



CHAPTER 5

Establishing the business requirements

- Understanding the business requirements and how to define them.
- Student should enhance the structure of vision and scope document, a deliverable that contains the project's business requirements
- Student could write the vision and scope about project through using vision statement and scope representation techniques.
- Understanding the vision and scope on agile project

- Business requirements
 - Identifying desired business benefits
 - Business objectives and opportunities
- Scope representation techniques
 - Context diagram
 - Ecosystem map
 - Feature tree
 - Event list
- Keeping the scope in focus
- Vision and scope on agile project

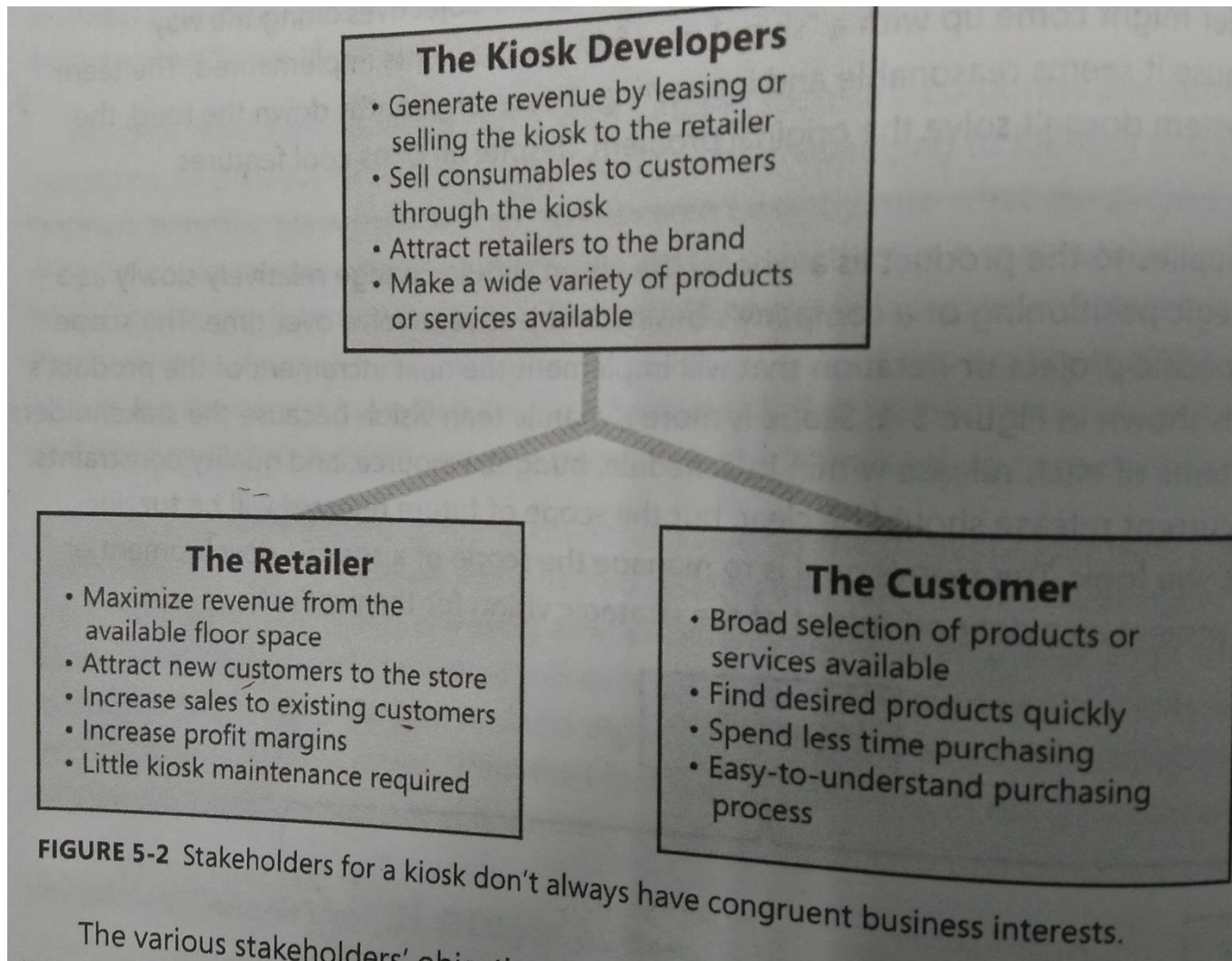
- **“Biz requirements”** refers to a set of information that, in the aggregate, describes a need that leads to one or more projects to deliver a solution and the desired ultimate biz outcomes. Biz opportunities, biz objectives, success metrics, and a vision statement make up the biz requirements.
- Biz requirements issues must be resolved before the functional and nonfunctional requirements can be fully specified. A statement of the project’s scope and limitations helps greatly with discussions of proposed features and target releases.

