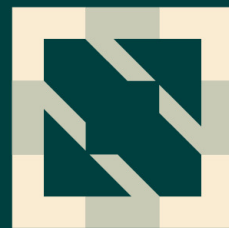




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Psychological safety for your platform engineering

Shinya Yanagihara
– *Developer Advocate, VMware Japan*

About me



Shinya Yanagihara

- **Company:** VMware Japan
- **Role:** Developer Advocate
- **Career:**



- **My motto:**
“Work for the Developer Experience”

Introduction

Fostering Innovation and Adaptability through a Learning Organization

What is Platform Engineering?

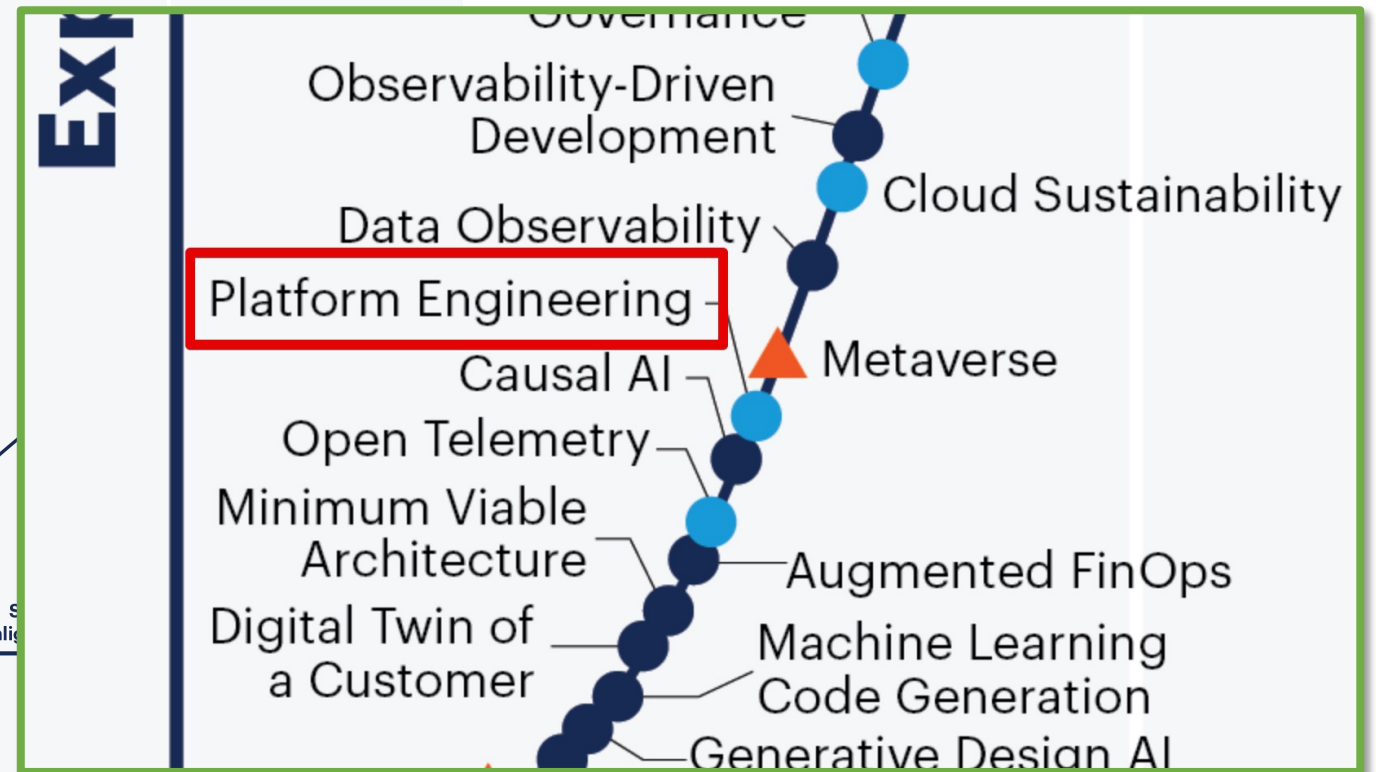
Hype Cycle for Emerging Tech, 2022



gartner.com

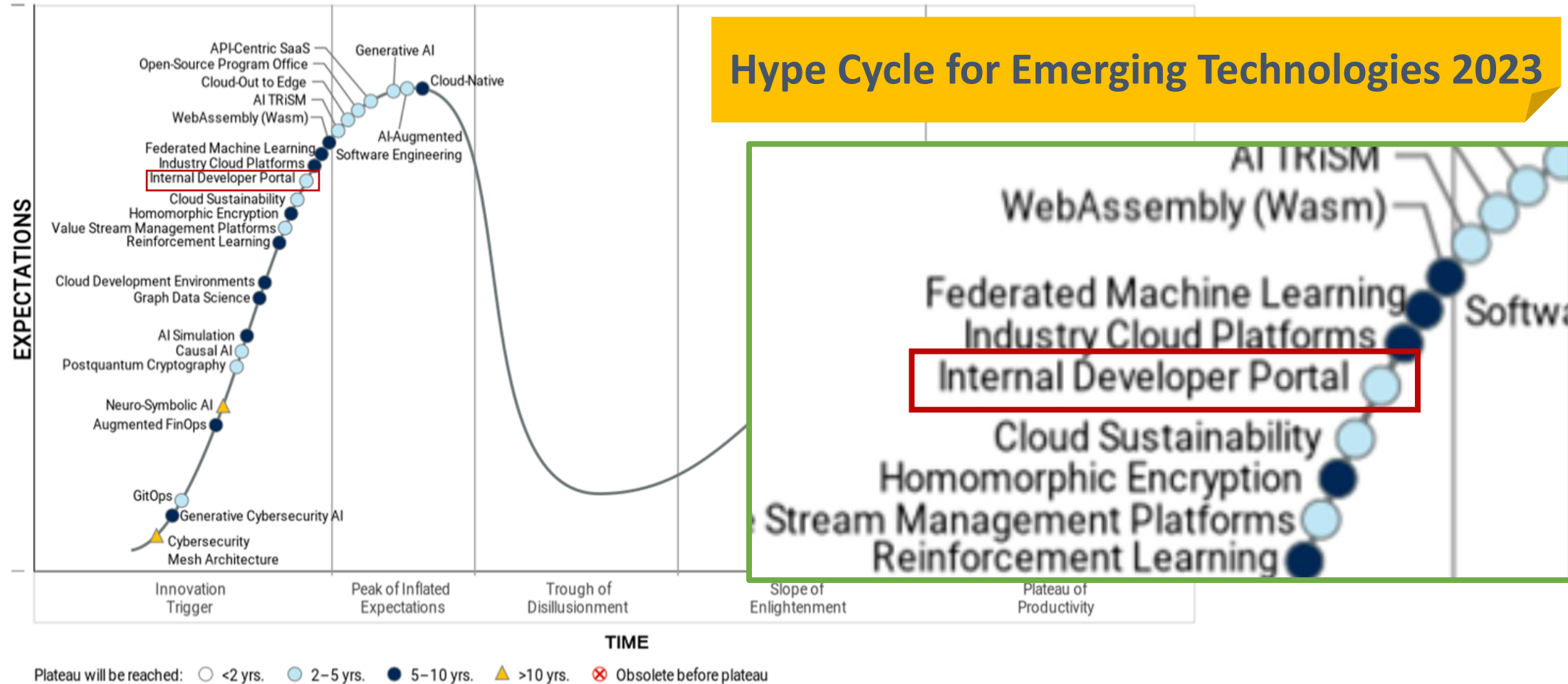
Source: Gartner
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Gartner Hype Cycle



Gartner

What is Platform Engineering?



What is Platform Engineering?

Insights / Information Technology / Article

What Is Platform Engineering?

Platform engineering is an emerging technology approach that can accelerate **the delivery of applications** and the pace at which they produce **business value**.

Menu



October 05, 2022

Contributor: Lori Perri

Platform engineering is an emerging technology approach that can accelerate the delivery of applications and the pace at which they produce business value.

Platform engineering improves developer experience and productivity by providing self-service capabilities with automated infrastructure operations. Platform engineering is trending because of its promise to optimize the developer experience and accelerate product teams' delivery of customer value.

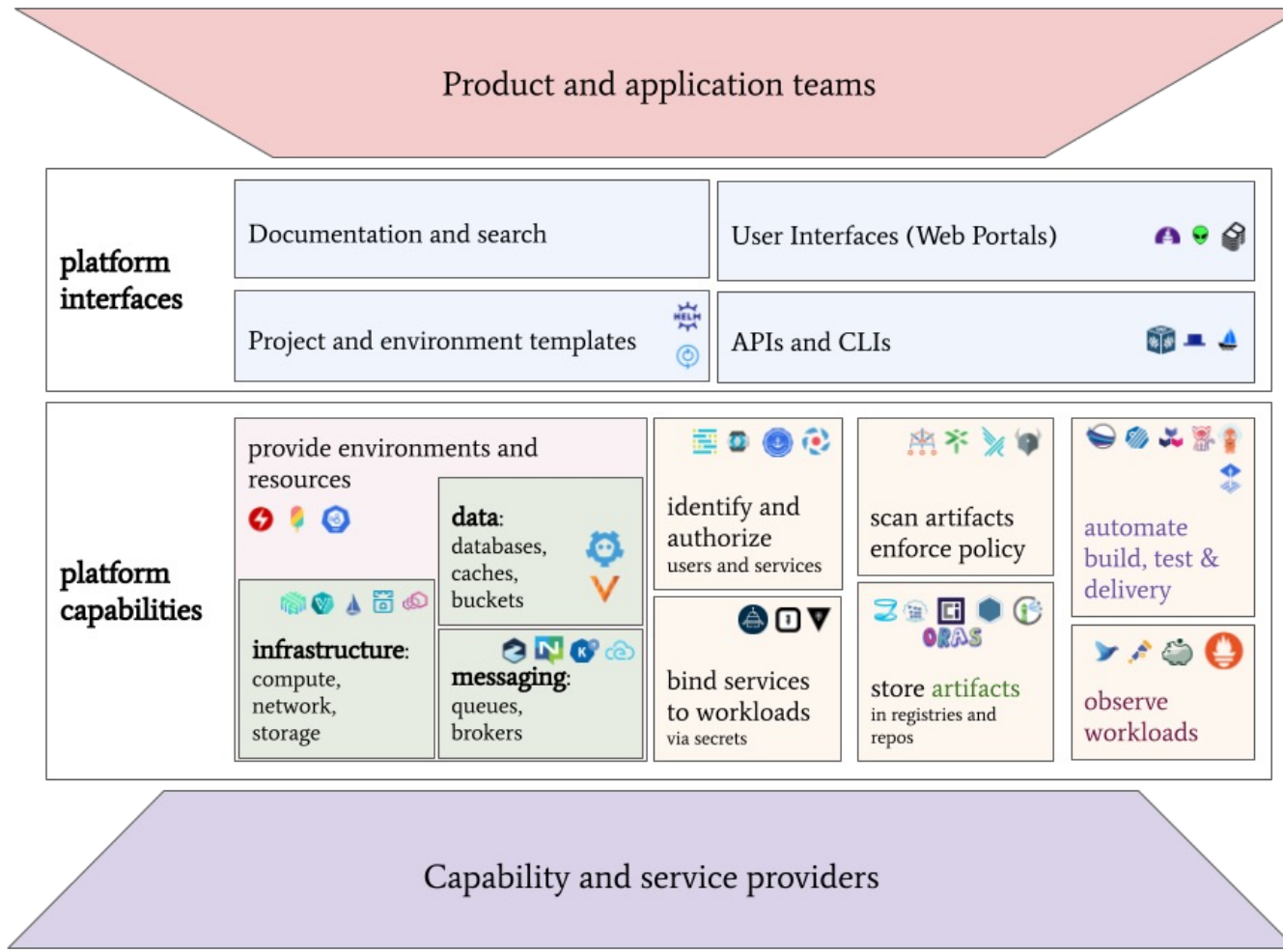
"Platform engineering emerged in response to the increasing complexity of modern software architectures. Today, non-expert end users are often asked to operate an assembly of complicated arcane services," says Paul Delory, VP Analyst at Gartner. "To help end users, and reduce friction for the valuable work they do, forward-thinking companies have begun to build operating platforms that sit between the end user and the backing services on which they rely."

