

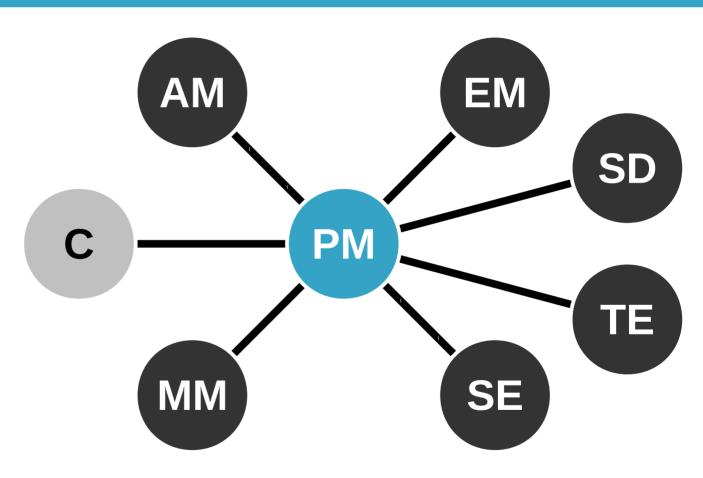
- Definition of product vision
- Economic rationale (business plan)
- Strategic positioning within portfolio
- Specification and prioritization of features
- Mapping of features into releases into time

Communication with Stakeholders

- With leadership
 - To ensure buy-in
- With marketing
 - To communicate the story to the market
- With engineering
 - To have the right product built
- With finance
 - To ensure funds don't run out
- With support
 - To ensure a whole product

Product Manager in Context

- Customer (C)
- Account Manager (AM)
- Marketing Manager (MM)
- Product Manager (PM)
- Engineering Manager (EM)
- Software Developer (SD)
- Test Engineer (TE)
- Support Engineer (SE)



Product Management vs ...

- Marketing Management
- Engineering Management
- Project Management
- User Experience Design

Marketing vs. Product Manager

- Marketing manager
 - A.k.a. "outbound marketing"
 - Markets to customers
- Product manager
 - A.k.a. "inbound marketing"
 - Learns from customers

Engineering vs. Product Manager

- Engineering Manager
 - Is to realize product
 - Has 5-20 times larger staff than product manager
- Product Manager
 - Is to define product
 - Small or no staff



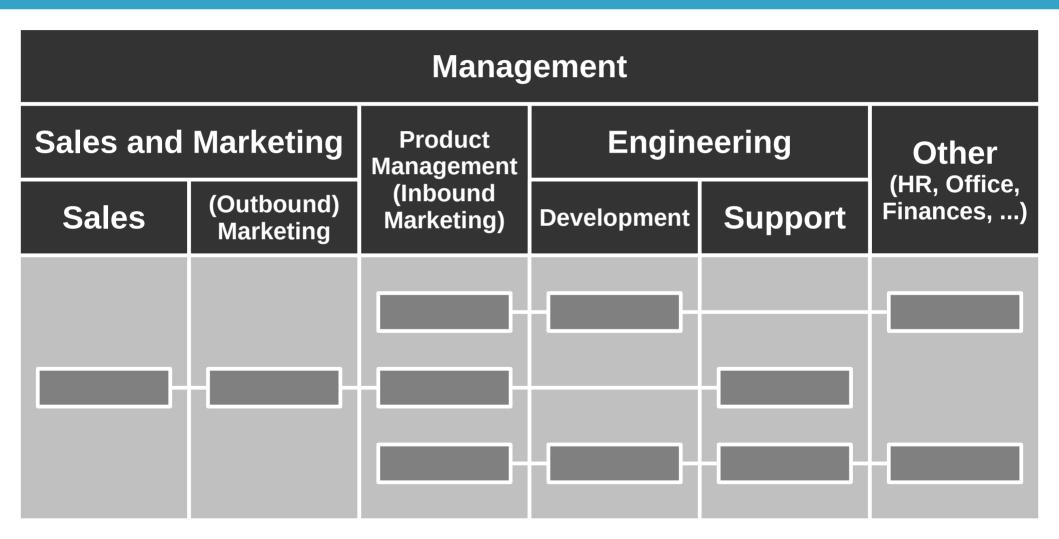
Project vs. Product Manager (Recap)

- Project Manager
 - Is to manage project, including people
- Product Manager
 - Typically not involved in any projects
 - May define project services as part of whole product

