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## 1 Purpose

The purpose of this document is to describe how Syncade Product Management will identify, prioritize, and flow items in the Syncade product backlog to address customer needs and deliver business value as well as craft a valuable vision for the future of the product.

## 2 Scope

The standards described in this procedure provide a framework to develop and execute a product strategy that adds value to both Emerson and users. The process encompasses all Syncade productized modules and features but does not include those items managed outside of Syncade Technology including but not limited to Components, Webparts, Tools, Behaviors, or Business Integrator.

The Syncade Product Management Process answers four critical questions:

1. How do we conduct strategic planning?
2. How do we manage the product backlog?
3. How do we engage with users?
4. What is our core product philosophy?

## 3 References

Not applicable.

## 4 Definitions & Terminology

- **UAB:** Refers to User Advisory Board
- **Release Cycle:** Refers to the amount of time in-between scheduled releases. For example, we have three scheduled releases per year, which means our release cycle is every four months.

## 5 Responsibility

### 5.1 Product Manager / Function

- Own the product vision, strategy, and roadmap
- Own product backlog and prioritization of product backlog
- Represent the problem and approve problem statements
- Drive end user engagement

### 5.2 Product Owner / Function

- Lead the backlog team through pulling activities and effort estimations
- Lead the backlog team through hypothesis development for solving problems
- Lead the backlog team to deliver approved hypotheses as product releases

### 5.3 Backlog Team / Function

- Estimate items on the backlog
- Provide hypotheses for solving problems
- Deliver approved hypotheses as product releases

## 6 Process Flow

Product managers are responsible for the life of Syncade as a product from vision to released user experience through user stories. Vision and strategy are brought to fruition through the deliverables and stages set forth below.



Figure 1: End-to-End Product Management Hierarchy

This flow breaks down into four critical components: Product Philosophy, Strategic Planning, Product Backlog Management, and User Engagement.

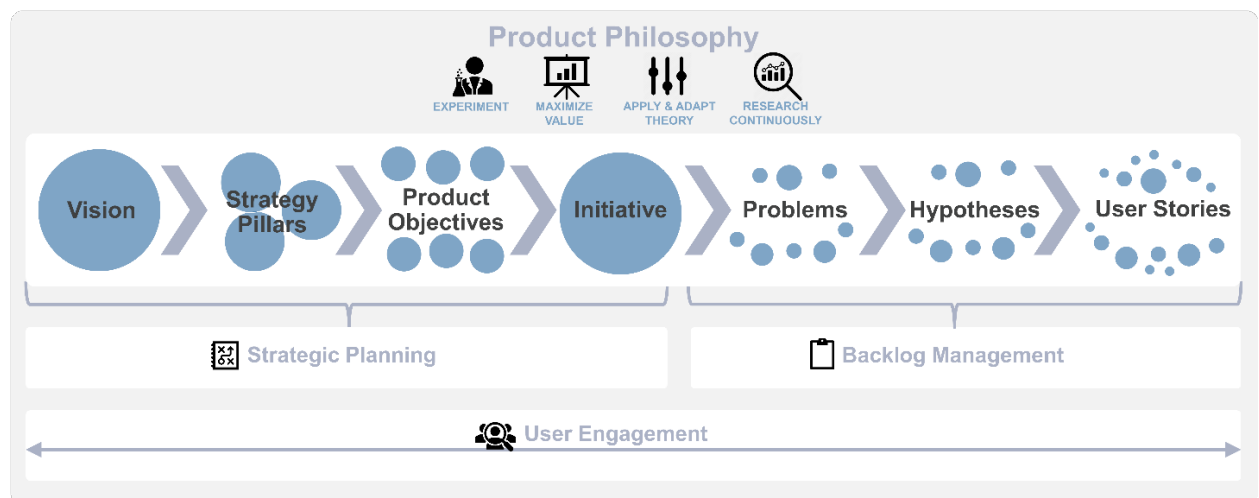


Figure 2: Product Management Process

### 6.1 Product Philosophy

Our philosophy is our way of working, how we aim to think and the mindset we strive to foster.

#### 6.1.1 Experiment

We approach product management with the problem-hypothesis method where we search for and identify problems and then work with the technology team, users, and experts to craft hypotheses to solve those problems. If a hypothesis does not solve the problem, we take the scientific approach and form a new testable hypothesis and start our next experiment as soon as we can. We aim to test our hypotheses as soon as possible in the process to avoid wasting work on anything that does not add value to our users.

