

# Evolving a Legacy System w/ Architecture for Flow

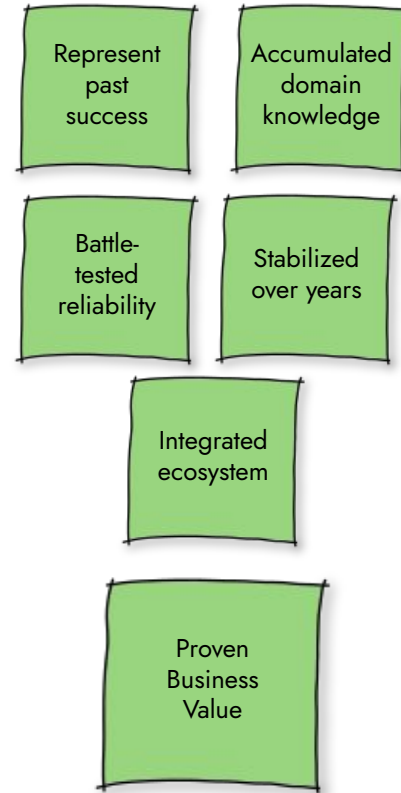
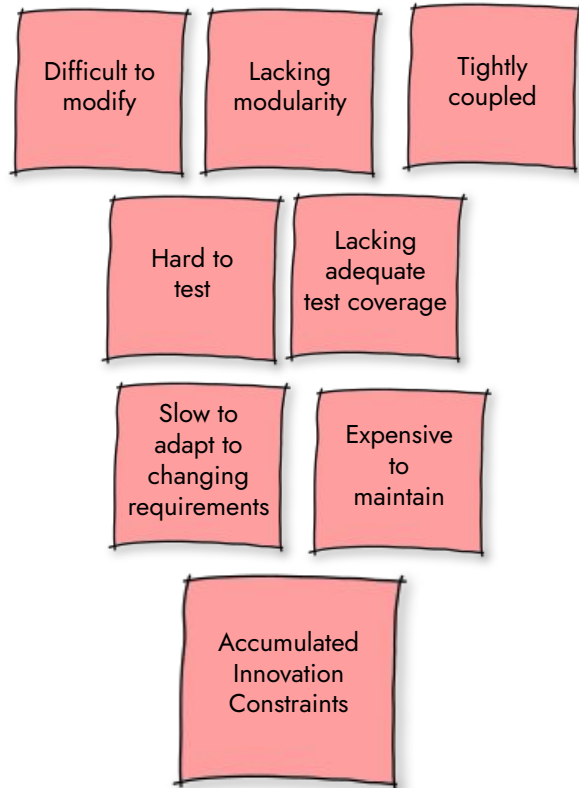
Susanne Kaiser  
Independent Tech Consultant

# Does Your Legacy System Spark Joy?




Image source: <https://konmarie.com>

# The Paradox of Legacy Systems



# How to Handle Legacy Systems?

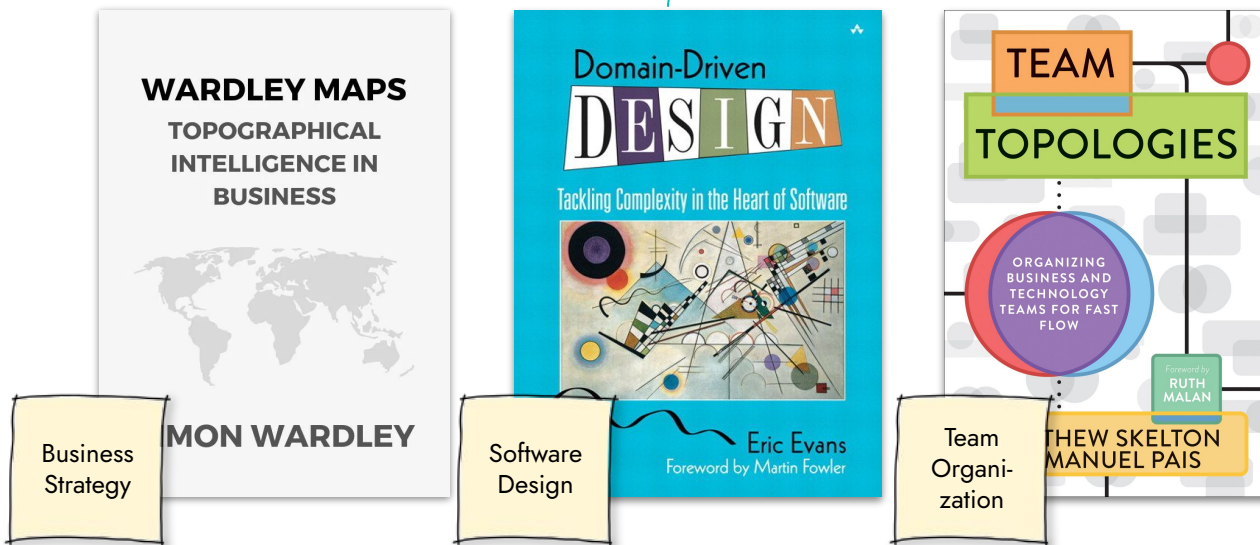
Big-bang replacement is  
not just expensive.  
It's risky!



Incremental  
evolution  
instead

# Evolving a Legacy System w/ Architecture for Flow

Adaptive, socio-technical  
systems optimized for a  
fast flow of value &  
feedback



# Architecture for Flow Canvas



1

## Current Status & Ways of Working

What are the current issues (challenges)?  
What parts/blocks of the system do they refer?  
What are their main goals?  
What are the current main dependencies?  
What are the current main interaction modes (PI, loose coupling, mostly/broadly connected modules, etc)?  
What are their current products? (e.g. features, services, planning techniques, etc.)

2

## Current Flow

What events add to the flow?  
What breaks the current flow?

Overload relationships (dependencies) flow

What is the flow? (the current)



Flow of Changes / Value

3

## Current Business Landscape

Visualizing the business landscape with Viability Maps



What is the current business landscape? (e.g. features, services, planning techniques, etc.)



5

## Viability to the Solution Space

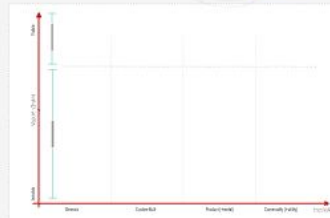
Decomposing solution space into bounded sections (design decisions)



6

## Future Business Landscapes & Bounded Controls

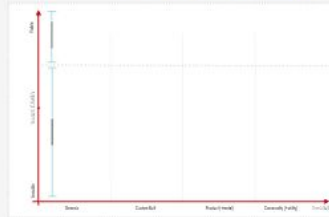
Visualizing the future business landscape with Viability Maps



7

## Future Status Governance Boundaries

Identifying future status governance boundaries



8

## Future Status Coordination & Interconnect Modes



# Current Teams & Dependencies



1

## Current Teams & Ways of Working

What are the current teams (if any)?  
What are the roles of the system (if any)?  
What are the team goals?  
What are the current team dependencies?  
What are the current team interaction modes (PM, team norms, meeting frequency, meeting agenda, etc)?  
What are the current team processes? (e.g., feedback, metrics, planning techniques, etc.)

2

## Current Plan

What is the plan for the system?

Development stages, progress, flow



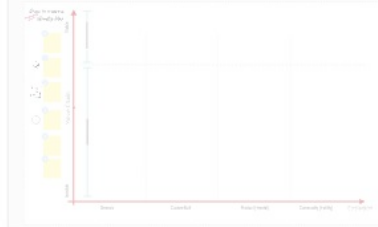
3

## Current Business Landscape

Visualizing the business landscape with a 2x2 matrix

Strategy & Business Plan

Business Plan & Strategy



5

## Modularity in the Solution Space

Decomposing solution space into bounded solution (change elements)

It's all about the solution



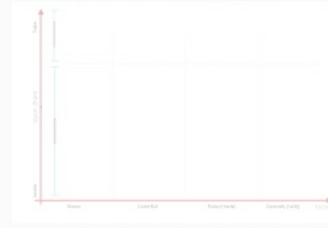
4

## Future Business Landscape & Bounded Contexts

Visualizing the future business landscape with a 2x2 matrix

Strategy & Business Plan

Business Plan & Strategy



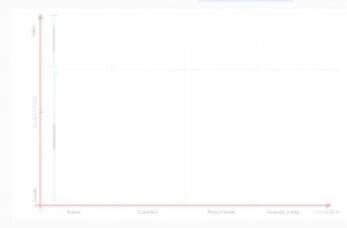
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## Future Team Operating Boundaries

Visualizing future team operating boundaries

Strategy & Business Plan

Business Plan & Strategy



8

## Future Team Contribution & Interaction Modes

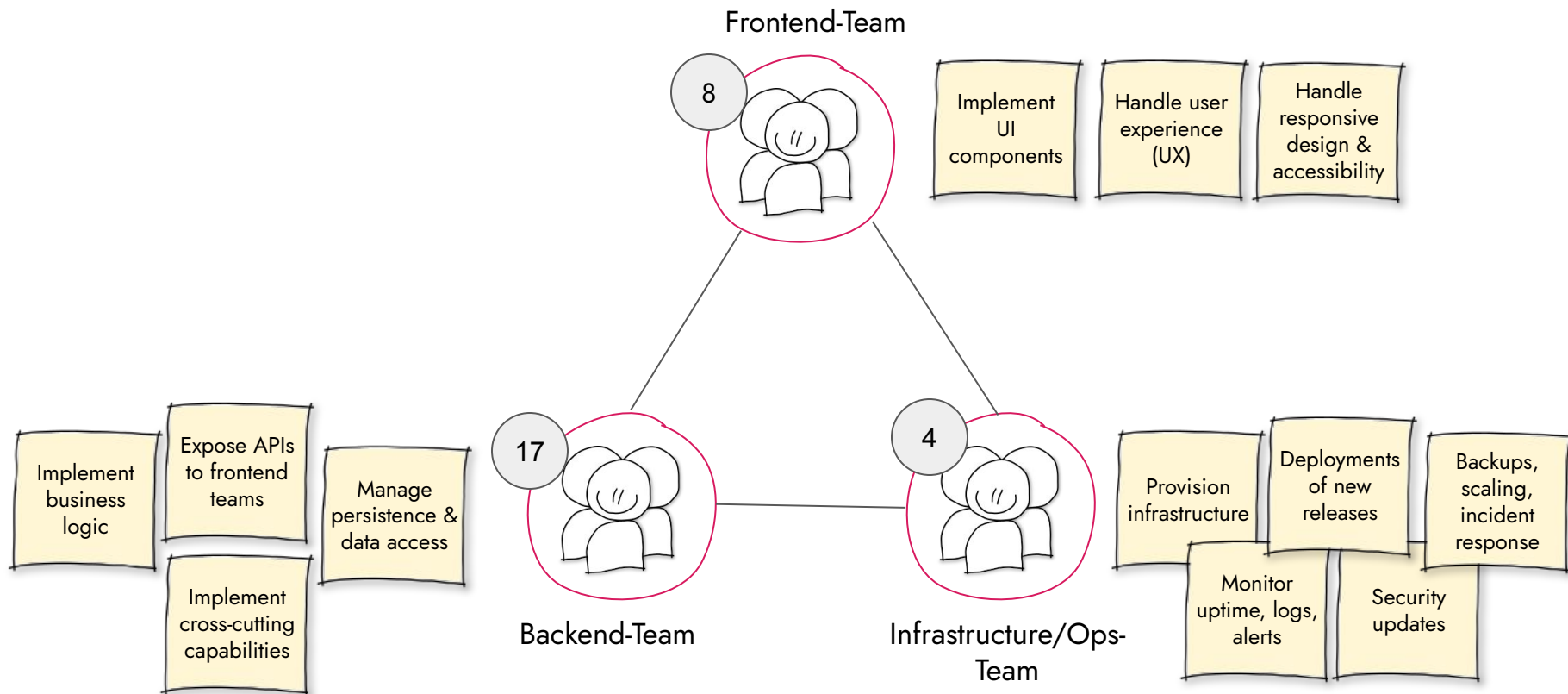
Visualizing future team contribution & interaction modes

Strategy & Business Plan

Business Plan & Strategy



# Current Teams & Dependencies





# Assessing Current Flow of Change



1

**Current Issues & Wishes of Working**  
What are the current issues (problems)?  
What are the wishes of the customer (they want)?  
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What are the current issues (problems)?  
What are the wishes of the customer (they want)?  
What are the current issues (problems)?  
What are the wishes of the customer (they want)?

2

**Current Flow**  
What events add in the flow?  
What events are the current flow?

Overlaid diagrams, scripts, the flow

What events add in the flow?



Flow of Changes / Value

3

**Current Business Landscape**  
Visualizing the business landscape with the flow of change



Overlaid diagrams, scripts, the flow

What events add in the flow?



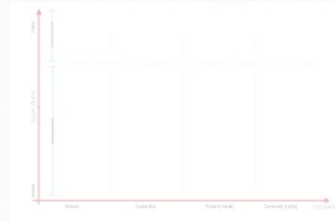
5

**Visualizing the Solution Space**  
Visualizing the solution space with the flow of change



6

**Future Business Landscape & Business Context**  
Visualizing the future business landscape with the flow of change



7

**Future Business Landscape & Business Context**  
Visualizing the future business landscape with the flow of change

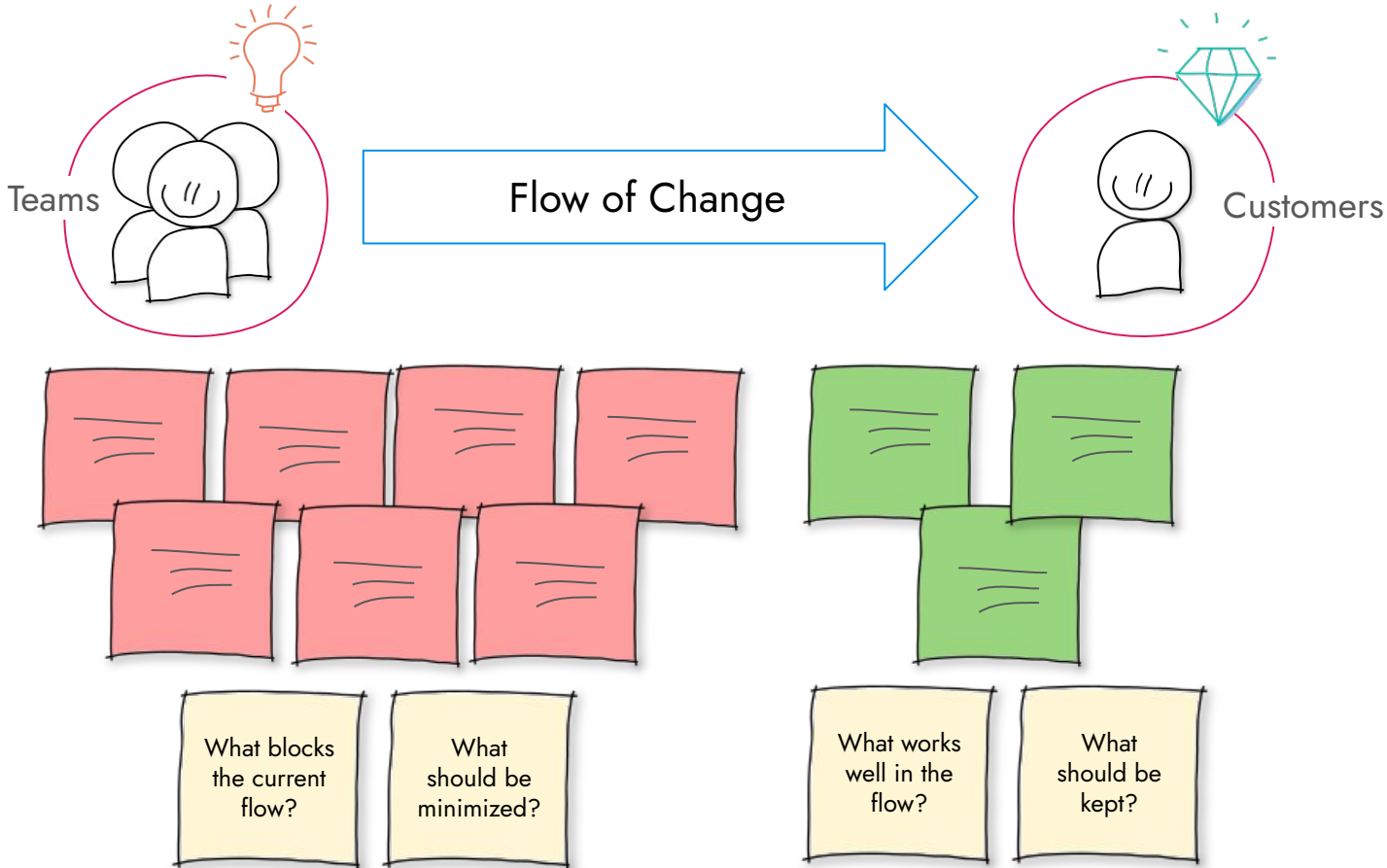


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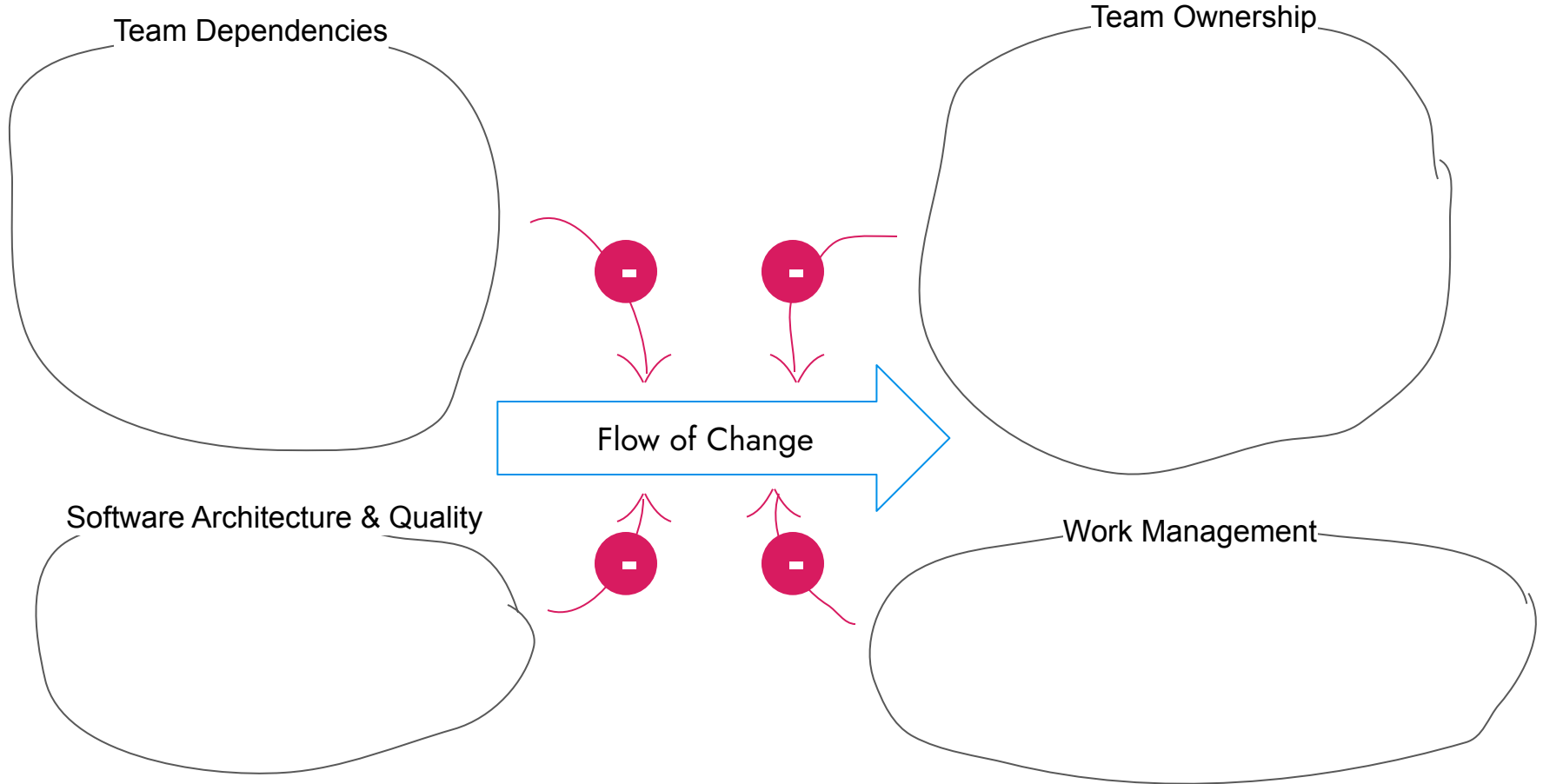
**Future Business Landscape & Business Context**  
Visualizing the future business landscape with the flow of change