Platform engineering implements **reusable tools** and **self-service capabilities** with automated infrastructure operations, improving the **developer experience and productivity**.

This technology approach utilizes **reusable configurable application components and services**.

The benefit to users is in **standardized tools, components and automated processes**.

What is Platform Engineering?



(CNCf Platforms White Paper <https://tag-app-delivery.cncf.io/whitepapers/platforms/>)

Platforms provided by Platform Engineering

Web portals

APIs

“Golden path”
templates and docs

Automation for building
and testing

Automation for delivering
and verifying

Development
environments

Observability

Infrastructure
(Compute, Network, block/volume)

Data services
(database, cache, object store)

Messaging

Identity and secret

Security

Artifact storage

The Dual Pillars of Platform Engineering

- Technology
- Software
- Engineering



- Culture
- Team
- People

Cultural Aspects of Platform Engineering



Collaboration

Feedback and
Improvement

Continuous
Improvement

Ownership and
Accountability

Platform as a Product

Psychological Safety

Continuous Learning

Innovation Mindset

Adaptability

Transparency

Diversity and
Inclusion

Cultural Aspects: Platform as a Product



Collaboration

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Continuous
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Ownership and
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Platform as a Product

Psychological Safety

Continuous Learning

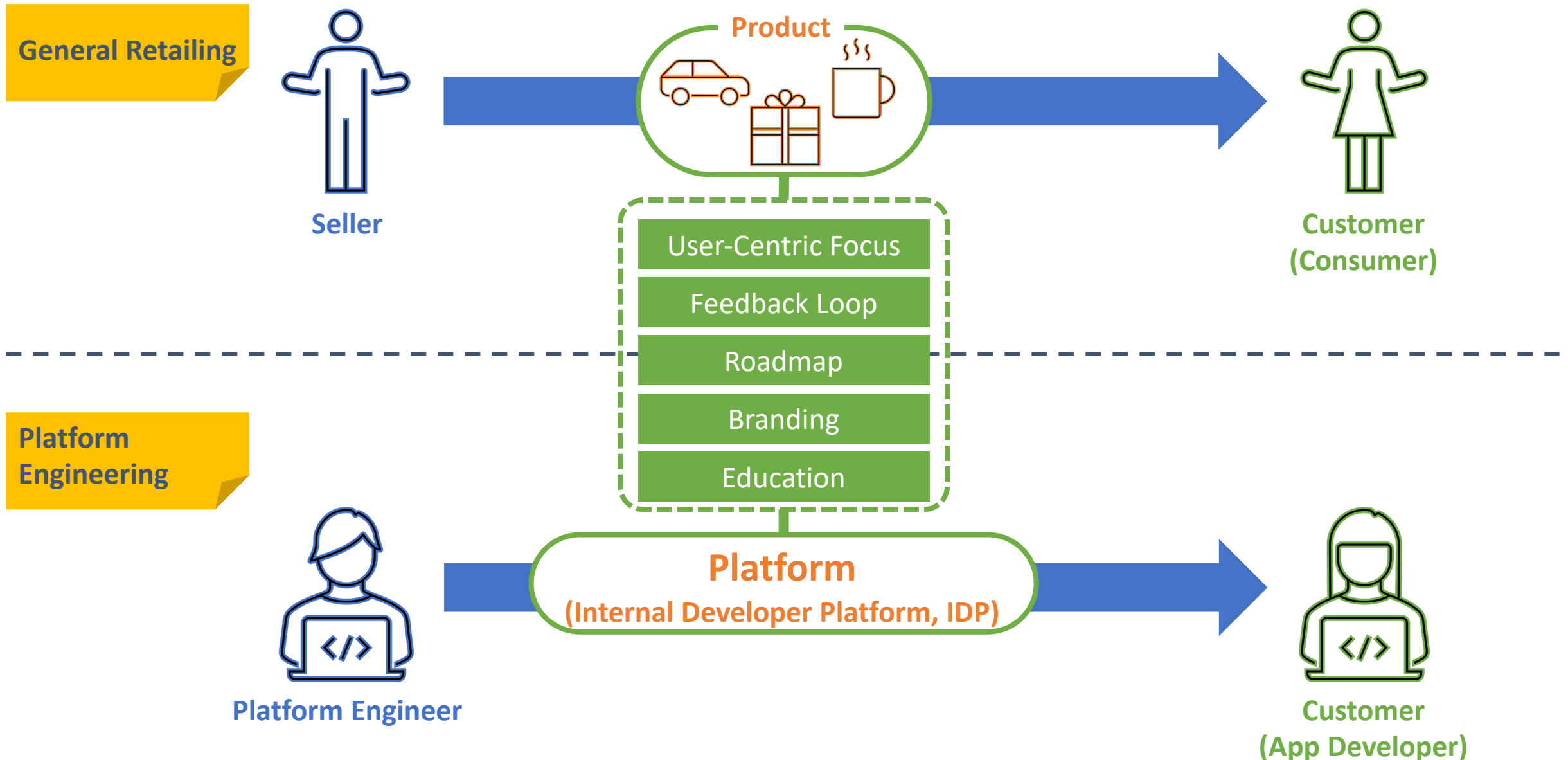
Innovation Mindset

Adaptability

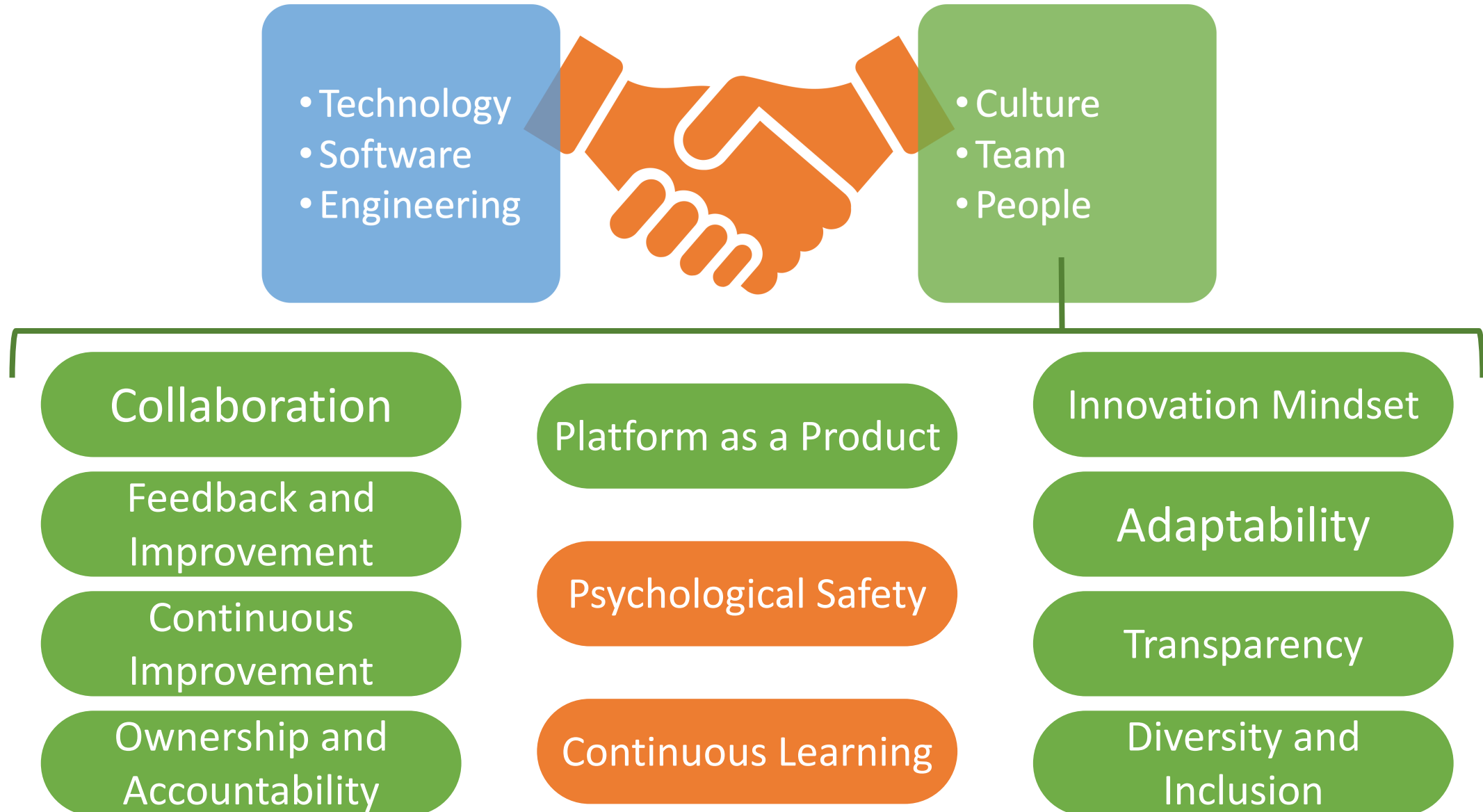
Transparency

Diversity and
Inclusion

Cultural Aspects: Platform as a Product



Cultural Aspects of Platform Engineering



Platform Engineering and Psychological Safety

Fostering Psychological Safety: Cultivating Collaboration and Innovation

What is Psychological Safety ?



Definition

A shared belief that individuals in a team or organization can express themselves, take risks, and share ideas without fear of negative consequences.

Open Communication

Risk-Taking

Learning Culture

Innovation and Creativity

Collaboration and Teamwork

What is Psychological Safety ?



Psychological Safety

Open communication fosters honest discussions, helps resolve misunderstandings, and encourages active listening among team members.

Definition

A shared belief that individuals in a team or organization can express themselves, take risks, and share ideas without fear of negative consequences.

Open Communication

Risk-Taking

Learning Culture

Innovation and Creativity

Collaboration and Teamwork

What is Psychological Safety ?



Psychological Safety

Psychological safety encourages risk-taking by creating an atmosphere where individuals are comfortable stepping out of their comfort zones.

Definition

A shared belief that individuals in a team or organization can express themselves, take risks, and share ideas without fear of negative consequences.

Open Communication

Risk-Taking

Learning Culture

Innovation and Creativity

Collaboration and Teamwork

What is Psychological Safety ?



Psychological Safety

Mistakes are viewed as opportunities for growth rather than failures, and team members actively seek to learn from their experiences. This culture supports ongoing development and individual improvement.

Definition

A shared belief that individuals in a team or organization can express themselves, take risks, and share ideas without fear of negative consequences.

Open Communication

Risk-Taking

Learning Culture

Innovation and Creativity

Collaboration and Teamwork

What is Psychological Safety ?



Psychological Safety

Psychological safety nurtures innovation and creativity by fostering an environment where diverse perspectives and novel ideas are embraced.

Definition

A shared belief that individuals in a team or organization can express themselves, take risks, and share ideas without fear of negative consequences.

Open Communication

Risk-Taking

Learning Culture

Innovation and Creativity

Collaboration and Teamwork

What is Psychological Safety ?



Psychological Safety

Psychological safety enhances collaboration and teamwork by building trust and reducing barriers to effective communication.

