

Adaptive Socio-Technical Systems w/ Architecture for Flow

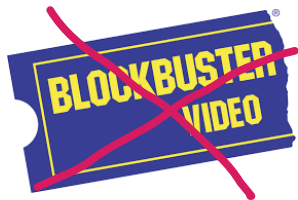
Susanne Kaiser
Independent Tech Consultant
@suksr

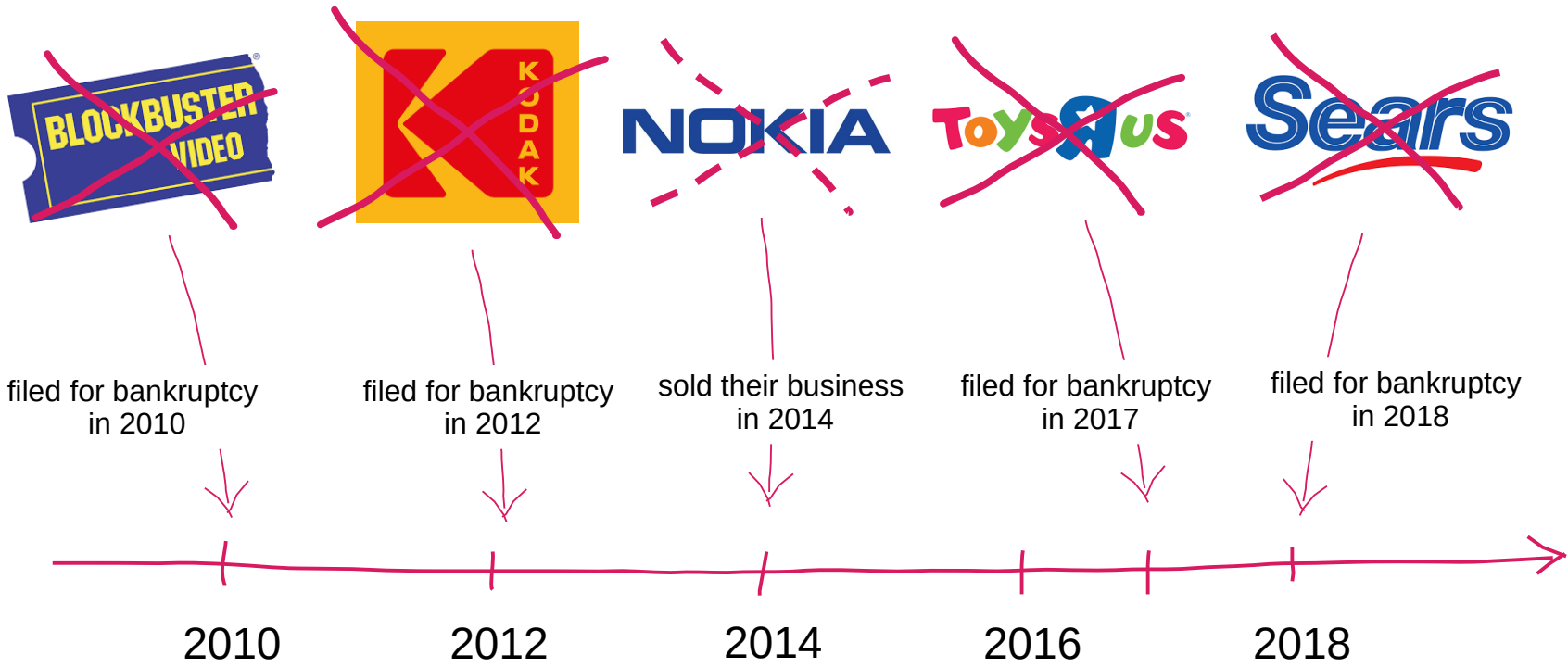
What do these companies have in common ?

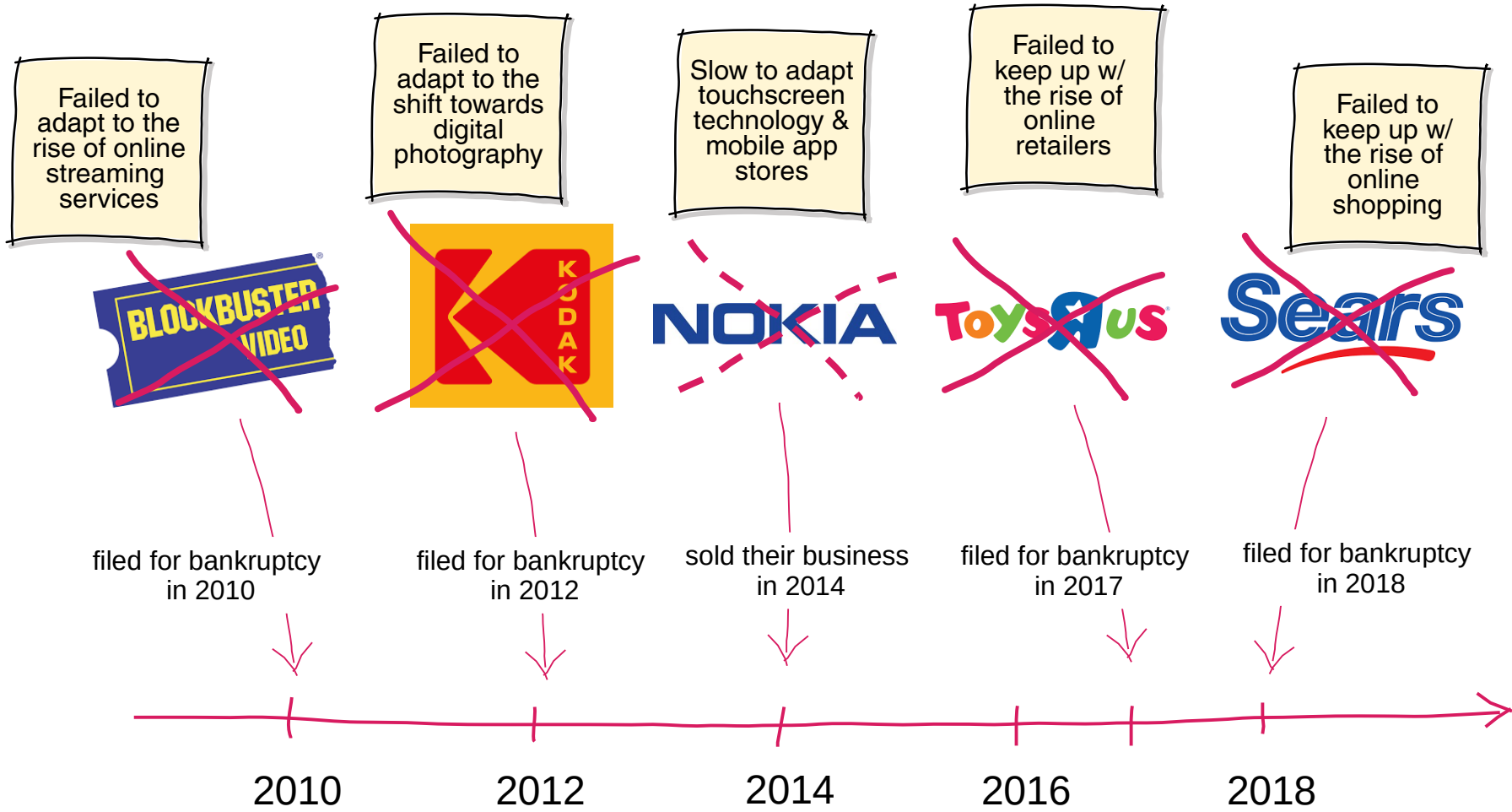


NOKIA









Failure to Adapt to Changing Circumstances

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graph TD; A[Failure to Adapt to Changing Circumstances] --> B[~200,000 job losses]; A --> C[~$220 Bn of costs for creditors incl. lost revenue, market share];
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~200,000
job losses

~\$220 Bn
of costs for
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market share

Organizations have to
continuously adapt
and evolve to
remain competitive

How to design
systems that can
evolve and thrive in
the face of
constant change?

How to design systems that can evolve and thrive in the face of constant change?

Understanding the business landscape and external forces acting on it

Knowing the business domain & closely align system to business & user needs

Aligning teams and evolving their interactions to the system & strategy

How to design systems that can evolve and thrive in the face of constant change?