■ Identifying desired business benefits:

- Organizations should not initiate any project without a clear understanding of the value it will add to the biz. Set measurable targets with biz objectives, and then define success metrics that allow you to measure whether you are on track to meet those activities.
- Biz requirements might come from funding sponsors, corporate executives, marketing managers, or product visionaries. However, it can be challenging to identify and communicate the biz benefits. Sometimes, sponsors don't want to set objectives for the projects.
- The biz benefit has to represent a true value for the project's sponsors and to the product's customers. For EX, when merging 2 systems into one, the customers don't care about 1, 5 or 10 systems, they just care about increasing revenue and decreasing costs.

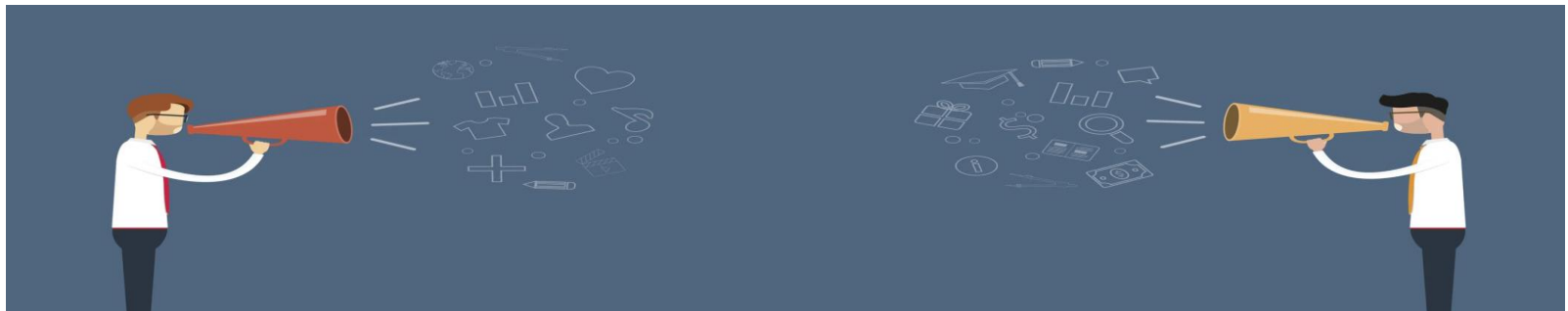
- Product vision and project scope:
 - **Product vision** succinctly (súc tích) describes the ultimate product that will achieve the biz objectives. The vision describes what the product is about and what it ultimately could become.
 - **Product scope** identifies what portion of the ultimately product vision the current project or development iteration will address. The statement of scope draws the boundary between what's in and what's out for the project.
 - Scope for the current release should be clear, but the scope for the future releases will be fuzzier.

Business requirements



■ Conflicting business requirements:

- In figure 5-2, both kiosk developers and the customers want to have a wide variety of products and services available through the kiosk. However, some biz objectives could conflict. The customers want to spend less time purchasing goods and services, but the retailer would prefer to have customers linger in the store and spend more money.
- The project's decision makers must resolve these conflicts before the analyst can detail the kiosk's requirements.



Vision and scope document

1. Business requirements
 - 1.1 Background
 - 1.2 Business opportunity
 - 1.3 Business objectives
 - 1.4 Success metrics
 - 1.5 Vision statement
 - 1.6 Business risks
 - 1.7 Business assumptions and dependencies
2. Scope and limitations
 - 2.1 Major features
 - 2.2 Scope of initial release
 - 2.3 Scope of subsequent releases
 - 2.4 Limitations and exclusions
3. Business context
 - 3.1 Stakeholder profiles
 - 3.2 Project priorities
 - 3.3 Deployment considerations

- The owner of the vision and scope document is the project's executive sponsor, funding authority, or someone in a similar role.
- BA can work with this individual to articulate the business requirements and write the vision and scope document.

■ Background:

- Summarize the rationale and context for the new product or for changes to be made to an existing one. Describe the history or situation that leads to the decision to build this product.

■ Biz opportunities:

- For a commercial product, describe the biz opportunity that exists and the market in which the product will be competing. This section could include a comparative evaluation of existing products, indicating why the proposed product is attractive and the advantages it provides.
- Describe the needs of typical customers or of the target market.