Definition

A shared belief that individuals in a team or organization can express themselves, take risks, and share ideas without fear of negative consequences.

Open Communication

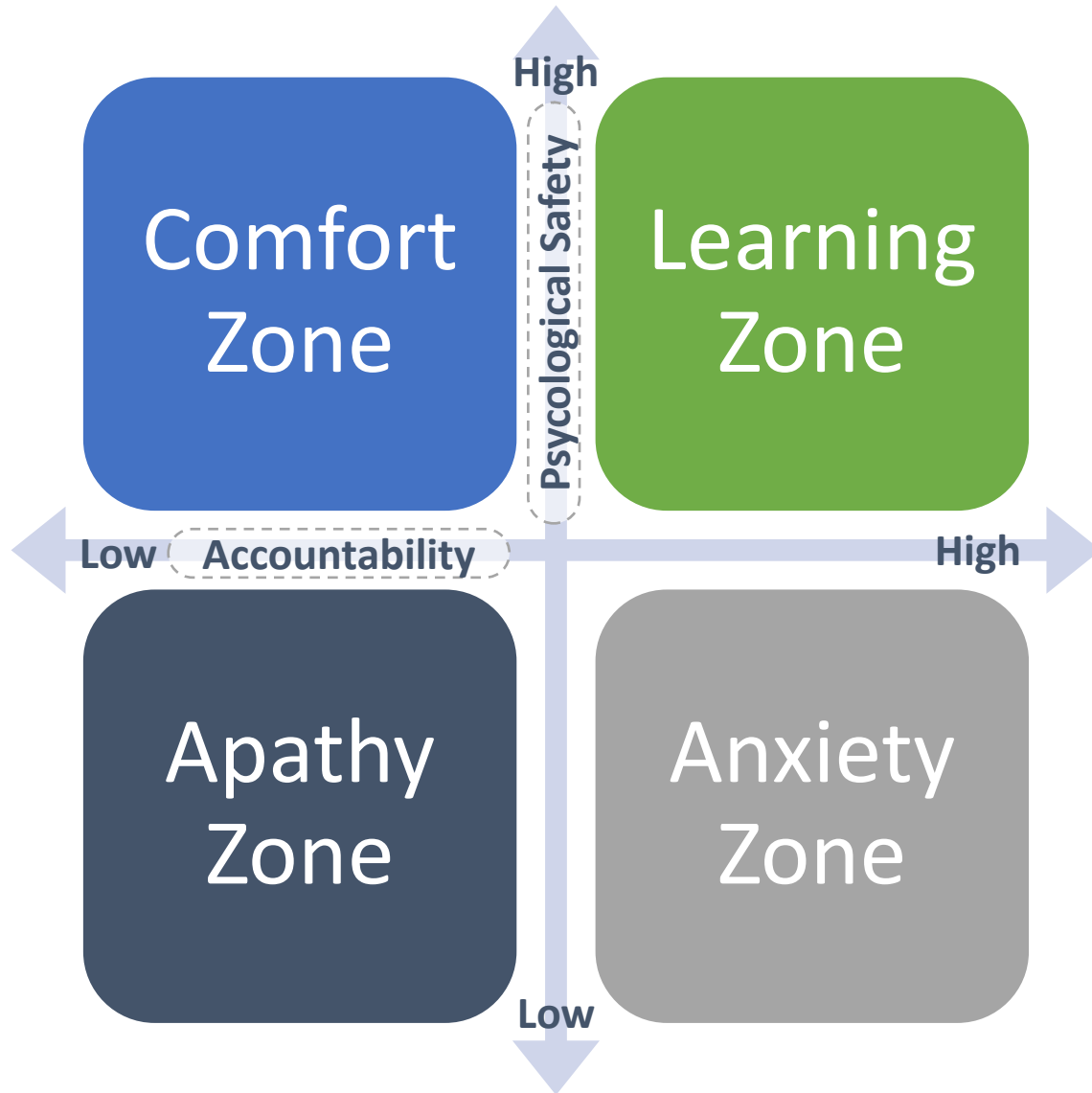
Risk-Taking

Learning Culture

Innovation and Creativity

Collaboration and Teamwork

Four zones of Psychological Safety



Learning Zone

- Team members feel valued, included, and respected.
- Individuals are comfortable contributing their ideas
- Mistakes are viewed as opportunities for learning, and there's an open exchange of constructive feedback

Comfort Zone

- Team members are willing to admit mistakes
- Individuals might lean towards familiar approaches rather than seeking out new challenges

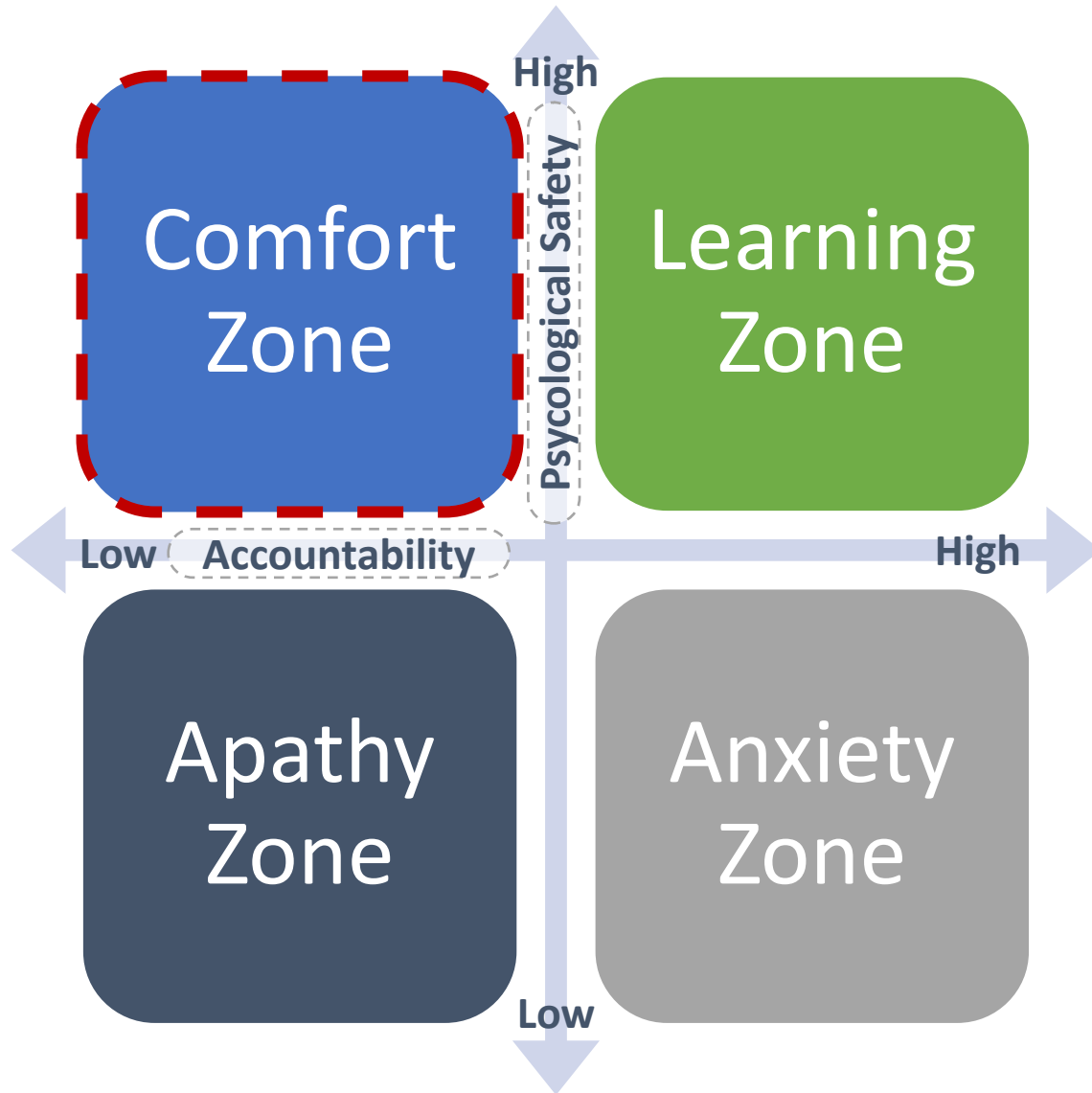
Anxiety Zone

- Team members are cautious about taking risks.
- Individuals may refrain from sharing their opinions
- The fear of potential negative outcomes prevents open communication and the free exchange of ideas

Apathy Zone

- Team members are hesitant to express dissenting opinions
- There's a lack of willingness to propose innovative ideas
- Fear of negative consequences

Illusions in the Comfort Zone



Even a team with open communication will be in a **Comfort Zone** if it is not actively taking risks and participating in challenging initiatives.

Open Communication

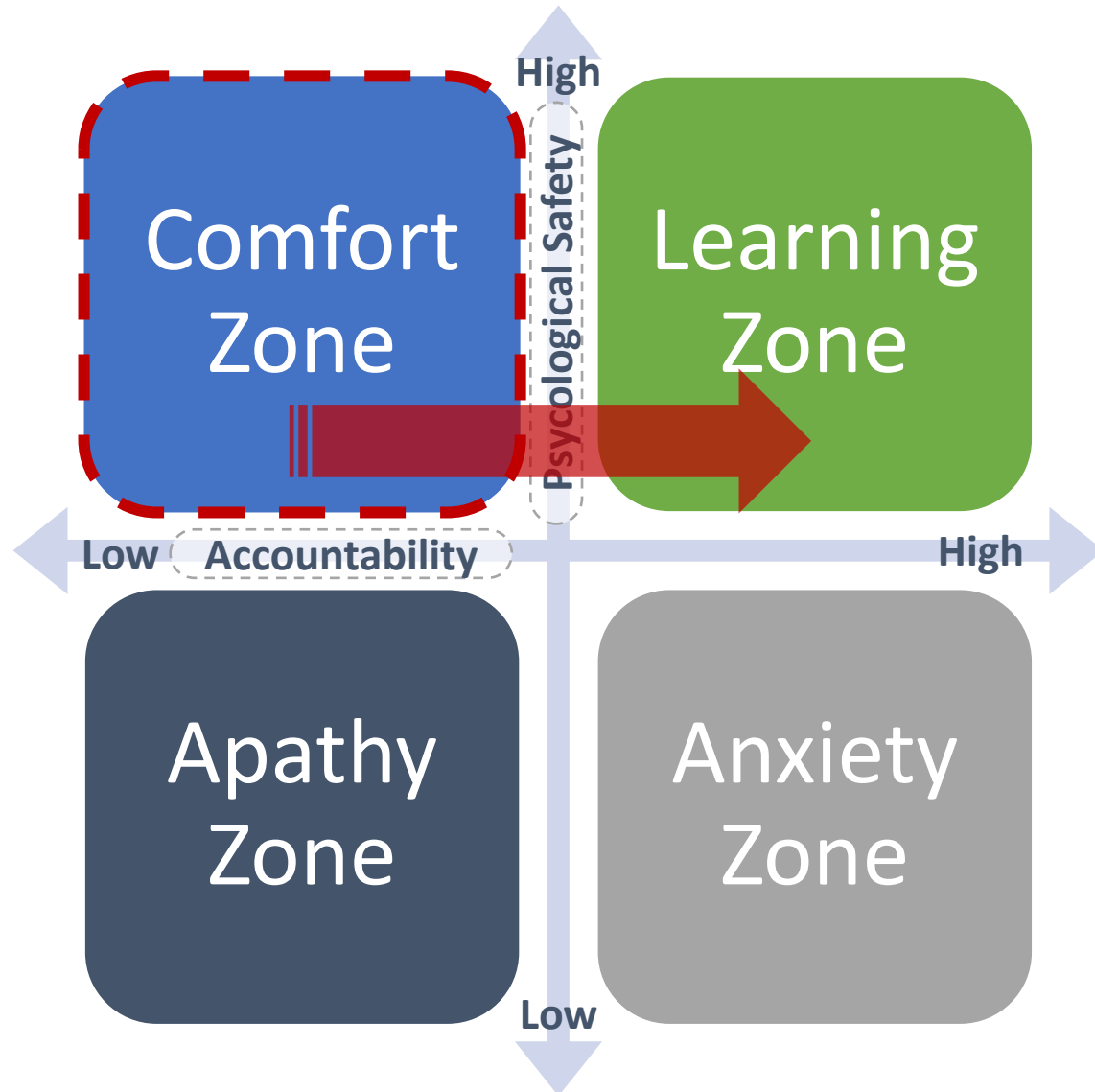
Risk-Taking

Learning Culture

Innovation and Creativity

Collaboration and Teamwork

Reasons to Avoid the Comfort Zone



Complacency

The Comfort Zone breeds complacency, where individuals become comfortable with routine and avoid pushing their boundaries.