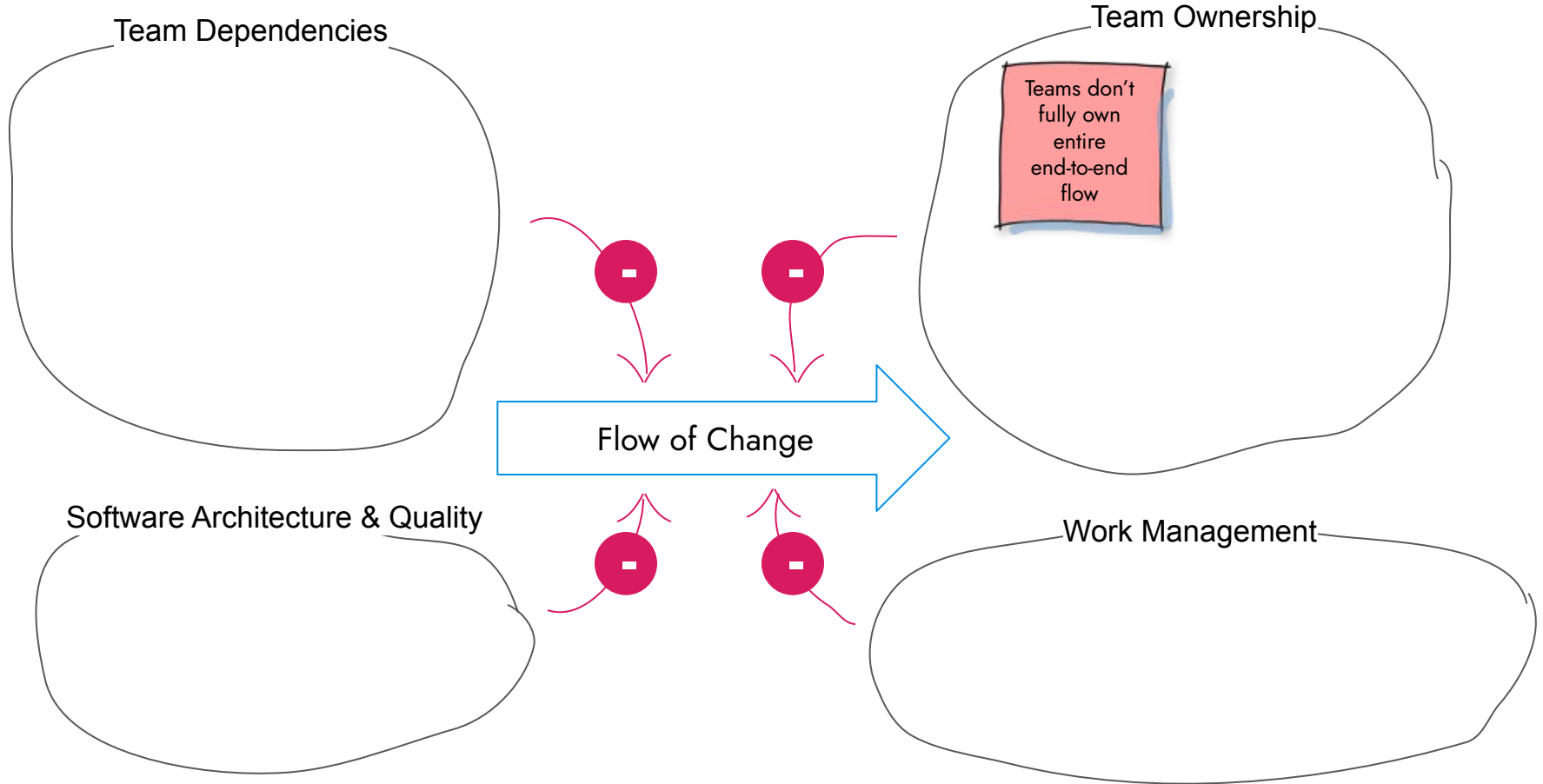
# Assessing Current Flow of Change



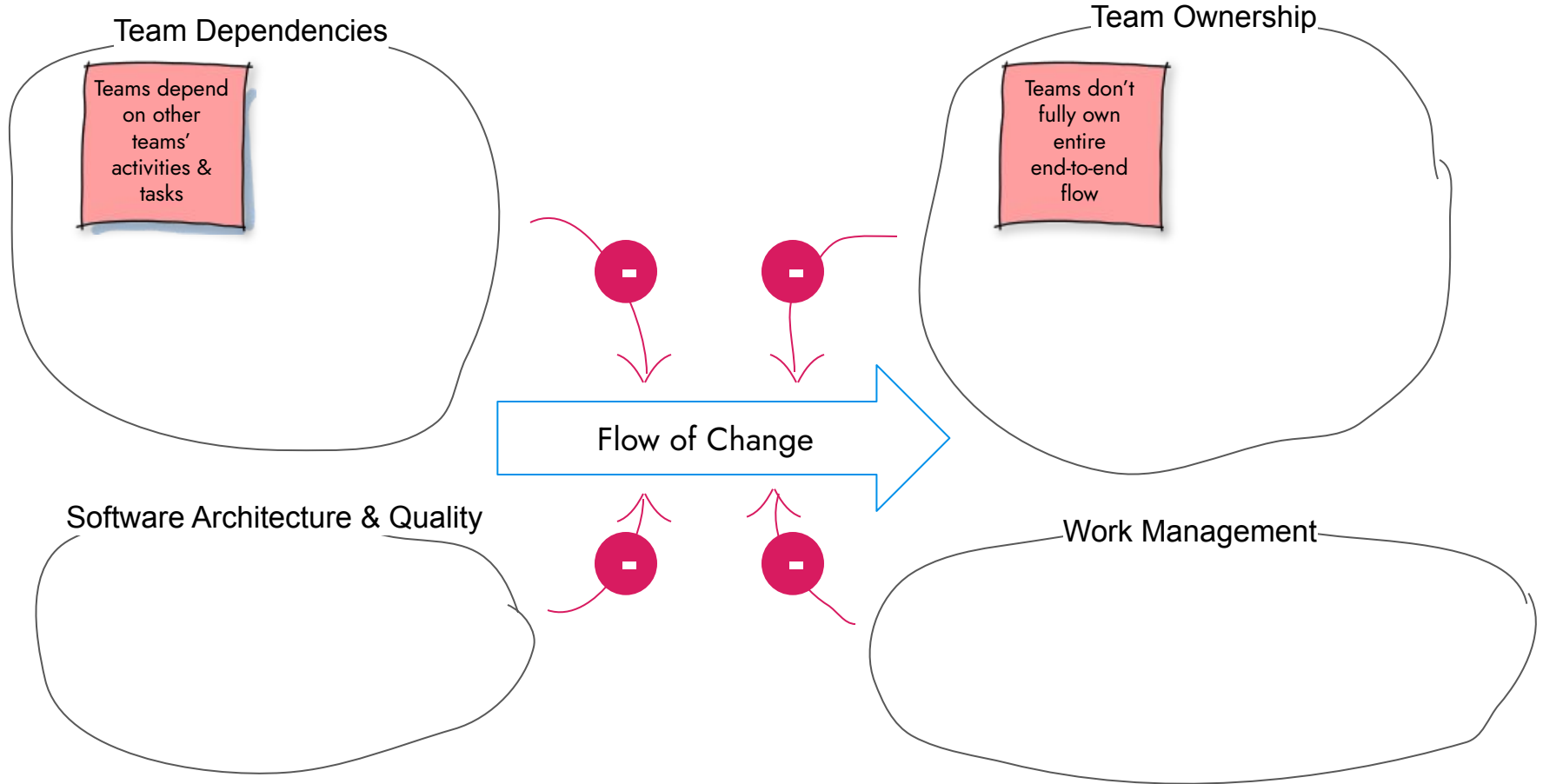
# What is Preventing Flow? (Examples)



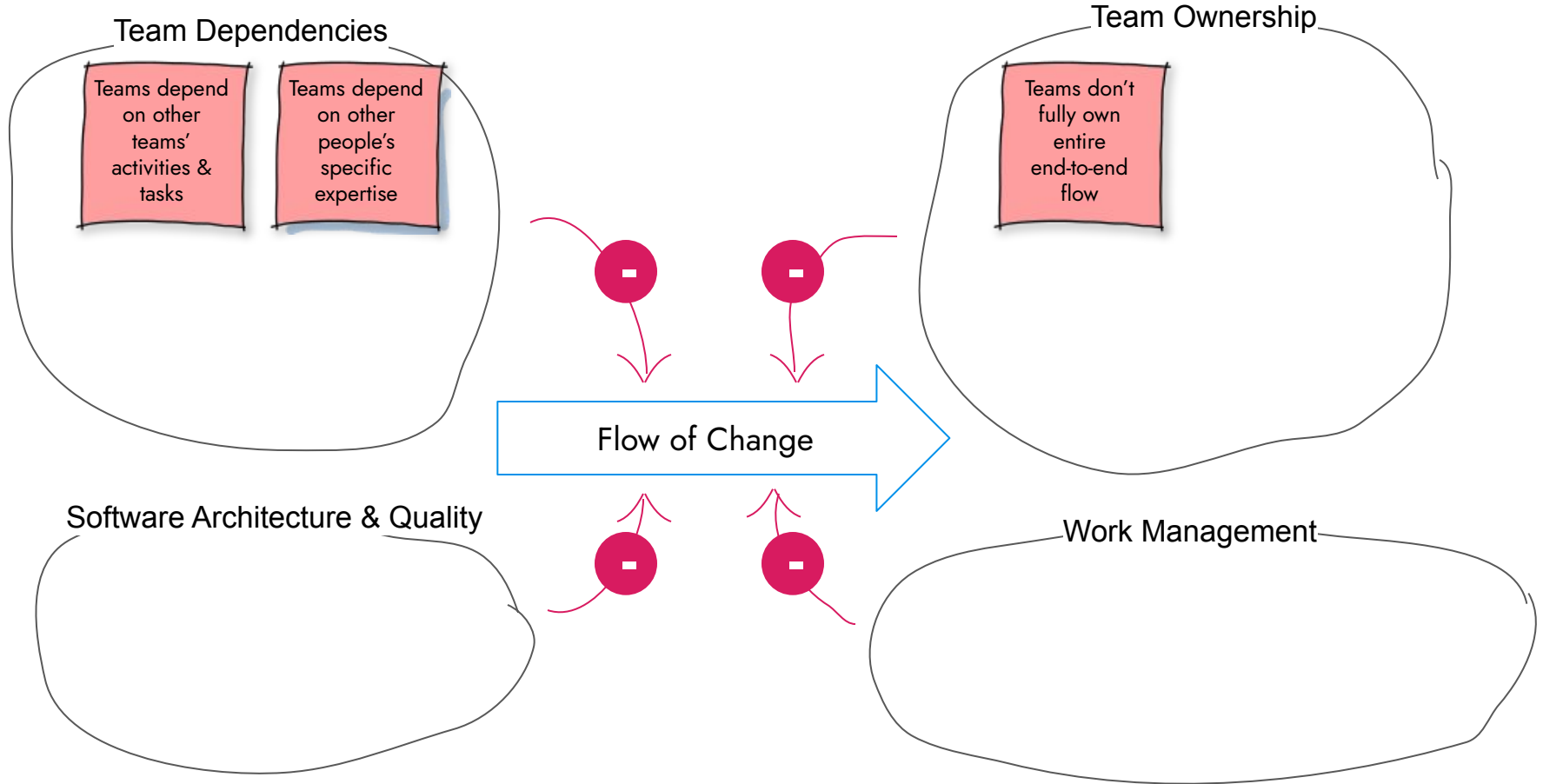
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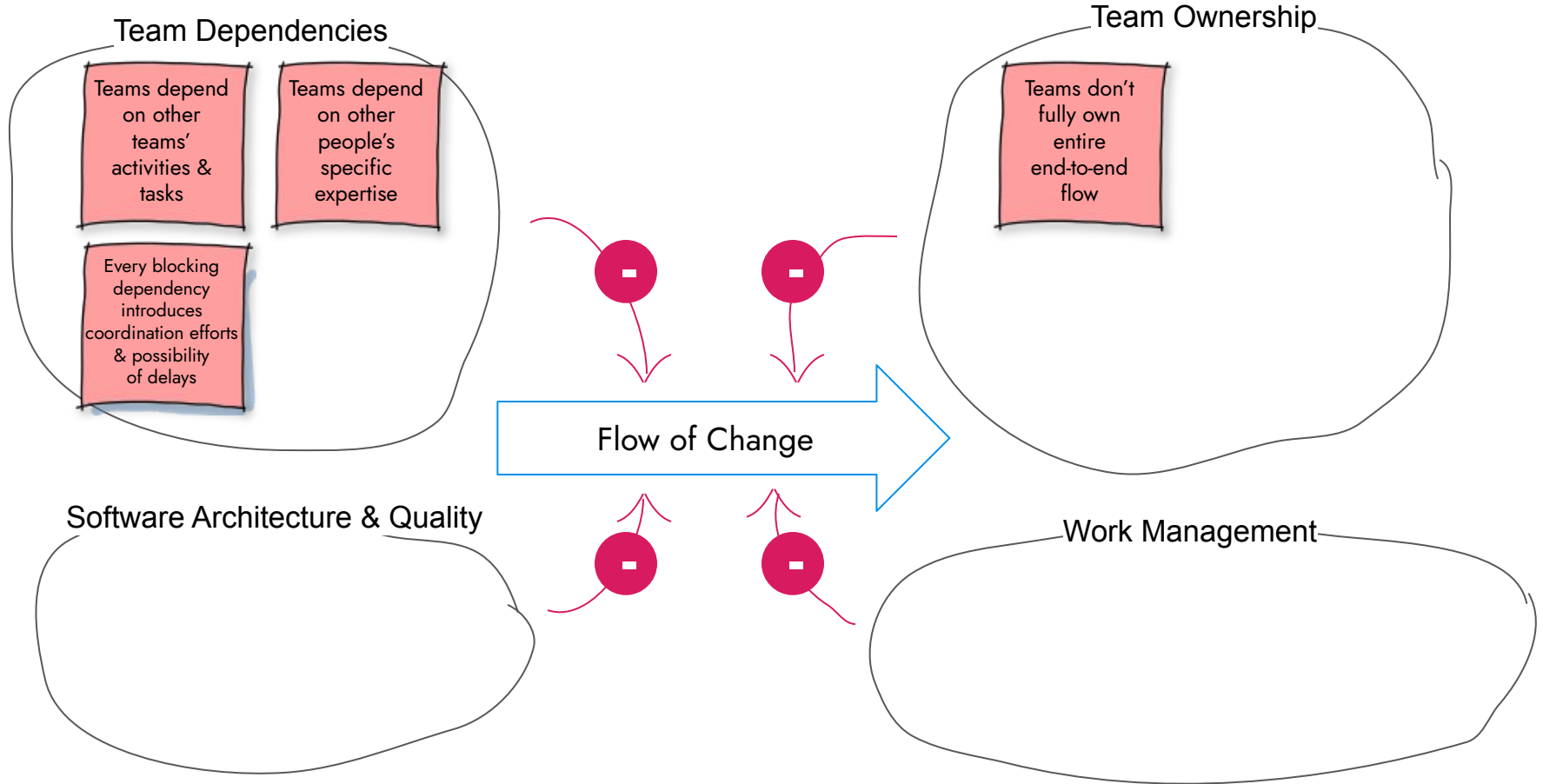
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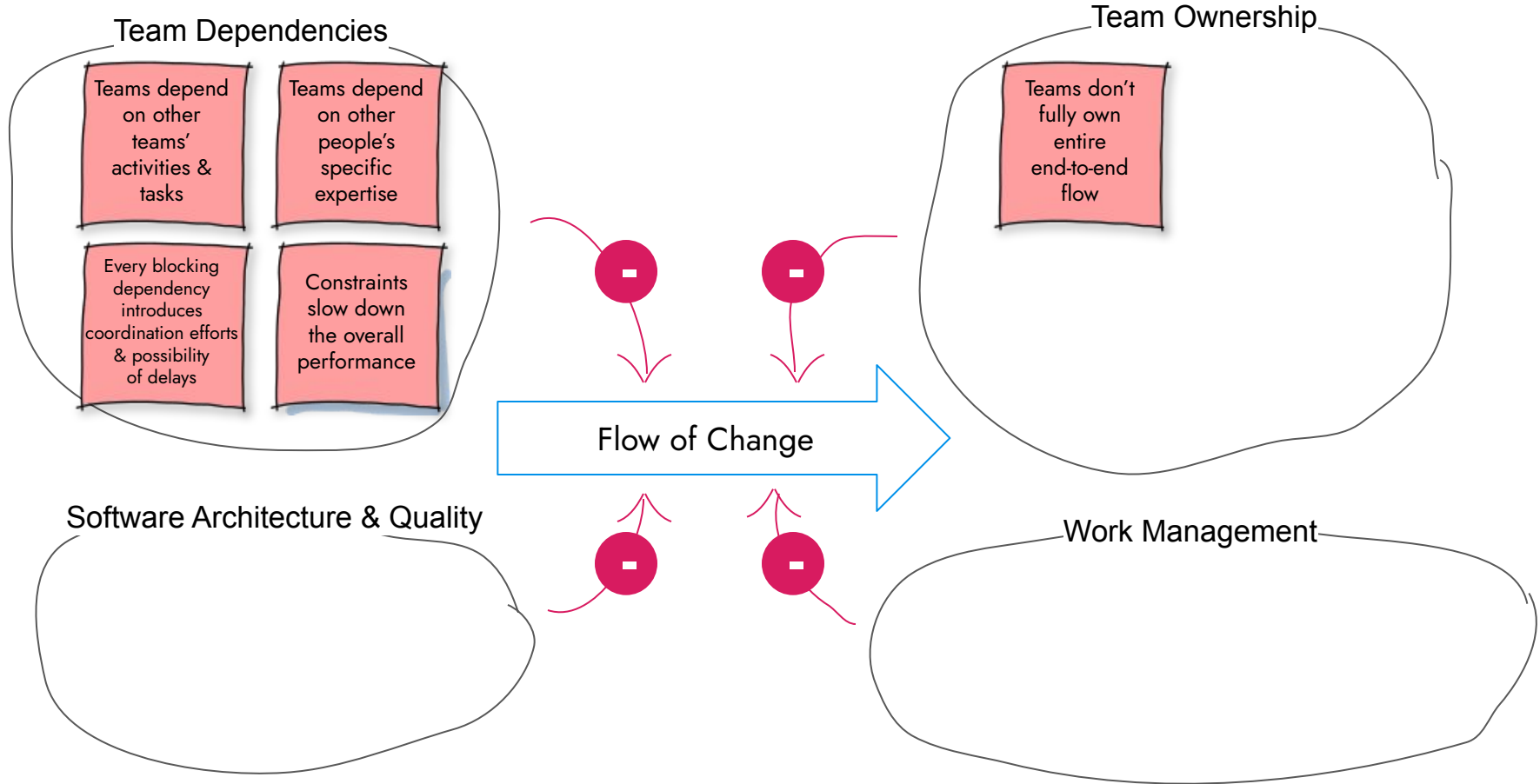
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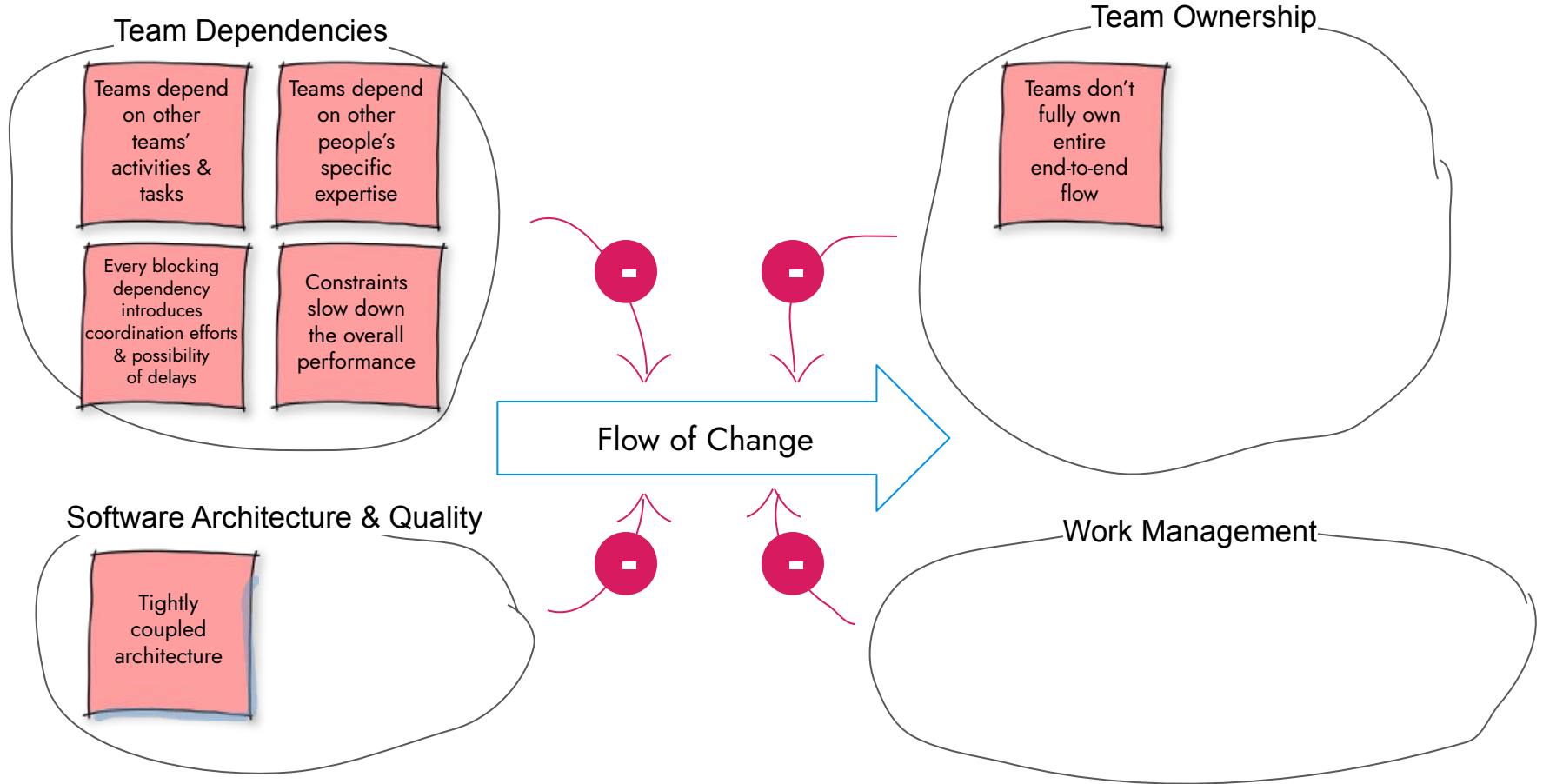