UX Designer vs. Product Manager

- User experience designer
 - Conceives user experience, includes
 - Information visualization
 - Interaction design
- Product manager
 - Provides the functional input for UX design
 - May be manager (superior) of UX designer

Product Management within a Product Firm



CEO Factories Sales VB LGQD St. + Alicences F

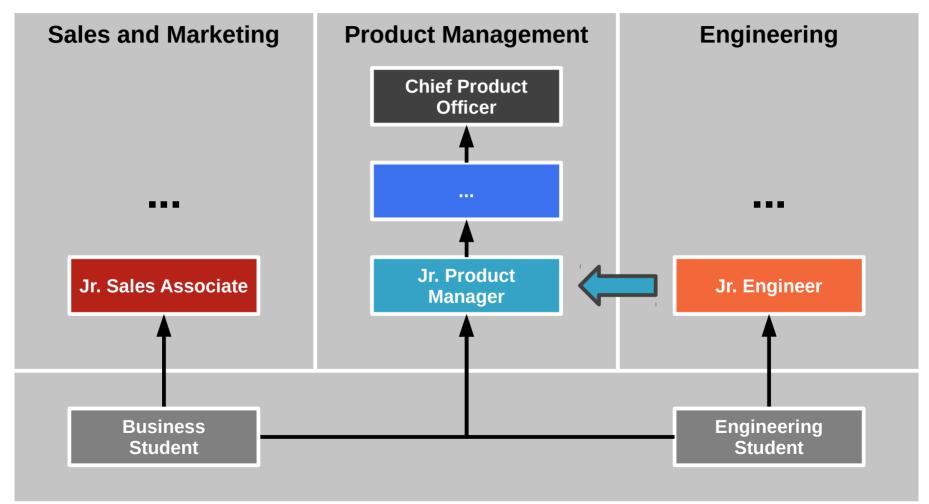
The Role of the Product Manager

- CEO of the product
 - Holds overall responsibility for the product (including revenue responsibility)
- Voice of the customer
 - Channels market requirements towards development

More Definitions

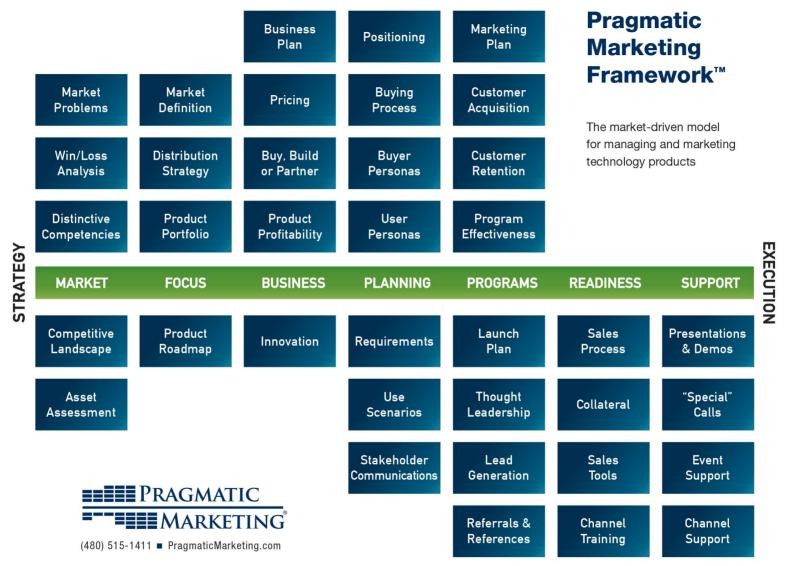
- Product life-cycle
 - A model of the stages that mark a product's life-time
- Product roadmap
 - A plan of the evolution over time of a product's key features
- Product portfolio
 - The group of products sold by a company and their relationships

