Establishing the Business Requirements

Contents

- Defining business requirements
- Vision and scope document
- Scope representation techniques
- Keeping the scope in focus
- Using business objectives to determine completion

Various requirements information

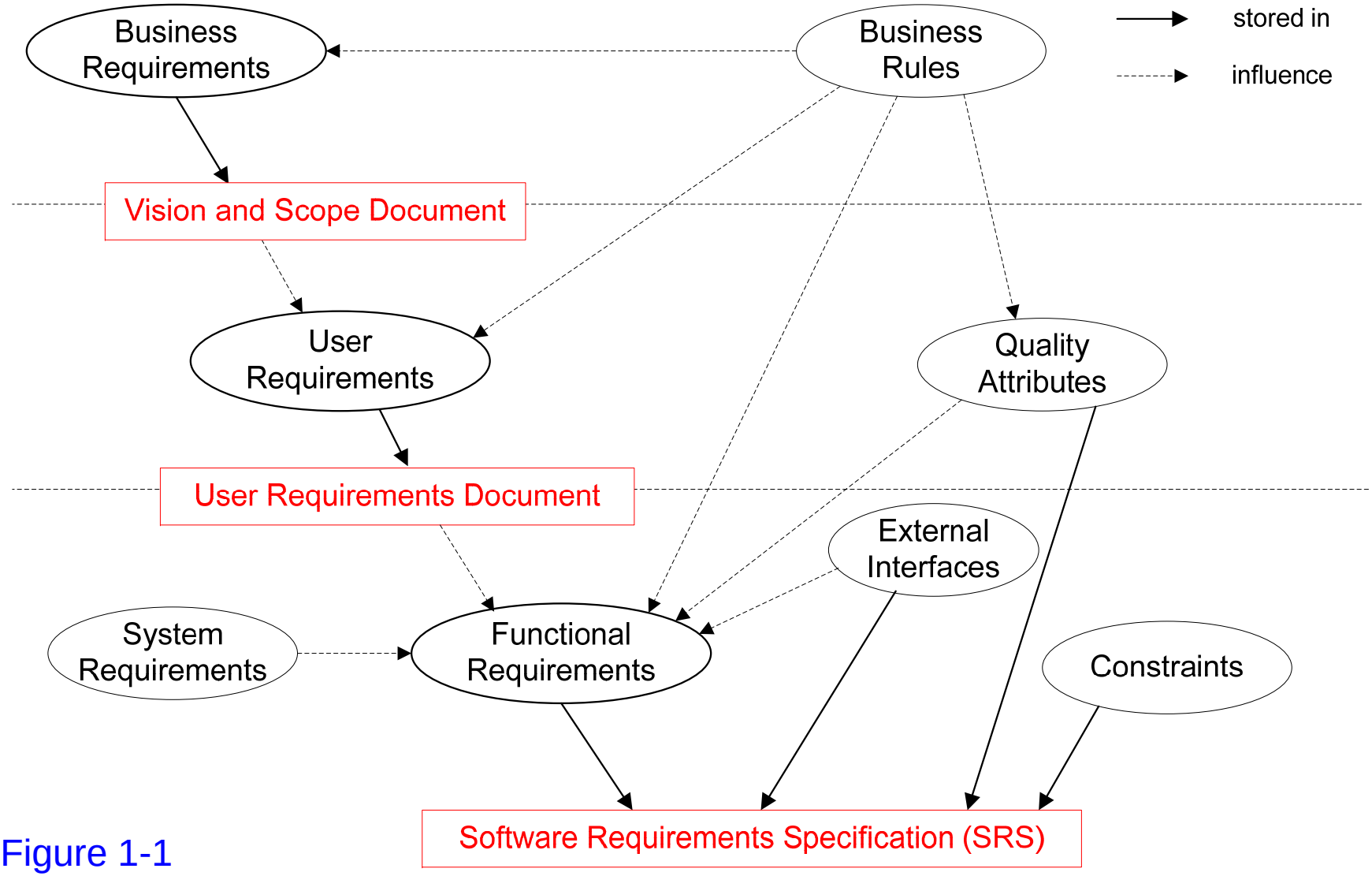


Figure 1-1

Defining business requirements

- *Business requirements* refer to a set of information that, in aggregate, describes a need that leads to one or more projects to deliver a solution and the desired ultimate business outcomes.
- Business requirements issues must be resolved before the functional and nonfunctional requirements can be fully specified.