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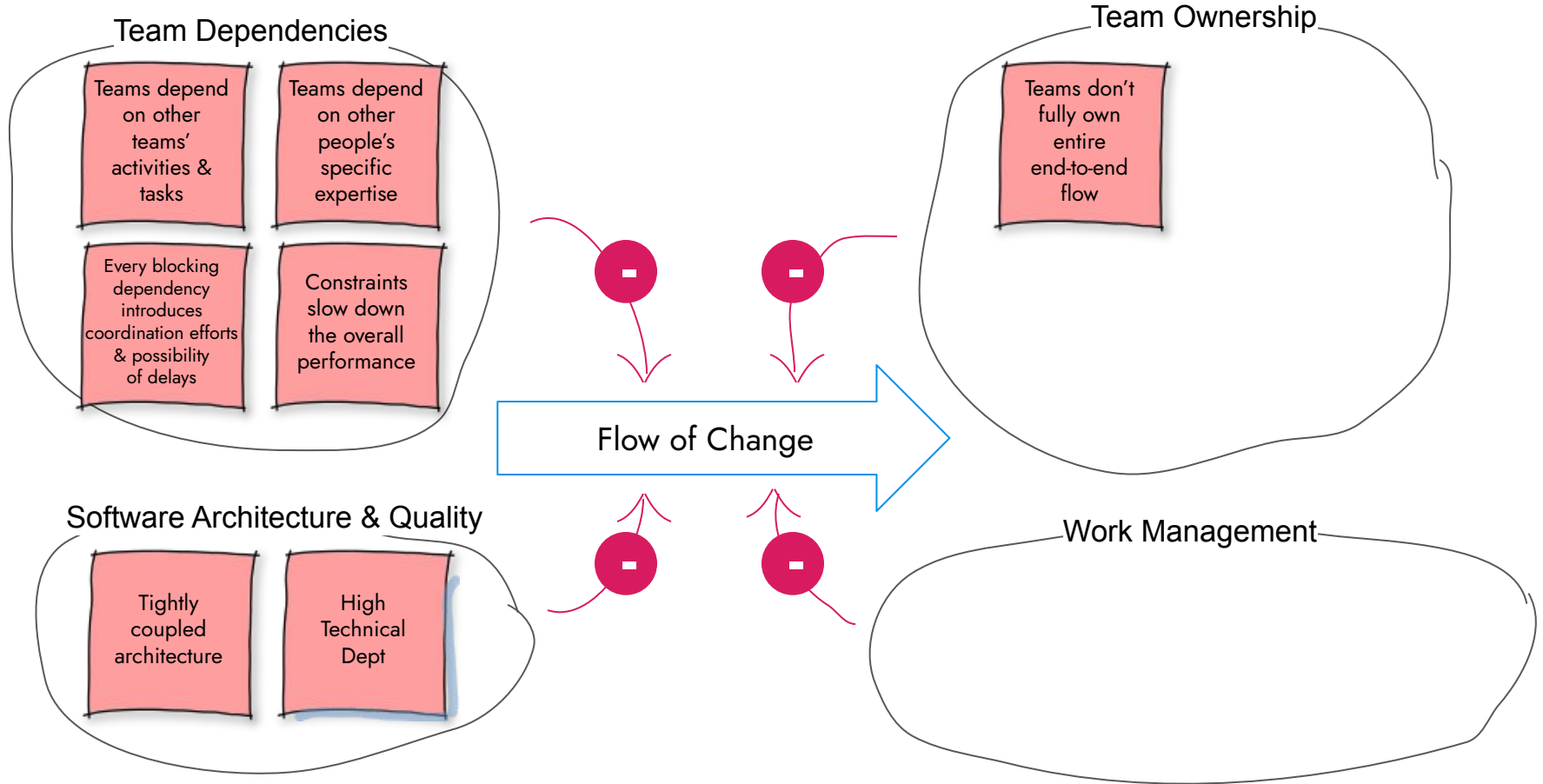




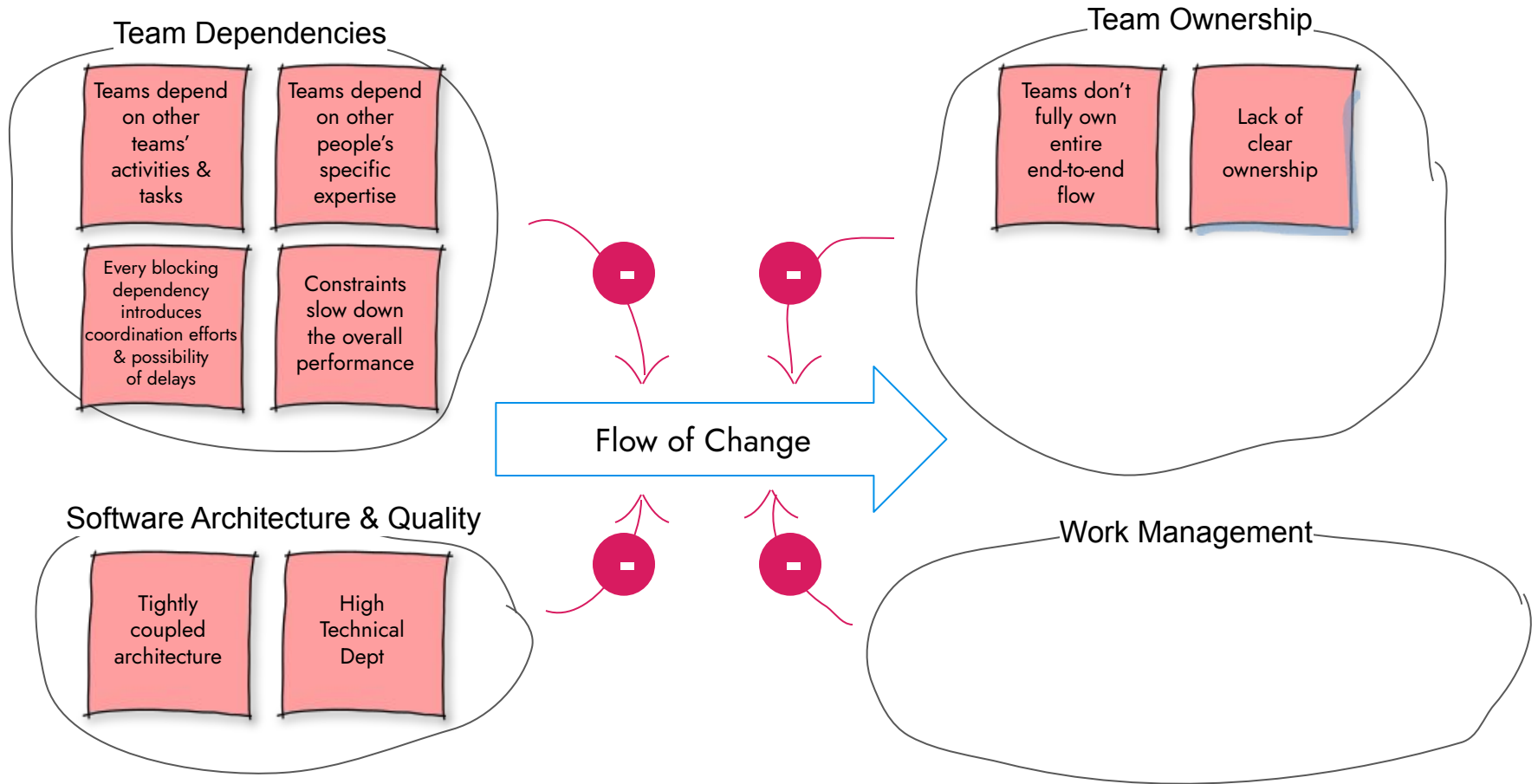
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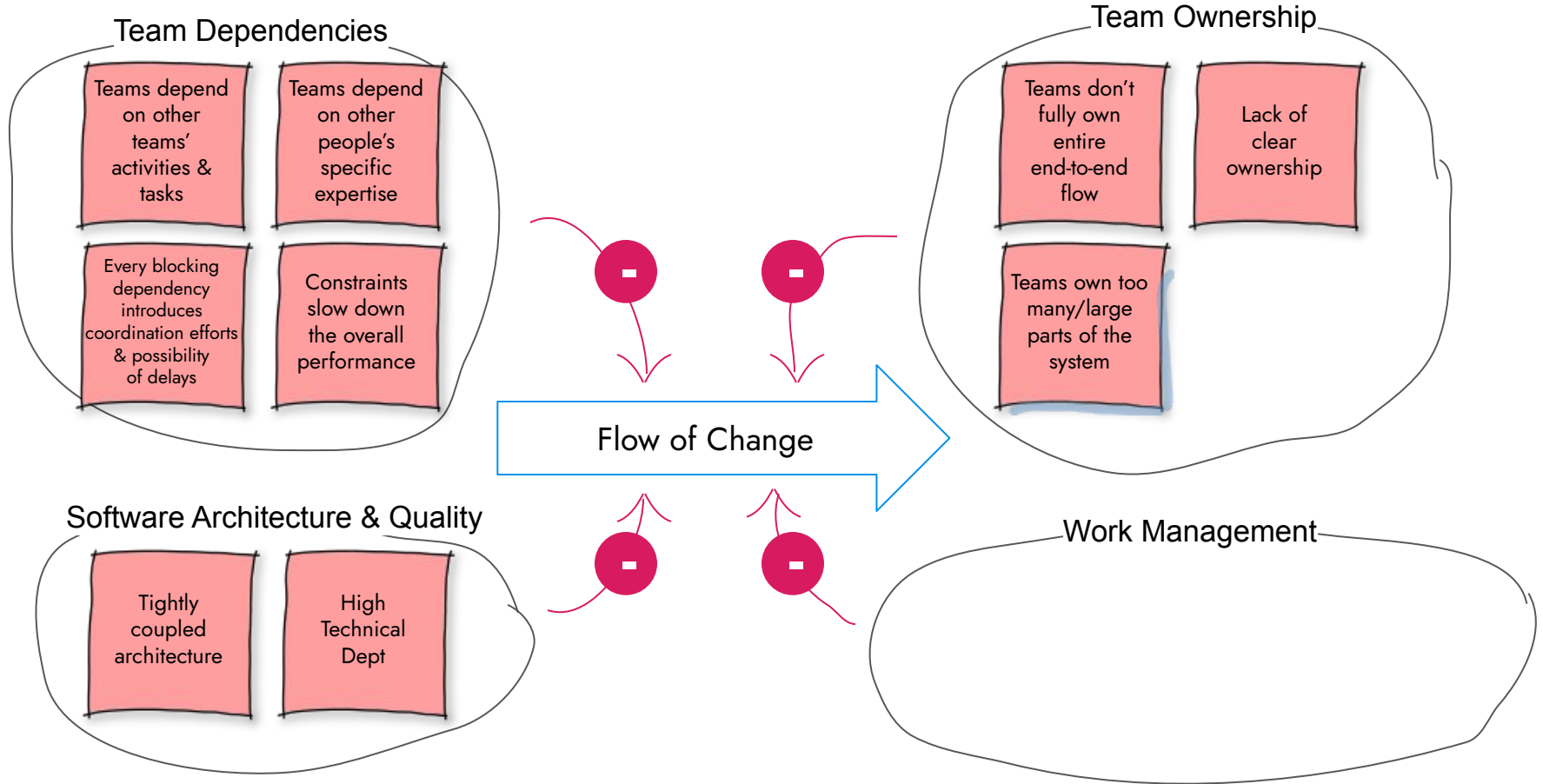
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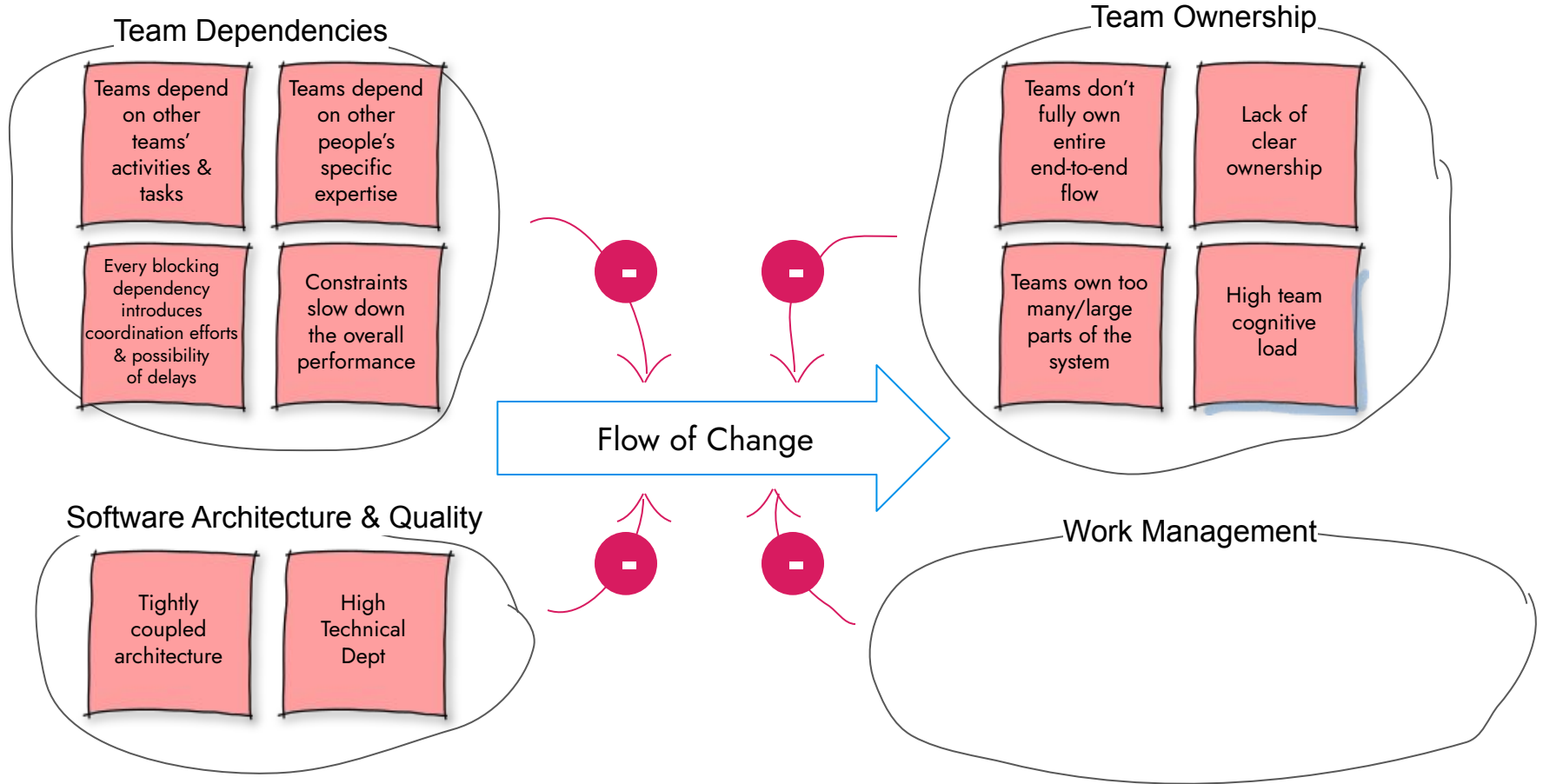
# What is Preventing Flow? (Examples)