Explanations: Biz requirements

■ Biz objectives:

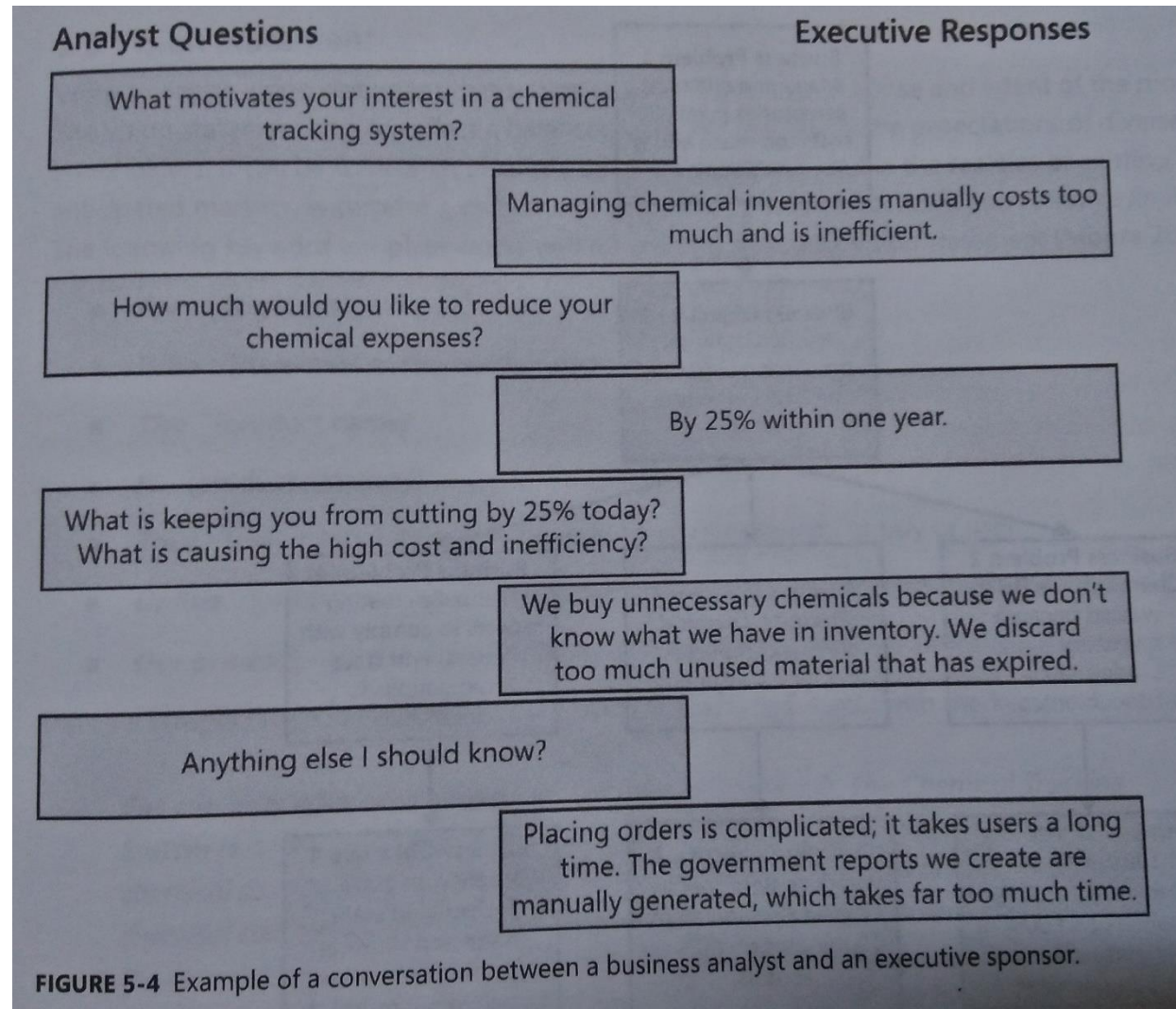
- Organizations generally undertake a project to solve a problem or exploit an opportunity.
- Given a set of objectives, ask: “What is keeping us from achieving the goal?” to identify a more detailed biz problem. Or work backward by asking “Why do we care about that goal?” to better understand to the top-level biz problem or opportunity.

TABLE 5-1 Examples of financial and nonfinancial business objectives

Financial	Nonfinancial
<ul style="list-style-type: none"> ■ Capture a market share of X% within Y months. ■ Increase market share in country W from X% to Y% within Z months. ■ Reach a sales volume of X units or revenue of \$Y within Z months. ■ Achieve X% return on investment within Y months. ■ Achieve positive cash flow on this product within Y months. ■ Save \$X per year currently spent on a high-maintenance legacy system. ■ Reduce monthly support costs from \$X to \$Y within Z months. ■ Increase gross margin on existing business from X% to Y% within 1 year. 	<ul style="list-style-type: none"> ■ Achieve a customer satisfaction measure of at least X within Y months of release. ■ Increase transaction-processing productivity by X% and reduce data error rate to no more than Y%. ■ Develop an extensible platform for a family of related products. ■ Develop specific core technology competencies. ■ Be rated as the top product for reliability in published product reviews by a specified date. ■ Comply with specific federal and state regulations. ■ Receive no more than X service calls per unit and Y warranty calls per unit within Z months after shipping. ■ Reduce turnaround time to X hours on Y% of support calls.