Missed Opportunities

Staying in the Comfort Zone causes individuals to miss out on valuable opportunities for personal and professional growth.

Lack of Innovation

When there's resistance to change or trying new things, innovation tends to suffer

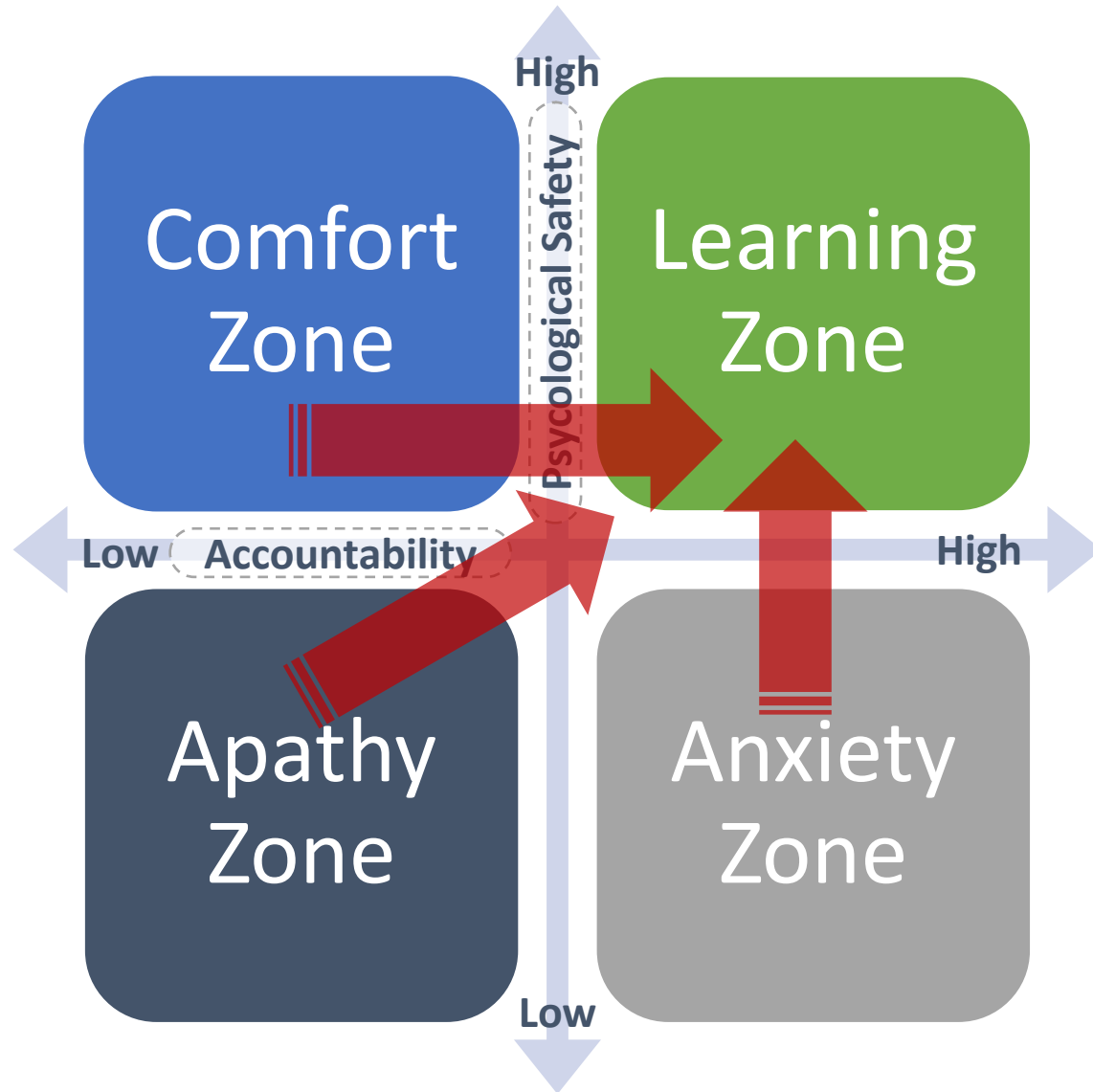
Reduced Resilience

Individuals who haven't faced challenges or taken risks may lack the resilience needed to navigate unexpected hurdles or setbacks effectively.

Lack of Adaptability

When the status quo becomes a priority, it's challenging to adapt to new circumstances or market shifts.

Reasons to Aim for the Learning Zone



Continuous Improvement

It encourages individuals to seek out new challenges, experiment with different approaches, and learn from both successes and failures.

Adaptability

It encourages individuals to be open to change, embrace uncertainty, and adjust to new situations.

Innovation

It encourages creative thinking and exploration of new ideas.

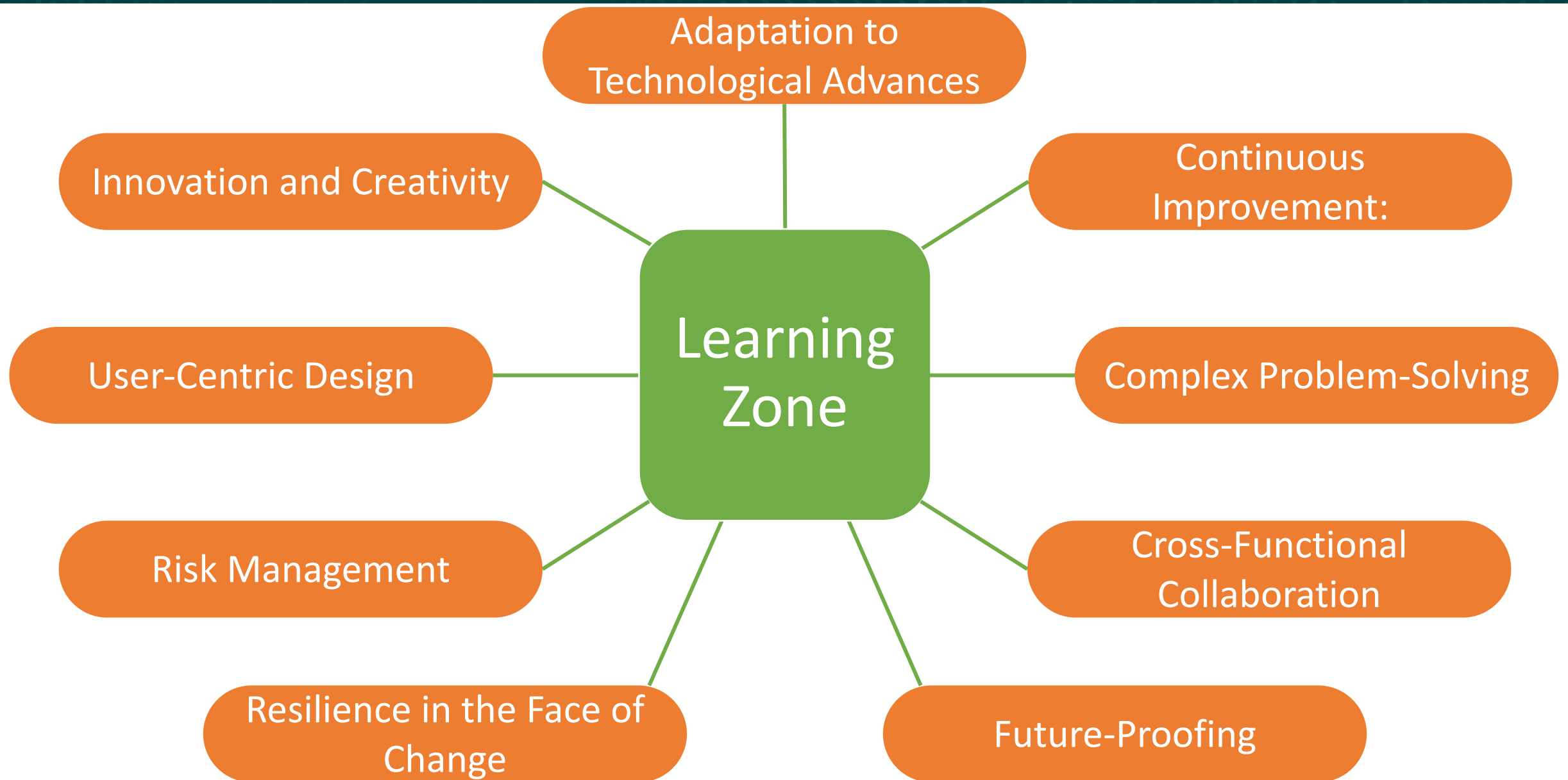
Resilience

Individuals develop resilience because they're accustomed to facing challenges and learning from setbacks.

Engagement

When individuals are encouraged to take risks and contribute their ideas, they feel more invested in the organization's success.

Learning Zone for Platform Engineering



Learning Zone for Platform Engineering



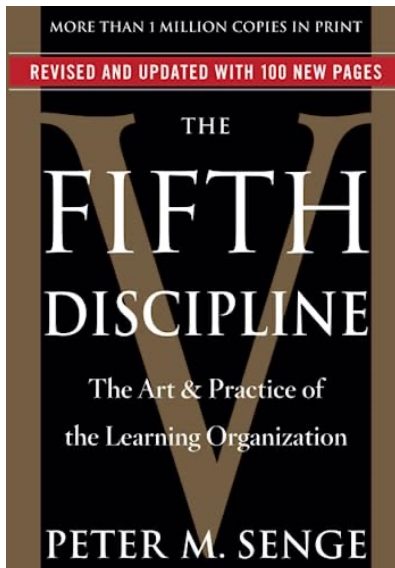
Platform Engineering involves creating tools for software developers, and it's always changing because technology advances.

Learning Zones encourage us to learn and try new things, which is perfect for staying up-to-date in platform engineering.

Organization with Learning Zone mindset

Learning Organization / Platform Engineering Team

Learning Zone mindset



Peter Senge's concept of a "Learning Organization" is detailed in his book "The Fifth Discipline."