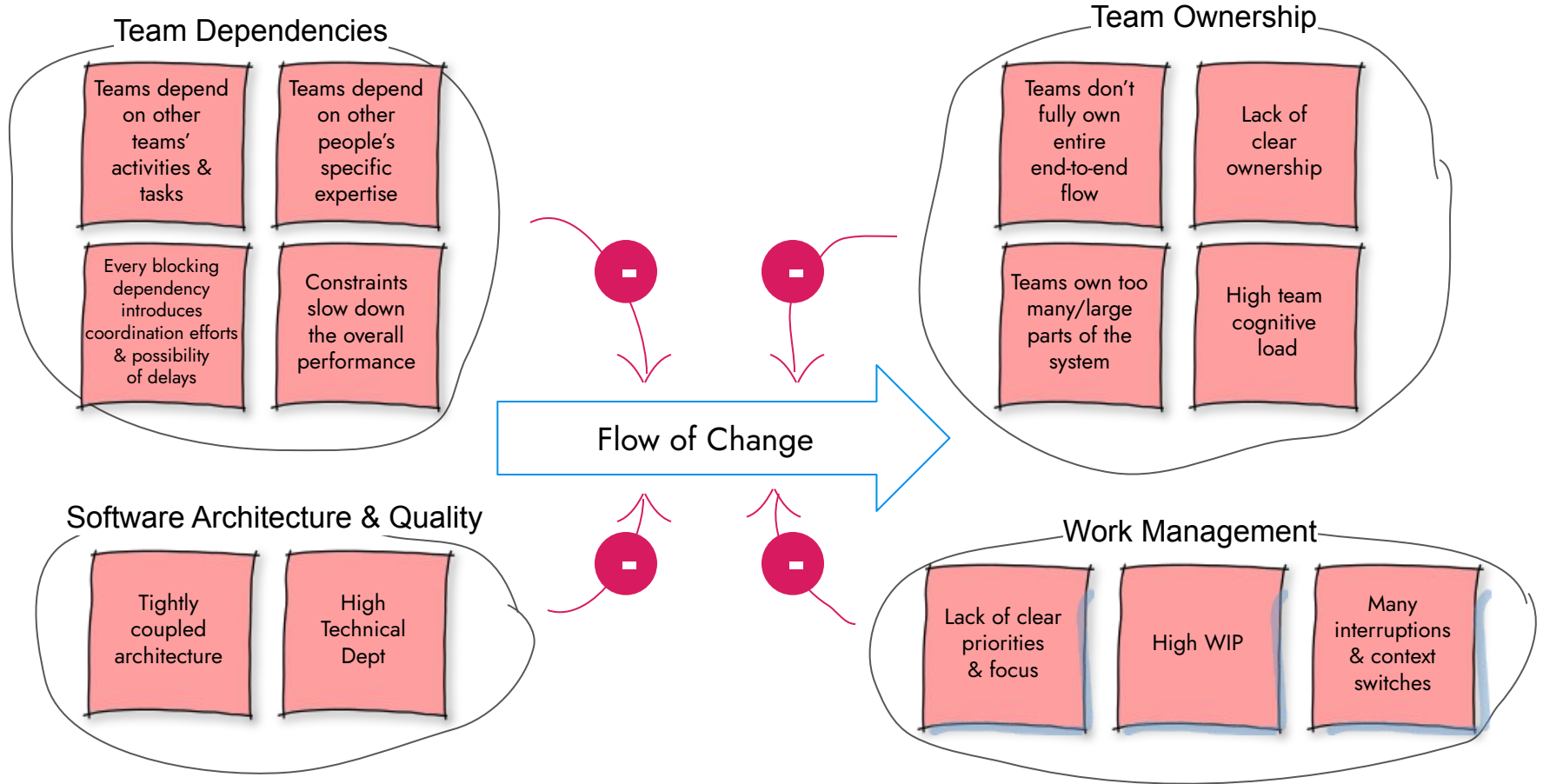
# What is Preventing Flow? (Examples)



# What is Preventing Flow? (Examples)



# What is Preventing Flow? (Examples)



# Mapping the Current Business Landscape



1

**Current Issues & Wishes of Stakeholders**  
What are the current issues (challenges)?  
What are the wishes of the stakeholders (they want)?  
What are their business goals?  
What are their current state (capabilities)?  
What are the current state (resources/capabilities)? (e.g., assets, resources, technology, capabilities, etc.)  
What are their current products? (e.g., services, services, products, etc.)

2

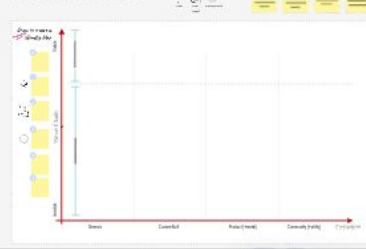
**Current Plan**  
What strategy will be in the future?  
What is the current plan?

Development stages, long-term plan  
What is the current plan?



3

**Current Business Landscape**  
Visualizing the business landscape with Viability Maps



5

**Viability in the Solution Space**  
Determining solution space (also based on current business landscape)



6

**Future Business Landscape & Business Canvas**  
Visualizing the future business landscape with Viability Maps



7

**Future Business Landscape & Business Canvas**  
Visualizing the future business landscape with Viability Maps

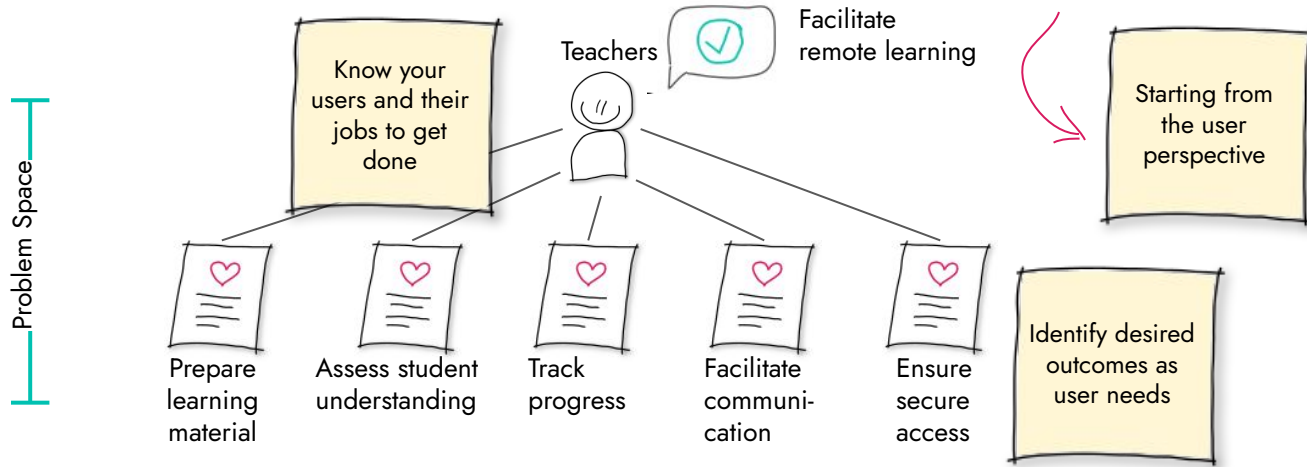


8

**Future Business Landscape & Business Canvas**  
Visualizing the future business landscape with Viability Maps



# Mapping the Current Business Landscape



"People buy products and services to get a job done."

Clayton Christensen

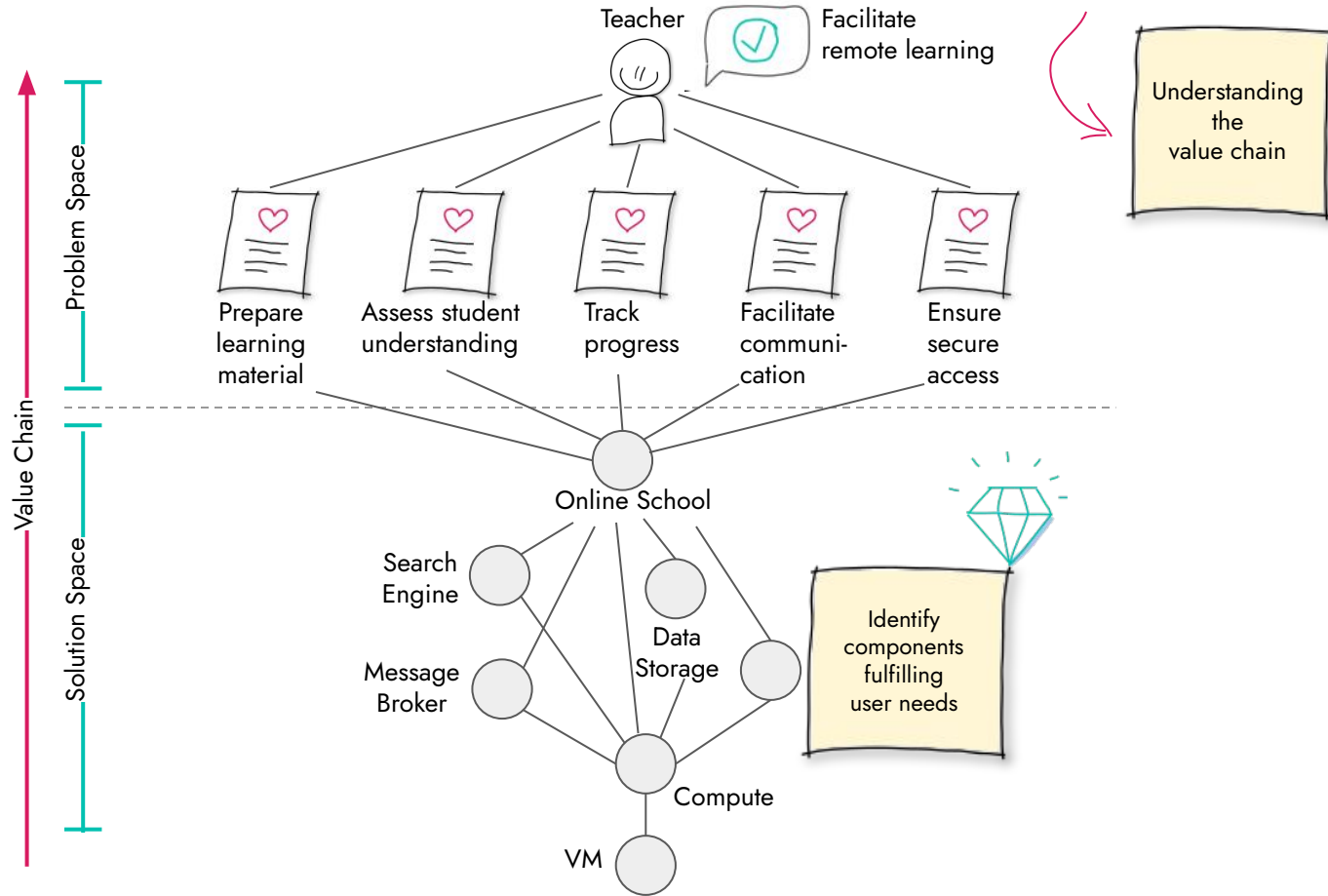
**WARDLEY MAPS**  
TOPOGRAPHICAL  
INTELLIGENCE IN  
BUSINESS



**SIMON WARDLEY**



# Mapping the Current Business Landscape



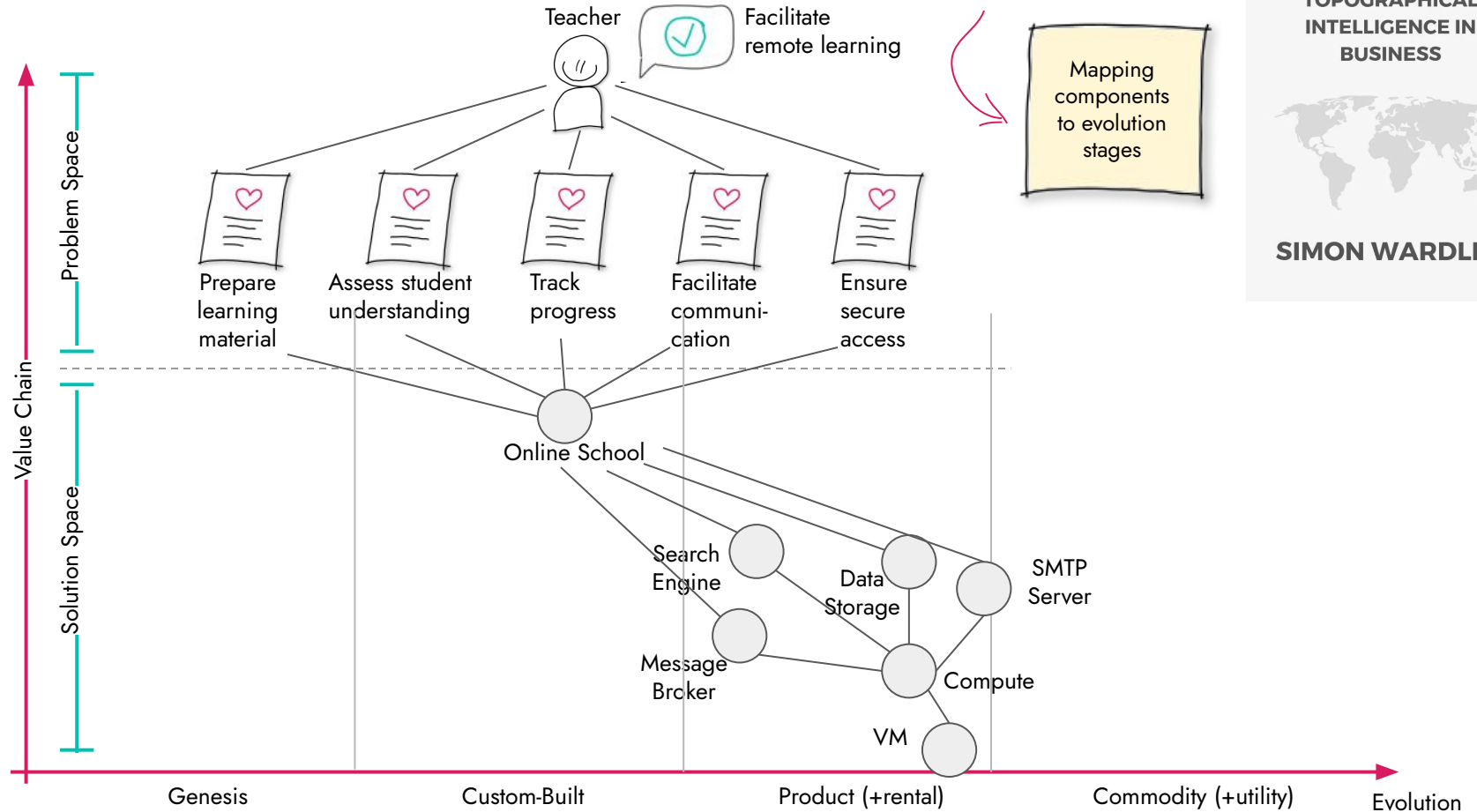
**WARDLEY MAPS**

TOPOGRAPHICAL  
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**SIMON WARDLEY**

# Mapping the Current Business Landscape



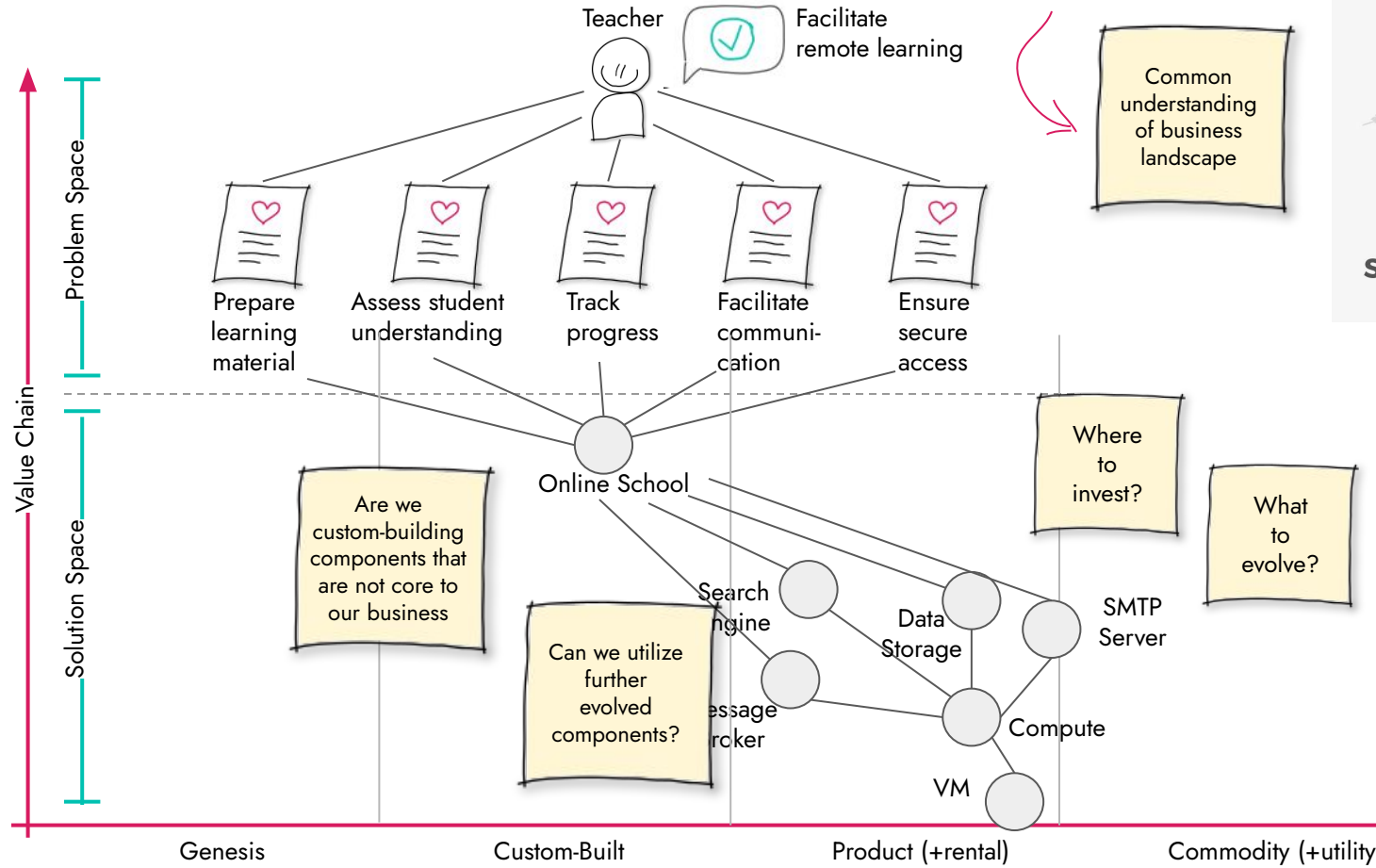
**WARDLEY MAPS**

TOPOGRAPHICAL  
INTELLIGENCE IN  
BUSINESS



**SIMON WARDLEY**

# Mapping the Current Business Landscape



**WARDLEY MAPS**

TOPOGRAPHICAL  
INTELLIGENCE IN  
BUSINESS



**SIMON WARDLEY**

# Categorizing the Problem Space



1

**Current Issues & Wishes of Working**  
What are the current issues of working?  
What are the wishes of the customer of the product?  
What are the current issues of the customer of the product?  
What are the current issues of the customer of the product?  
What are the current issues of the customer of the product?

2

**Current Plan**  
What are the current plans of the customer of the product?  
What are the current plans of the customer of the product?

**Development stages, progress, the flow**  
What are the current plans of the customer of the product?  
What are the current plans of the customer of the product?