Explanations: Biz requirements

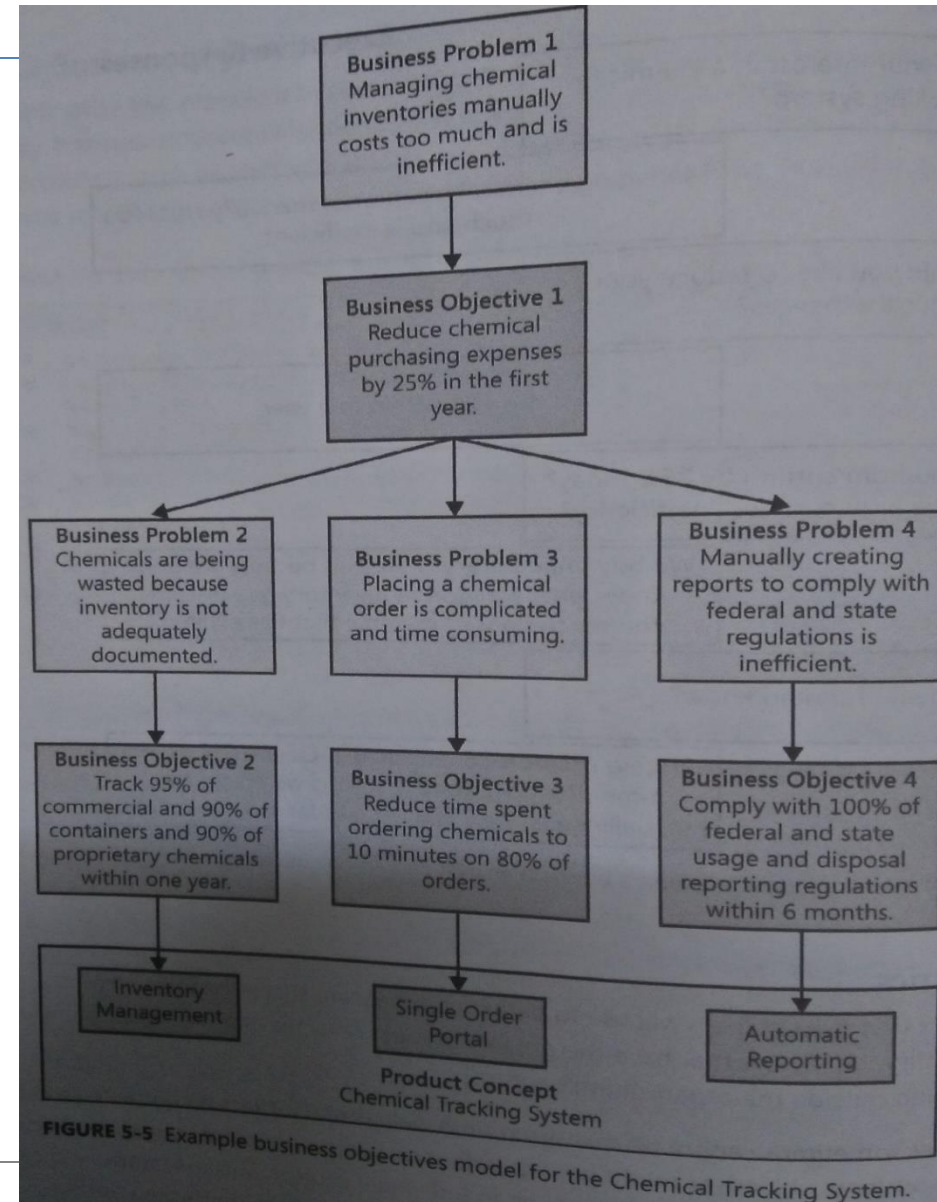
■ Analyst questions:



Explanations: Biz requirements

■ Success metrics:

- Specify the indicators that stakeholders will use to define and measure success on this project. Identify the factors that have the greatest impact on achieving that success, including factors both within and outside the organization's control.



Explanations: Biz requirements

■ Vision statement:

- Write a concise vision statement that summarizes the long-term purpose and intent of the product.
- The following keyword template works well for crafting product vision statement:
 - **For** [target customer]
 - **Who** [statement of the need or opportunity]
 - **The** [product name]
 - **Is** [product category]
 - **That** [major capabilities, key benefit,...]
 - **Unlike** [primary competitive alternative, current system, current biz process]
 - **Our product** [statement of primary differentiation and advantages of new product]

***For** scientists **who** need to request containers of chemicals, **the** Chemical Tracking System **is** an information system **that** provide a single point of access to the chemical stockroom and to vendors. The system will store the location of every chemical container within the company, the quality of material remaining in it, and the complete history of each container's locations and usage. **Unlike** the current manual ordering processes, **our product** will generate all reports required to comply with federal and state government regulations that require the reporting of chemical usage, storage, and disposal.*

■ Biz risks:

- Summarize the major biz risks associated with developing the product. Risk categories include marketplace competition, timing issues, user acceptance, implementation issues, and possible negative impacts on the biz.