Systems Thinking

Personal Mastery

Mental Models

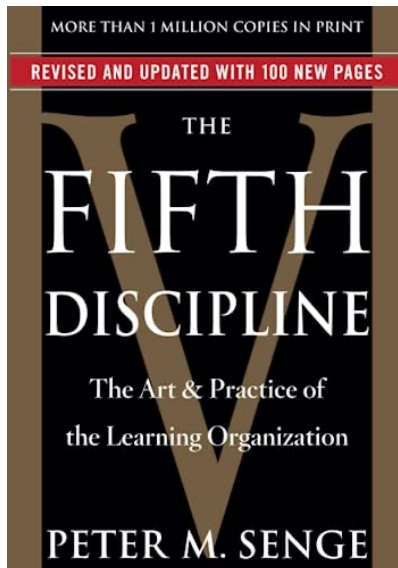
Shared Vision

Team Learning

Organization with Learning Zone mindset

Learning Organization / Platform Engineering Team

Learning Zone mindset



Platform Engineering

Properties consistent with the concept of a learning organization and platform engineering

Continuous Learning

Systems Thinking

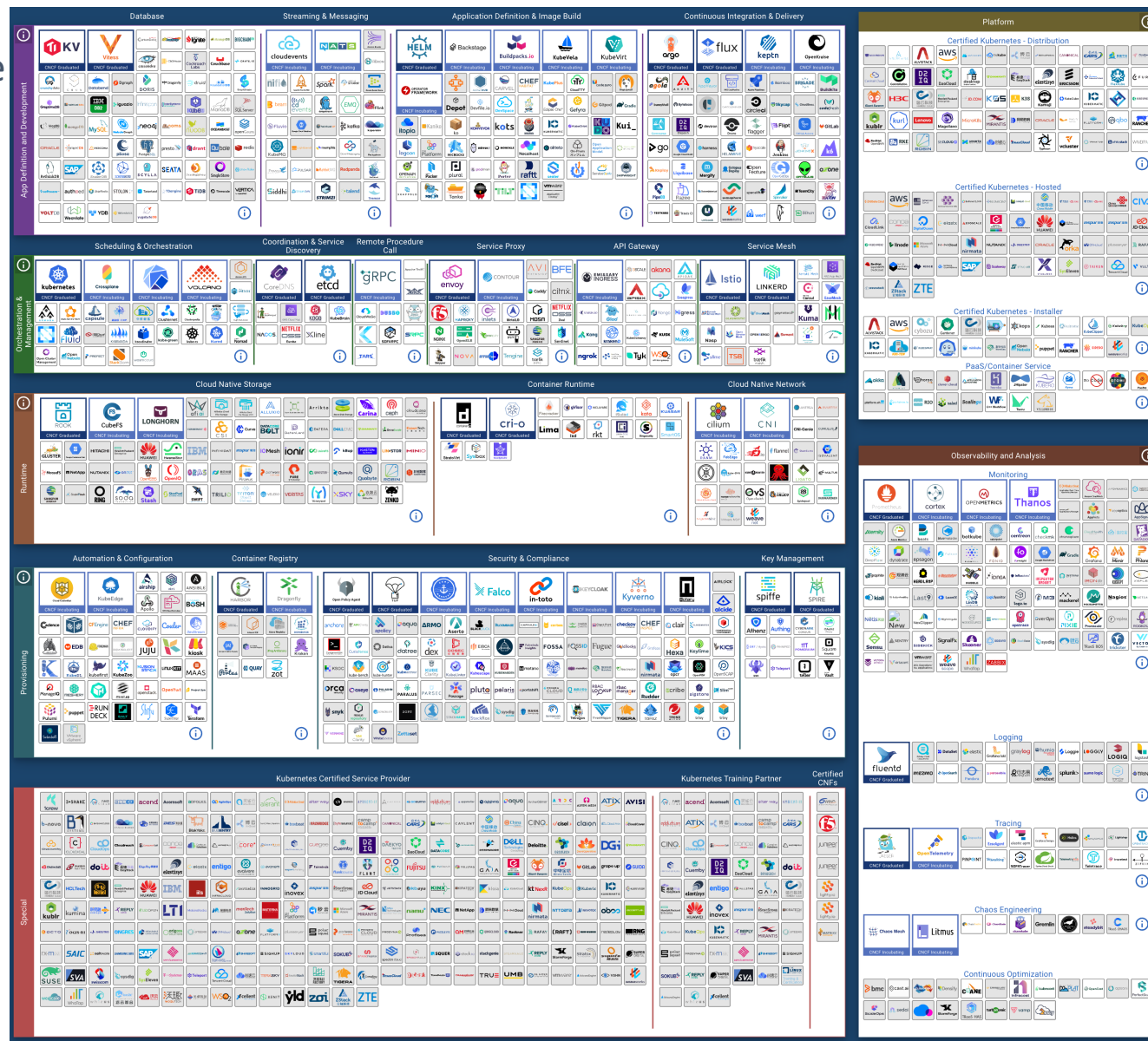
Innovation

Collaboration

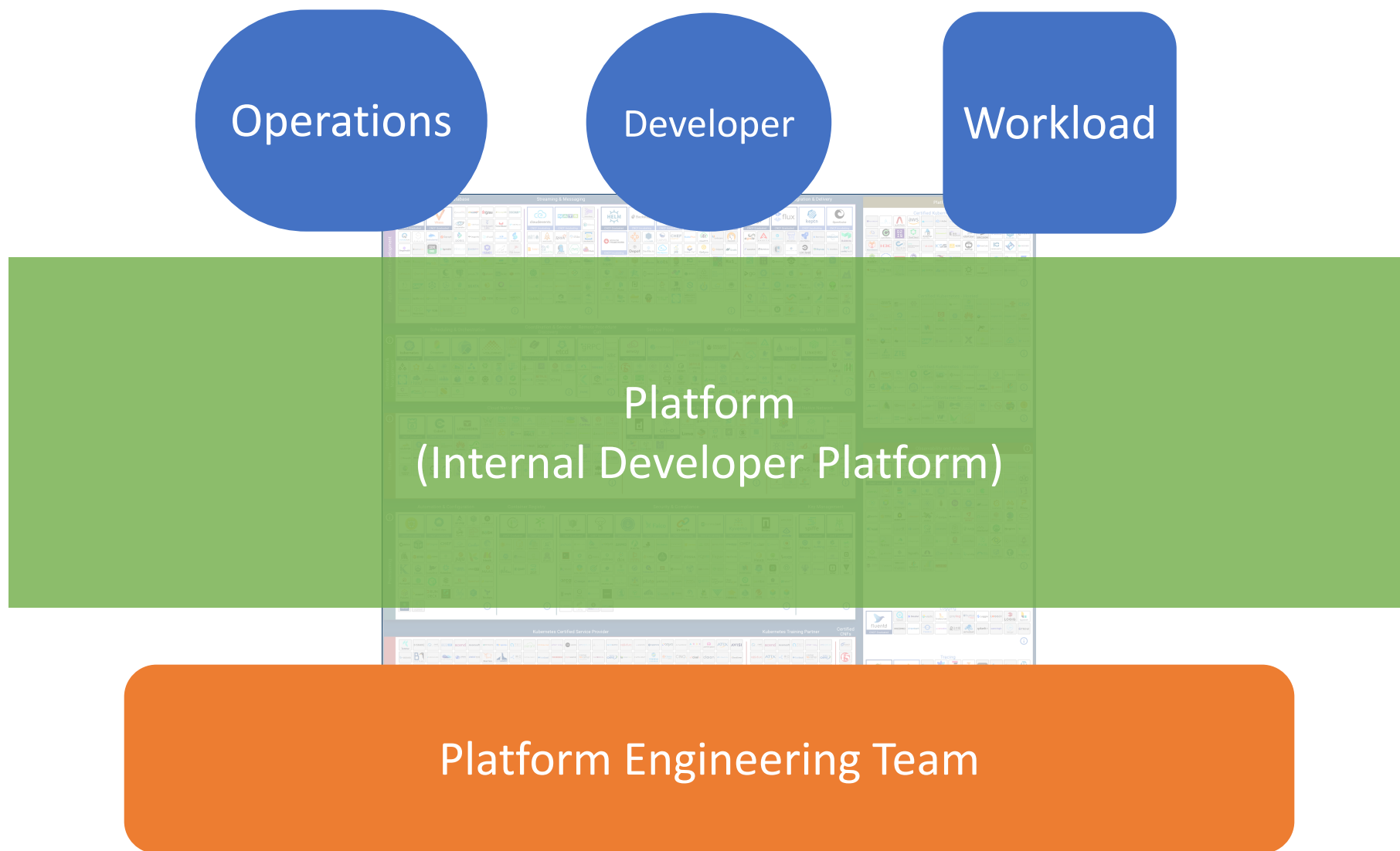
Adaptability

Why Learning Organization is Appropriate for Platform Engineering

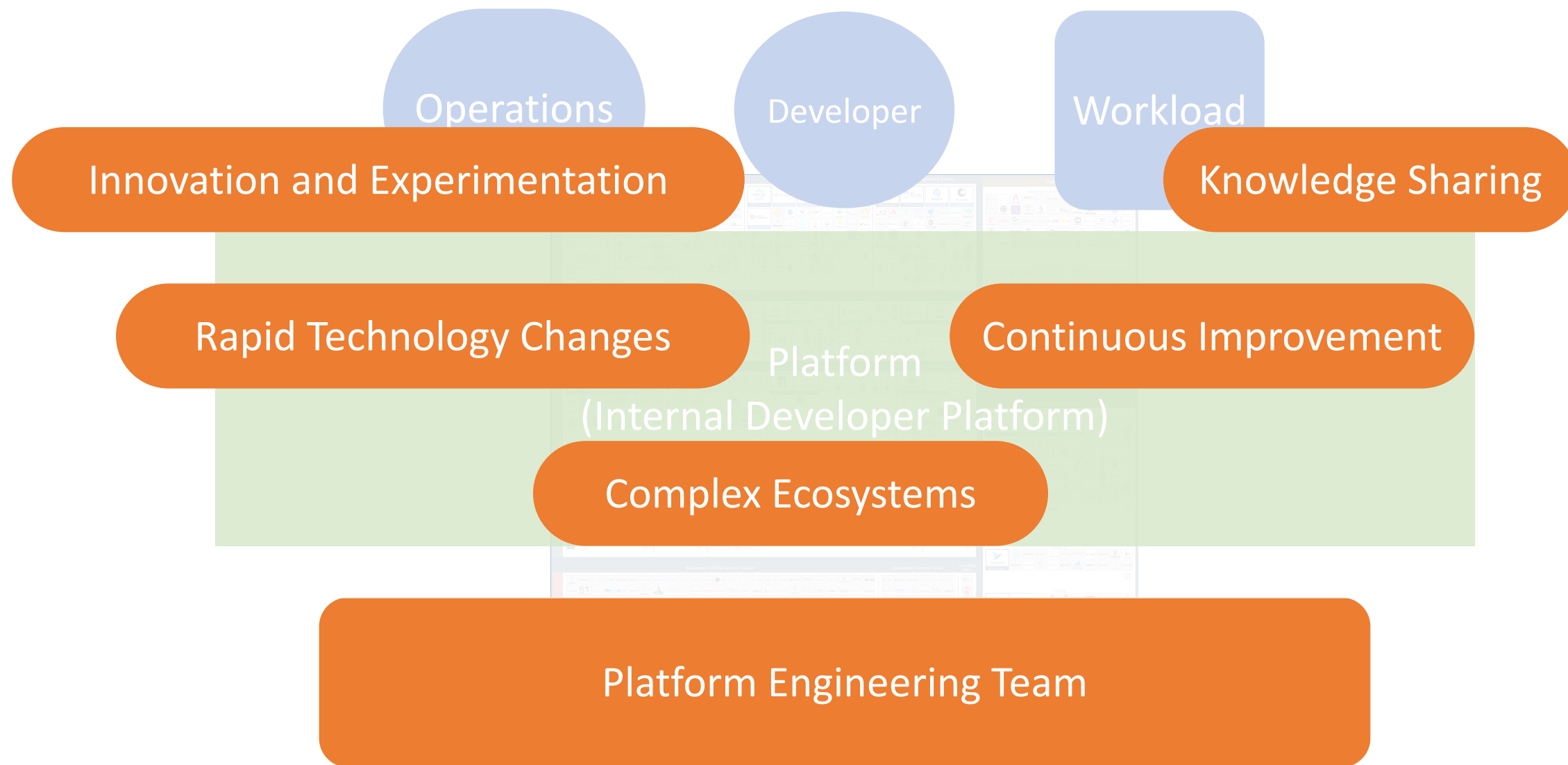
CNCF Cloud Native Landscape



Why Learning Organization is Appropriate for Platform Engineering



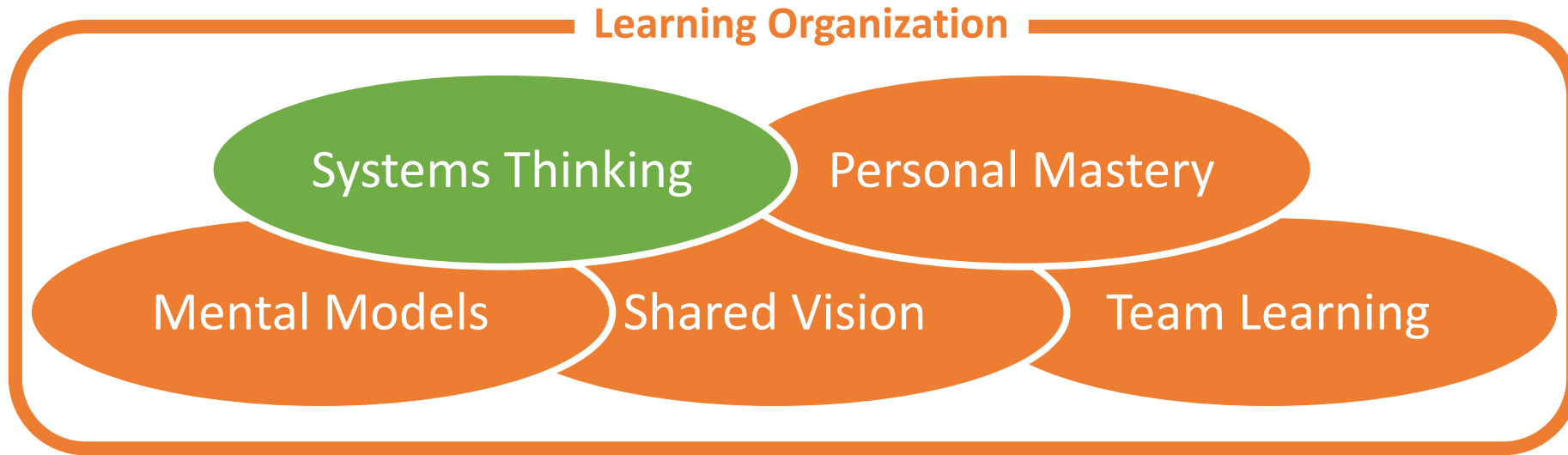
Why Learning Organization is Appropriate for Platform Engineering



Platform Engineering and Systems Thinking

Harnessing Systems Thinking for Platform Engineering Success

Systems Thinking



Systems thinking is an approach that recognizes the interconnectedness and interdependencies among various elements within a complex system.