Understanding the business landscape and external forces acting on it

Wardley Mapping

Knowing the business domain & closely align system to business & user needs

Domain-Driven Design

Aligning teams and evolving their interactions to the system & strategy

Team Topologies

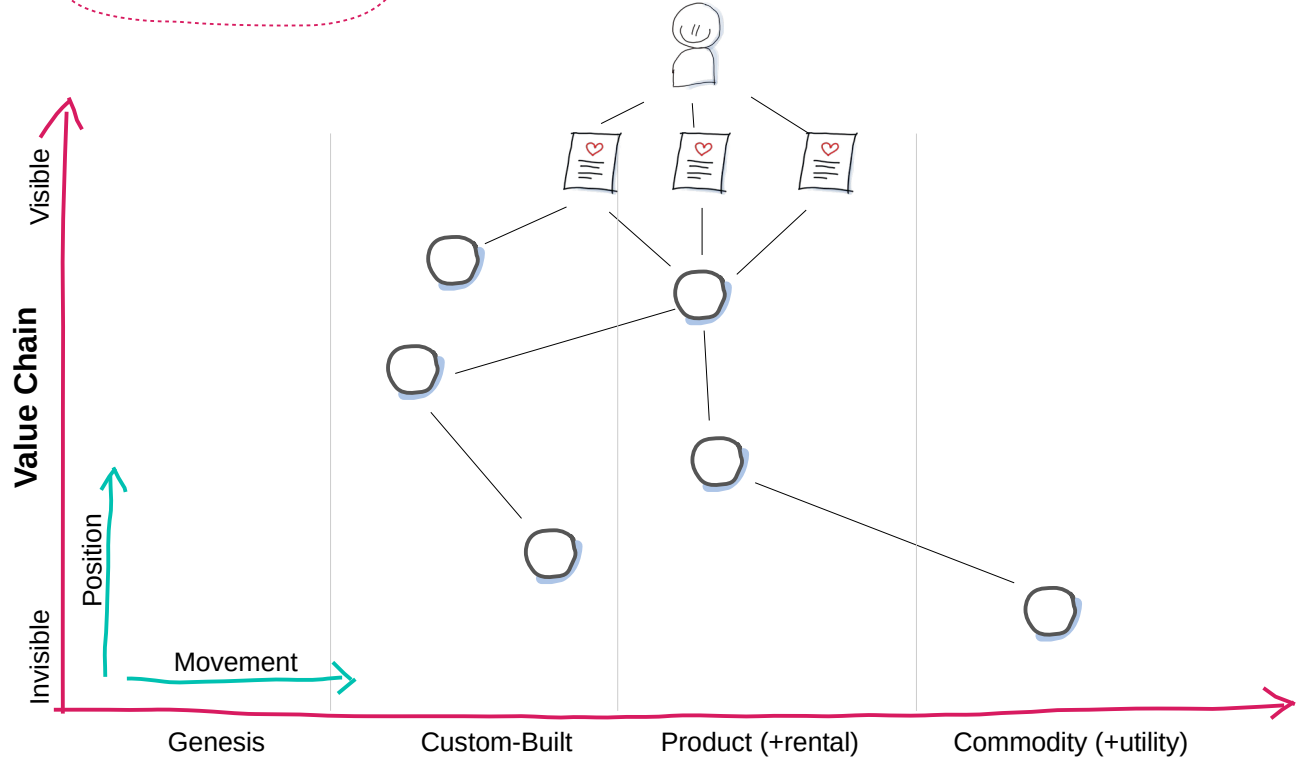
Online School



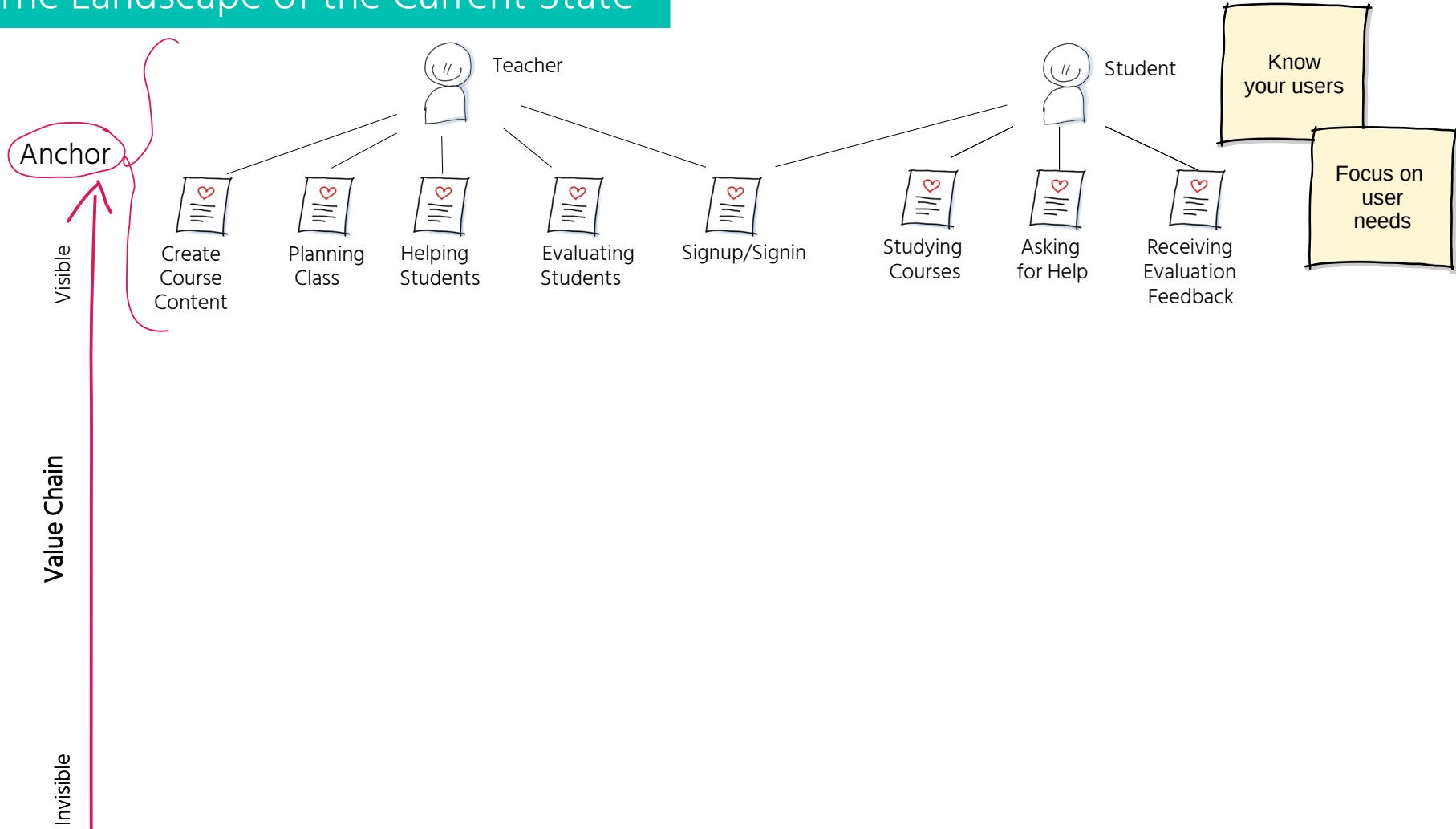
Image source: <https://www.food-management.com>