3

**Current Business Landscape**  
What are the current business landscapes of the customer of the product?

**Development stages, progress, the flow**  
What are the current business landscapes of the customer of the product?



5

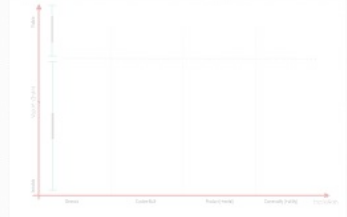
**Wishability in the Solution Space**  
What are the current business landscapes of the customer of the product?



4

**Future Business Landscape & Business Context**  
What are the current business landscapes of the customer of the product?

**Development stages, progress, the flow**  
What are the current business landscapes of the customer of the product?



7

**Future Business Landscape & Business Context**  
What are the current business landscapes of the customer of the product?

**Development stages, progress, the flow**  
What are the current business landscapes of the customer of the product?



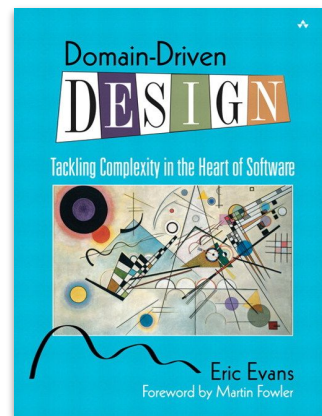
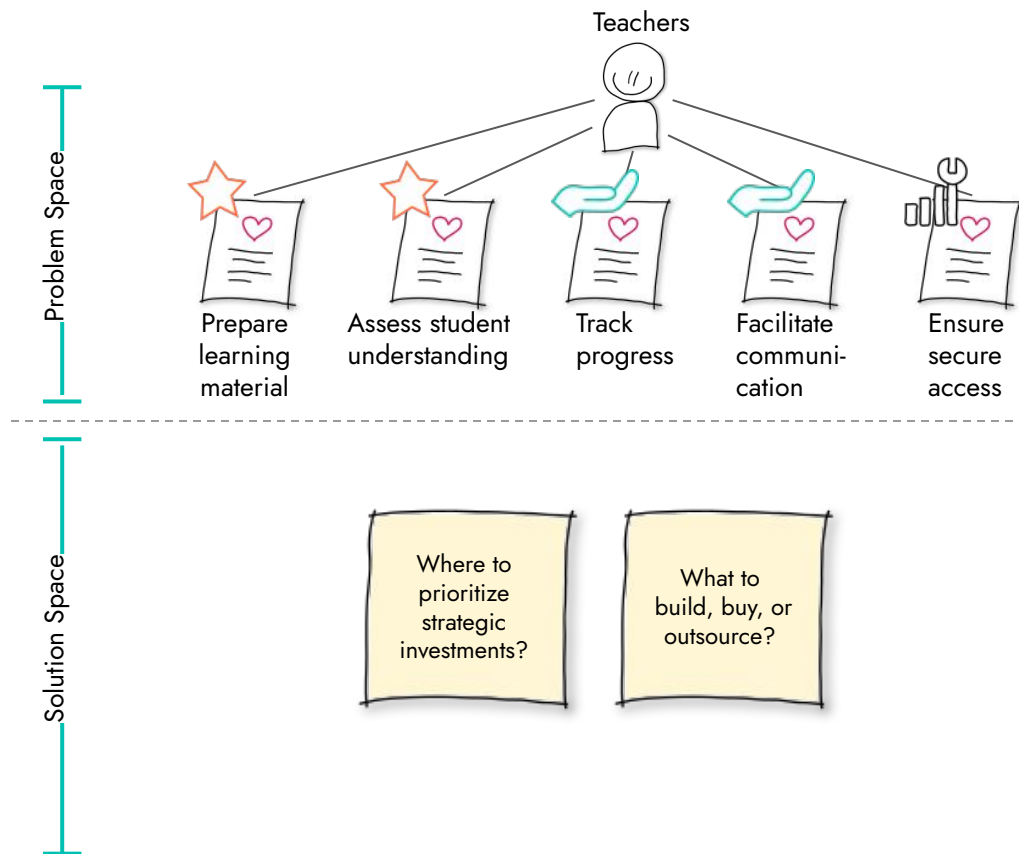
8




**Future Business Landscape & Business Context**  
What are the current business landscapes of the customer of the product?

**Development stages, progress, the flow**  
What are the current business landscapes of the customer of the product?



# Categorizing the Problem Space



-  Core Domain
-  Supporting Subdomain
-  Generic Subdomain

## Modularizing the Solution Space

**START**  
AS-IS

1

2

1000

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Drawing a Monthly Map

5

www.elsevier.com/locate/jmb

### Decomposing solution space into bounded contexts, design decisions

*It's all in the details*

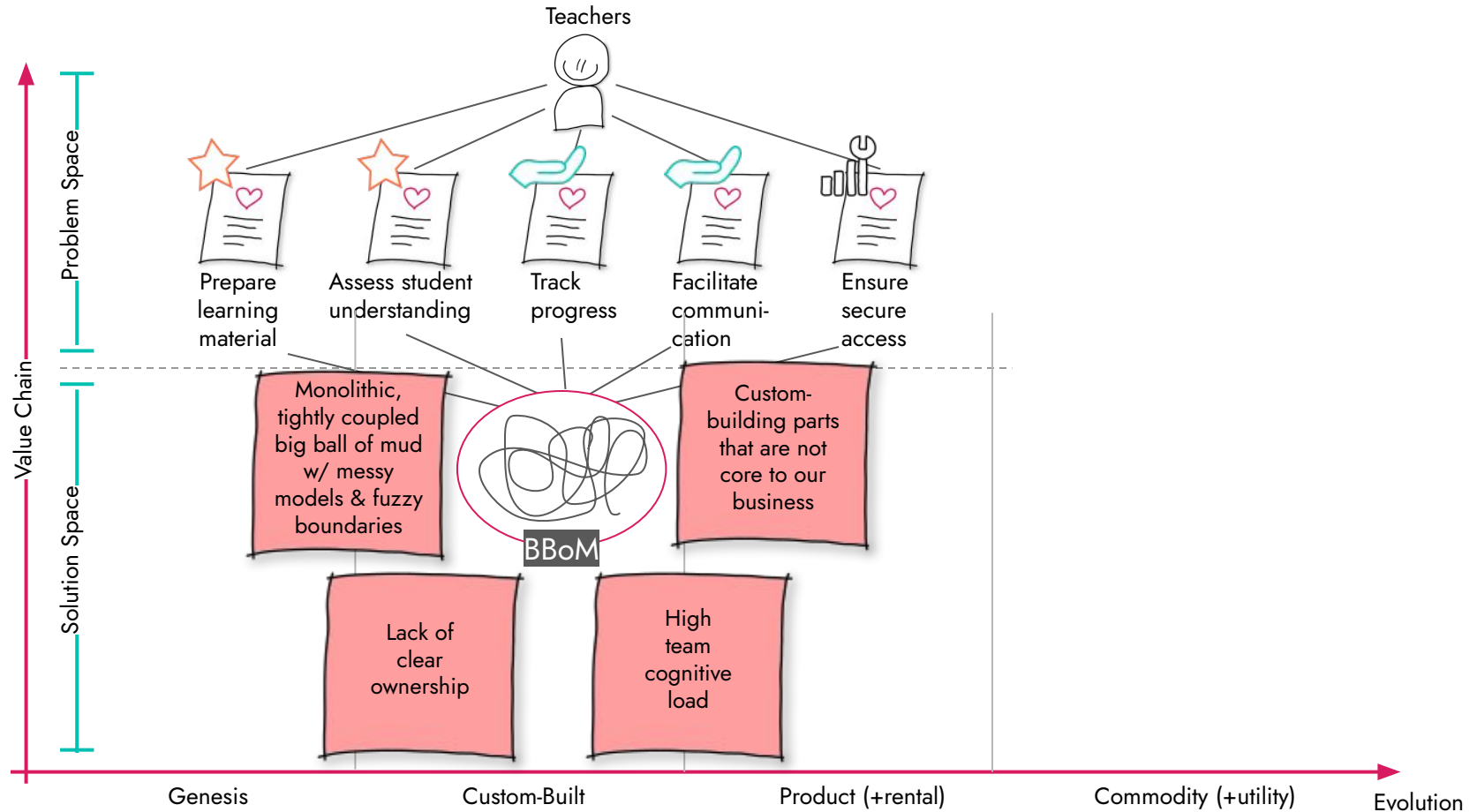
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Future Business Leaders of America® Awarded Certificate

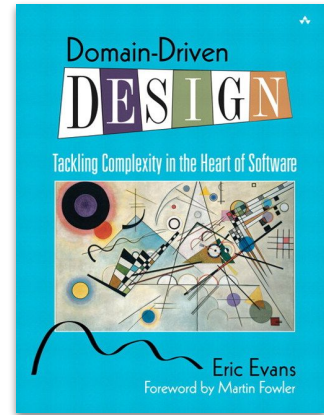
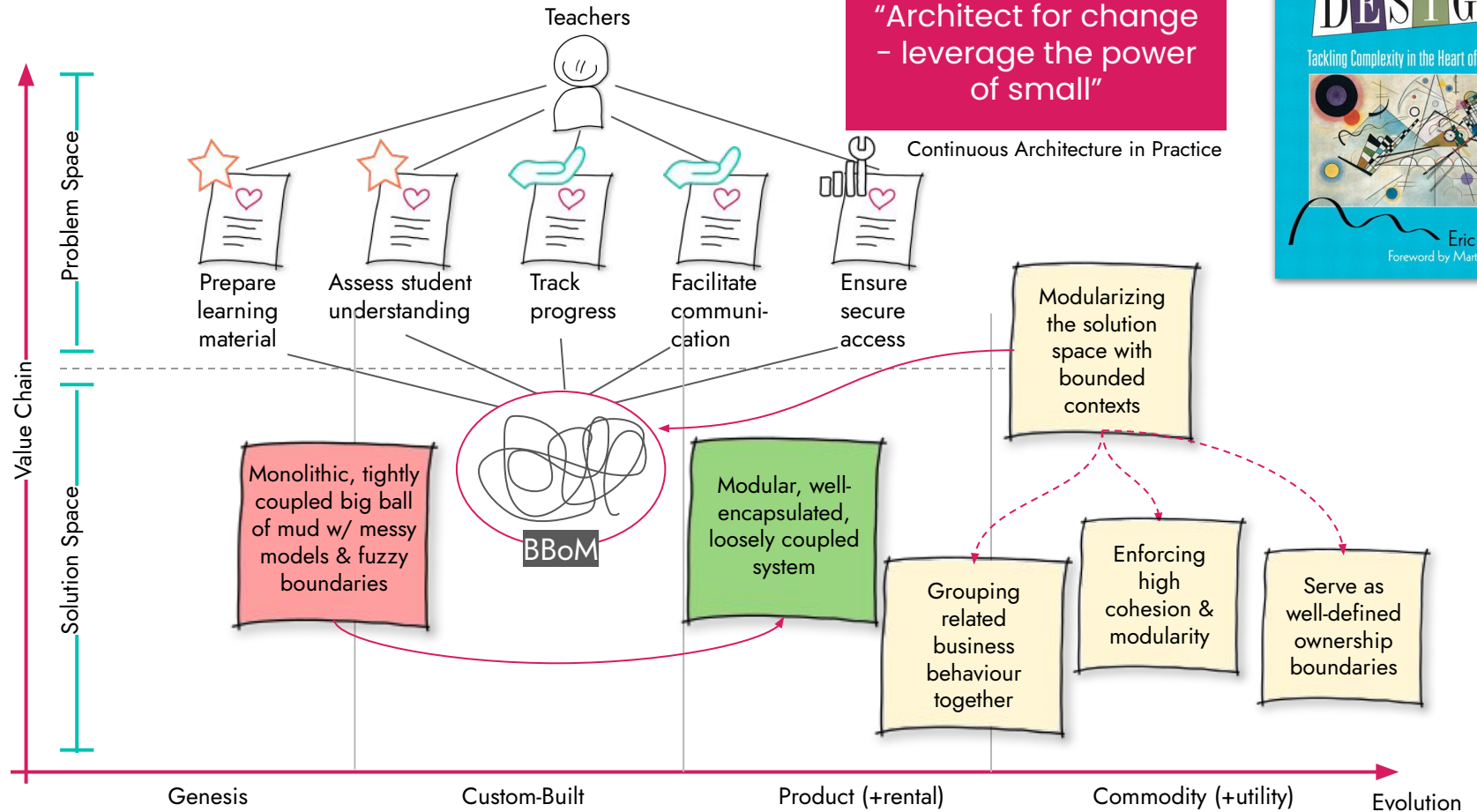
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# Modularizing the Solution Space

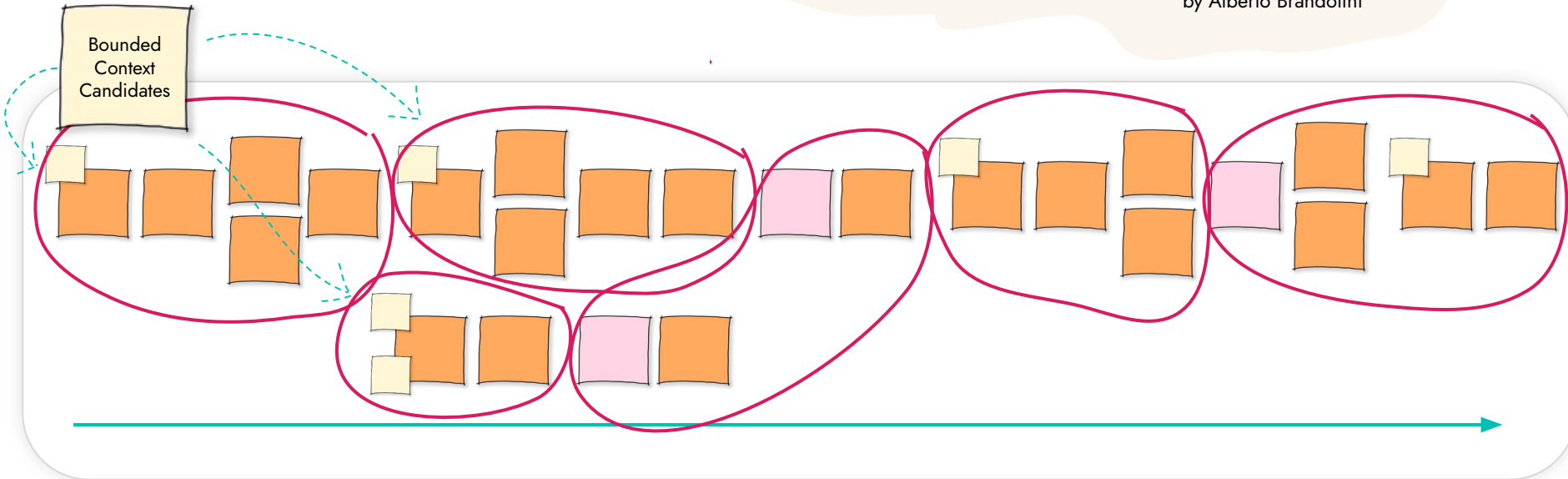
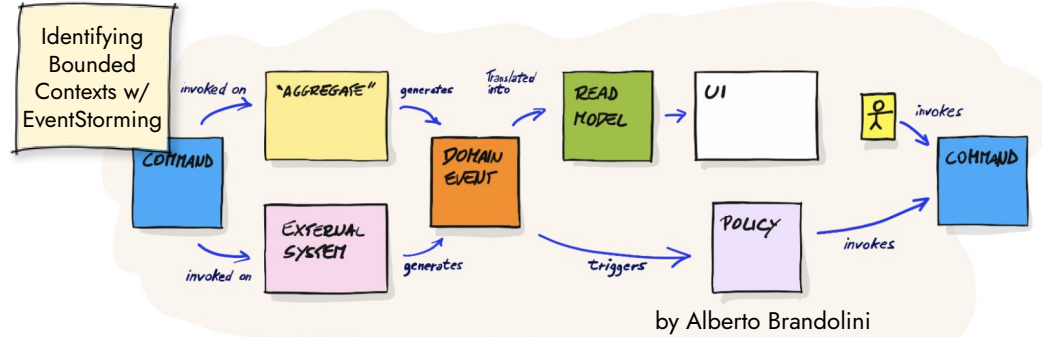
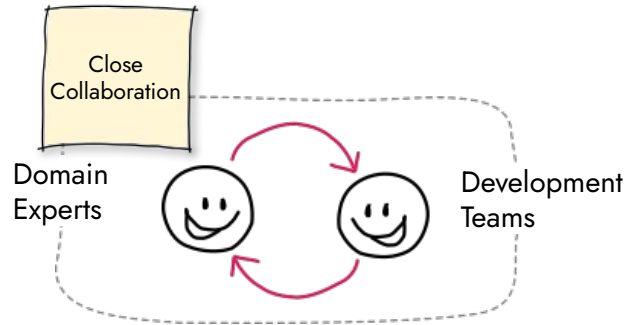


# Modularizing the Solution Space





# Modularizing the Solution Space



# Envisioning the Future Landscape

## START AS-IS

1

**Current Issues & Wishes of Working**  
What are the current issues (challenges)?  
What are wishes of the customer (they want)?  
What are their business goals?  
What are their current main (dis)advantages?  
What are the current main (dis)advantages (PPE, design issues, usability, usability, maintainability, etc.)?  
What are their current products? (e.g., features, services, planning techniques, etc.)

2

**Current Plan**  
What really will be in the future?  
What is the current plan?

Development stages, long-term plan  
What is the current plan?

Flow of Changes / Value

3

**Current Business Landscape**  
Visualizing the current landscape with Visionary Maps

Open to innovation  
What is the current landscape?

What is the current landscape?

4

**Comparing the Problem Space**  
Problem (In)consistency Space

Problem (In)consistency Space

What is the current landscape?

## TO-BE

5

**Visualizing the Solution Space**  
Decomposing solution space into bounded solution (change elements)

What is the current landscape?

6

**Future Business Landscape & Bounded Contexts**  
Visualizing the future business landscape with Visionary Maps

What is the current landscape?