Identifying desired business benefits

- The business requirements set the context for, and enable the measurement of, the benefits the business hopes to achieve from undertaking a project.
- Business requirements might come from funding sponsors, corporate executives, marketing managers, or product visionaries.
- The business benefit has to represent a true value for the project's sponsors and to the product's customers.

Project vision and project scope 1

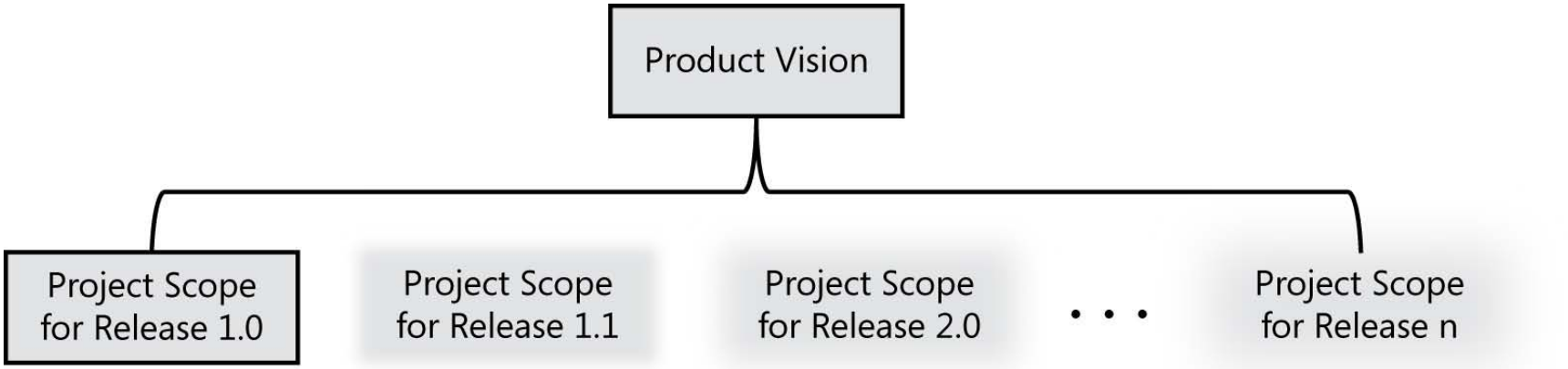
- The *product vision* briefly describes the ultimate product that will achieve the business objectives.
  - This product could serve as the complete solution for the business requirements or as just a portion of the solution.
  - The vision describes what the product is about and what it ultimately could become.
  - It provides the context for making decisions throughout the product's life, and it aligns all stakeholders in a common direction.

Project vision and project scope 2

- The *project scope* identifies what portion of the ultimate 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 this project.

- The product vision ensures that we all know where we are hoping to go eventually.
- The project scope ensures that we are all talking about the same thing for the immediate project or iteration.

Project vision and project scope 3



- The product vision encompasses the scope for each planned release, which is less well defined the farther out you look

- The vision applies to the product as a whole. The vision should change relatively slowly.
- The scope pertains to a specific project or iteration that will implement the next increment of the product's functionality.
- Scope is more dynamic than vision.

Conflicting business requirements

- Business requirements collected from multiple sources might conflict.
  - The various stakeholders' objectives sometimes are in alignment. However, some business objectives could conflict.
- The project's decision makers shouldn't expect the software team to resolve conflicts among various stakeholders.

- Long-duration projects often experience a change in decision makers partway through. If this happens, immediately revisit the baselined business requirements with the new decision makers.

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Suggested template

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

1 Business Requirements
1.1 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 led to the decision to build this product.

1.2 Business opportunity

- eg. For a corporate information system, describe the business problem that is being solved or the process being improved, as well as the environment in which the system will be used.
- eg. For a commercial product, describe the business opportunity that exists and the market in which the product will be competing. (stock market analysis?)
- This section could include a comparative evaluation of existing products, indicating why the proposed product is attractive and the advantages it provides.
- Describe the problems that cannot currently be solved without the envisioned solution.