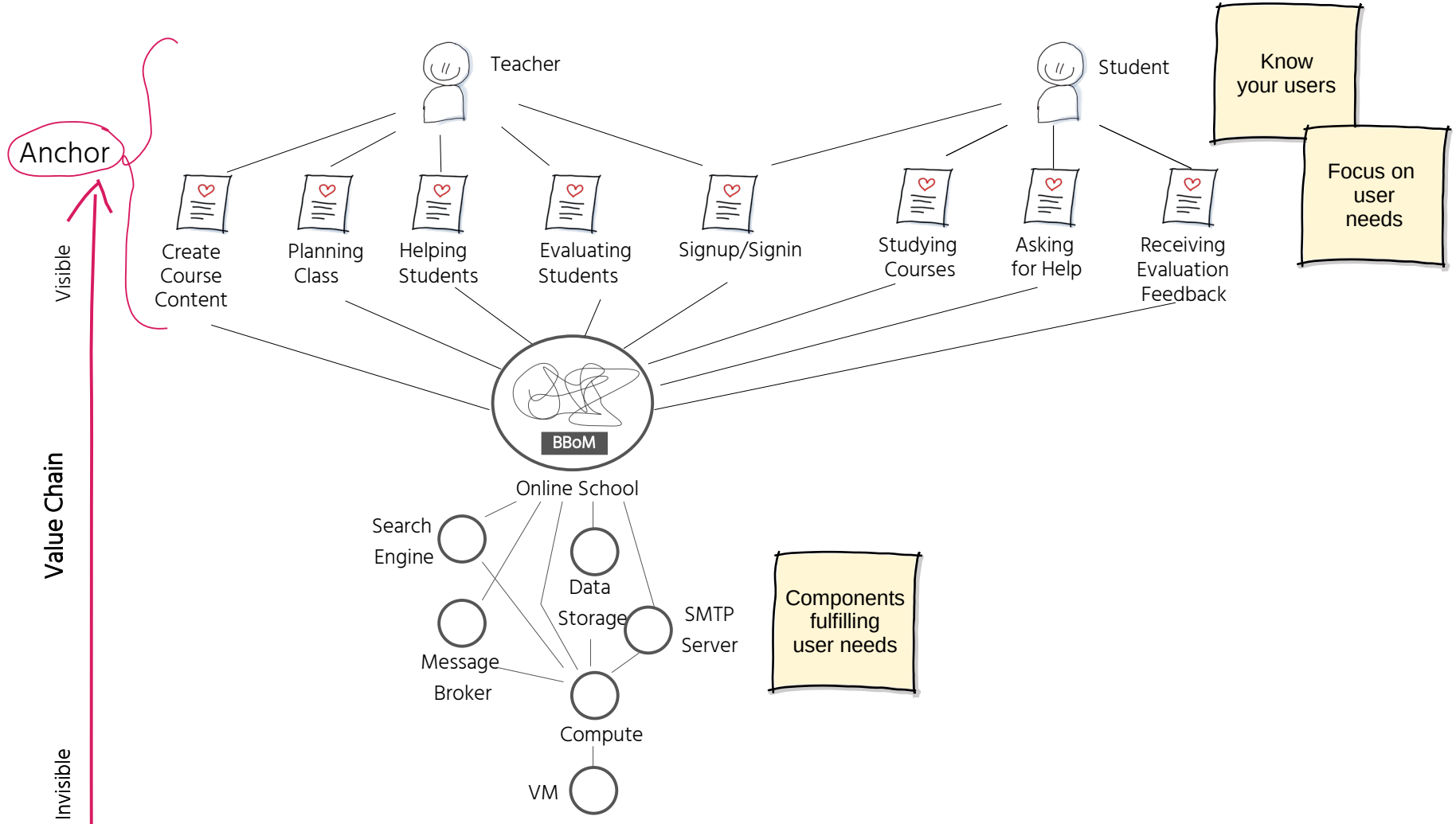
Understanding the business landscape

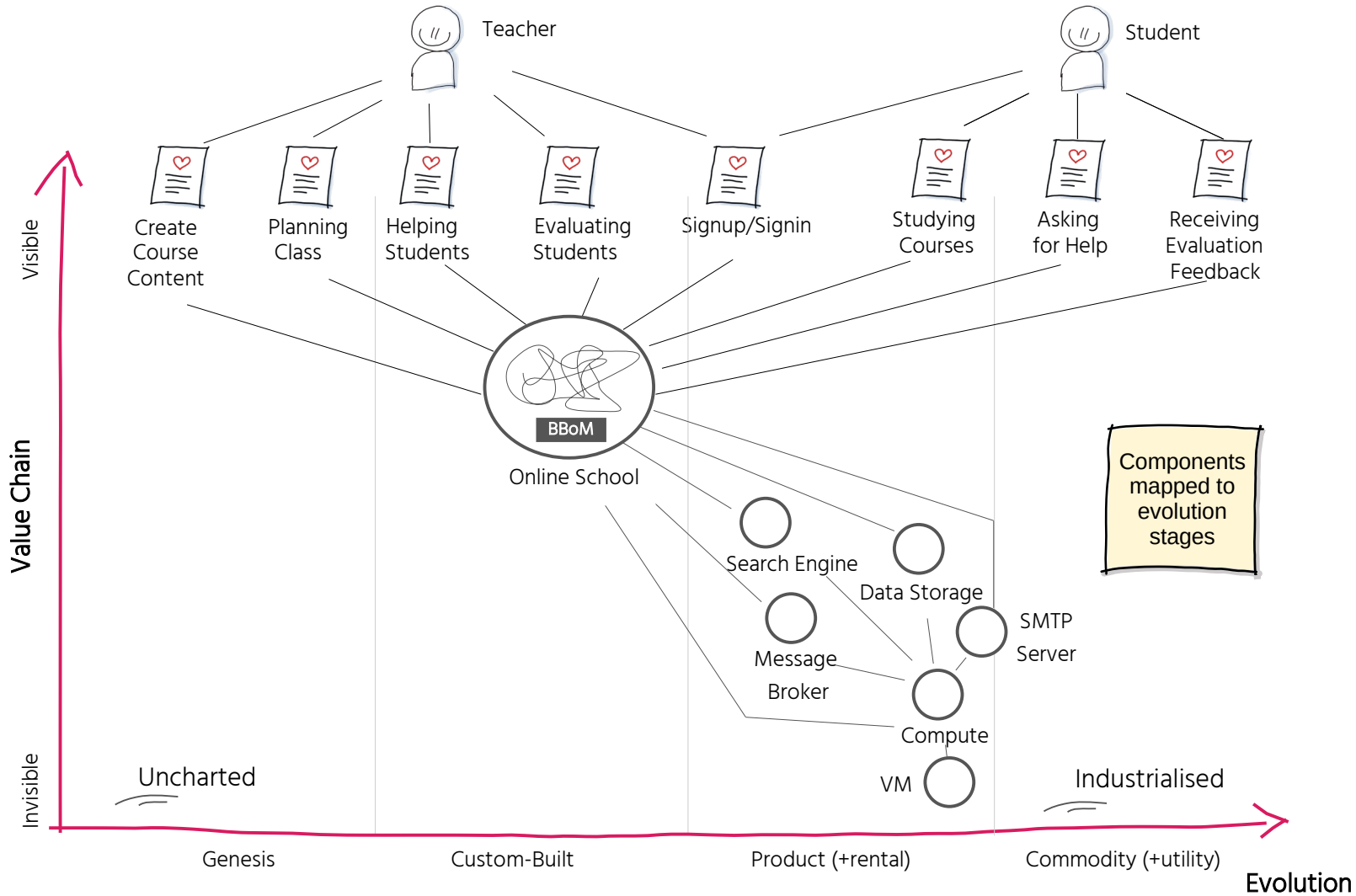
Wardley Map

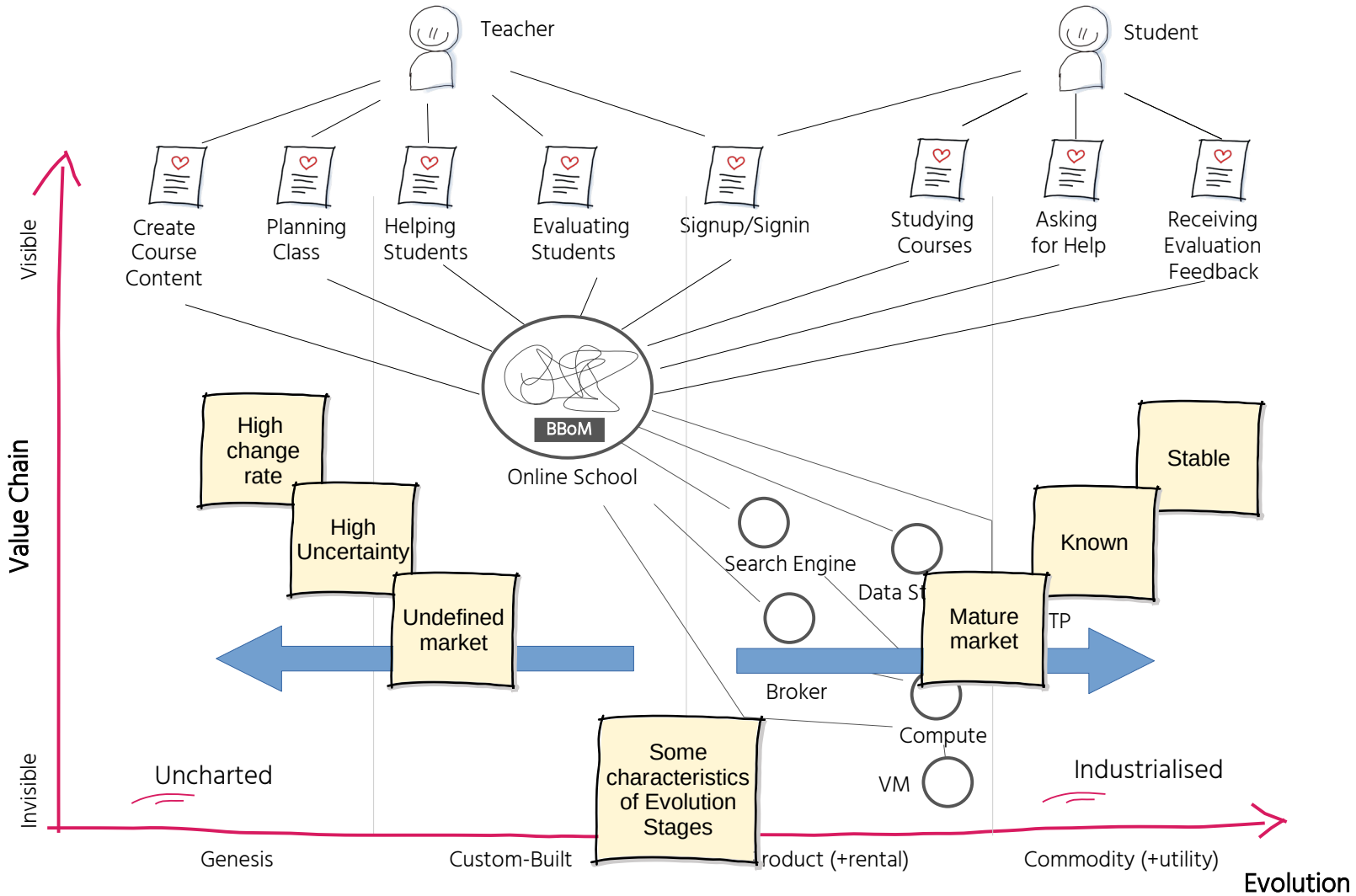