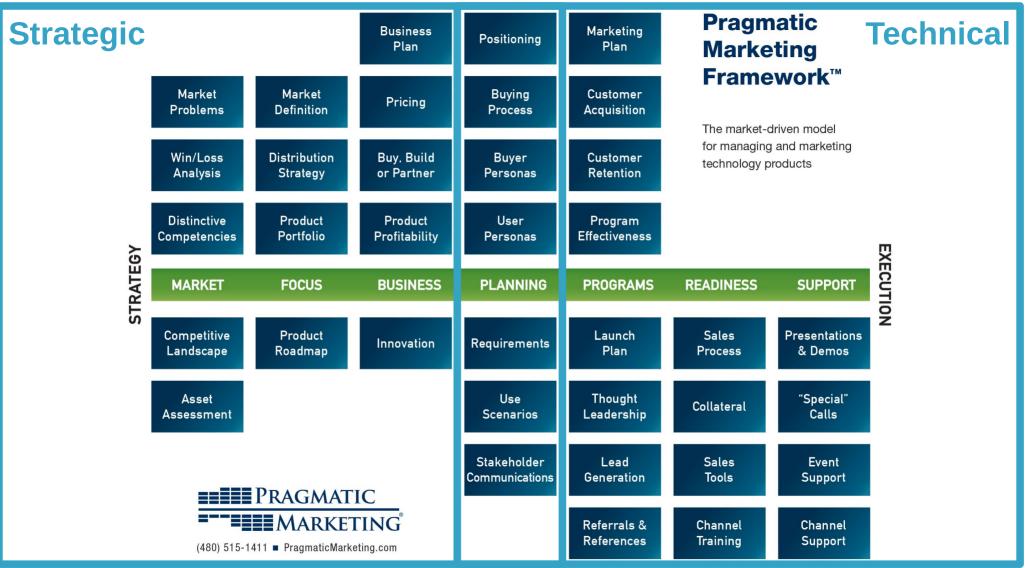
Product Management Careers



Functions of Product Management

- Strategic Product Management
 - Focuses on assessing and defining the market opportunity
 - "Owns" the Marketing Requirements Document, which
- Technical Product Management
 - Focuses on defining the product and its features
 - "Owns" the Product Requirements Document, which





Open Product Management Workflow™

A market-driven step by step model for developing and managing innovative technology products.

STRATEGY, INNOVATION, BUSINESS						TECHNICAL			GO-TO-MARKET		
		Win/Loss Analysis		Market Strategy						Product Launch Plan	Sales to Buying Process
		Competence Analysis		Portfolio Strategy			User Persona			Marketing Plan	Support Sales for Forecast
	Identifiy Problems	Competitive Analysis	Product Profitability	Distribution Strategy			Use Scenario	Prototype		Marketing Efficiency	Website Content
Interview Market	Identify Persona	SWOT Analysis	Innovation	Price Strategy	Business Plan	Technical Product Team	Requirements Rating	Review Meetings	Go-To-Market Team	Customer Maintenance	Sales Collateral
	Identify Scenario	Market Potential	Buy, Build, Partner	Positioning			Work Package Definition	Approval		Reference Customers	Sales Presentation
		Buyer Persona Analysis		Communication Strategy			Time and Costs			Opinion Leader	Sales Channel Training
		Technology Analysis		Product Roadmaps						Demos, Trial Versions	Event Support
INTERVIEW	▶ IDENTIFY	→ ANALYZE	► CHECK	► STRATEGY →	► CONSOLIDATE	→ BUILD TEAM	► DELIVERY	► CONTROL	► BUILD TEAM	► PLAN →	► PREPARE



Review / Summary of Session

- Product Management
 - The what, why, and when?
 - Compared with other functions
 - Within the corporate context
- Domains of product management
 - Product roadmap
 - Product life-cycle
 - Product portfolio

Thank you! Questions?

dirk.riehle@fau.de – http://osr.cs.fau.de

dirk@riehle.org – http://dirkriehle.com – @dirkriehle

Credits and License

- Original version
 - © 2012-2018 Dirk Riehle, some rights reserved
 - Licensed under Creative Commons Attribution 4.0 International License
- Contributions

• ..

Software Product Management

Prof. Dr. Dirk Riehle

Friedrich-Alexander University Erlangen-Nürnberg

PROD C01

Licensed under CC BY 4.0 International

It is Friedrich-Alexander University Erlangen-Nürnberg – FAU, in short. Corporate identity wants us to say "Friedrich-Alexander University".

Software Product Management (Recap)

- (Software) product
 - A man-made physical or virtual artifact offered for sale to customers in a market
- (Software) product management
 - The management of a company's products (along the product life-cycle) (across the product portfolio)
- (Software) product manager
 - The person tasked with performing product management at a product company

Software Product Management © 2018 Dirk Riehle - Some Rights Reserved



Main Questions (re: Products)

- 1. What? What should we be doing?
- 2. Why?
 Why should we be doing it?
- 3. When? When is the time for doing it?