■ Biz assumptions and dependencies:

- An ***assumption*** is statement that is believed to be true in the absence of proof or definitive knowledge. If you learn that certain assumptions are wrong, you might have to change scope, adjust the schedule or launch other projects to achieve the objectives.
- Record any major dependencies the projects has on external factors. Examples are pending industry standards or government regulations, deliverables from other projects, third-party suppliers, or development partners.

Explanations: Scope and limitations

■ Major features:

- List the product's major features or user capabilities, emphasizing those that distinguish it from previous or competing products. Think about how users will use these features to ensure that the list is complete.

■ Scope of initial release:

- To focus the development effort and maintain a reasonable project schedule, avoid the temptation (cám dỗ) to include every feature that any potential customer might eventually want in release 1.0. Version 1 don't have to be fast, pretty, or easy to use, but it has to be reliable.

Explanations: Scope and limitations

■ Scope of subsequent releases:

- If you envision a staged evolution of the product, or if you are following an iterative or incremental life cycle, build a release roadmap that indicates which functionality chunks will be deferred and the desired timing of later release.
- Subsequent releases let you implement additional use cases and features, as well as enriching the capabilities of the initial ones.

■ Limitations and exclusions:

- List any product capabilities or characteristics that a stakeholder might expect but that are not planned for inclusion in the product or in a specific release.

■ Stakeholder profiles:

- *Stakeholders* are the groups, people, or organizations that are actively involved in a project, are affected by its outcome, or are able to influence its outcomes. The stakeholder profiles describe different categories of customers and other key stakeholders for the project.
- The information is in stakeholder profile:
 - The major value or benefit that the stakeholder will receive from the product such as improved productivity; reduced rework and waste; cost saving; streamlined biz processes; ...
 - Their likely attitudes toward the product.
 - Major features and characteristics of interest.
 - Any known constraints that must be accommodated.

■ Project priorities:

- To enable effective decision making, the stakeholders must agree on the project's priorities. One way to approach this is to consider the 5 dimensions of features, quality, schedule, cost, and staff.

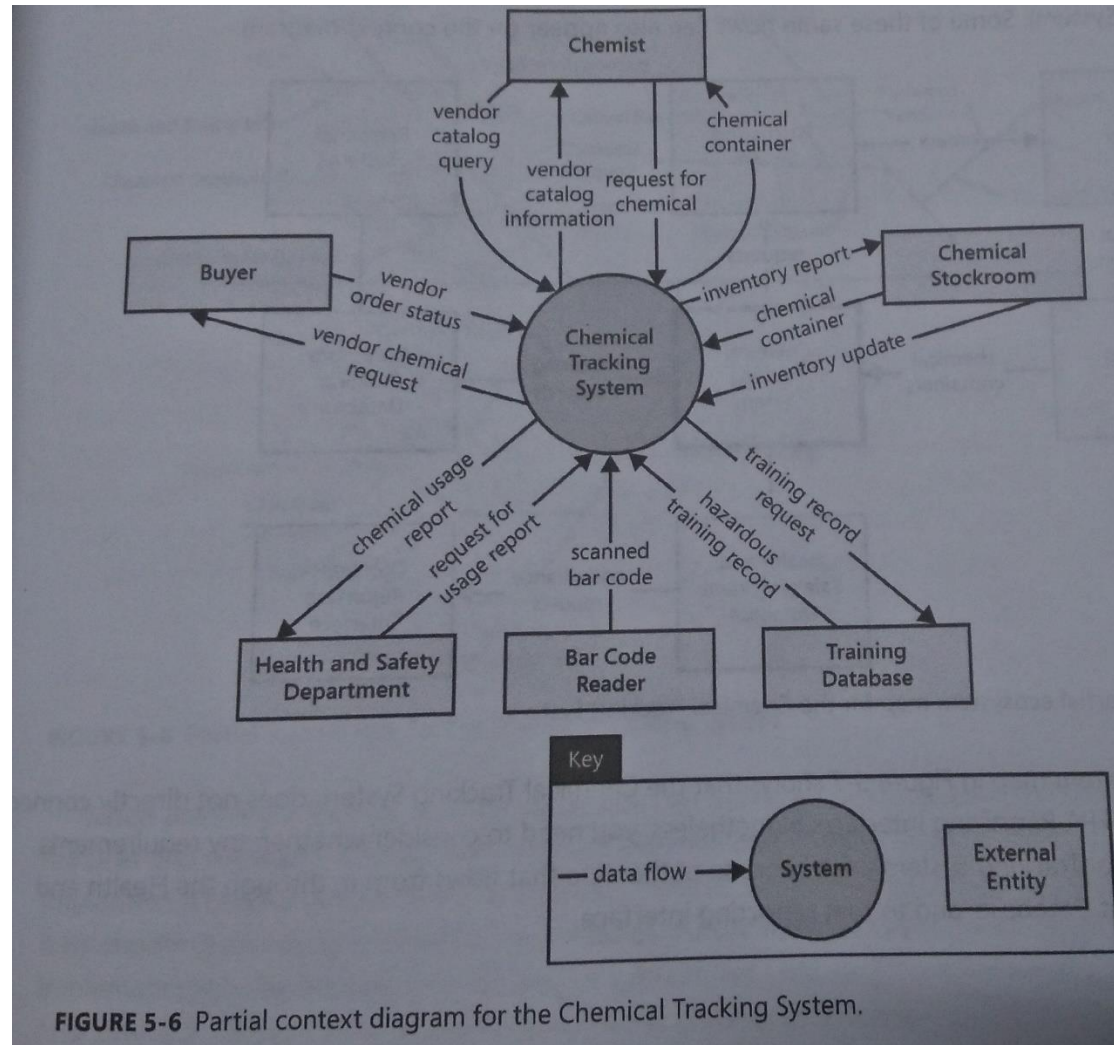
■ Deployment considerations:

- Describe the access that users will require to use the system, such as whether the users are distributed over multiple time zones or located close to each other. State when the users in various locations need to access the system.
- If infrastructure changes are needed to support the SW's need for capacity, network access, data storage, or data migration, describe those changes.

Scope representation techniques

There are many techniques to represent project scope:

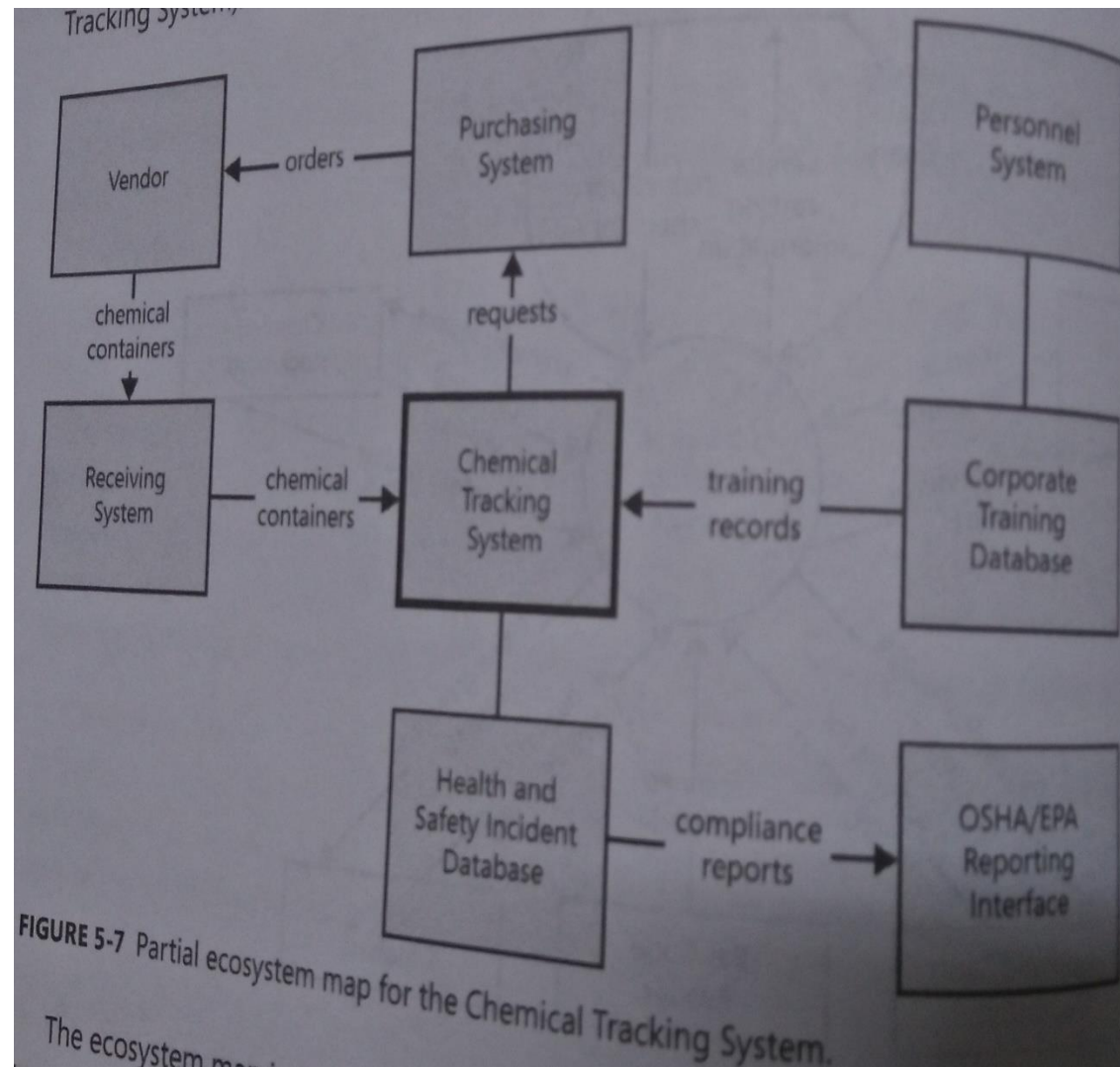
- Context diagram: visually illustrates the connections between *external entities* and the *system* in some way, as well as data, control, and material flows.