The Landscape of the Current State

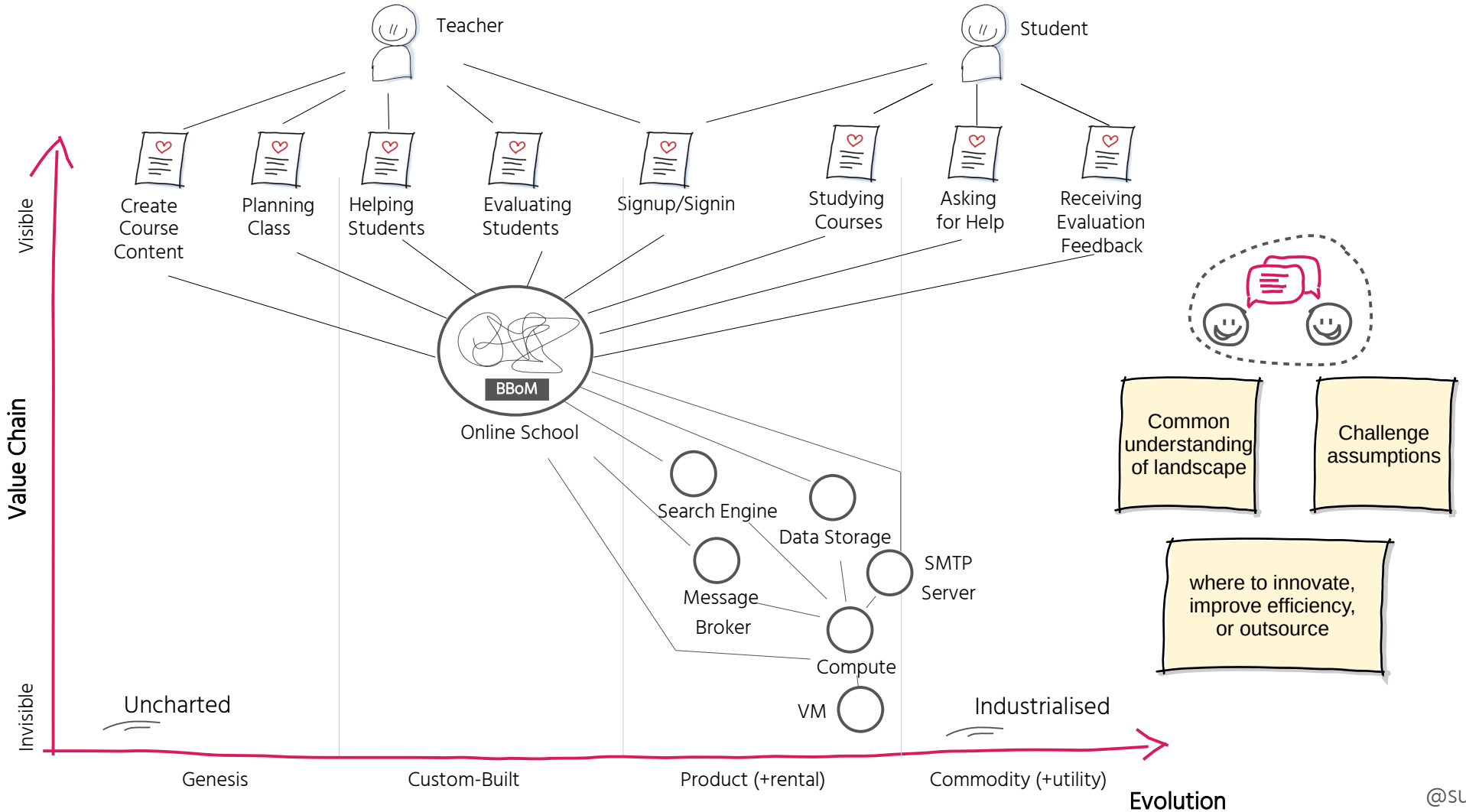




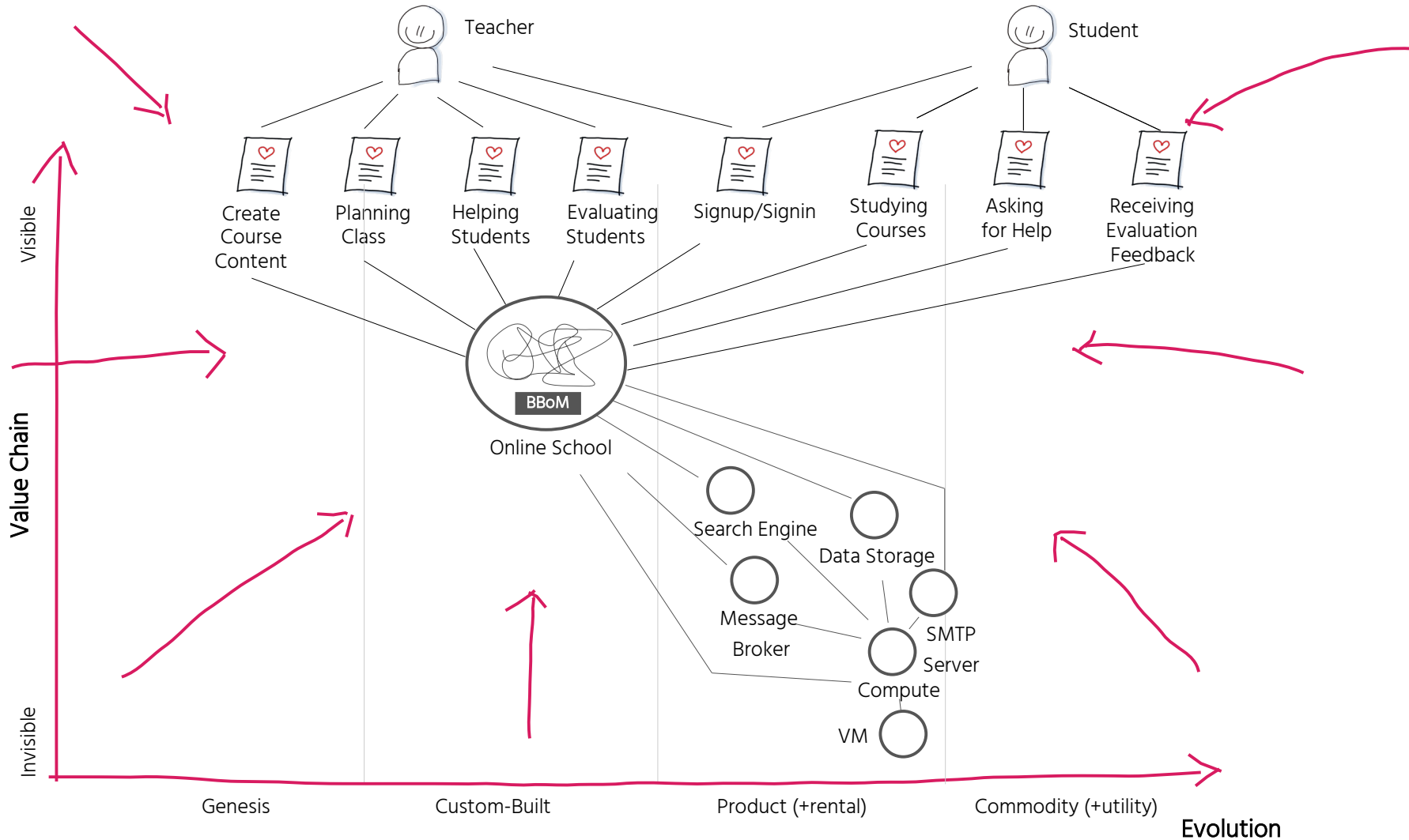




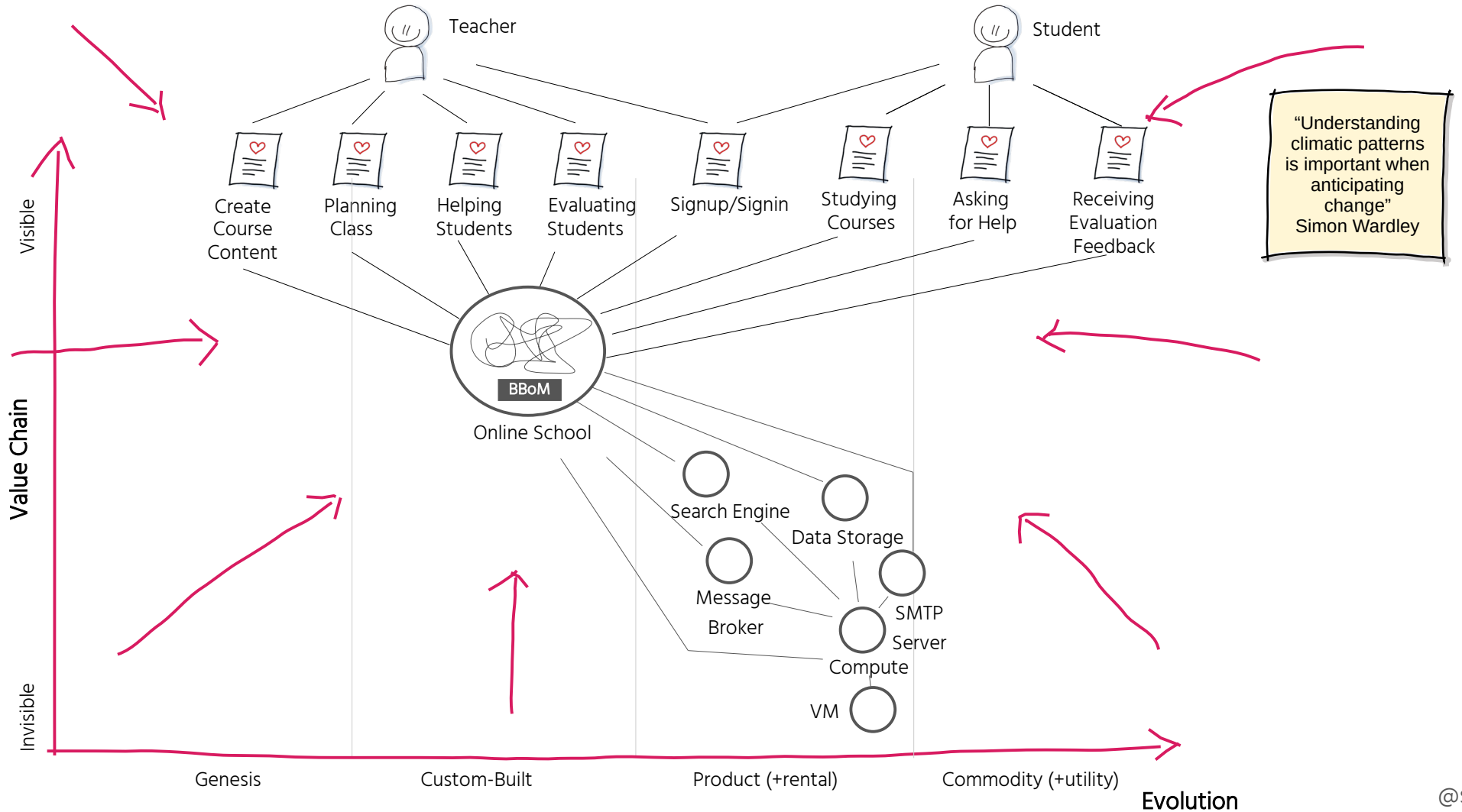