Software Product Management © 2018 Dirk Riehle - Some Rights Reserved

Video From "The Pentagon Wars" [1]

The Bradley Vehicle

(10+ years in the life of a project manager)

[1] https://youtu.be/r0op8e0LuoU

Software Product Management © 2018 Dirk Riehle - Some Rights Reserved

Video Lessons

- Multiple stakeholders: Bargaining leads to suboptimal results
- Meddling stakeholders: Intervening in the tank design process
- Unclear market: From US military to foreign markets
- · Cost explosion: With changing requirements, costs explode
- · Inconsistent requirements: From fast and small to big with firepower
- Changing requirements: Lack of focus invalidates prior work
- Feature creep: From troop carrier to tank

Software Product Management © 2018 Dirk Riehle - Some Rights Reserved

Main Responsibilities

- Definition of product vision
- Economic rationale (business plan)
- Strategic positioning within portfolio
- Specification and prioritization of features
- Mapping of features into releases into time

Software Product Management © 2018 Dirk Riehle - Some Rights Reserved

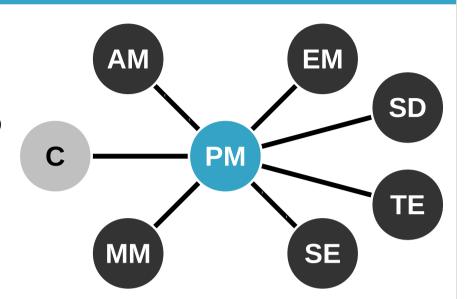
Communication with Stakeholders

- · With leadership
 - To ensure buy-in
- · With marketing
 - To communicate the story to the market
- · With engineering
 - To have the right product built
- With finance
 - To ensure funds don't run out
- With support
 - To ensure a whole product

Software Product Management © 2018 Dirk Riehle - Some Rights Reserved

Product Manager in Context

- Customer (C)
- Account Manager (AM)
- Marketing Manager (MM)
- Product Manager (PM)
- Engineering Manager (EM)
- Software Developer (SD)
- Test Engineer (TE)
- Support Engineer (SE)



Software Product Management © 2018 Dirk Riehle - Some Rights Reserved

Product Management vs ...

- Marketing Management
- Engineering Management
- Project Management
- User Experience Design

Marketing vs. Product Manager

- Marketing manager
 - A.k.a. "outbound marketing"
 - · Markets to customers
- Product manager
 - A.k.a. "inbound marketing"
 - · Learns from customers

Engineering vs. Product Manager

- Engineering Manager
 - Is to realize product
 - Has 5-20 times larger staff than product manager
- Product Manager
 - Is to define product
 - Small or no staff



Project vs. Product Manager (Recap)

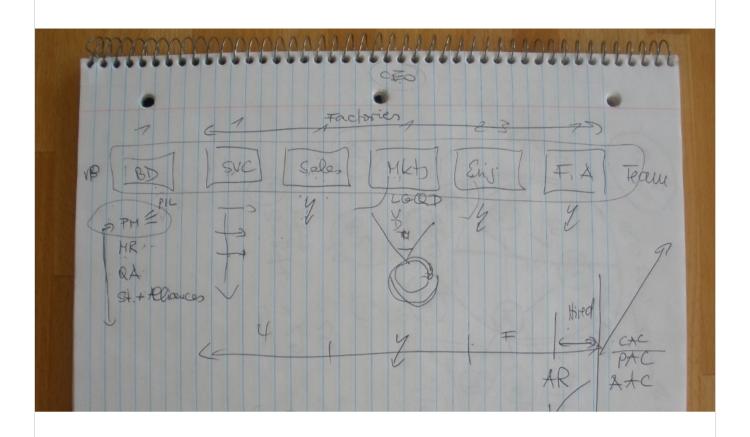
- Project Manager
 - Is to manage project, including people
- Product Manager
 - Typically not involved in any projects
 - May define project services as part of whole product

UX Designer vs. Product Manager

- User experience designer
 - Conceives user experience, includes
 - Information visualization
 - Interaction design
- Product manager
 - Provides the functional input for UX design
 - May be manager (superior) of UX designer

Product Management within a Product Firm

Management					
Sales and Marketing		Product Management	Engineering		Other
Sales	(Outbound) Marketing	(Inbound Marketing)	Development	Support	(HR, Office, Finances,)