7

**Future Space Delineating Boundaries**  
Visualizing future space boundaries

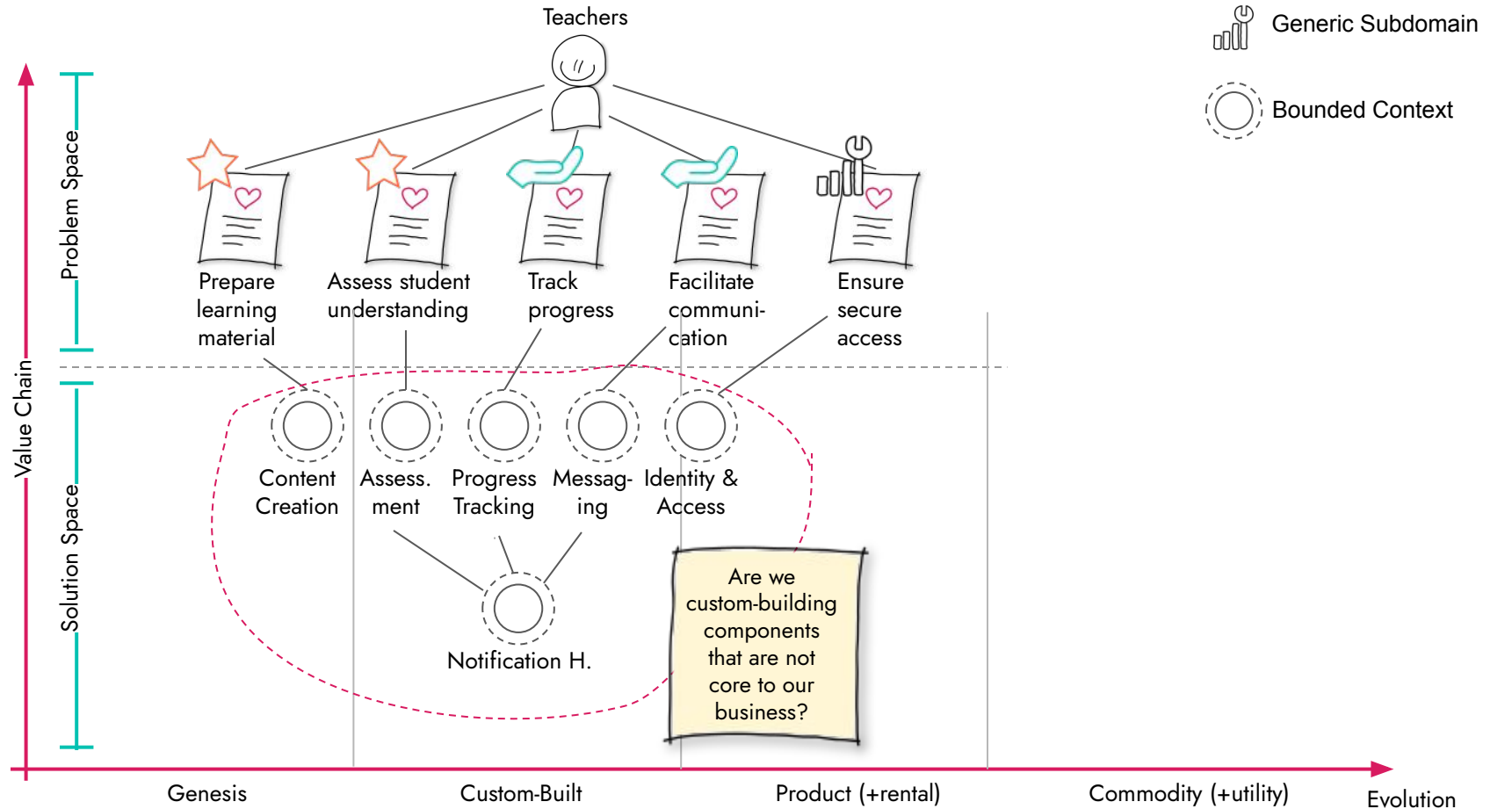
What is the current landscape?

8

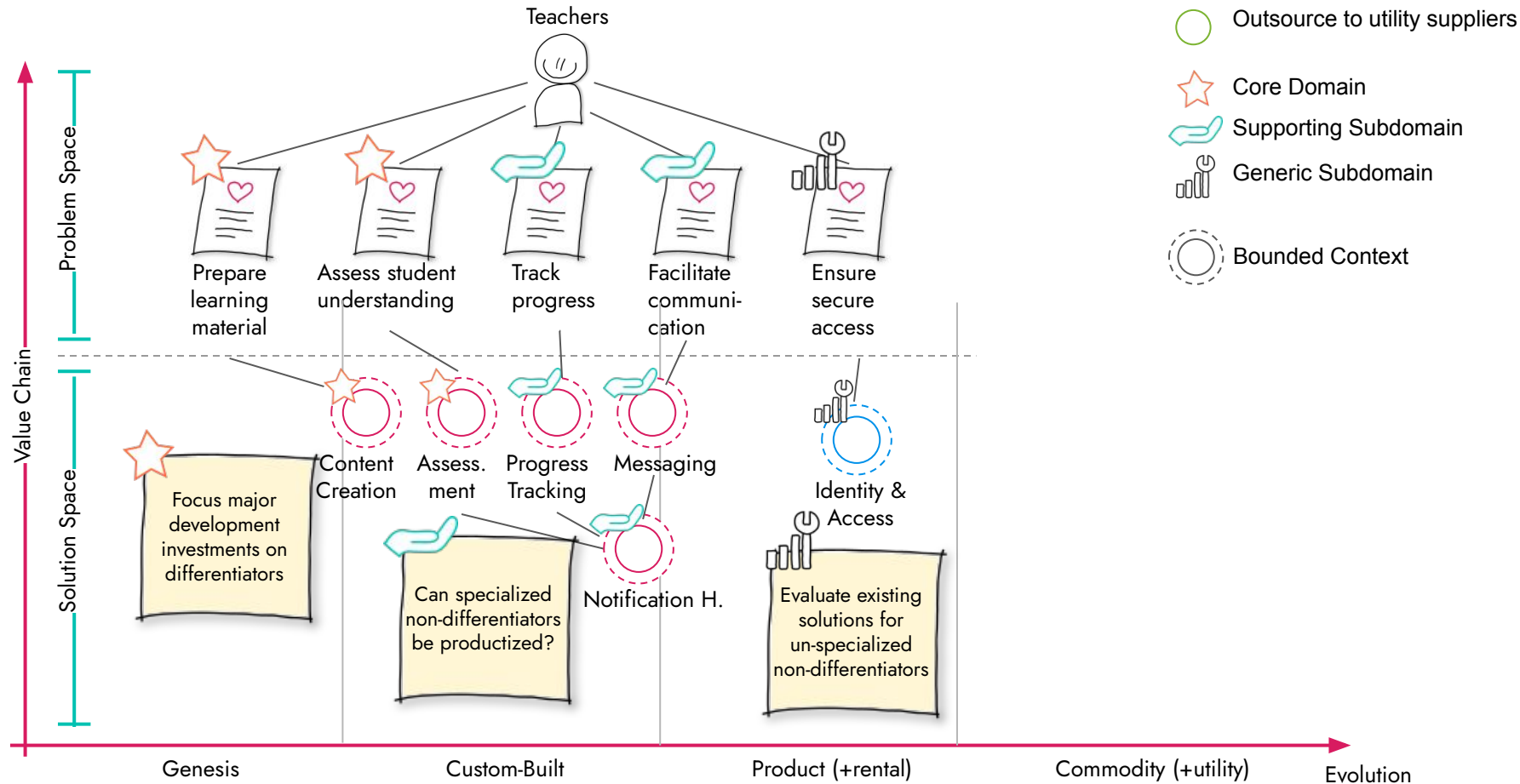
**Future Space Delineating Boundaries**  
Visualizing future space boundaries

What is the current landscape?

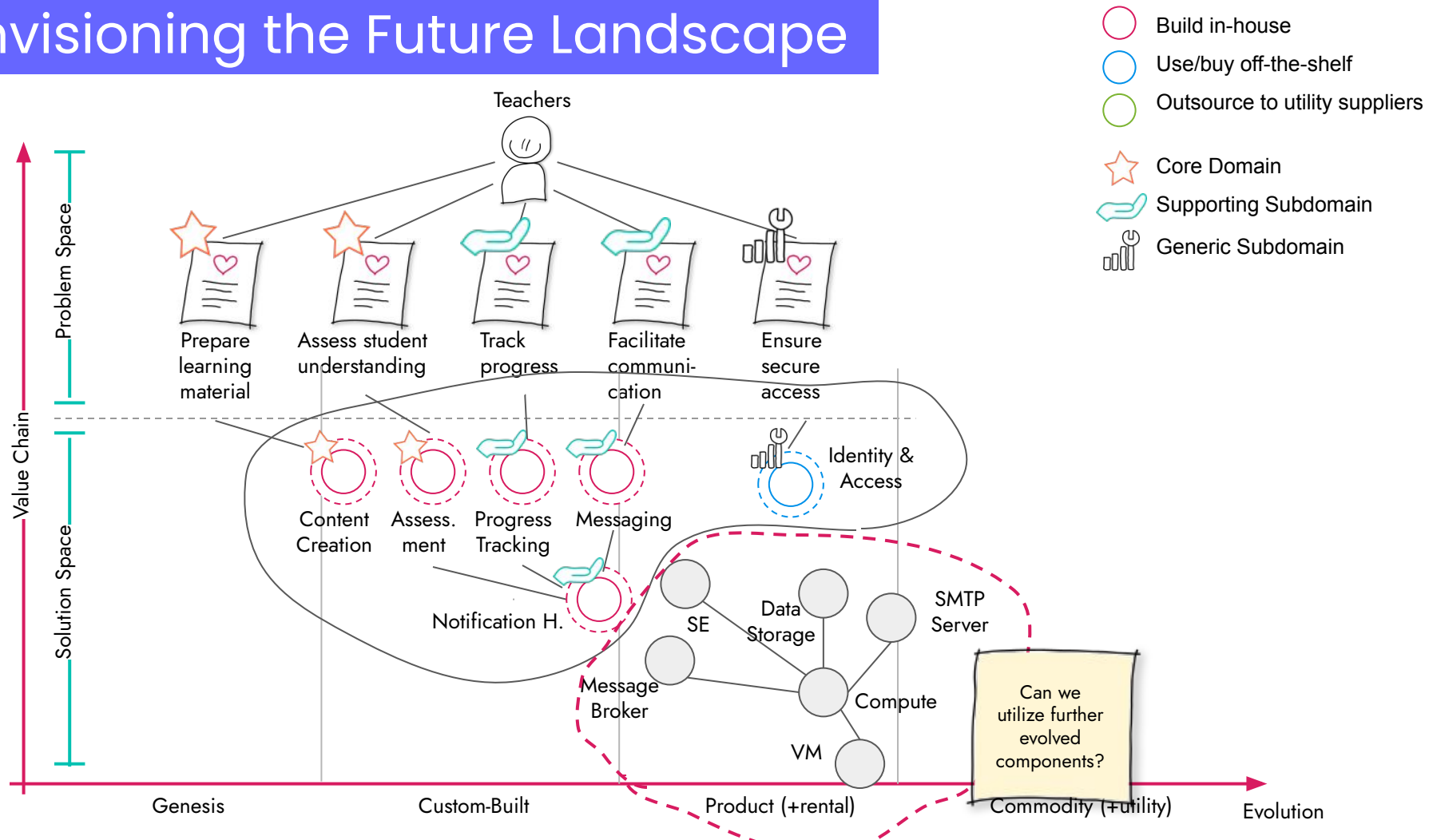
# Envisioning the Future Landscape



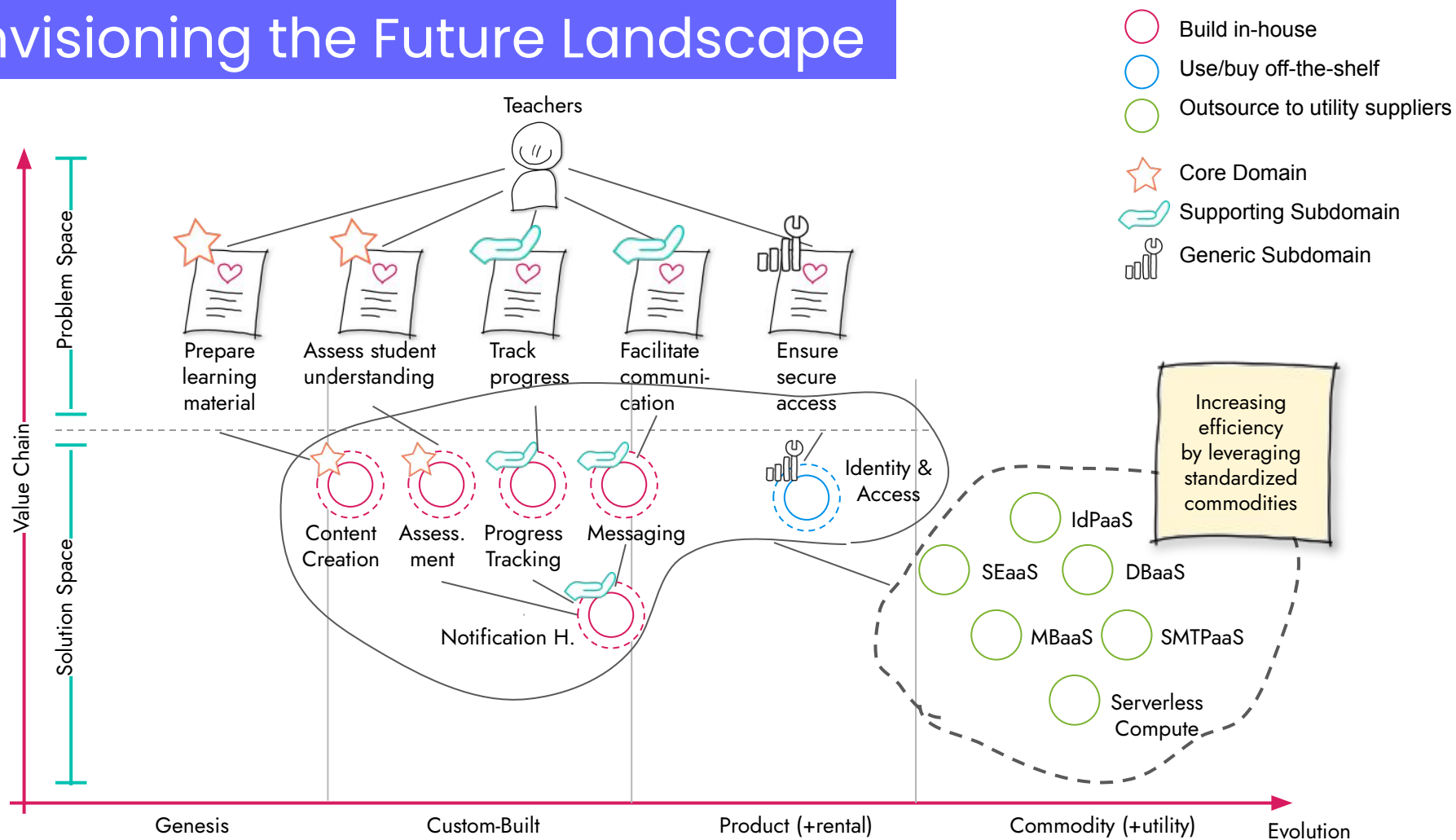
# Envisioning the Future Landscape



# Envisioning the Future Landscape



# Envisioning the Future Landscape



# Aligning Teams & Evolving Interactions

## START AS-IS

1

### Current Teams & Ways of Working

What are the current teams (structure)?  
What are the roles of the members of the team?  
What are the current ways of working?  
What are the current team dynamics?  
What are the current team interaction models (e.g., team norms, meeting frequency, coordination meetings, etc.)?  
What are the current team processes (e.g., decision making, planning, etc.)?

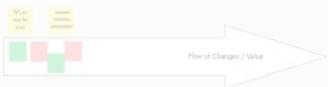
2

### Current Plan

What are the current plans?  
What are the current goals?

Current plan (e.g., project plan)

Current plan (e.g., project plan)



3

### Current Business Landscape

Visualizing the business landscape with the current plan

Current plan (e.g., project plan)

Current plan (e.g., project plan)



## TO-BE

5

### Visualizing the Business Landscape

Visualizing the business landscape with the current plan



6

### Future Business Landscape & Business Goals

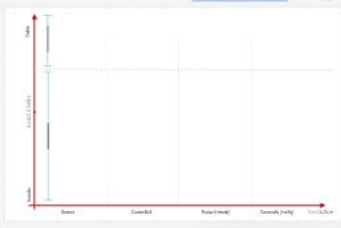
Visualizing the business landscape with the current plan



7

### Future Team Composition & Business Goals

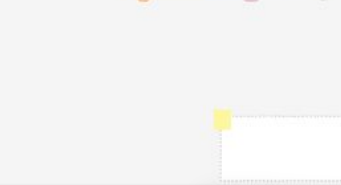
Visualizing the business landscape with the current plan



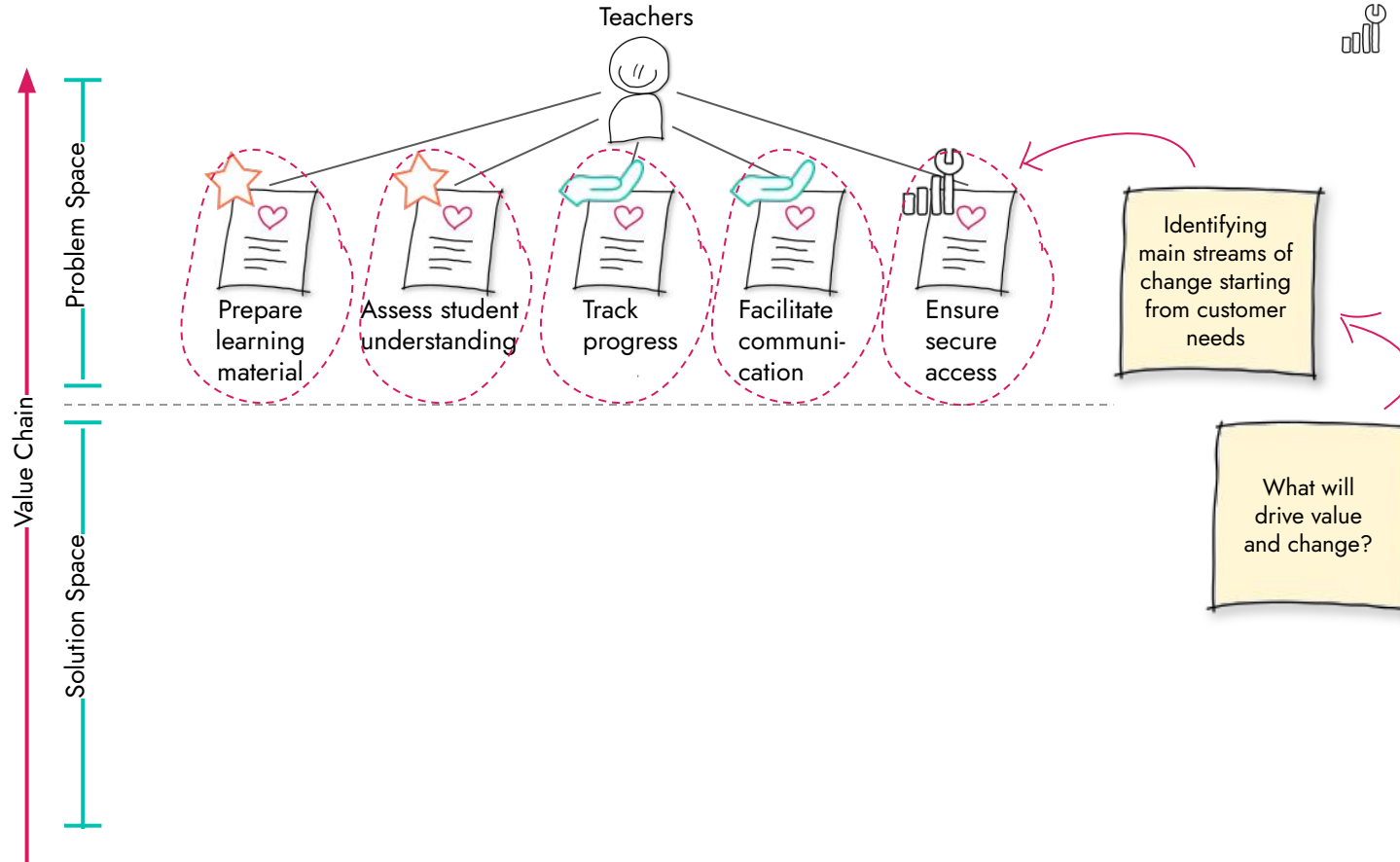
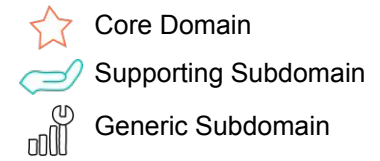
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### Future Team Composition & Business Goals