Scope representation techniques

■ Ecosystem map:

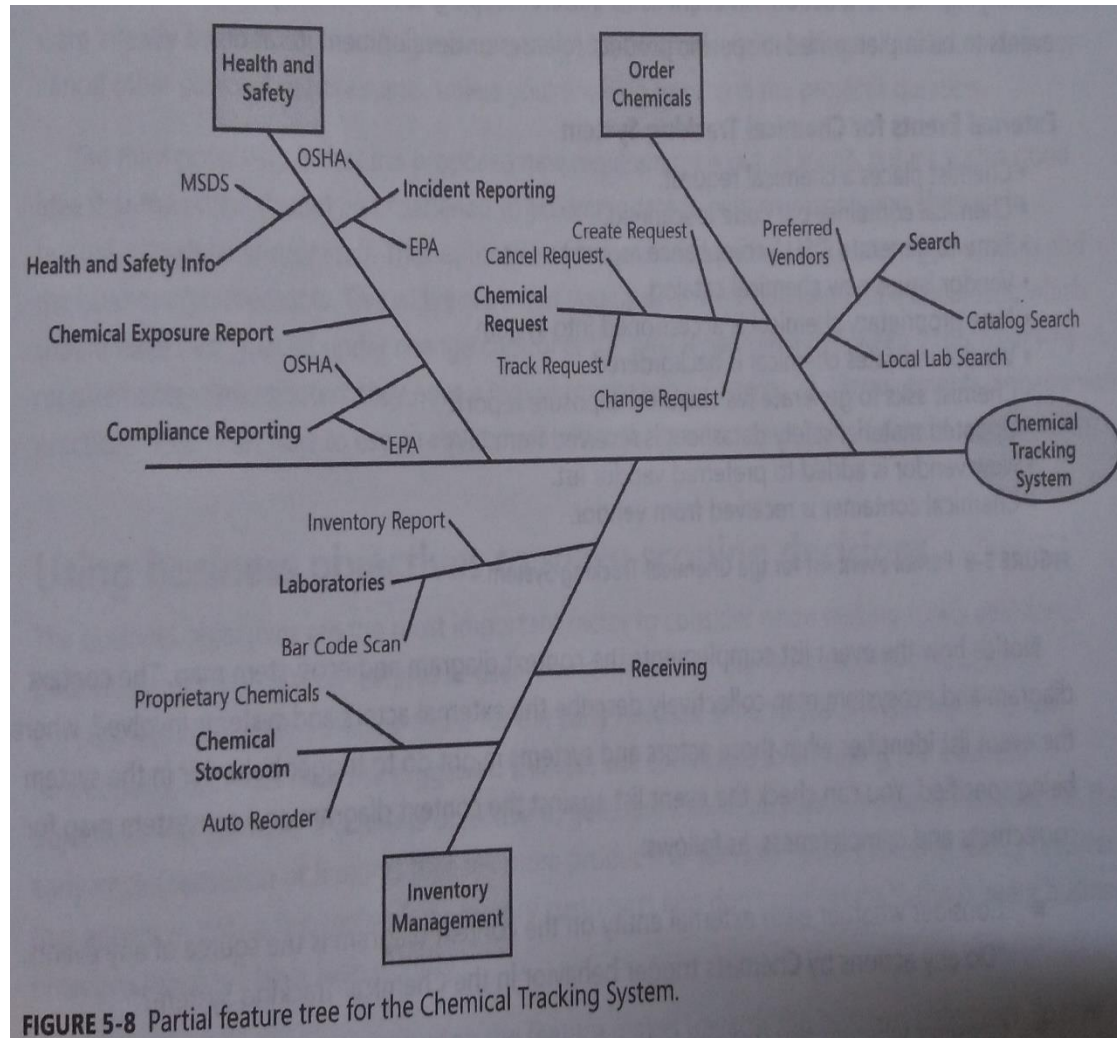
- It shows all of the systems related to the system of interest that interact with one another and the nature of those interactions.
- An ecosystem map represents scope by showing all the systems that interconnect and that therefore might need to be modified to accommodate your new system.