#### 6.1.2 Maximize Value

When making the tough decisions on items such as strategy, backlog priority, expediting issues, and trade-offs, our guiding principle is to maximize value for both the users and Emerson. Thus, we always put great effort into quantifying and estimating the projected value of solving a problem. Regardless of personal bias, the path that maximizes value to users and Emerson is the ideal choice. This means we also strive to quantify the value we deliver to continuously improve our estimates.

### 6.1.3 Apply & Adapt Theory

We love and respect credible sources and theory on agile, product management practices, human-centered design, and software development techniques. We strive to apply these when managing the Syncade product, but we adapt these to appropriately support our teams, business, and environment for success.

### 6.1.4 Research Continuously

Market and user research are not a stage or step of the process but is an embedded part of product management that is continuous throughout all stages. We aim to validate observations and adjust our ideas through appropriate continuous research throughout strategic planning and backlog management processes.

## 6.2 Strategic Planning

Strategic planning is the critical proactive, skating to where the puck is headed, thinking of the future part of product management. Without this, it is easy to unintentionally default to firefighting, reactive product management that results in missing key industry changes and needs. This section will walk through each piece of strategic planning shown in the Strategic Planning Map in the Appendix. This again is merely a framework and does not denote a required order of operations. While it is ideal, these components do not need to be crafted in any particular order.

### 6.2.1 Vision

Everything starts with the product vision. The vision answers questions about why the Syncade product exists. It is crafted collaboratively between the Product Management and Technology teams. This collaboration helps assure full buy-in to the vision, which is critical as it serves the foundational driving force of what we do.

### 6.2.2 Strategic Pillars

Once the vision is set, the technology leadership and product management members identify what needs to happen over the next five years to achieve the vision at a high level. The needs are identified through core strategic pillars that represent key challenge areas. Here is an example of a core set of pillars:

- Quality & Reliability- Ensuring the highest quality product with product updates
- Sustainability- Future-proofing the product by keeping up with industry standards and third-party validations
- Security- Dedicated efforts focused on preserving product integrity
- Continuous Improvement- Incremental updates to support project execution & product usability

### 6.2.3 Product Objectives

While the pillars are high level strategy, product objectives are a level deeper into tactical planning. For each strategic pillar, product objectives, which represent specific, measurable challenges, are identified by appropriate technology leadership and product management members as needed anywhere between every two to five years.

Each year, these product objectives are refined and prioritized by the appropriate technology leadership and product management members. These product objectives and their priority help determine the weighting in the categories of the backlog matrix and the order of the product roadmap. Here is an example of some product objectives under the example Quality & Reliability pillar:

- Reduce critical bugs & CRs
- Increase visibility & predictability of releases
- Reduce cost for technology

Each objective is measurable and too big to be solved in a single update or release and will most likely remain prioritized for more than 1-2 years.

#### 6.2.4 Product Initiatives

Product objectives set the tactical approach for the full organization around Syncade, but they are very large. There are many problems and potential solutions to tackling the challenges represented in the product objective that the teams can work on. Initiatives help to break the challenge down into more specific areas. On a rolling basis, it is the responsibility of product management to leverage the vision, strategic pillars, backlog items, market research, and more to break the product objectives down into challenges that help achieve the overarching objective without getting into the details of backlog items. Most of the time, an initiative represents a small grouping of similar problem statements in the backlog.

The product management team involves the appropriate stakeholders approximately one to three times per year to review and refine the initiatives into clear, concise challenges that can be communicated on a roadmap and share future direction to users and external stakeholders.

#### 6.2.5 Product Roadmap

Product management works with technology leadership and the product owner to organize the initiatives along with appropriate backlog problem statements or hypotheses onto the roadmap. This occurs and is typically updated in tandem with the release cycles. Product management can update the roadmap as needed for any major necessary changes, but the goal is to align updates to the three times a year release cadence for consistency and predictability.

The goal of the roadmap is to share the future direction of Syncade. It is not a schedule. It is not set in stone. It is meant to show strategy and direction to give users and stakeholders an idea of what is to come. Thus, it leverages a Kanban-style now, next, later approach.