Visualizing the business landscape with the current plan

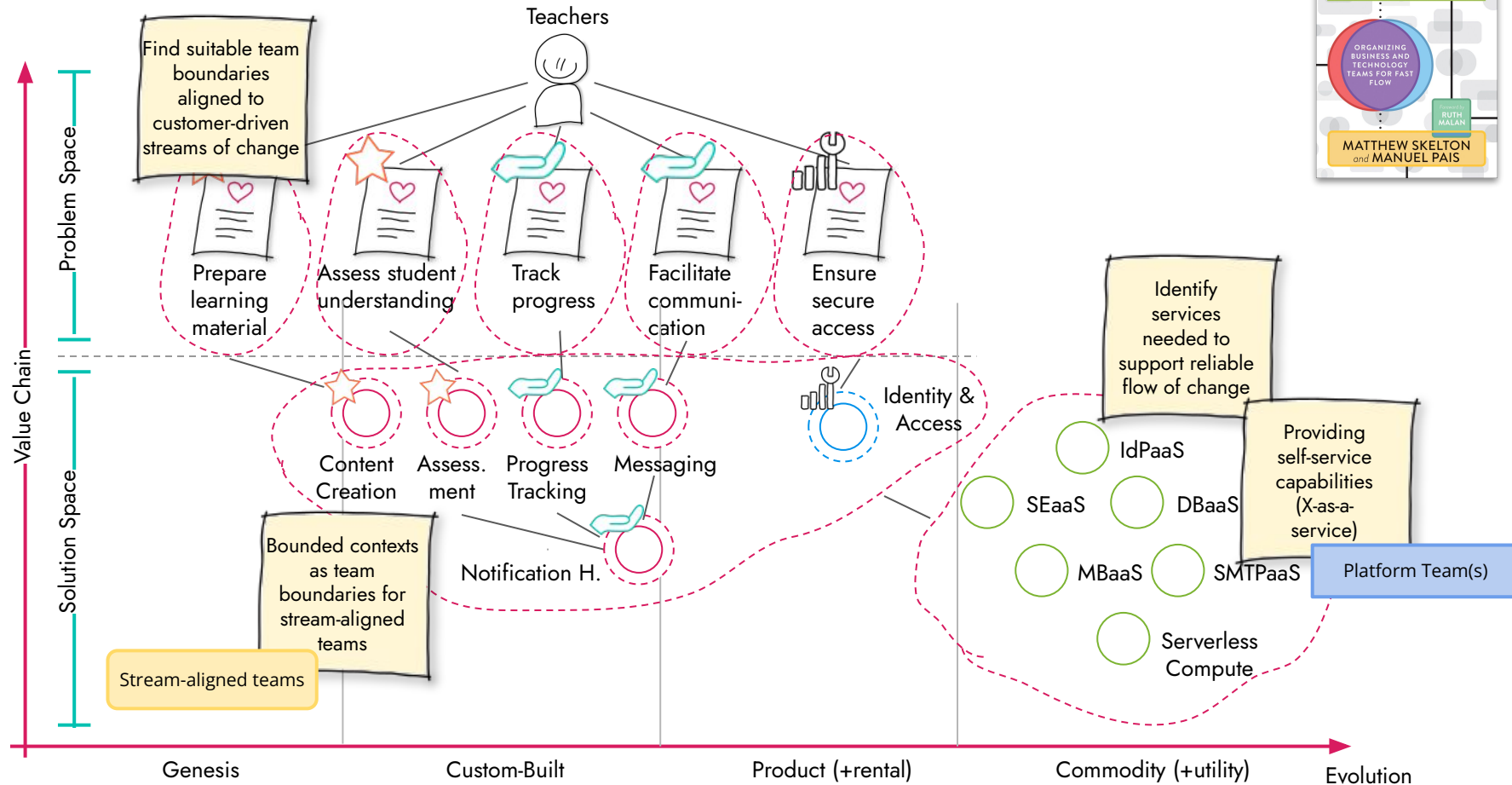


# Aligning Teams & Evolving Interactions

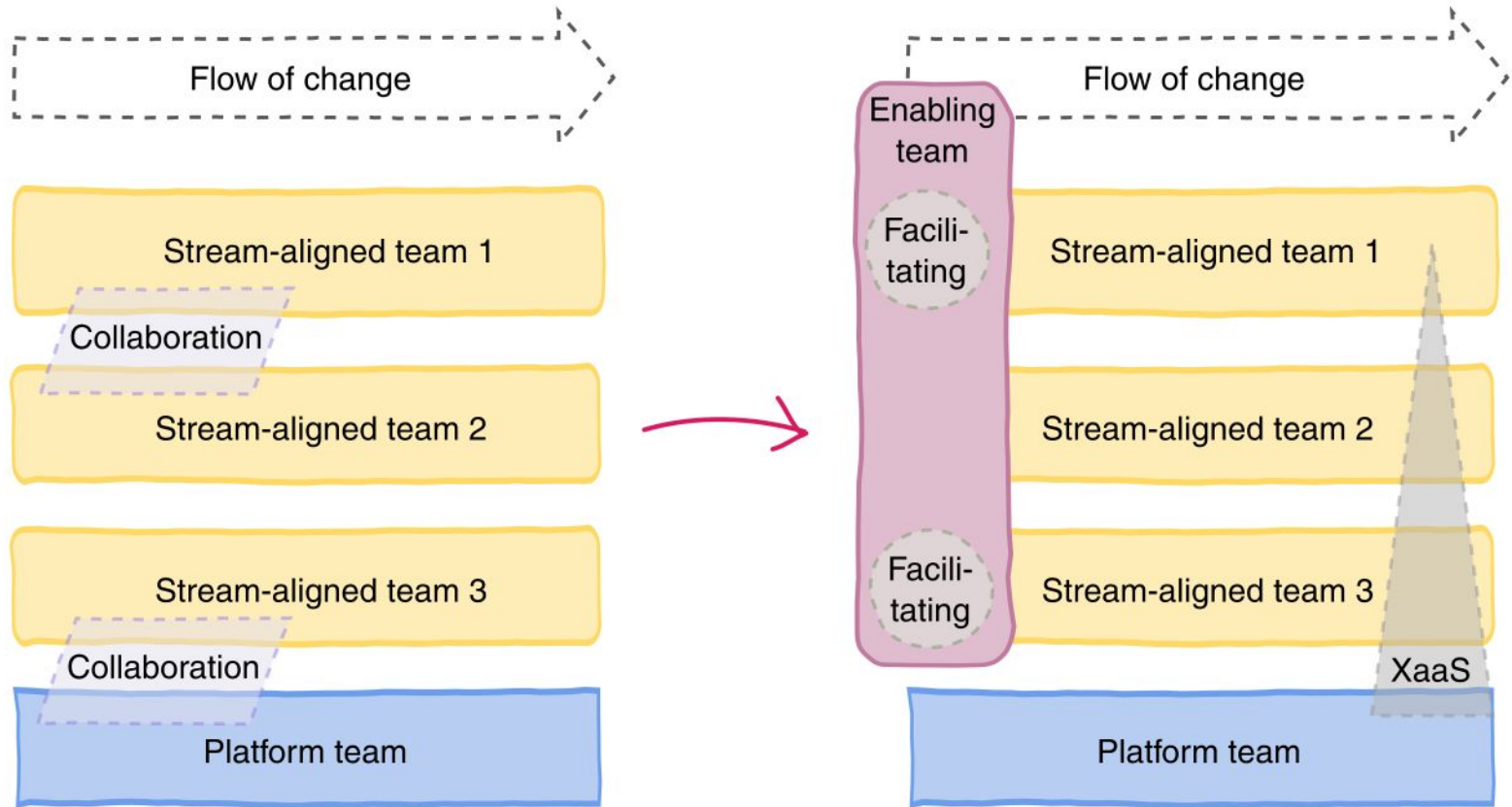




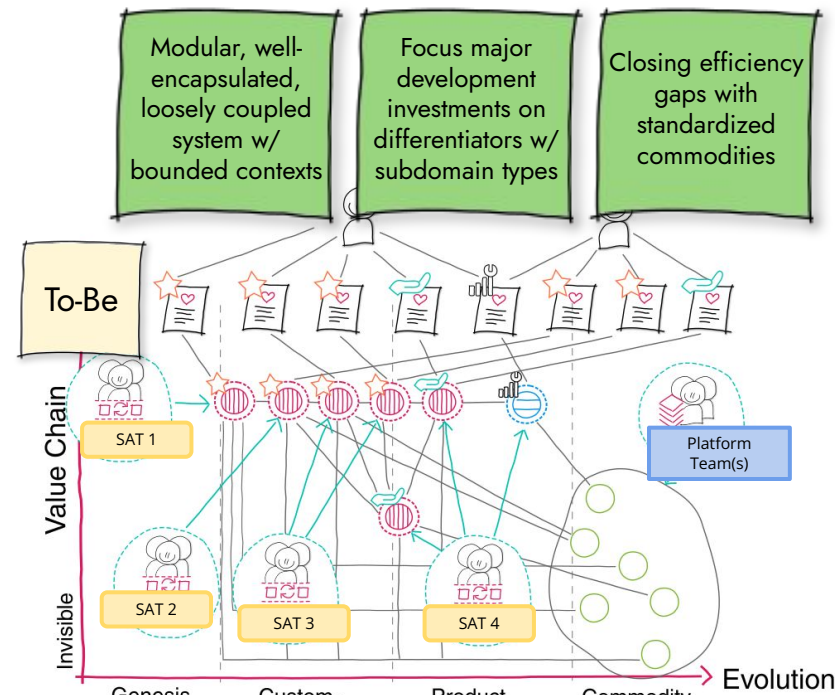
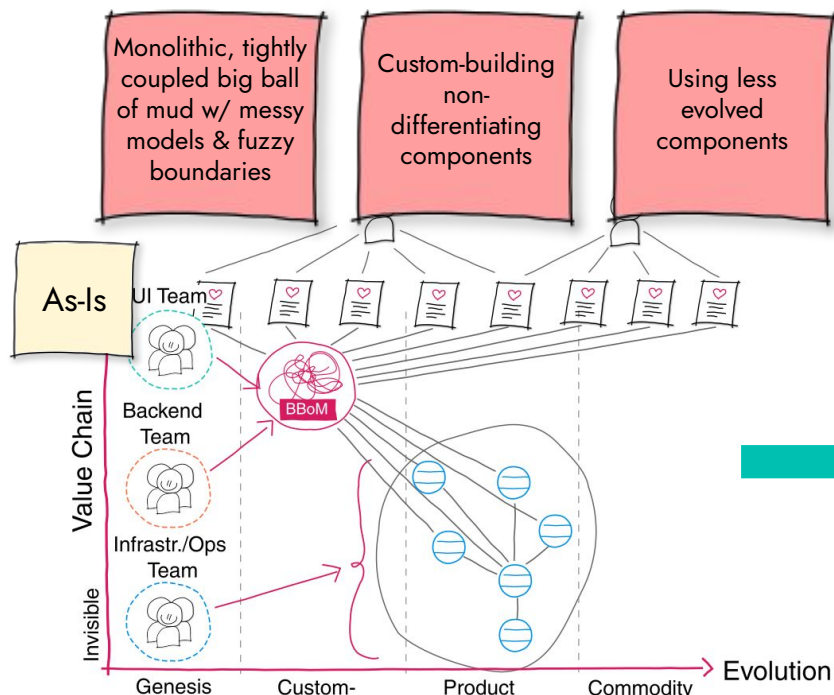
# Aligning Teams & Evolving Interactions



# Evolving Team Interactions



# Unlocking Blockers to Flow



Lack of clear ownership

Teams own too many/too large parts of the system

Teams depend on other teams' activities & tasks (handover)

Teams wait for other people w/ specific expertise to do something

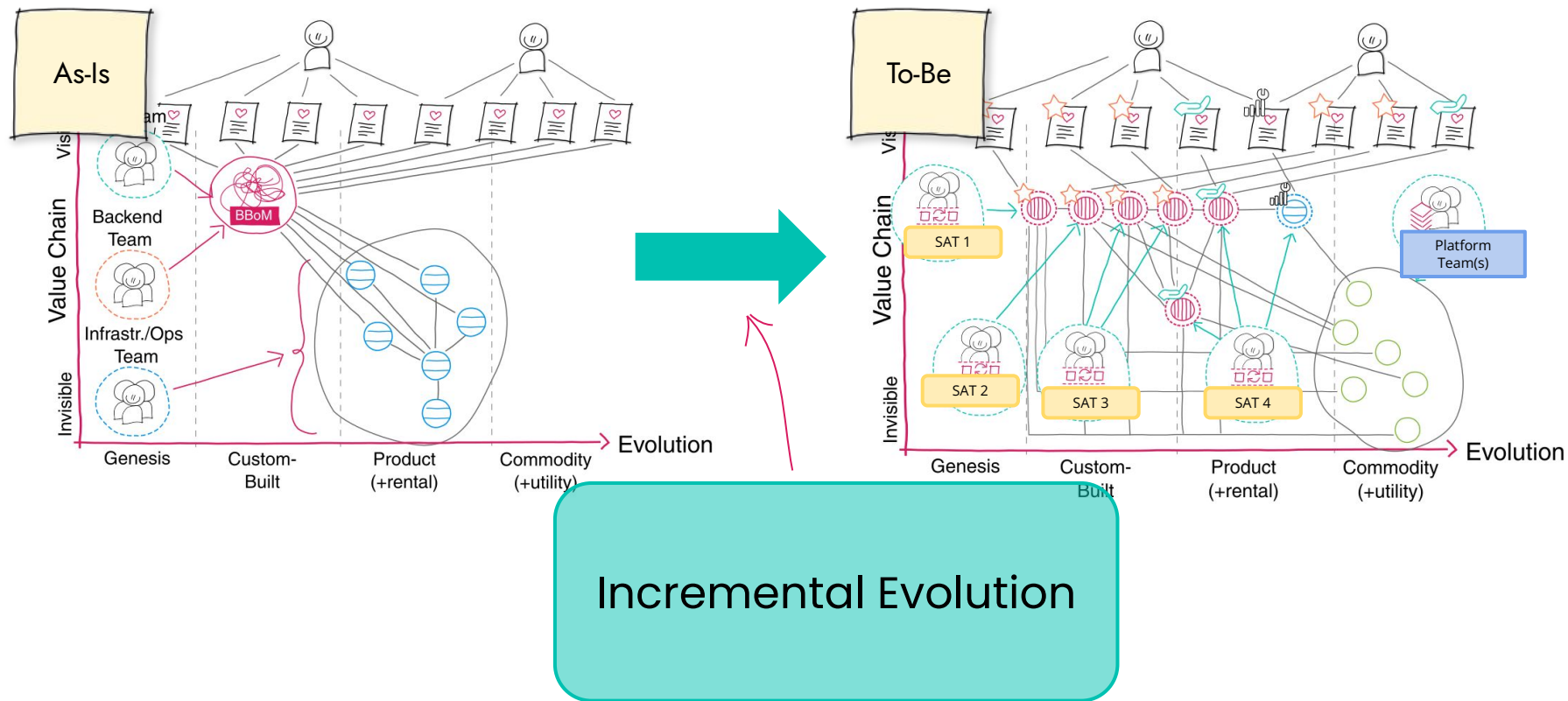
Bounded contexts as well-defined ownership boundaries

Optimizing for team cognitive load

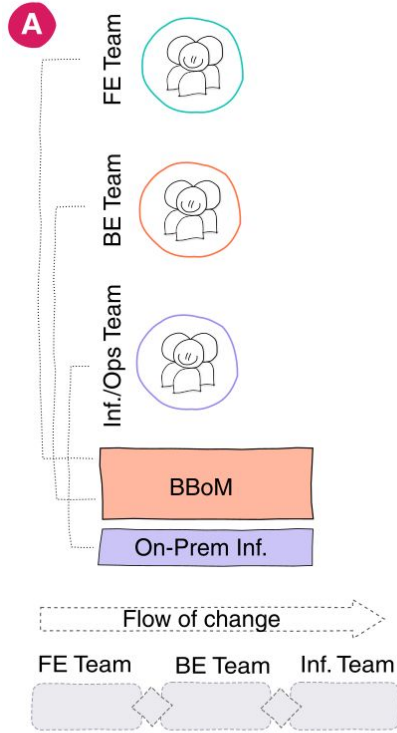
Cross-functional, autonomous stream-aligned teams & platform teams providing self-service svcs

Enabling teams as internal mentor, coaches to upskill teams

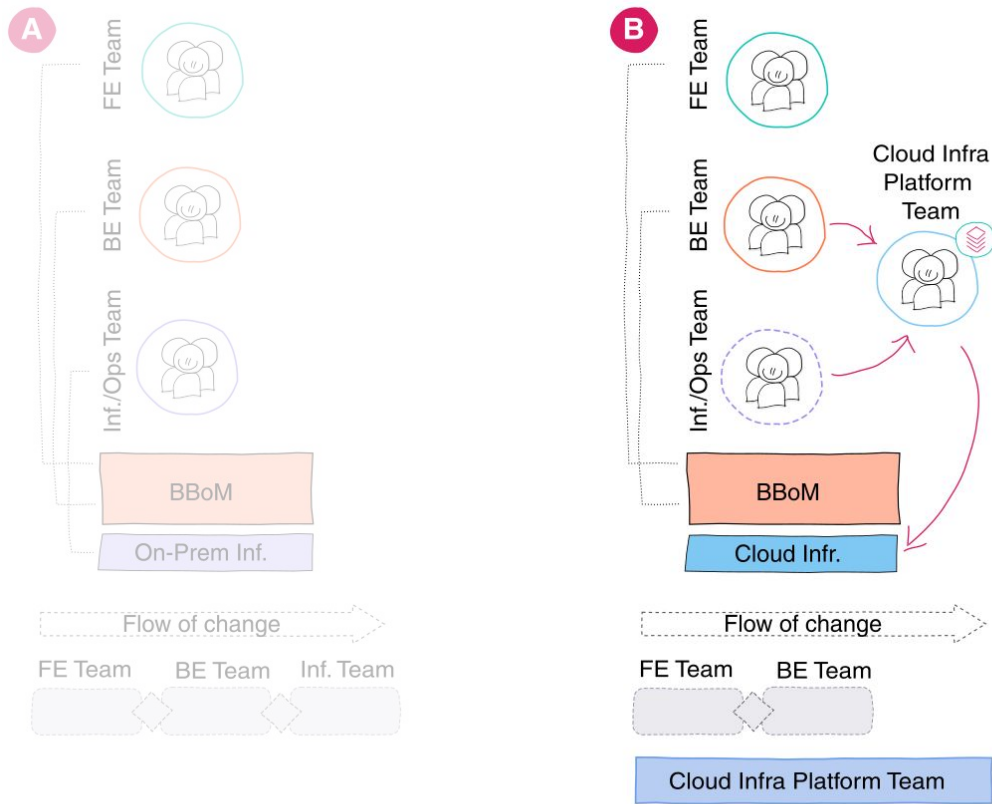
# How to Transition?