1. Holistic Perspective

2. Interconnectedness

3. Feedback Loops

4. Emergent Properties

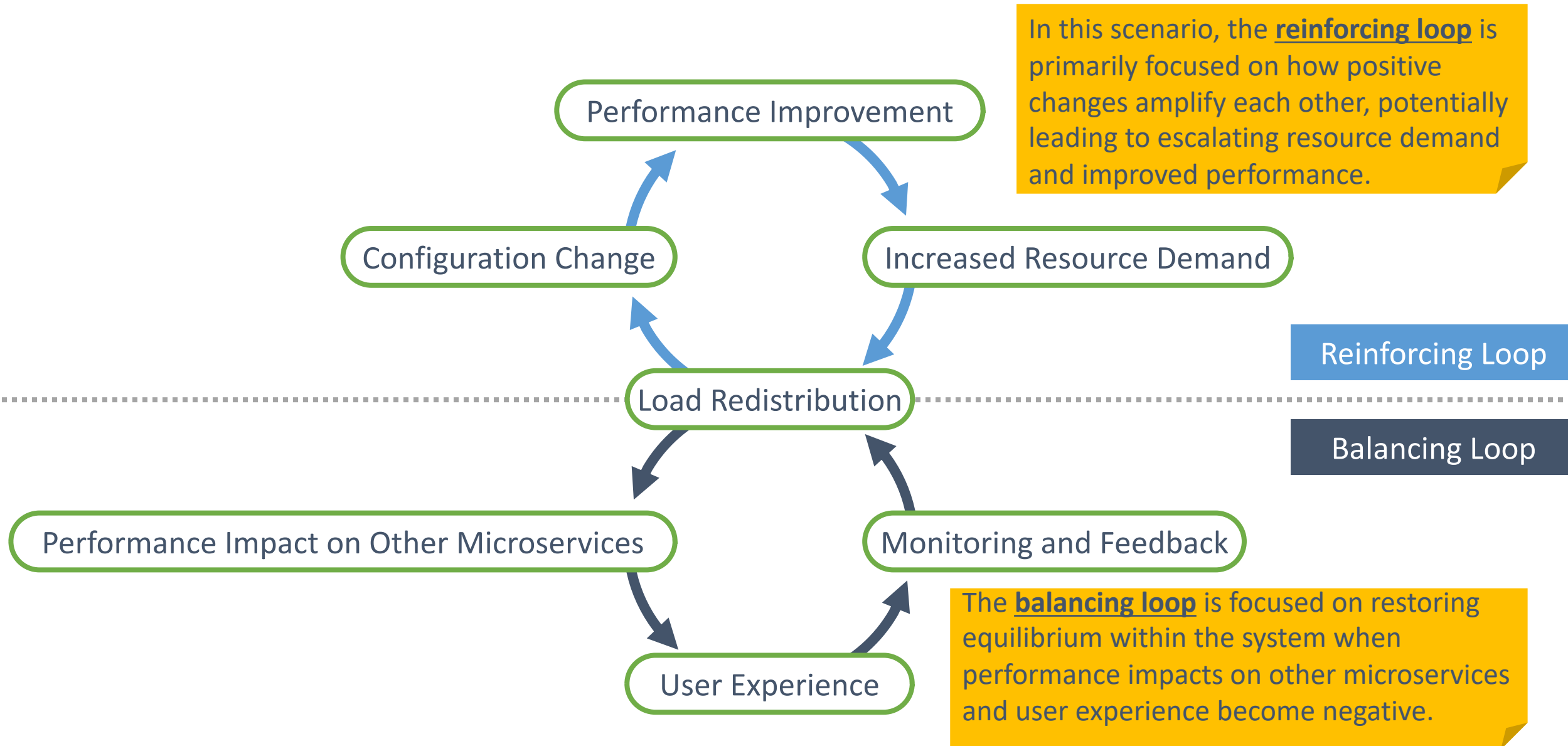
5. Complexity

6. Holistic Problem-Solving

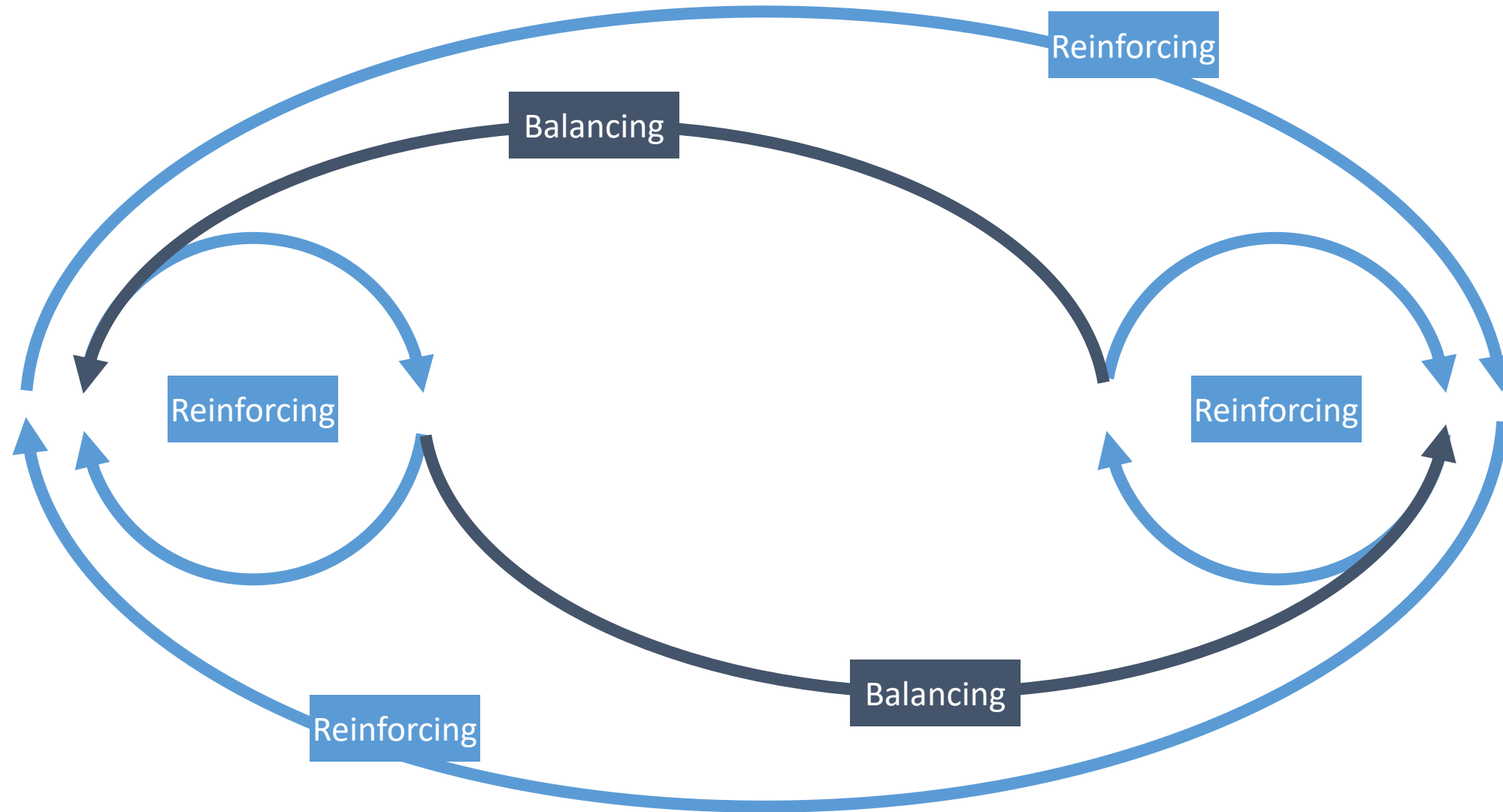
7. Adaptation

8. Alignment with Learning Organization

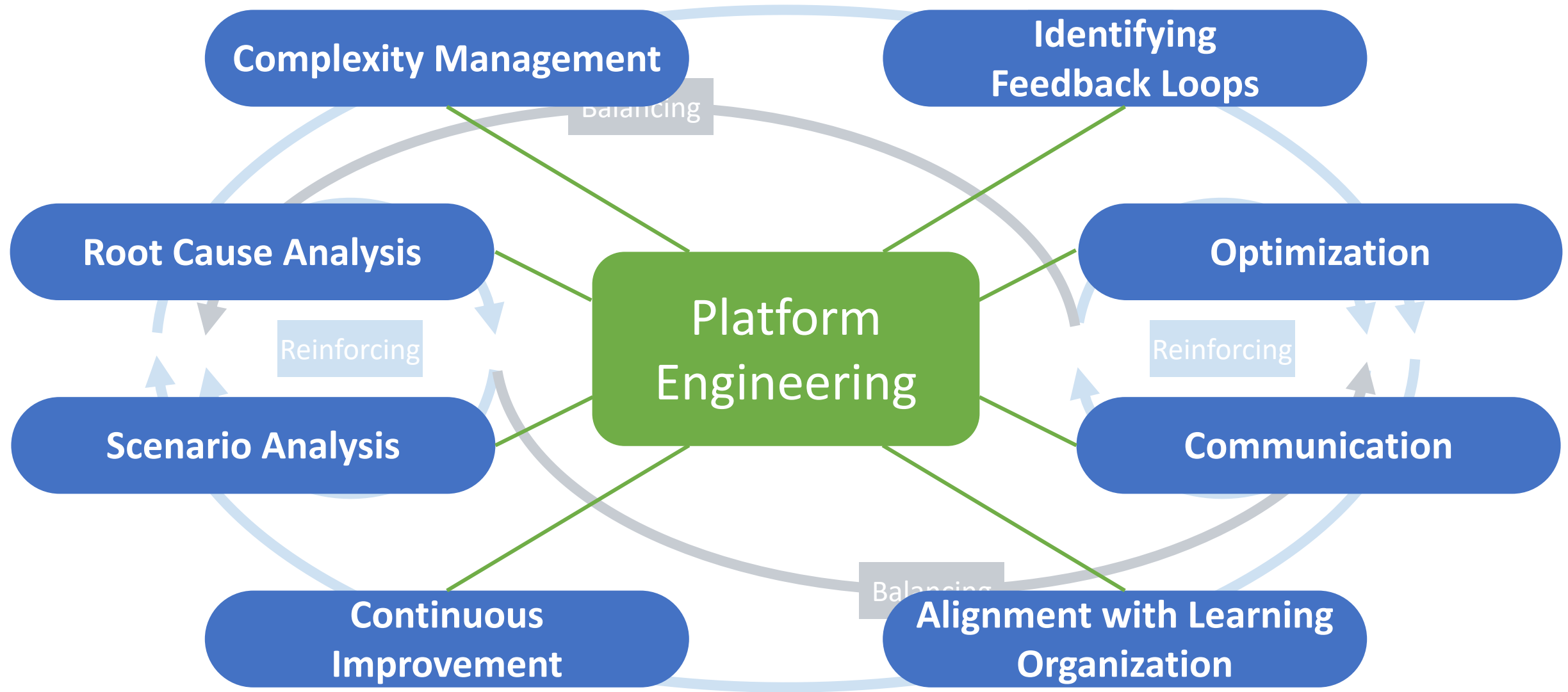
Systems Thinking with Loop Diagrams



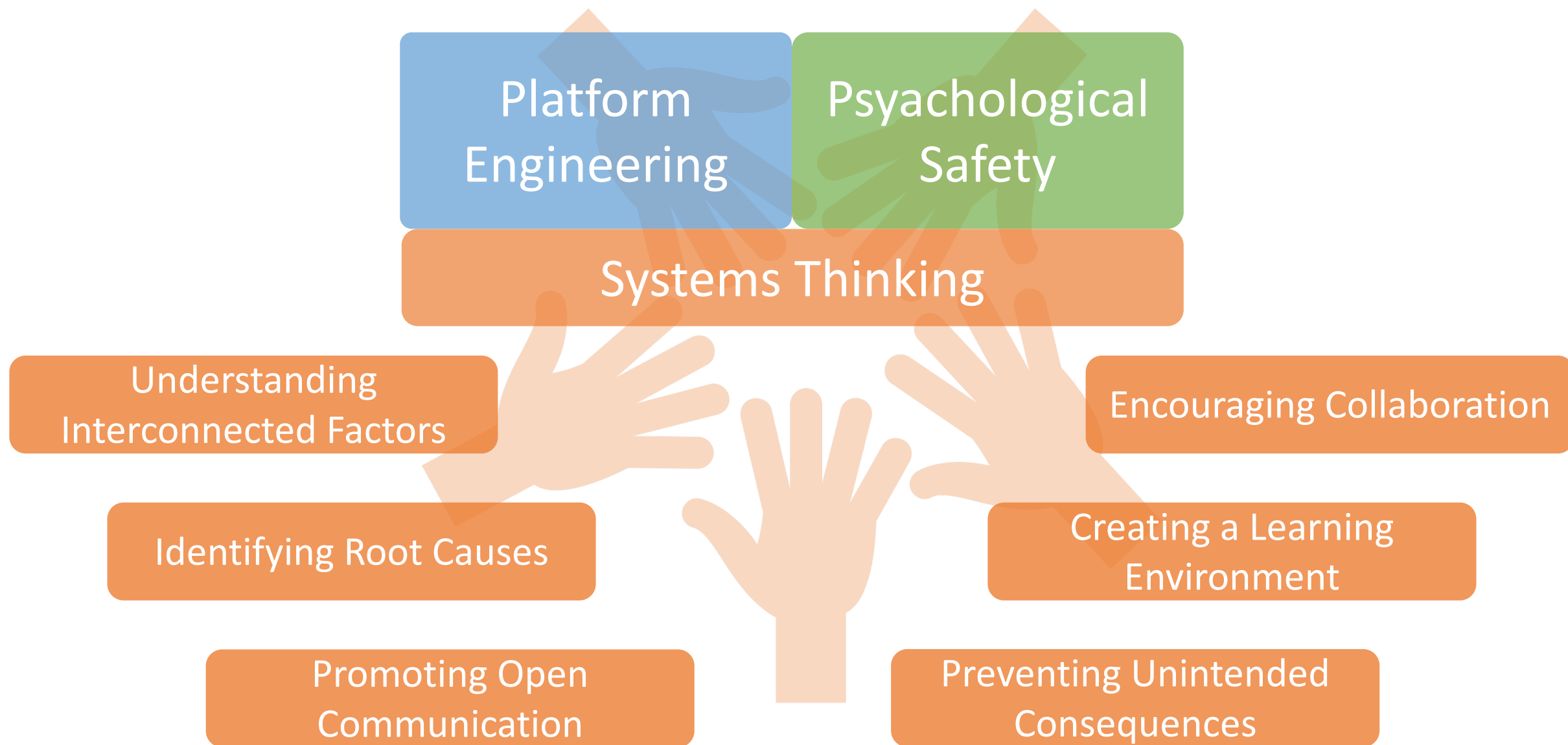
The Value of Loop Diagrams to Platform Engineering



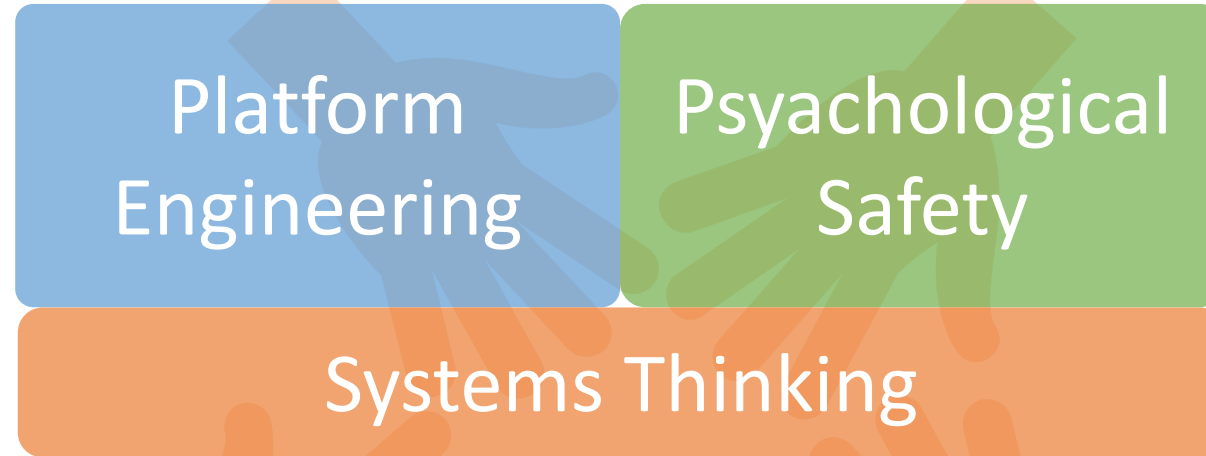
The Value of Loop Diagrams to Platform Engineering



The Value of Systems Thinking to Psychological Safety



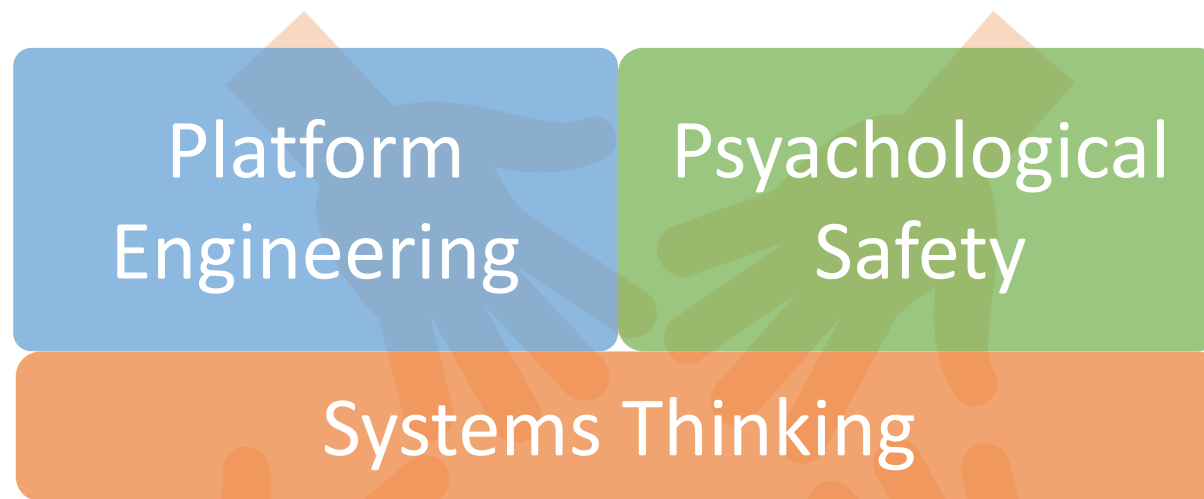
The Value of Systems Thinking to Psychological Safety



Understanding
Interconnected Factors