The “Now” Column represents items that are currently being worked on by the agile teams now including all hypotheses and problems that have been pulled. These items are expected to be *completed* in 1-2 release cycles.

The “Next” Column represents a combination of initiatives and backlog items that are most likely to be worked on next. This typically includes the highest priority items from the backlog and their associated initiatives. These items are expected to be *pulled* in 1-4 release cycles.

The “Later” Column represents the future direction of the product. This usually includes initiatives that represent the subsequent priority items in the backlog. These items are expected to be *pulled* in more than 4 release cycles.

The roadmap ties to the vision and strategy by utilizing swim lanes representing each strategic pillar.

In order to make the roadmap consumable and usable by the intended audience, friendly concise names are given to the items rather than anything technical.

There is also a marker to show items driven by the Syncade User Advisory Board.

An example roadmap is shown below.

### Syncade Product Roadmap

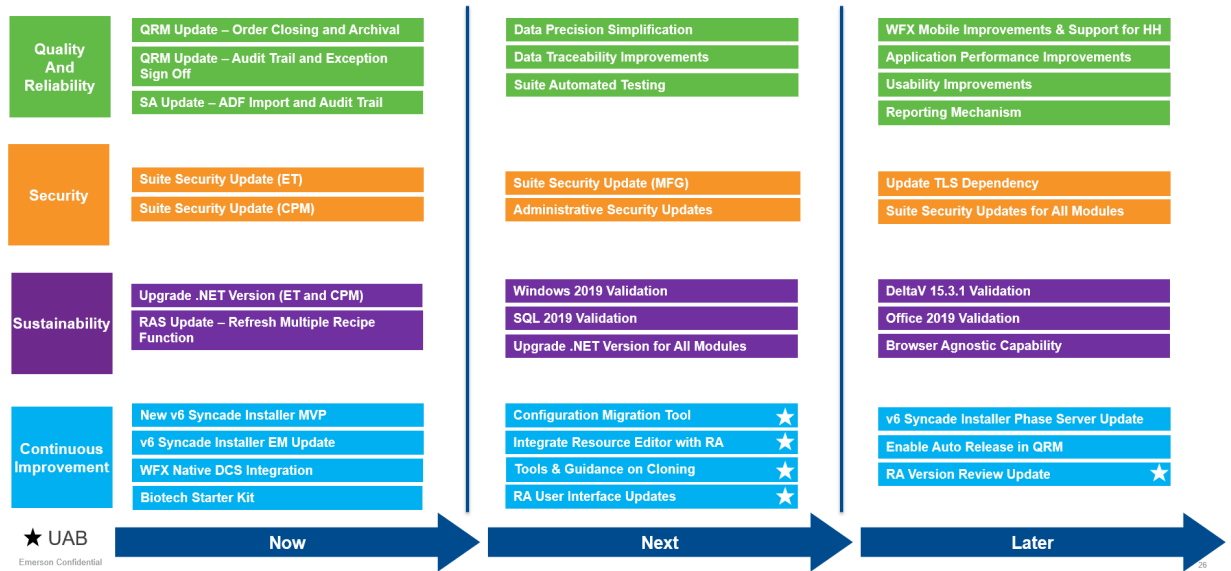


Figure 3: Example Product Roadmap

### 6.3 Product Backlog Management

The next critical piece of product management is crafting, refining, and managing the product-wide backlog. Product management maintains full ownership of the Syncade product backlog. They are encouraged to invite, collaborate, and involve key stakeholders in prioritizing items as members of the backlog team. Product management may at any time chose to invite new members or ask current members to leave the backlog team. Backlog team members are expected to support the product vision, strategic pillars and product objectives and are encouraged to come to the table with ideas and evidence-based suggestions for prioritizing the backlog in a professional, collaborative, and unbiased manner. Bullying, attacking, and brash behavior will not be tolerated.

As stated in the product philosophy section, we view every backlog item as a “problem to be solved” regardless of origin or type of item. When we refer to “problems” in this document, this is referencing individual backlog items that could include but are not limited to bugs, change requests, technical debt, security issues or validation needs.

### 6.3.1 Problem Submission

For items to end up on the backlog, they must be reported and recorded. Stakeholders submit problems and they are entered into TFS. This entry process is covered in other documentation. All items must be recorded in TFS so that they can be tracked and flow through the process. If it is not in TFS with a work item number, it will not be considered for backlog inclusion.