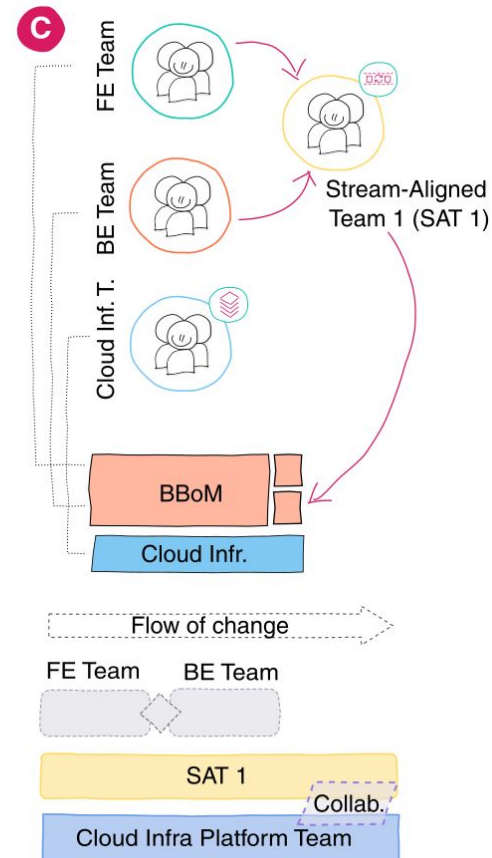
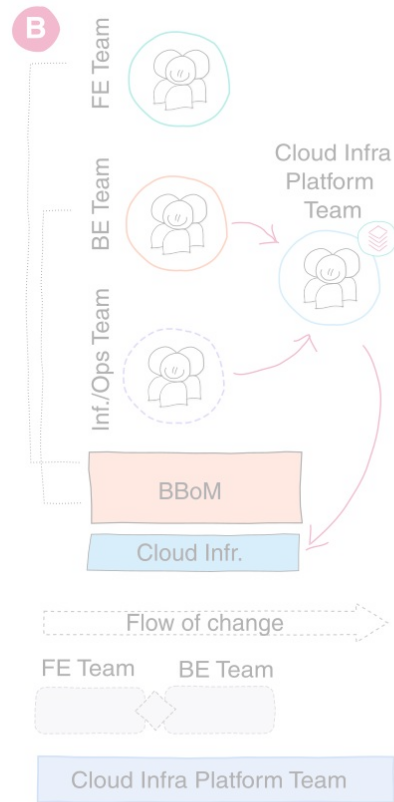
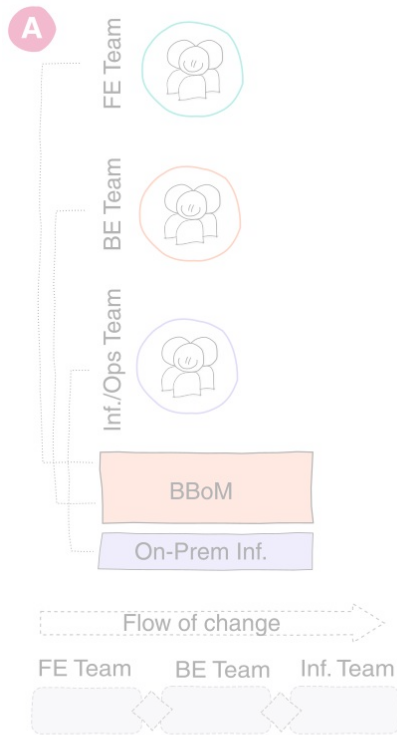
# Incremental Evolution (Example)



# Incremental Evolution (Example)

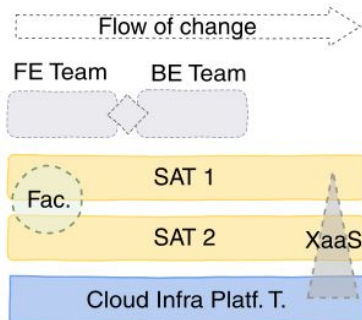
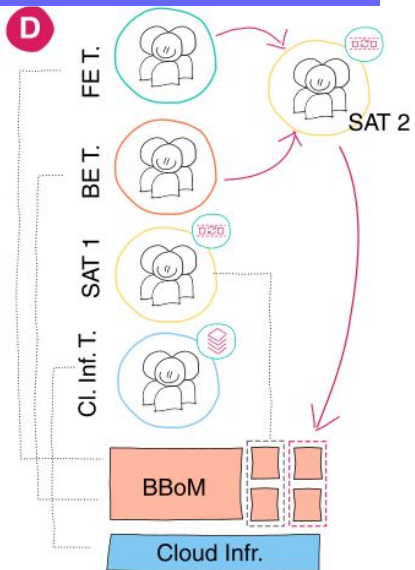
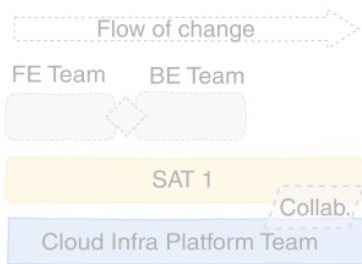
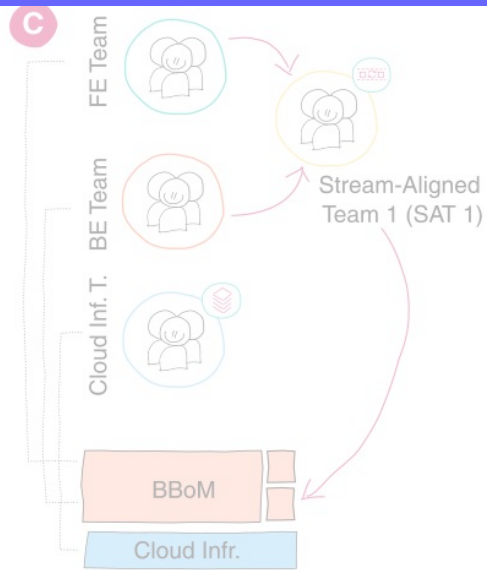


# Incremental Evolution (Example)



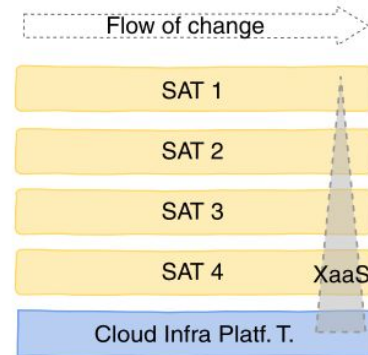
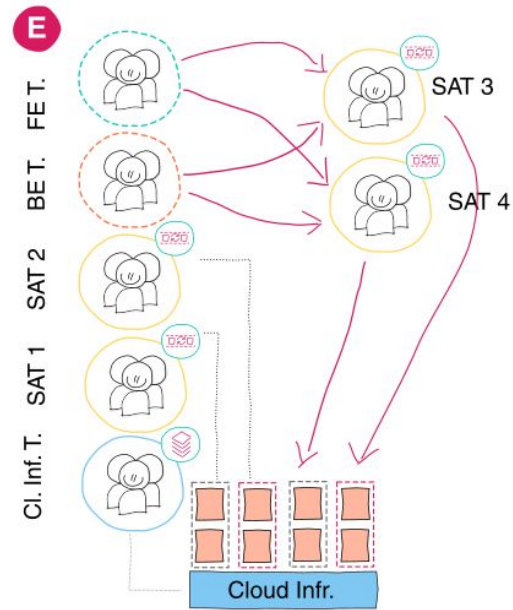
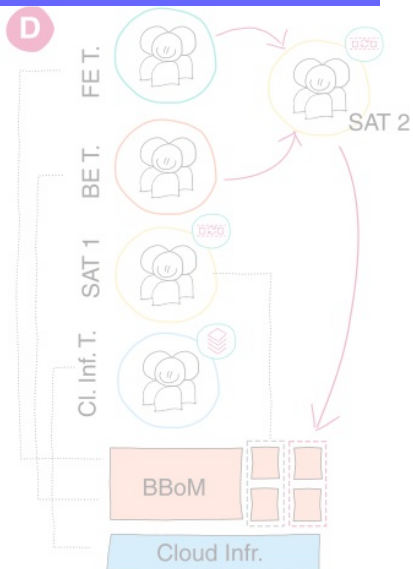
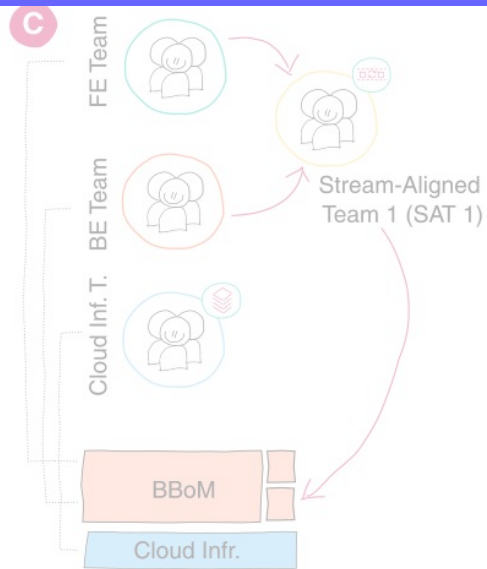


# Incremental Evolution (Example)

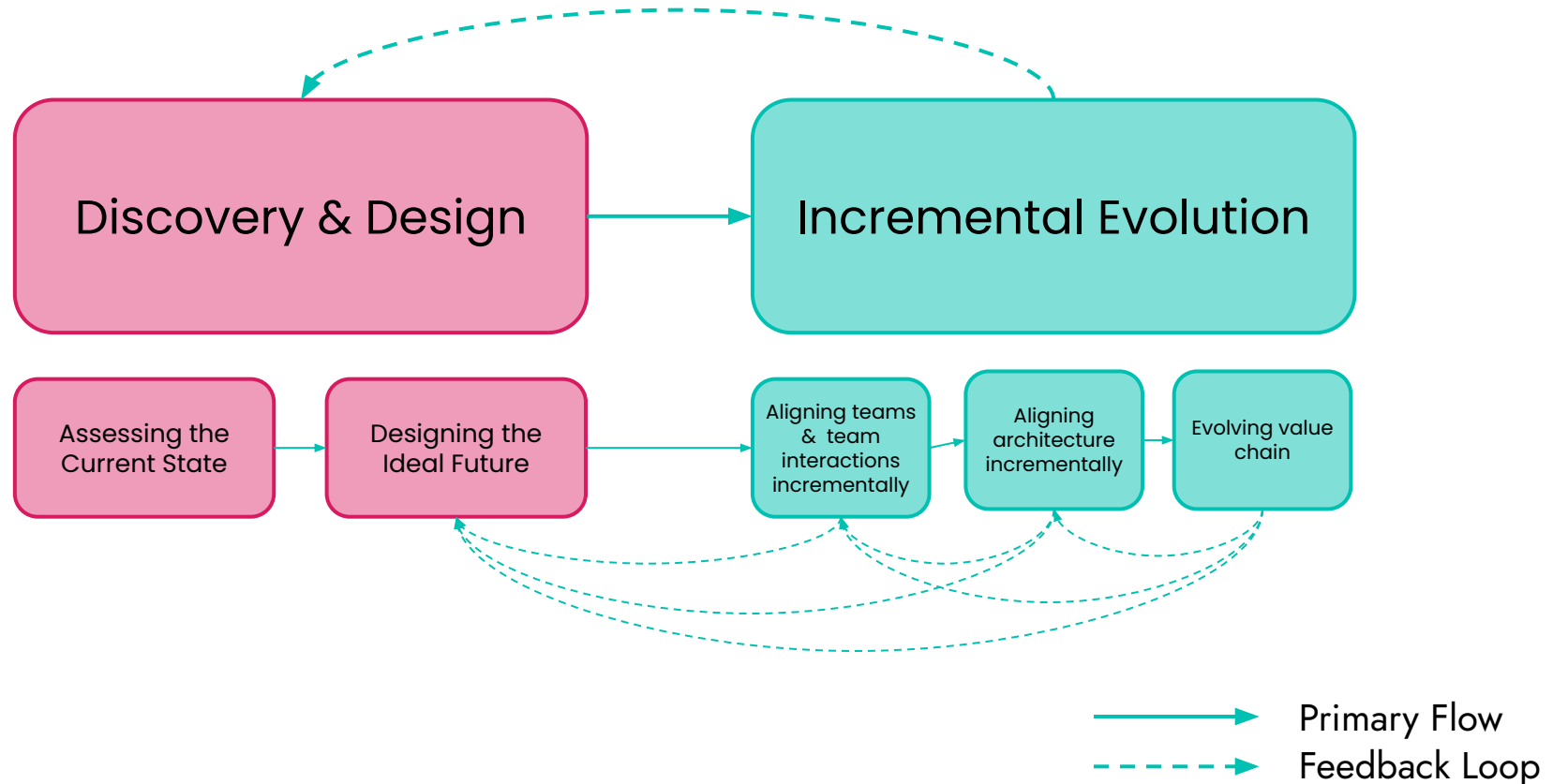




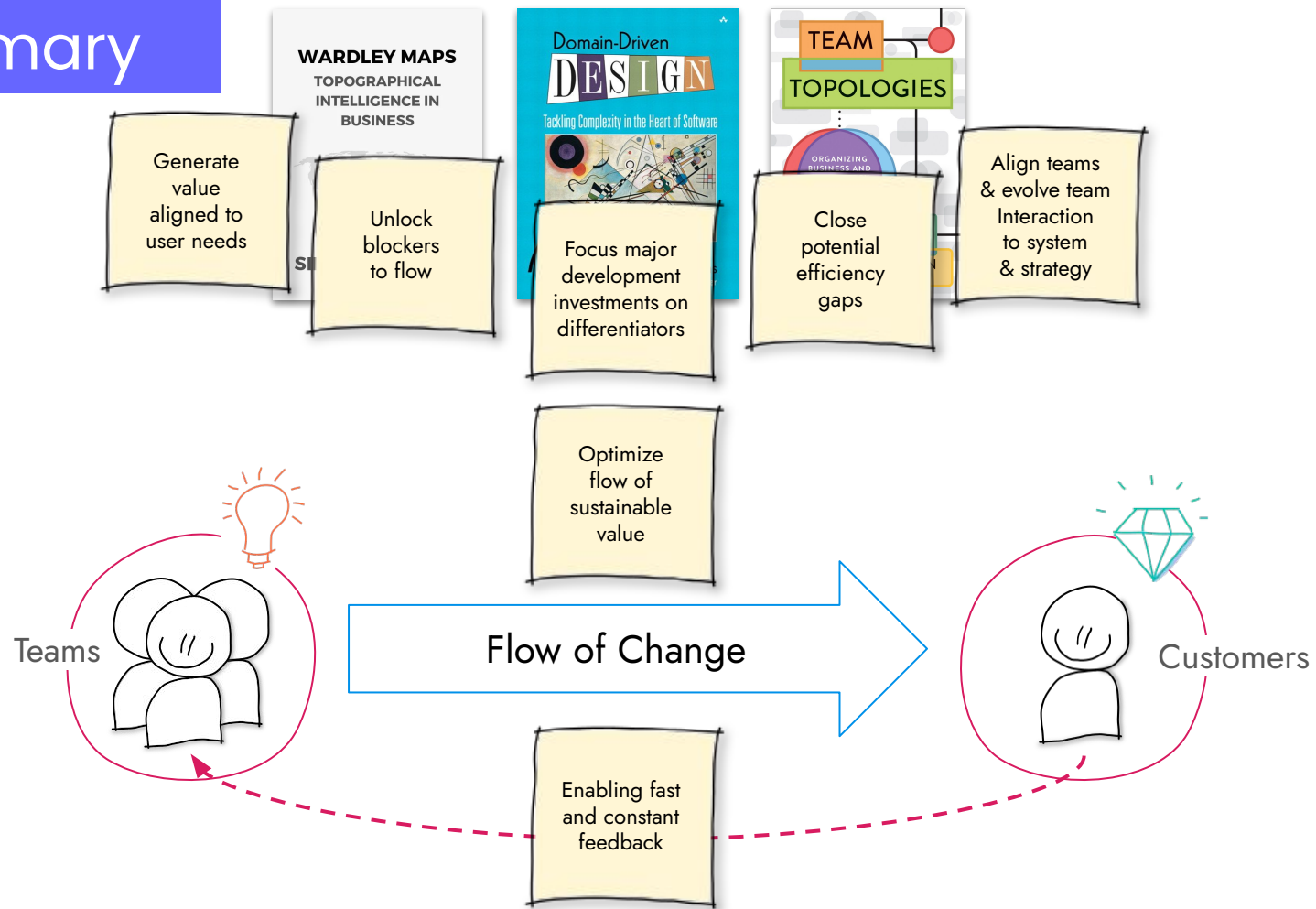
# Incremental Evolution (Example)



# An Adaptive, Iterative Process



# Summary



No silver bullet: Adapt these principles to your specific context, culture and challenges

Evolve your Legacy  
System with Gratitude

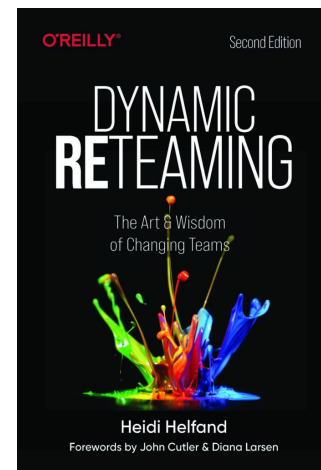
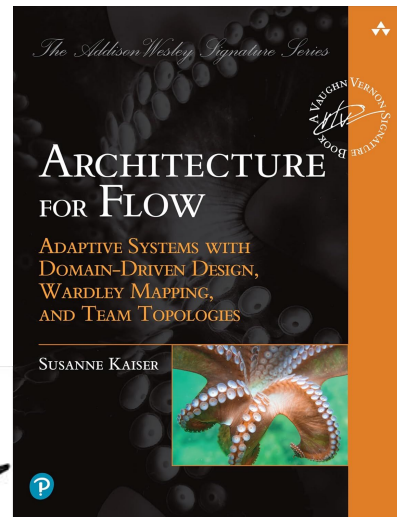
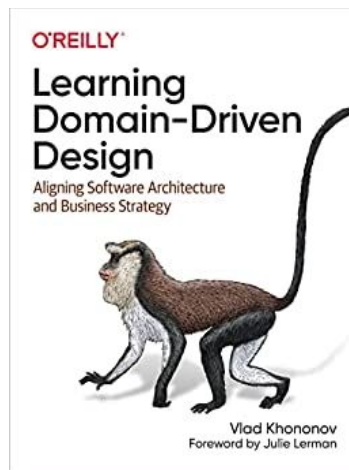
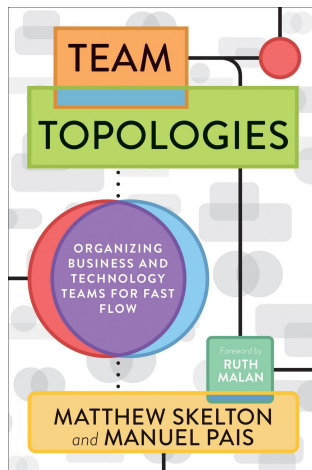
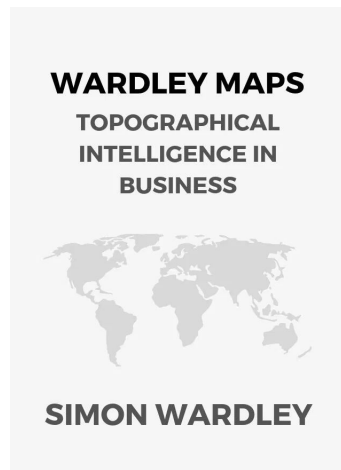
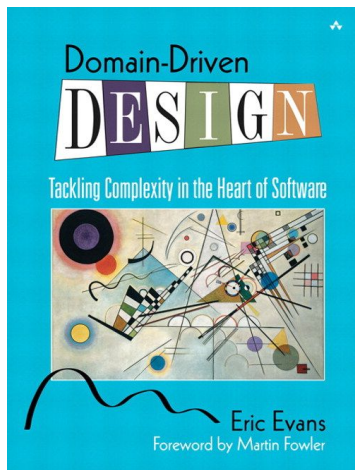
# Ressources

Architecture for Flow Canvas

<https://susannekaiser.net/architecture-for-flow-canvas/>

Case Study

<https://ninasiessegger.de/en/blog/re-teaming-for-faster-flow>



<https://medium.com/wardleymaps>

<https://learnwardleymapping.com/>

<https://github.com/wardley-maps-community/awesome-wardley-maps>

<https://github.com/ddd-crew>

<https://www.dddheuristics.com>

# Thank you!

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Link to  
slide deck