A Wardley Map of the Current State



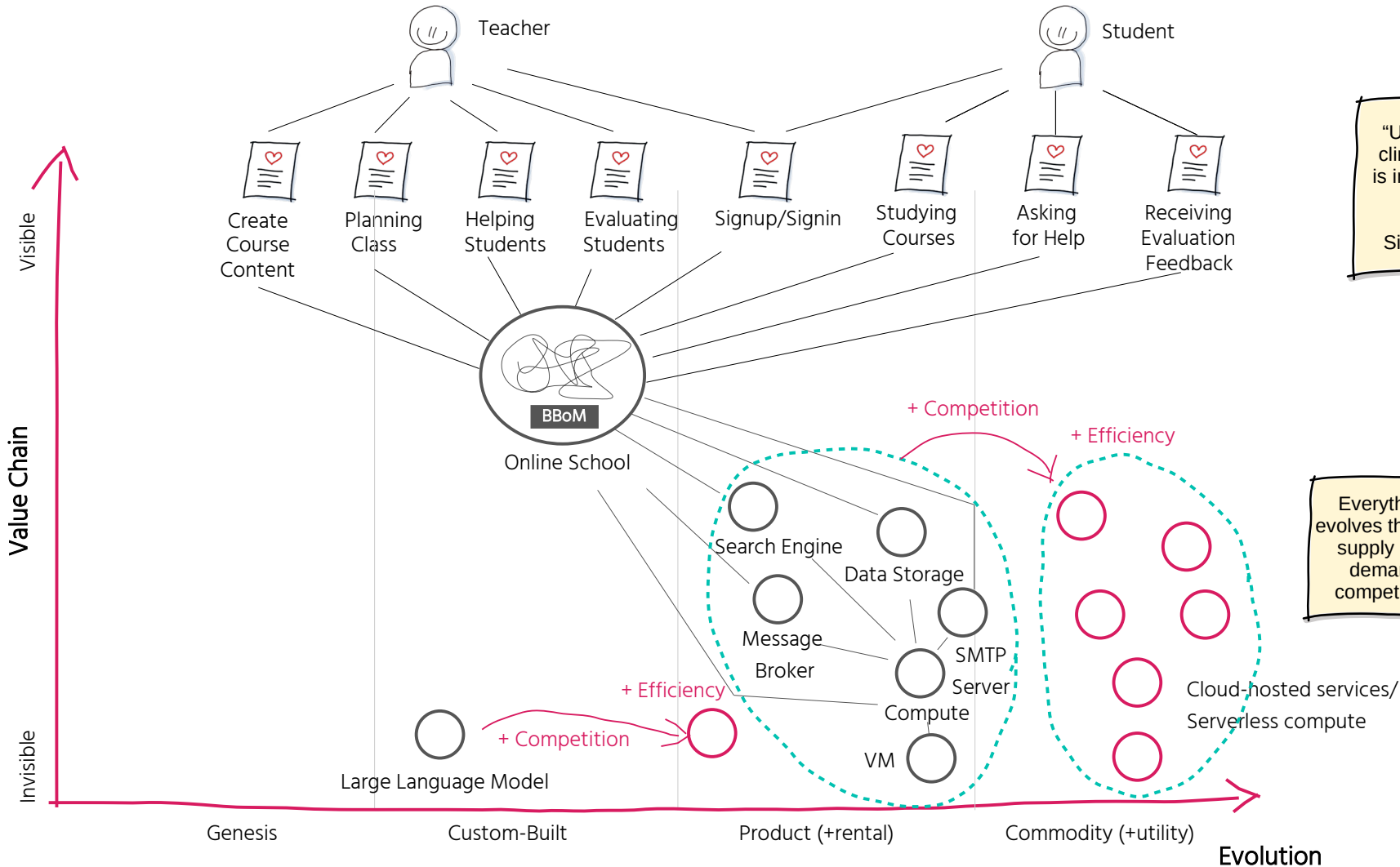
External Forces Impacting the Landscape: Climatic Patterns