When an item is entered in TFS, it should include as much information as possible to answer four key questions:

- Problem Statement: What problem needs to be solved?
- Workaround: What types of workarounds exist today?
- Business Outcomes: If solved, what benefit does the reporting business gain and what benefit would Emerson business gain?
- User Outcomes: What users (personas) are affected and what are their expected results of solving the problem?

Once submitted and the information is collected, the problem statement can be proposed by backlog team members to be reviewed for inclusion in the backlog. This proposal is made by members thinking through the vision, strategy, criticality and impact of items. Not all items will be on the backlog.

### 6.3.2 Problem Review & Prioritization

Once a problem is proposed, it is reviewed by the full backlog team at the weekly review meeting. The problem and associated TFS information is reviewed and discussed. Three potential outcomes of this review are:

- The item is accepted to the backlog
- The item is not accepted to the backlog
- The item is missing information or there are open questions that must be investigated prior to scoring and the item is left in proposed

If an item is accepted, it is then scored by the backlog team at this meeting using the backlog matrix. There are four categories in which items are ranked for estimated value or cost of delay.

How much will addressing the problem help:

- Increase Revenue?
  - Deliver functionality to promote new sales to new or existing users
- Protect Revenue?
  - Keep existing customers happy
  - Fix critical problems
  - Justify continued or promised investment in Syncade and Guardian Support
  - Address incremental innovation
- Reduce Costs for Emerson?
  - Provide more efficient operations delivery
  - Reduce current test/dev/support effort
  - Reduce current cost associated with EMR workarounds
- Avoid Costs for Emerson?
  - Avoid costs associated with escalation
  - Improve internal processes
  - Avoid potential compliance or out of support risks or costs

Each category is scored 1-5 with 1 being minimal impact and 5 representing high impact to the category. The categories are weighted totaling 100% aligning with the current strategic pillars and product objectives. For example, with the example pillars focused on Sustainability, Security and Quality & Reliability, the weight placed on protecting revenue would be much higher than increase revenue. These weights are meant to be steady. They can change, but should align with the vision and strategy which only changes every few years. The sum of the product of the categories score and associated weights results in an estimated value score of the item. This enables the team to get an idea of relative ranking by value of the problems.

The backlog team also reviews and compares previously scored items to ensure the items are scored in the backlog relative to each other and reflect the strategy. The team may make adjustments as needed.

An example backlog with estimated value is shown below.

Categories>	<u>Increase Revenue</u>	<u>Protect Revenue</u>	<u>Reduce Costs for EMR</u>	<u>Avoid Costs for EMR</u>	
Weights>	8	48	24	20	Value Score
Problem D	5	5	4	5	476
Problem A	1	5	4	5	444
Problem C	1	4	5	4	400
Problem B	1	4	4	5	396
Problem E	1	2	3	2	216

Figure 4: Example Product Backlog

### 6.3.3 Problem Pulled by Teams

The agile teams and product owner take the backlog and estimates high-level effort for each item. This process is not described in this document.

At release planning, the agile teams and product owner pull problems from the backlog that now contains value vs effort in a true prioritized backlog. The strategy for which item to pull is explained below:

- Always maximize value and leverage weighted shortest job
- UNLESS there is a non-negotiable, “must-do-now” item. This occurrence should be rare and will be identified by the backlog team. (Example: Adding browser agnostic capability requires massive effort, but it must be accomplished before support for IE 11 ends. If we waited for this backlog item to be pulled to the teams through weighted shortest job, it would not be released in time due to its large effort size.)



#### 6.3.4 Problem Hypothesis Development

Once a problem is pulled by the agile teams, product management remains engaged through the hypothesis development during release planning and after as needed. They review the proposed solution from the team, help answer questions, involve users and stakeholders as needed, attend demos, and help ensure the agile team crafts a hypothesis that is focused on the problem. See User Engagement for other activities that can occur mid-development.

#### 6.3.5 Problem Release

When an item is ready to be released, the product manager ensures the problem was solved and is responsible for organizational readiness including: Product Data Sheets, enabling Business Development to train sales, promote to the necessary stakeholders, update licensing, update pricing, and any NPD items assigned to product management. Product management is not responsible for: sales collateral, training support, training operations, or distributing the release to supply chain or users.