1.3 Business objectives

- Summarize the important business benefits the product will provide in a quantitative and measurable way.

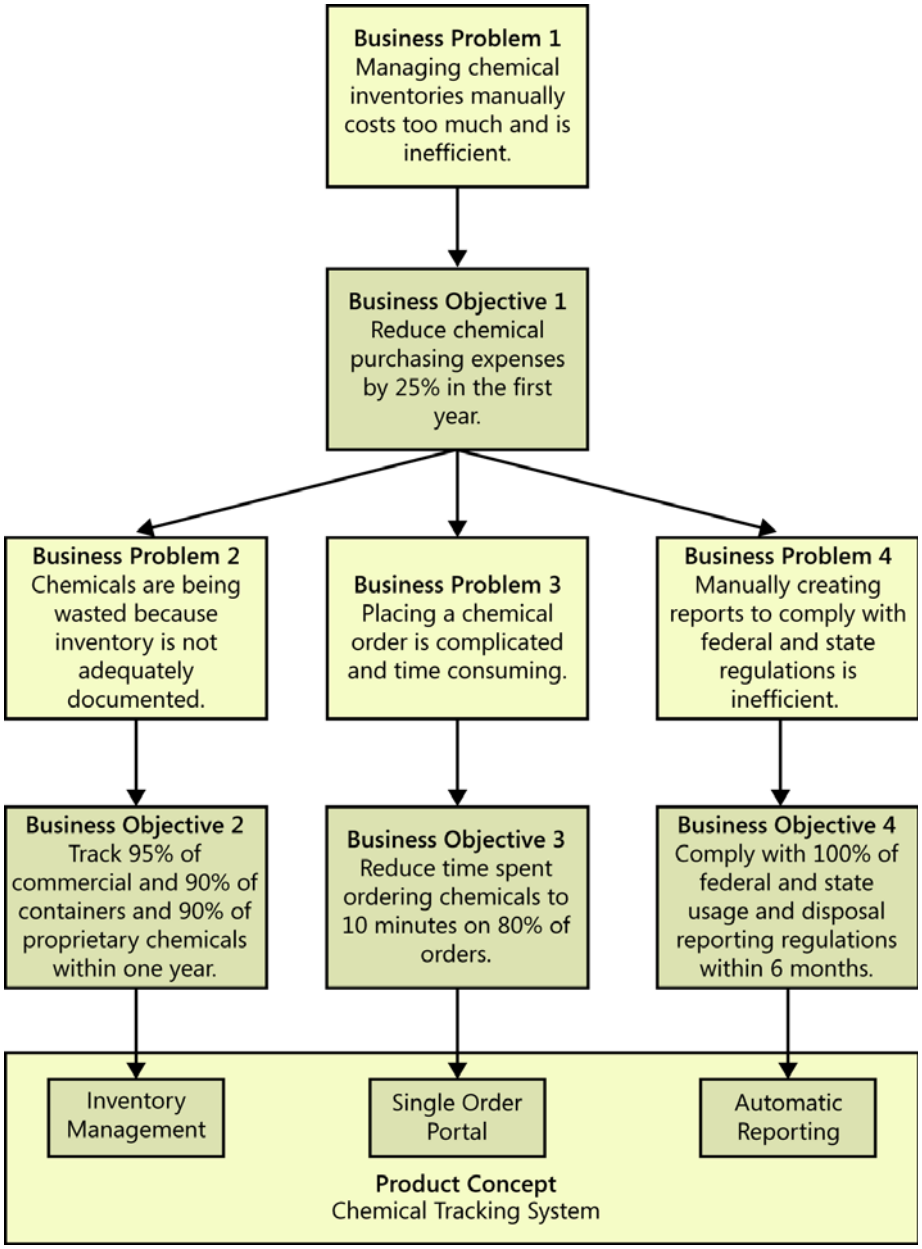
Examples 1

- **Financial**
  - 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.

Examples 2

- **Nonfinancial**
  - 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.