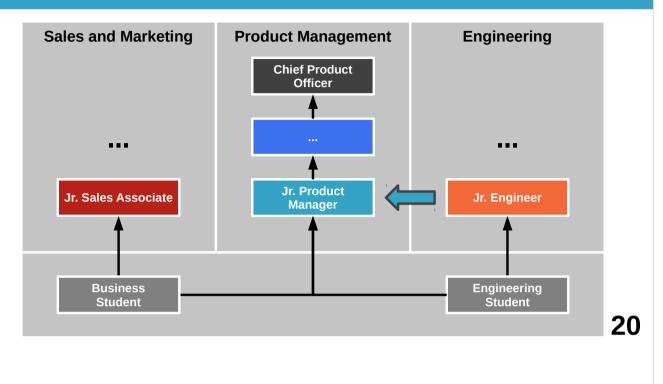
The Role of the Product Manager

- · CEO of the product
 - Holds overall responsibility for the product (including revenue responsibility)
- · Voice of the customer
 - Channels market requirements towards development

More Definitions

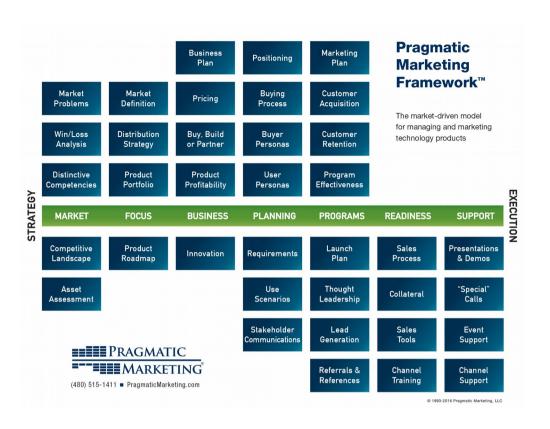
- · Product life-cycle
 - A model of the stages that mark a product's life-time
- Product roadmap
 - A plan of the evolution over time of a product's key features
- Product portfolio
 - The group of products sold by a company and their relationships

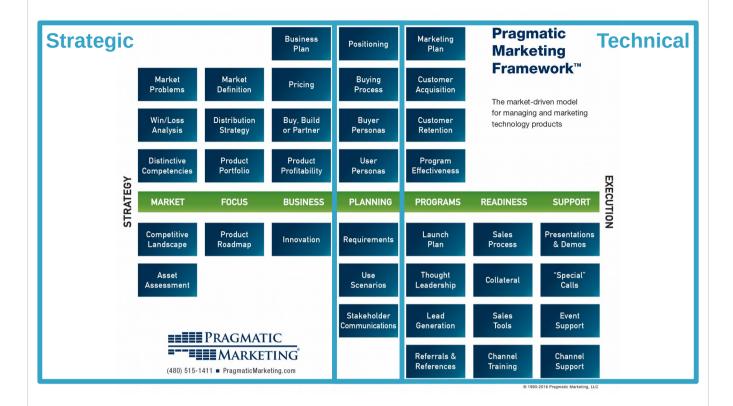
Product Management Careers



Functions of Product Management

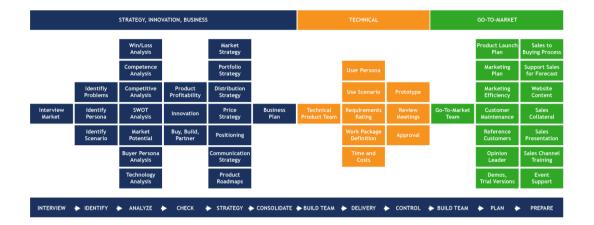
- Strategic Product Management
 - Focuses on assessing and defining the market opportunity
 - "Owns" the Marketing Requirements Document, which
- Technical Product Management
 - · Focuses on defining the product and its features
 - "Owns" the **Product Requirements Document**, which





Open Product Management Workflow™

A market-driven step by step model for developing and managing innovative technology products.





Open Product Management Workflow™ is a trademark of Frank Lemser www.pro-produktmanagement.de License: Creative Commons Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)

Review / Summary of Session

- Product Management
 - The what, why, and when?
 - Compared with other functions
 - Within the corporate context
- Domains of product management
 - Product roadmap
 - Product life-cycle
 - Product portfolio

Thank you! Questions?
dirk.riehle@fau.de – http://osr.cs.fau.de dirk@riehle.org – http://dirkriehle.com – @dirkriehle DR

Credits and License

- Original version
 - © 2012-2018 Dirk Riehle, some rights reserved
 - Licensed under Creative Commons Attribution 4.0 International License
- Contributions