Post release, product management conducts analysis on the value delivered by the release via user surveys, interviews and quantified business results to identify whether or not the solution provided the expected value.

### 6.4 User Engagement

User engagement is not a single stage of the process. User engagement should occur frequently throughout all stages to continuously ensure the strategy and potential solutions align with our real end users' needs. There are many forums that product management leverages to engage with users. Forums where some are owned by product management, and others where product management acts as a key stakeholder.

#### 6.4.1 User Engagement

The definition, management and interactions of the Syncade User Advisory board group is owned by product management. The mission of the Syncade User Advisory Board (UAB) is to work strategically with Syncade product management, technology, and operations teams on product direction and roadmaps that evolve into product development projects and solutions that add business value and competitive advantage. The UAB targets to meet at least 1-2 times a year both formally and on an ad hoc basis.

Key external members include 1-2 individuals per company with anywhere from 8-10 different companies who have and use Syncade. Internal members include executive sponsors (typically the Director and VPs of product management or marketing, the VP of Sales and the VP of Operations), the product managers, the Director of Syncade Technology, the Director of Syncade Global Operations and a single invited Syncade sales representative. Internal memberships are extended by invite only. Product management may invite other internal non-members to the UAB meetings on an as needed basis.

6.4.2 Collaborative Development Program

The Collaborative Development Program (CDP) is owned by product management and leveraged for the development of new-to-the-market products. It is an approach that designs, creates, and tests product ideas from concept to release, pairing developers' expertise with end users' experience. It is an interactive, collaborative program for Emerson to test hypotheses about problems in the industry for value and usability throughout product development through defined touch points with a select group of users. It validates our ideas quickly & ratifies four goals:

- Value - Will this have a clear ROI for users, or will they choose to use it?
- Usability - Can the user figure out how to use it?
- Feasibility - Can we build it?
- Business viability - Is the solution viable for users' business and Emerson business?

Details of how this program works is not managed in this document. The important part to know is that this approach is leveraged when new-to-market products are being developed.

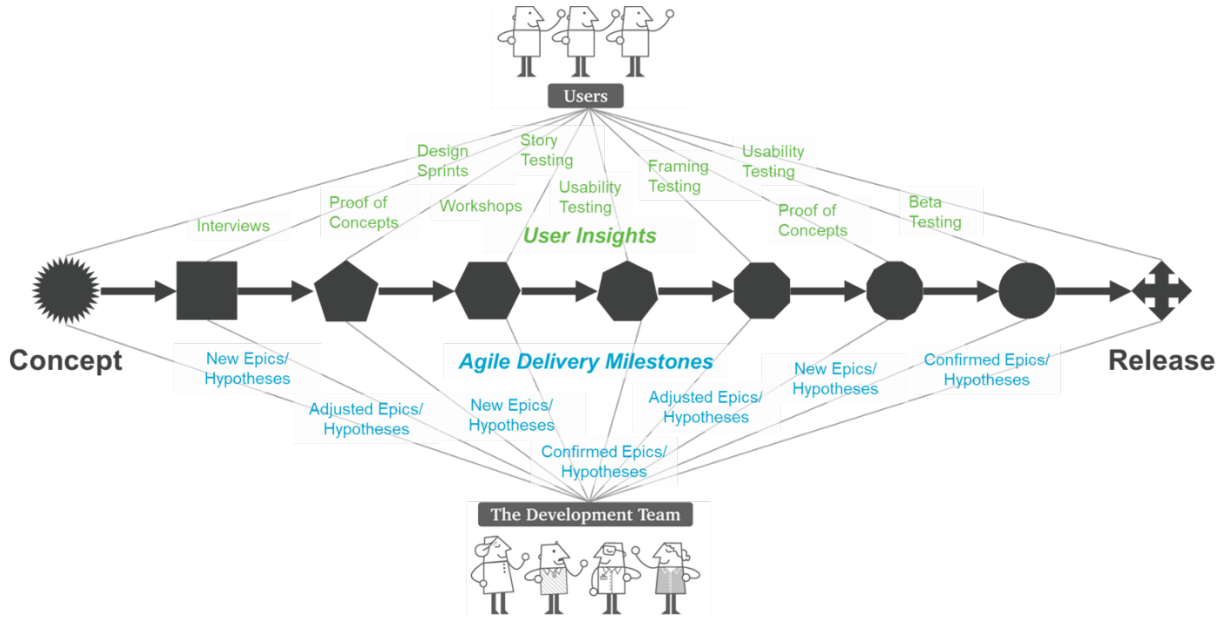


Figure 4: CDP Program Approach

### 6.4.3 Discovery, Concept & Usability Activities

Throughout the life of product problems and hypotheses, the product management team leverages human-centered design practices and facilitation techniques to conduct user research, market research and usability research. It is recommended that product managers become certified as Human-Centered Design Practitioners and Facilitators through a company like LUMA. Product managers leverage design thinking and drive practices in three buckets:

Discovery (understanding and researching the problem)

- User Interviews & Contextual inquiries
- Group Workshops with Users
- Fly-on-the-wall User Observation
- Industry Report Analysis
- Market Research Paid Partnerships

Concept & Development (crafting potential solutions)

- Design Sprints\*
- Framing/Strategy/Assumption Testing
- Persona creation & testing
- User Story Maps (StoriesOnBoard)
- Review Story boards/ Day in the Life for prototypes
- Low-fidelity prototypes

Usability & Validation (confirming the solution is usable and valuable)

- Usability Tests
- Low fidelity- paper, represents workflow and interaction, not exact UI, concierge test
- High fidelity- working demo, coded prototype, tests more visual and live data flow
- Beta or Proof of Concept
- Live-data prototype Testing

### 6.4.4 User Executive Meetings

Throughout the life of Syncade, users arrange meetings between their leadership and Emerson Life Sciences leadership in things like Technology Round Tables, Quarterly Steering Meetings, or Account Review Meetings. Product management supports these on an ad hoc basis as requested. This typically includes:

- Presenting the product roadmap
- Explaining the product management process
- Updating users on the state of their critical items
- Presenting the vision for the future and any research & development work underway

#### 6.4.5 Emerson Exchange

Emerson Exchange occurs twice a year with one event in Europe and one in America. Product management is responsible for presenting the Syncade product roadmap and strategy at the American Exchange each year and many times supports an exhibit highlighting the Syncade product. It is also expected they support the other Emerson Life Sciences events and users at the conference and submit proposals for Syncade or Life Sciences presentation topics. They are not responsible for the logistics of the event. Industry marketing handles this.

#### 6.4.6 Syncade User Meeting

The Syncade product management team hosts and executes the Syncade User Meeting each year. This is a local event open to the full Syncade community of users to exchange ideas, best practices, and success stories of Syncade. Product management works with Emerson's event staff to accomplish the logistics of the event including collateral, location, catering, reservations, the exhibit hall, etc. Product management works with a subcommittee of the UAB on the theme, giveaways, agenda and call for and selection of presentations.

## 7 Variances

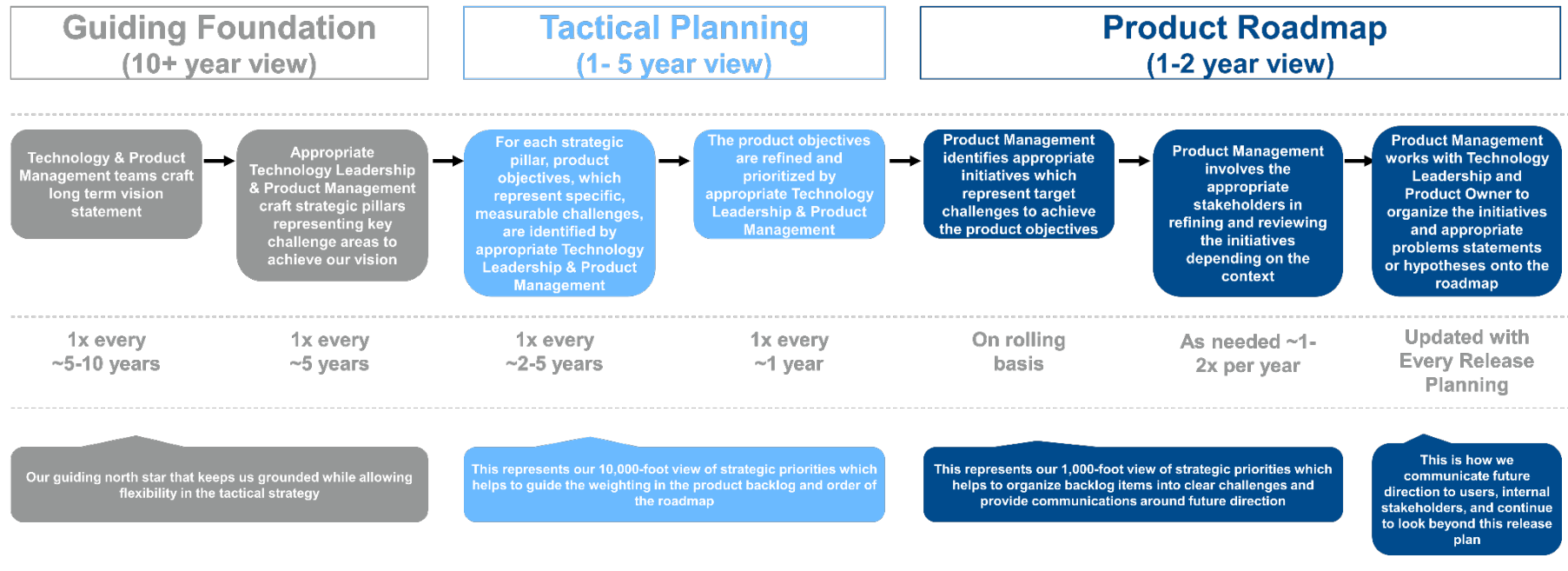
Variations will be documented in accordance with DE6, Corrective and Preventive Action.