Analyst Questions	Executive Responses
What motivates your interest in a chemical tracking system?	
	Managing chemical inventories manually costs too much and is inefficient.
How much would you like to reduce your chemical expenses?	
	By 25% within one year.
What is keeping you from cutting by 25% today? What is causing the high cost and inefficiency?	
	We buy unnecessary chemicals because we don't know what we have in inventory. We discard too much unused material that has expired.
Anything else I should know?	
	Placing orders is complicated; it takes users a long time. The government reports we create are manually generated, which takes far too much time.


Business Problem 1
Managing chemical inventories manually costs too much and is inefficient.
Business Objective 1
Reduce chemical purchasing expenses by 25% in the first year.
Business Problem 2
Chemicals are being wasted because inventory is not adequately documented.
Business Problem 3
Placing a chemical order is complicated and time consuming.
Business Problem 4
Manually creating reports to comply with federal and state regulations is inefficient.
Business Objective 2
Track 95% of commercial and 90% of containers and 90% of proprietary chemicals within one year.
Business Objective 3
Reduce time spent ordering chemicals to 10 minutes on 80% of orders.
Business Objective 4
Comply with 100% of federal and state usage and disposal reporting regulations within 6 months.
Inventory Management
Single Order Portal
Automatic Reporting
Product Concept
Chemical Tracking System

1.4 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.

- Success metrics indicate whether a project is on track to meet its business objectives.
- The metrics can be tracked during testing or shortly after product release.

1.5 Vision statement

- Write a concise vision statement that summarizes the long-term purpose and intent of the product.
  - ***For*** [target customer]
  - ***Who*** [statement of the need or opportunity]
  - ***The*** [product name]
  - ***Is*** [product category]
  - ***That*** [major capabilities, key benefit, compelling reason to buy or use]
  - ***Unlike*** [primary competitive alternative, current system, current business process]
  - ***Our product*** [statement of primary differentiation and advantages of new product]

Example

- ***For*** *scientists* ***who*** *need to request containers of chemicals,* ***the*** *Chemical Tracking System* ***is*** *an information system* ***that*** *will 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 quantity of material remaining in it, and the complete history of each container's locations and usage. This system will save the company 25 percent on chemical costs in the first year of use by allowing the company to fully exploit chemicals that are already available within the company, dispose of fewer partially used or expired containers, and use a standard chemical purchasing process.* ***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.*

1.6 Business risks

1.7 Business assumptions and dependencies

2 Scope and limitations

- You need to state both what the solution being developed *is* and what it *is not*.

- Many projects suffer from scope creep — rampant growth as more and more functionality gets stuffed into the product.
  - The first step to controlling scope creep is to define the project's scope.
  - The limitations itemize certain capabilities that the product will *not* include that some people might assume will be there.

2.1 Major features

- List the product's major features or user capabilities, emphasizing those that distinguish it from previous or competing products.
- Ensure that the list is complete and that it does not include unnecessary features.

- You might include a feature tree diagram.

2.2 Scope of initial release

- Summarize the capabilities that are planned for inclusion in the initial product release.
- Scope can be defined in terms of features, user stories, use cases, use case flows, or external events.
- To focus the development effort and maintain a reasonable project schedule, avoid the temptation to include every feature that any potential customer might eventually want in release 1.0.

2.3 Scope of subsequent release

2.4 Limitations and exclusions

3 Business Context
3.1 Stakeholders profiles

- *Stakeholders* are the people, groups, or organizations that are actively involved in a project, are affected by its outcome, or are able to influence its outcome.

- The stakeholder profiles describe different categories of customers and other key stakeholders for the project.

- You needn’t describe every stakeholder group.

3.1 Stakeholders profiles

- Each stakeholder profile should include the following information:

- The major value or benefit that the stakeholder will receive from the product.
  - Improved productivity.
  - Reduced rework and waste.
  - Cost savings.
  - Streamlined business processes.
  - Automation of previously manual tasks.
  - Ability to perform entirely new tasks.
  - Compliance with pertinent standards or regulations.
  - Improved usability compared to current products.
- Their likely attitudes toward the product.
- Major features and characteristics of interest.
- Any known constraints that must be accommodated.