Systems Thinking encourages individuals to view situations holistically, considering how various elements and interactions contribute to an overall outcome. When applied to psychological safety, this approach helps people recognize the interplay between factors like communication patterns, team dynamics, leadership behaviors, and organizational culture.

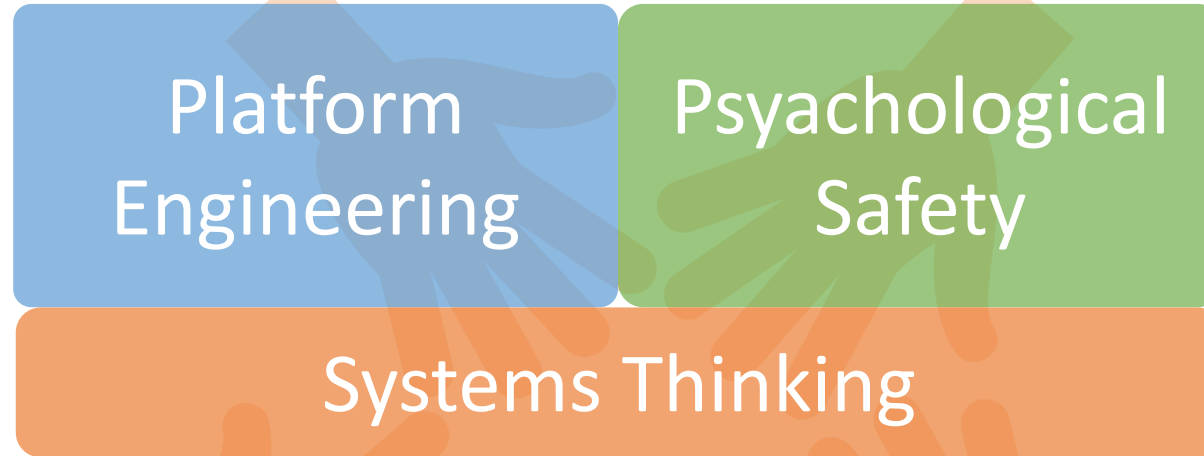
The Value of Systems Thinking to Psychological Safety



Identifying Root Causes

Similar to its application in root cause analysis for technical issues, Systems Thinking can help uncover the underlying causes of psychological safety challenges. Instead of simply addressing surface-level symptoms, individuals can delve deeper to identify systemic issues that may be contributing to an unsafe or non-inclusive environment.