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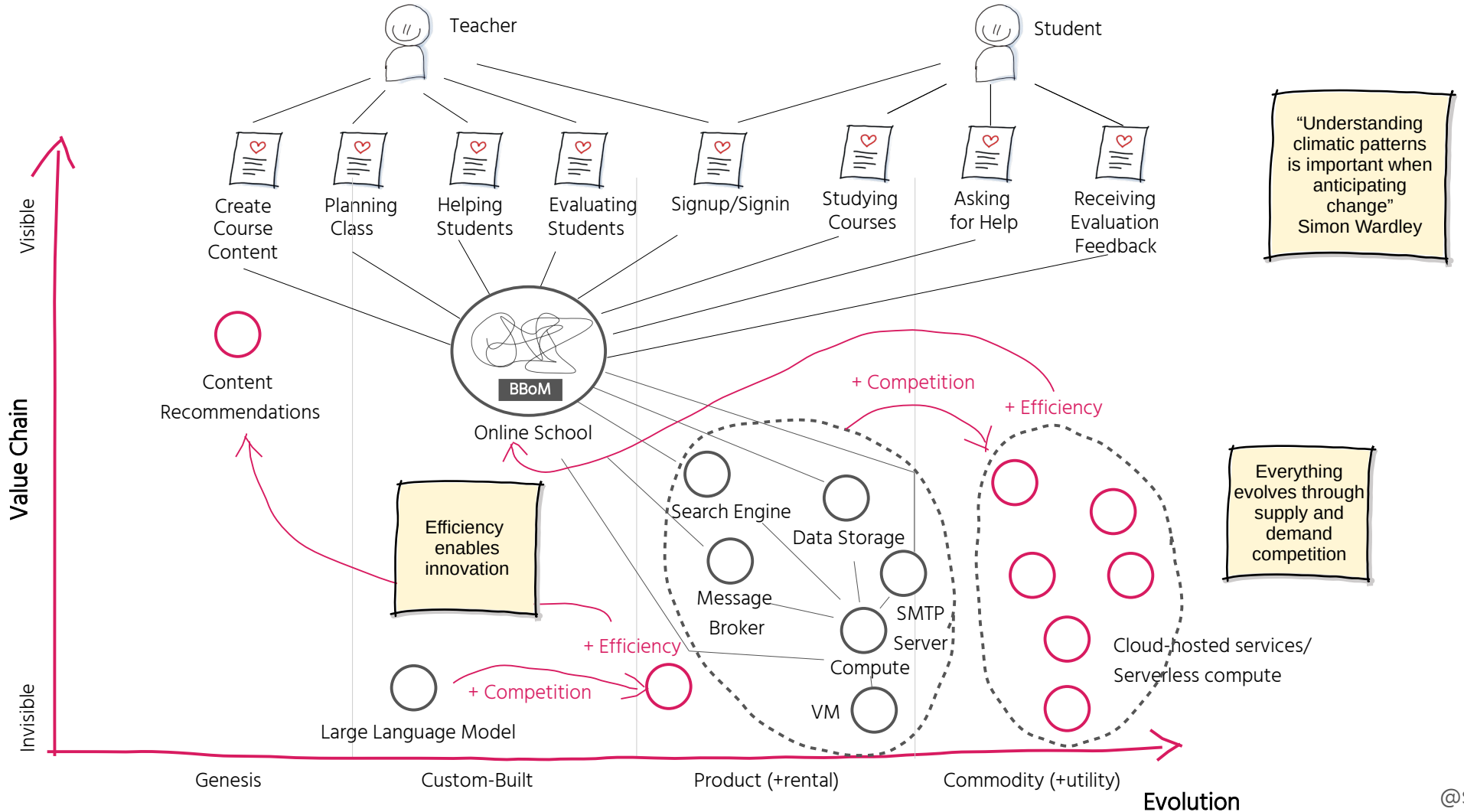
External Forces Impacting the Landscape: Climatic Patterns



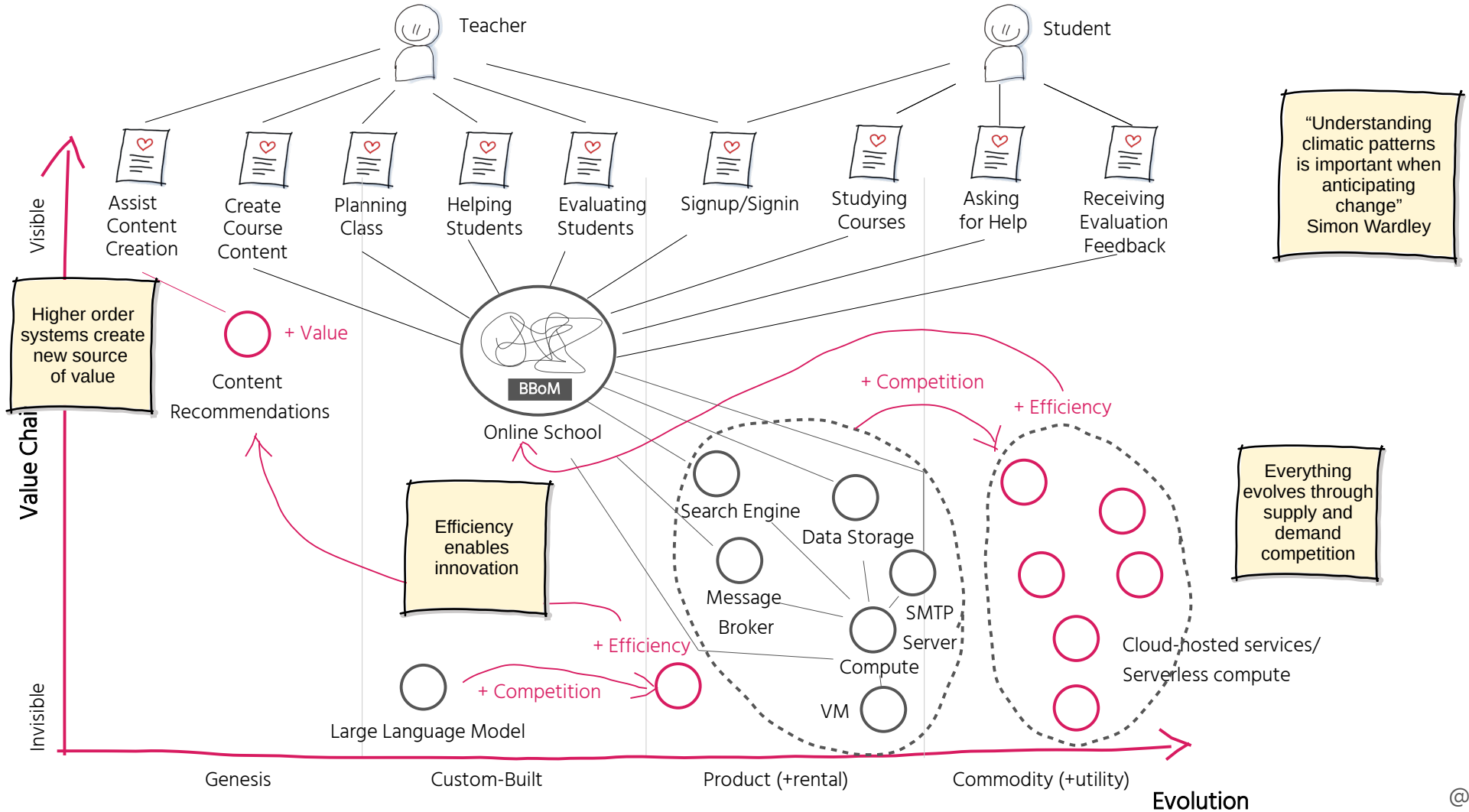
"Understanding climatic patterns is important when anticipating change"
Simon Wardley

Everything evolves through supply and demand competition

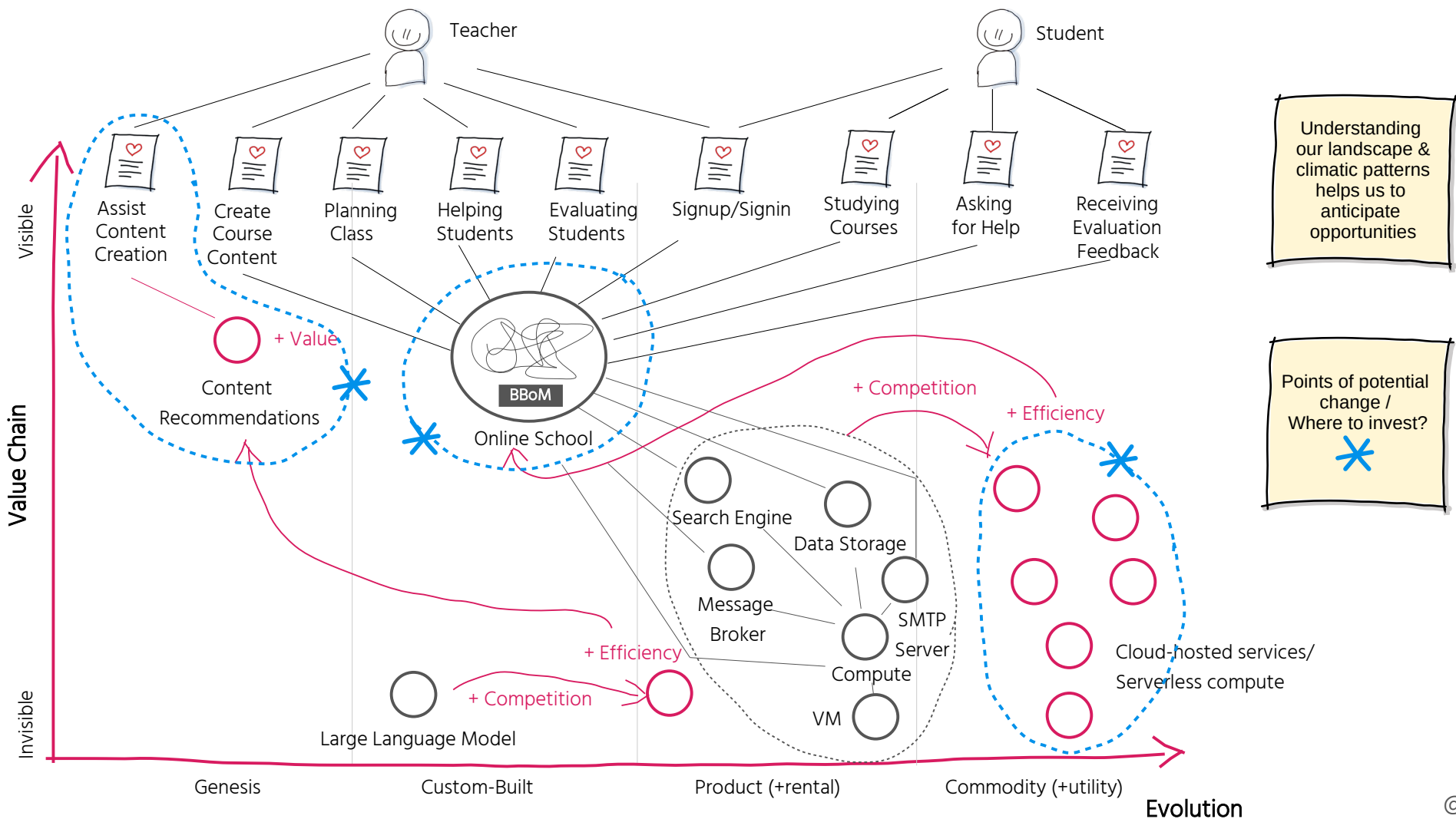
External Forces Impacting the Landscape: Climatic Patterns