3.2 Project priorities

3.3 Deployment considerations

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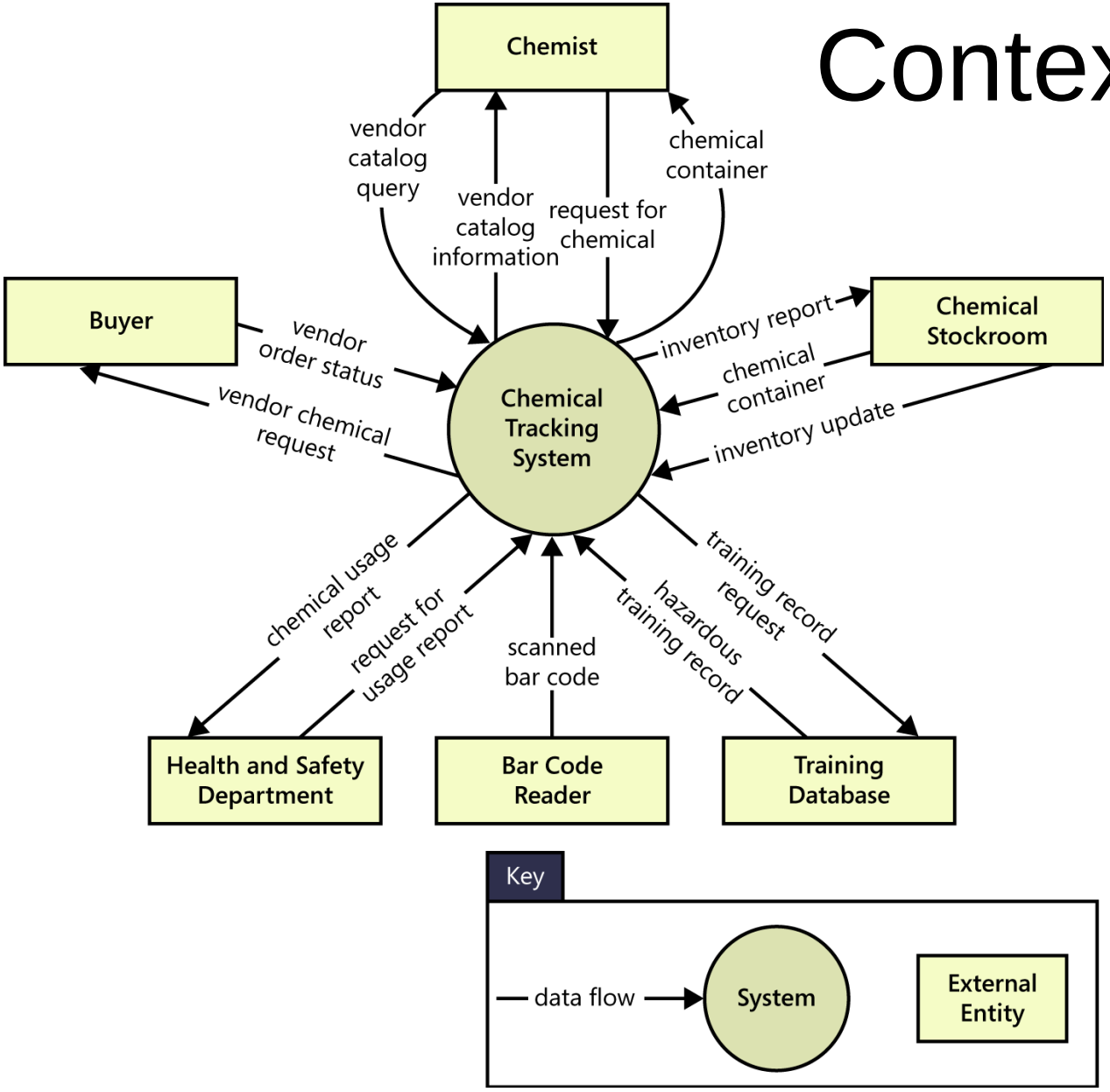
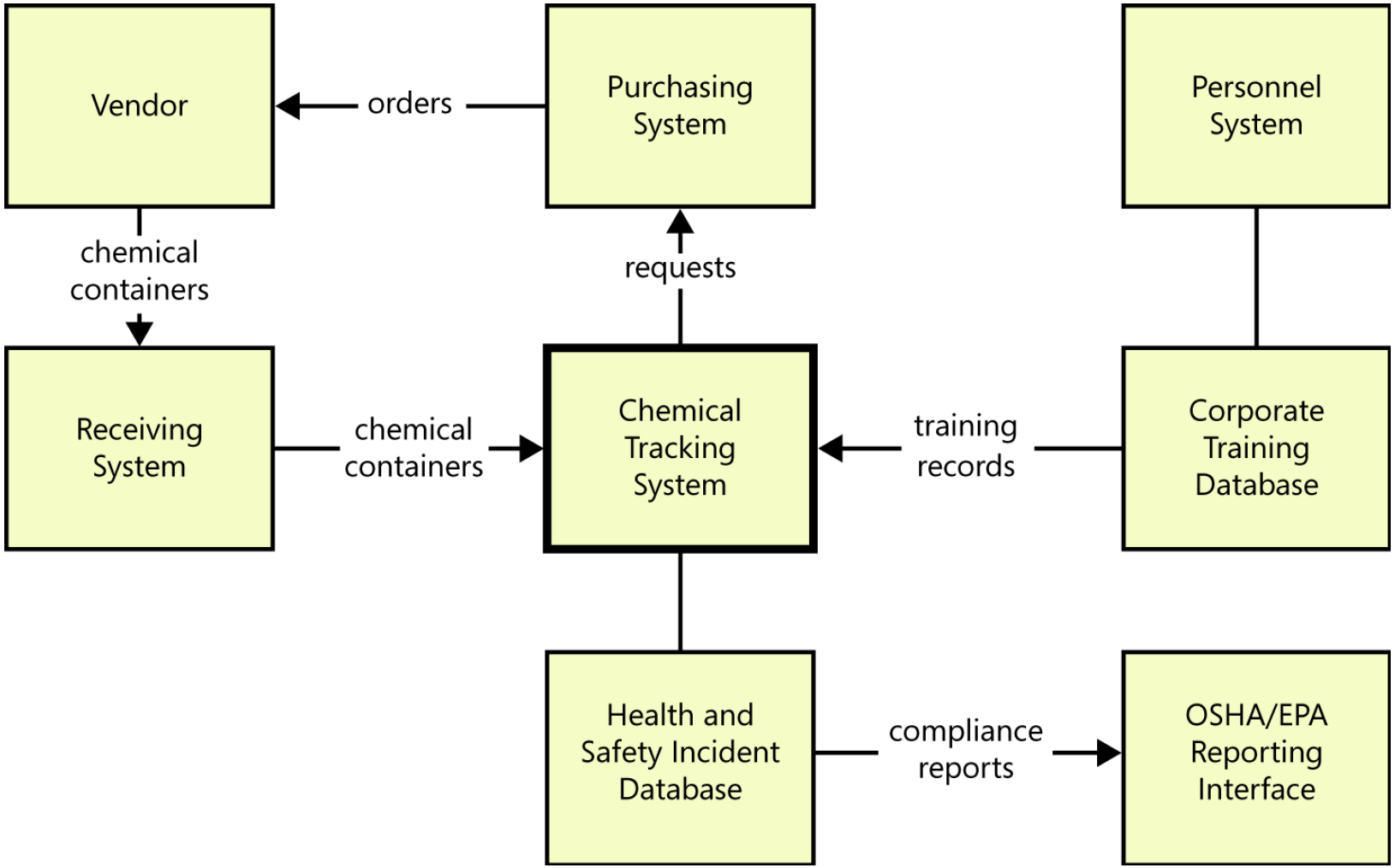
Context diagram



Ecosystem map



- Feature tree
- Event list

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Keep the scope in focus

- Whenever someone requests a new requirement, the analyst needs to ask, “Is this in scope?”
- Using business objectives to make scoping decisions
- Assessing the impact of scope changes

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- Traditionally, a project manager manages the project towards completion.
- A business analyst is intimately familiar with the business objectives and can help determine when the desired value has been delivered, implying that the work is done.

- In iterative development approaches, the end point might be vague.
  - Within each iteration, scope is defined for that iteration.

In short …

- Focus on defining clear business requirements for all of your projects.
- Otherwise, you are just wandering about aimlessly hoping to accomplish something useful without any way to know if you’re reaching your destination.