## 8 Associated Forms & Templates

None

9 Appendix A

# Strategic Planning



# Backlog Management

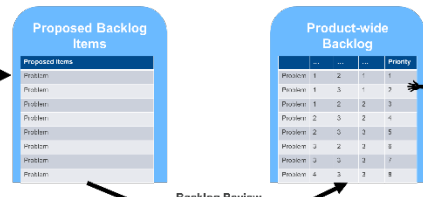
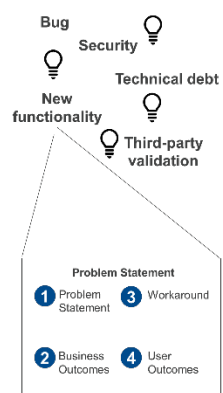
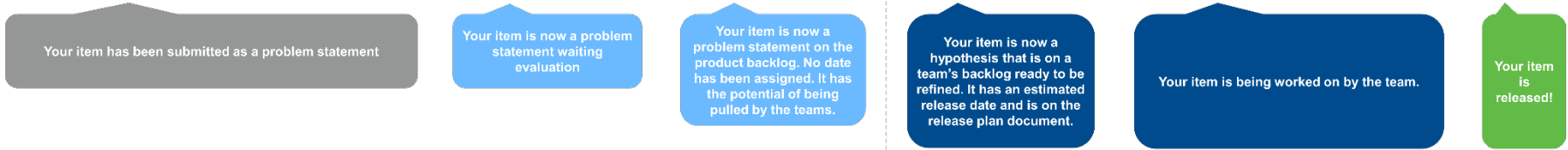
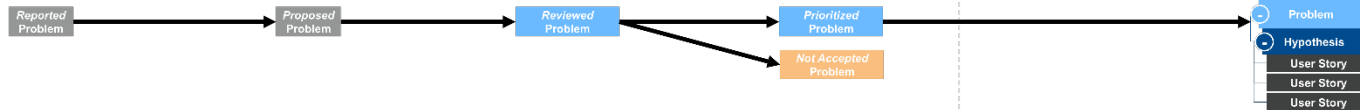
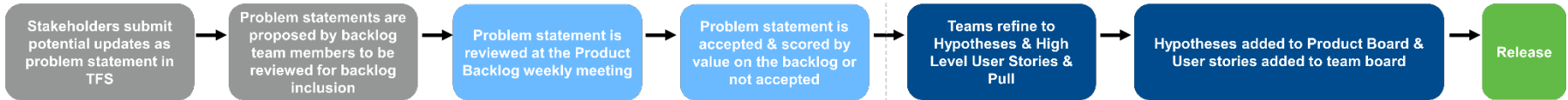
Problem Space

Solution Space

## Potential Updates

## Product Backlog

## Team Backlogs & Boards



Backlog Review

Release Planning (x 3 per year) Or Ad Hoc Emergency