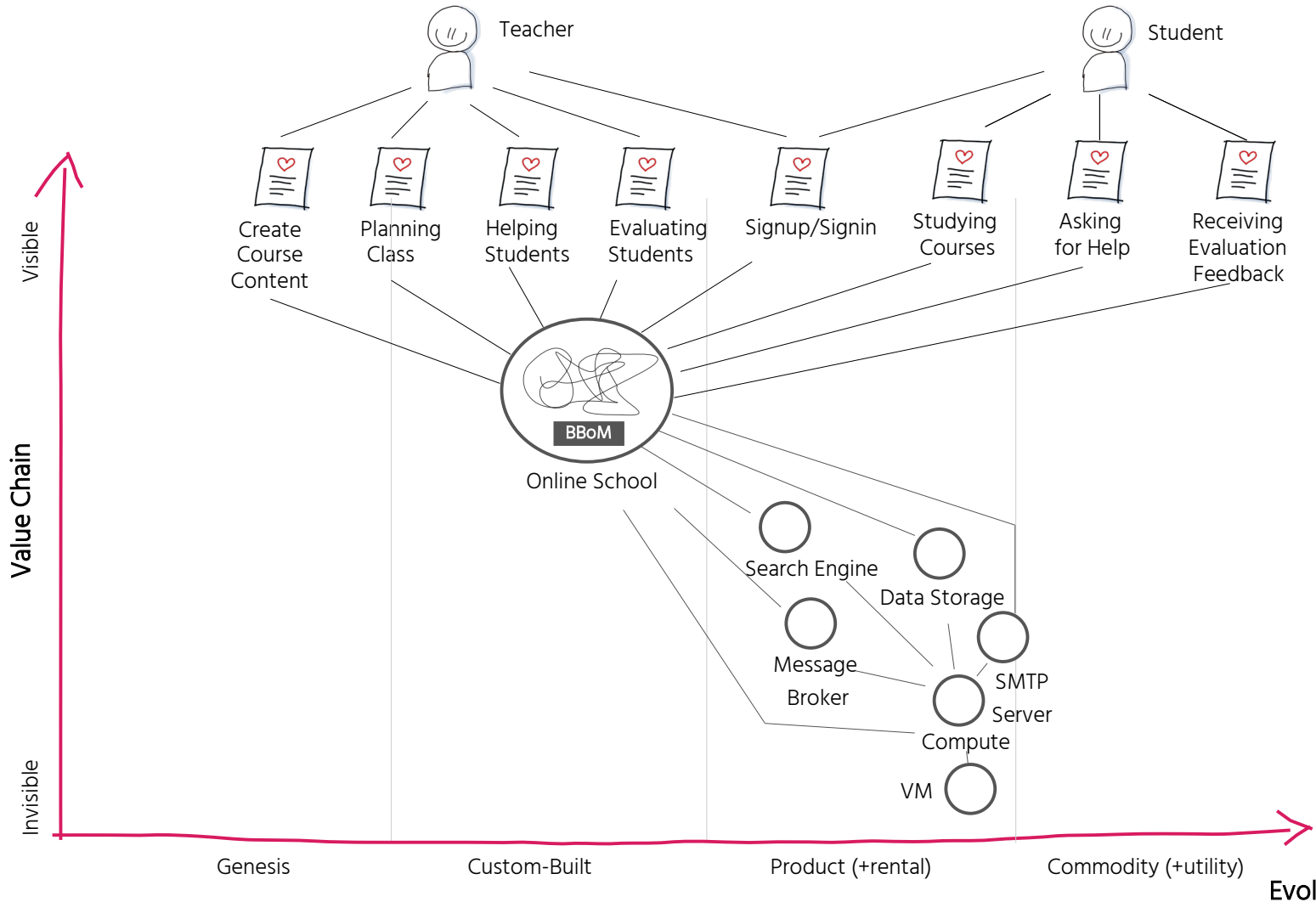
External Forces Impacting the Landscape: Climatic Patterns