Scope representation techniques

■ Feature tree:

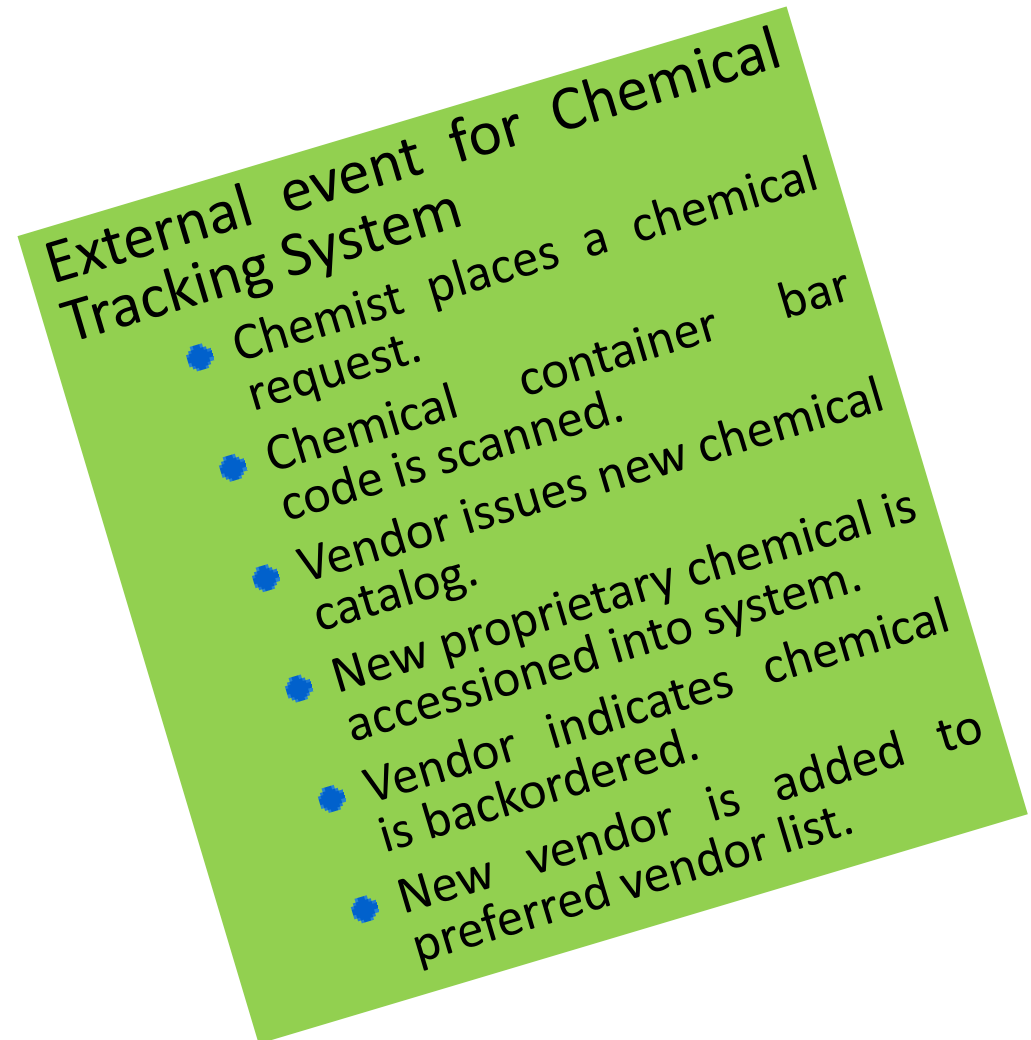
- It's a visual depiction of the product's features organized in logical groups, hierarchically subdividing each feature into further levels of detail.
- The feature tree is a concise view of all the features planned for a project, marking it an ideal model to show to executives who want to quick glance at the project scope.



Scope representation techniques

■ Event list:

- An event list identifies external events that could trigger behavior in the system.
- The event list depicts the scope boundary for the system by naming possible biz events triggered by users, time-triggered events, or signal events received from external components, such as HW devices.



The biz requirements and an understanding of how customers will use the product provide valuable tools for dealing with scope change. Scope change is not a bad thing if it helps you steer the project toward satisfying evolving customer needs.

- Using business objectives to make scoping decisions:
 - The biz objectives are the most important factor to consider when making scope decisions.
 - When a stakeholder wants to add functionality, consider how the suggested changes will contribute to achieving the biz objectives.
 - When an executive requests a new feature that he thought of over the weekend, you can use quantitative analysis to help determine if adding it is the right biz decision.

- Assessing the impact of scope changes:
 - When project's scope increases, the PM usually will have to negotiate the planned budget, resources, schedule, and/or staff.
 - A common consequence of scope change is that completed activities must be reworked in response to the changes.
 - Quality often suffers if the allocated resources or time are not increased when new functionality is added.

Vision and scope on agile projects

- Managing scope on an agile project, in which development is performed in a series of fixed timebox iterations, takes a different approach.
- The scope of each iteration consists of user stories selected from a dynamic product backlog, based on their relative priority and the estimated delivery capability of the team for each timebox.
- Instead of trying to fight scope creep, the team prioritizes new requirements against existing items in the backlog and allocates them to future iterations.
- The biz objectives describe the expected value coming out of the project, and on the agile project, they are used to help prioritize the backlog to deliver the most biz value in the earliest iterations.

THE END THANK YOU!