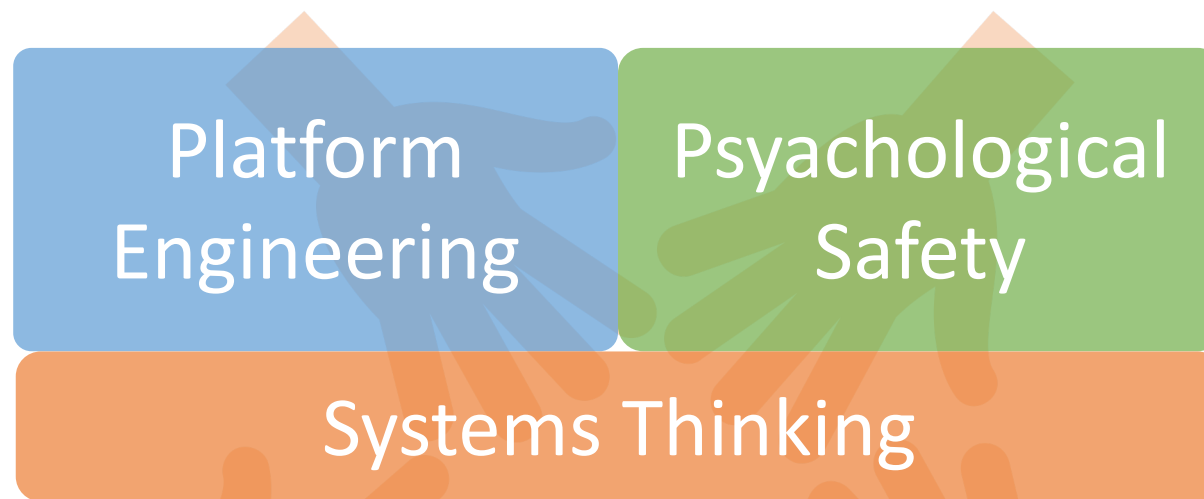
The Value of Systems Thinking to Psychological Safety



Promoting Open
Communication

Open communication is a crucial component of psychological safety. Systems Thinking encourages individuals to consider the feedback loops and information flows within an organization. By analyzing these communication patterns, teams can identify bottlenecks, breakdowns, or barriers in information sharing that may hinder psychological safety.

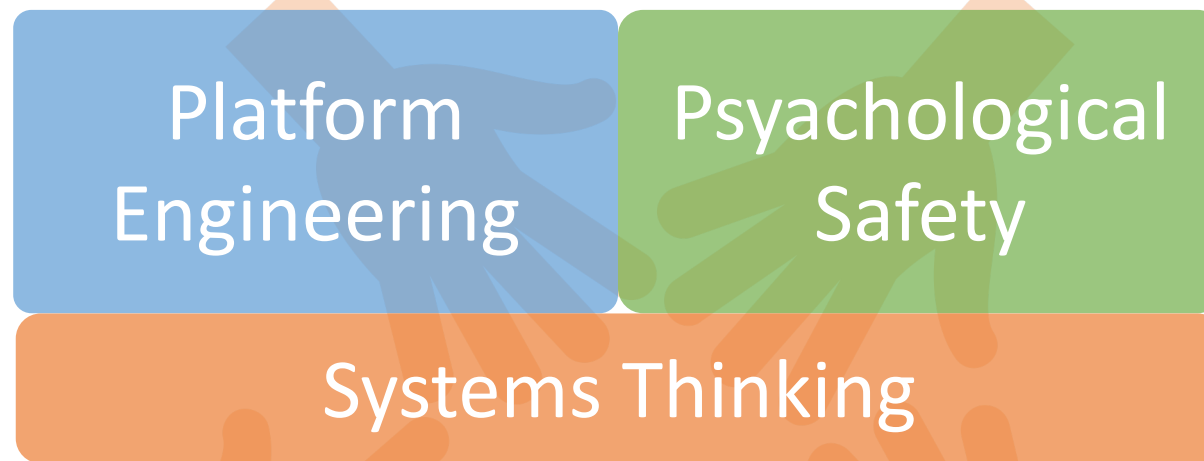
The Value of Systems Thinking to Psychological Safety



Preventing Unintended Consequences

In complex systems, well-intentioned actions can sometimes lead to unintended negative consequences. Similarly, efforts to enhance psychological safety may inadvertently create new challenges. Systems Thinking helps teams anticipate these unintended consequences by considering the potential ripple effects of their actions.

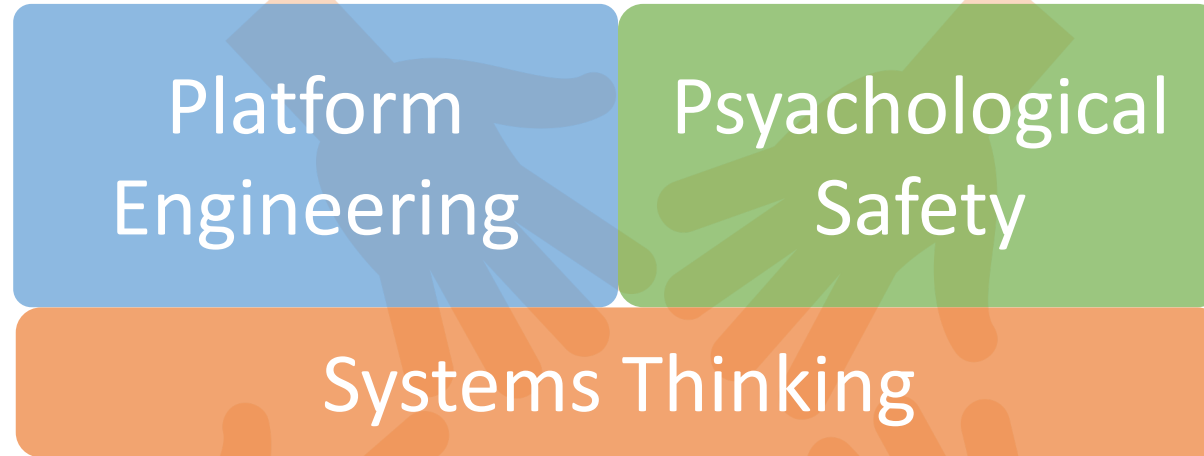
The Value of Systems Thinking to Psychological Safety



Creating a Learning Environment

Systems Thinking aligns with the principles of a learning organization, where continuous improvement and adaptability are valued. By applying Systems Thinking to psychological safety, organizations can foster a culture of continuous learning and growth. Team members are encouraged to reflect on their experiences, learn from mistakes, and adapt their behaviors and interactions to better support psychological safety.

The Value of Systems Thinking to Psychological Safety



Encouraging Collaboration

Systems Thinking often involves cross-functional collaboration and the recognition that multiple perspectives are needed to understand complex issues. Applying this approach to psychological safety can encourage diverse teams to work together to address challenges. Inclusion of different viewpoints can lead to more comprehensive solutions and a stronger commitment to creating a safe and inclusive environment.

Platform Engineering and Psychological Safety & Systems Thinking

Nurturing a Platform Engineering
through Psychological Safety and Systems Thinking

Platform Engineering and Psychological Safety & Systems Thinking

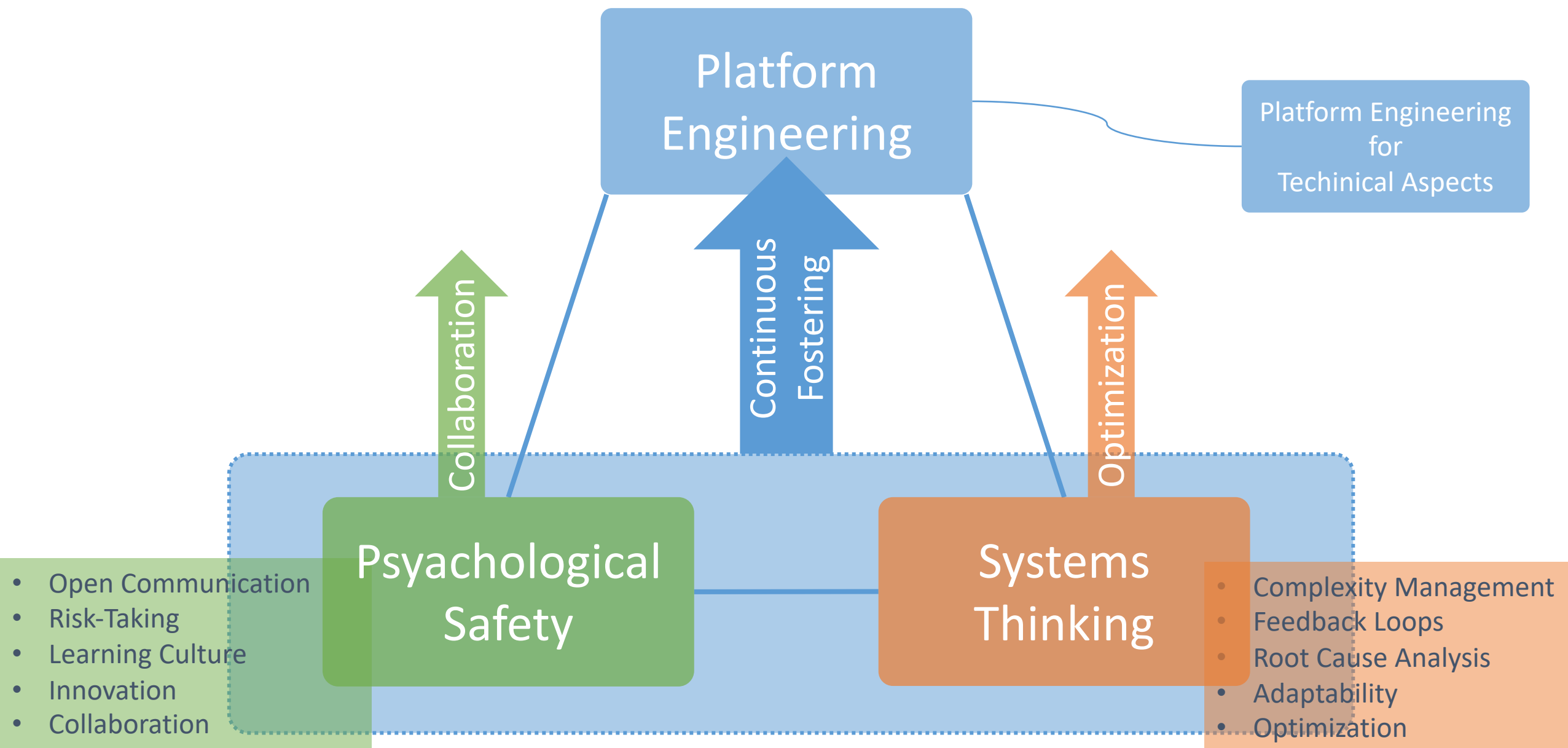


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Thanks

多谢