Understanding Landscape & Climatic Patterns

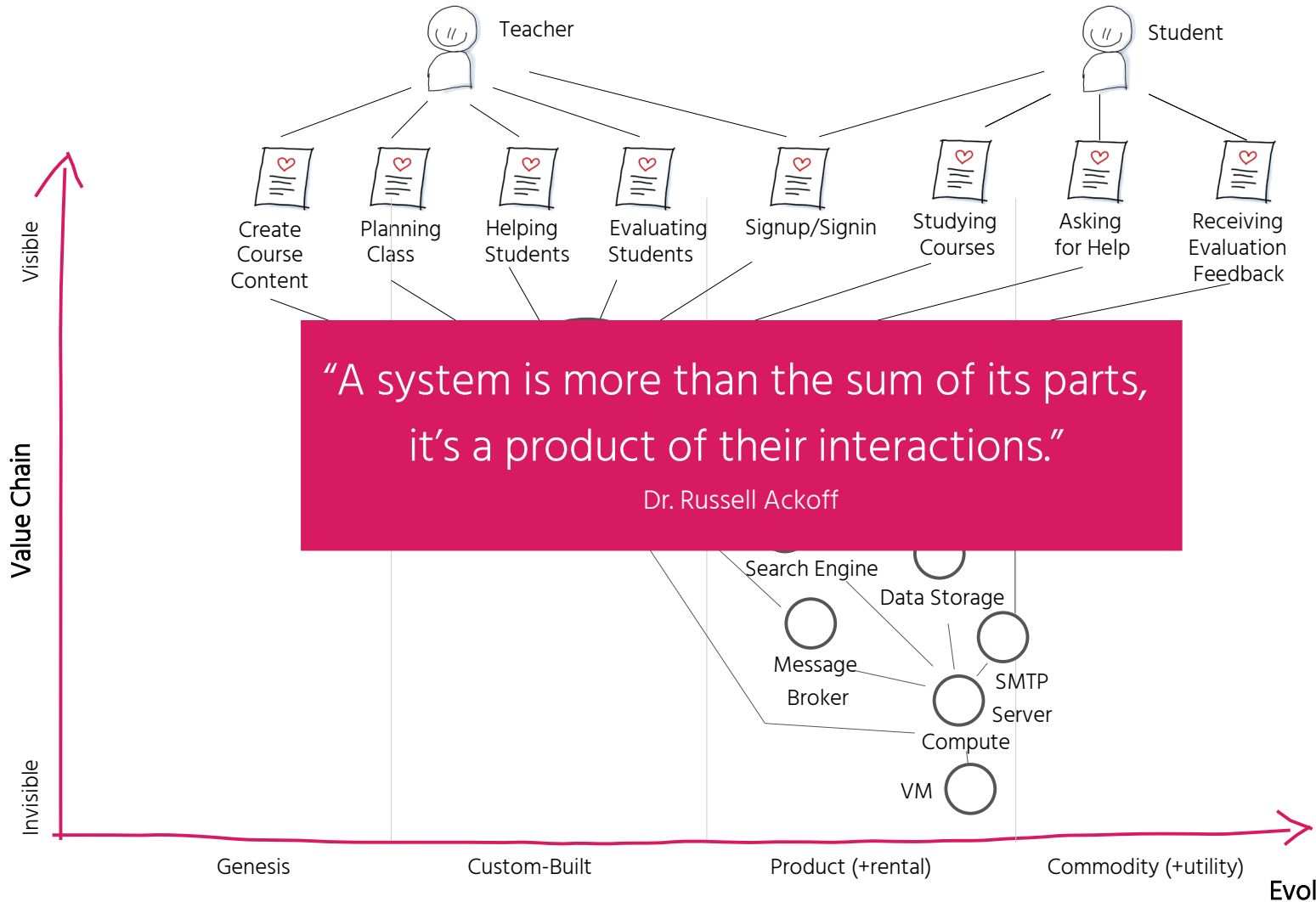


Assessing Responsiveness to Change



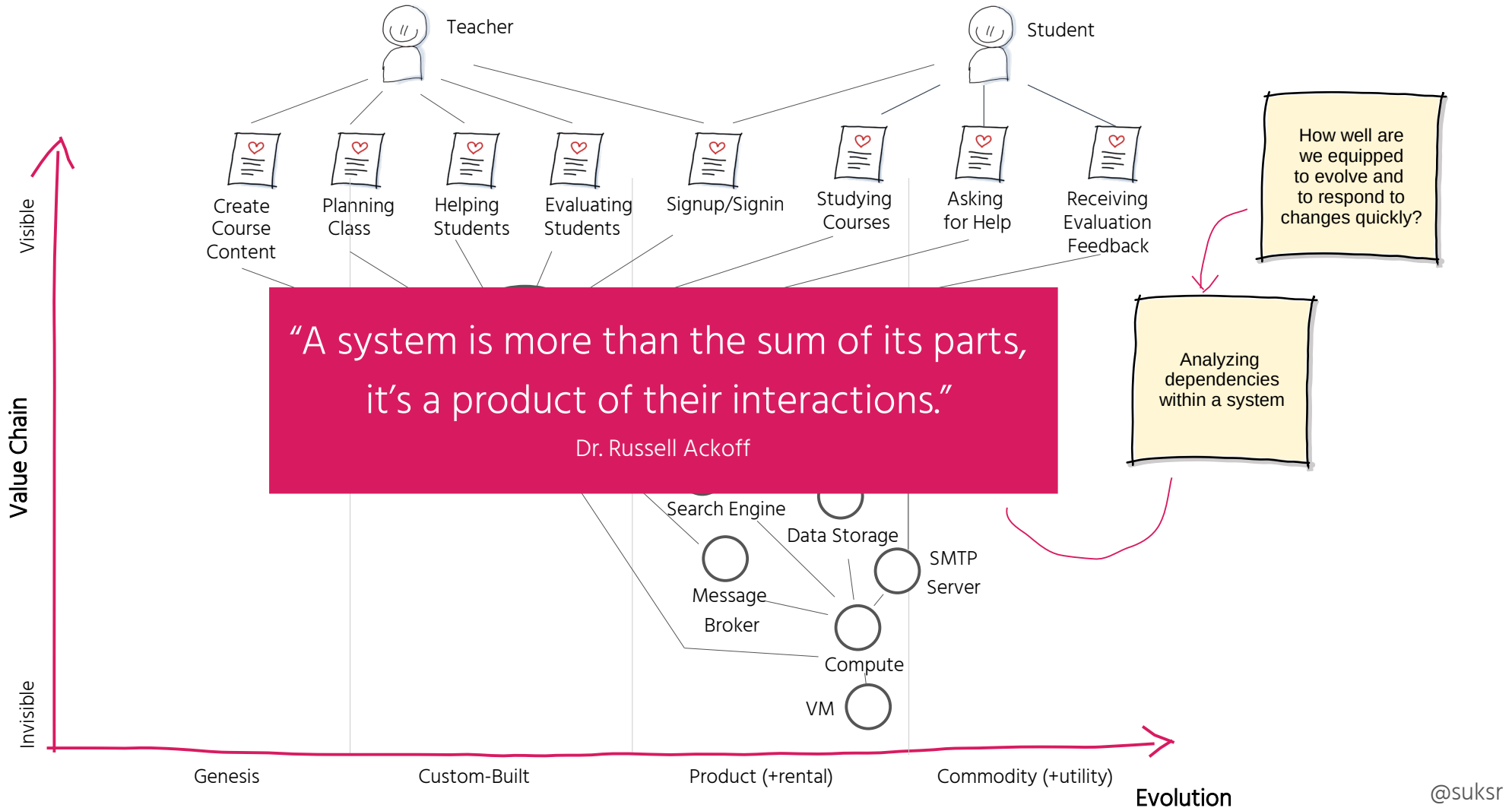
How well are we equipped to evolve and to respond to changes quickly?

Assessing Responsiveness to Change

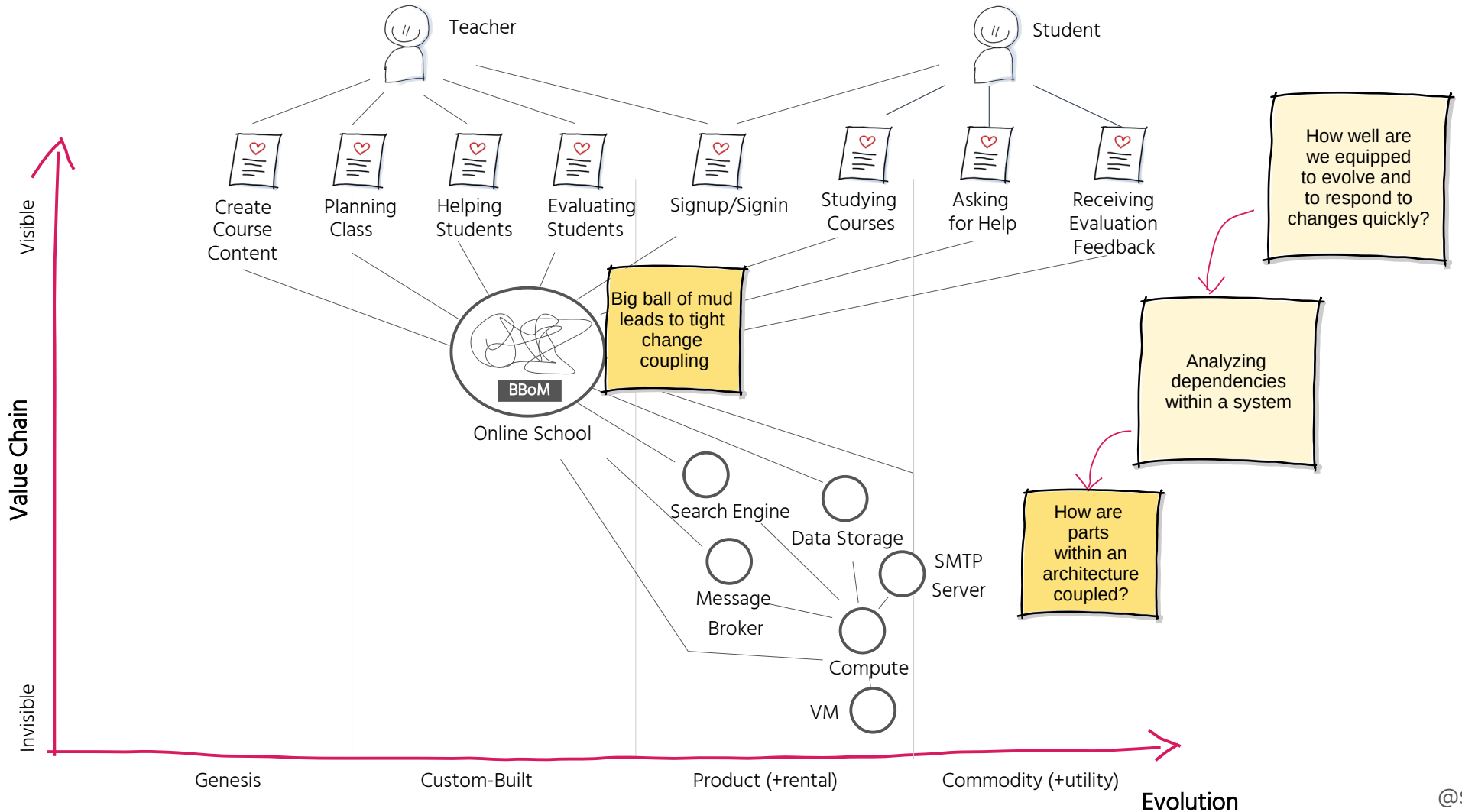


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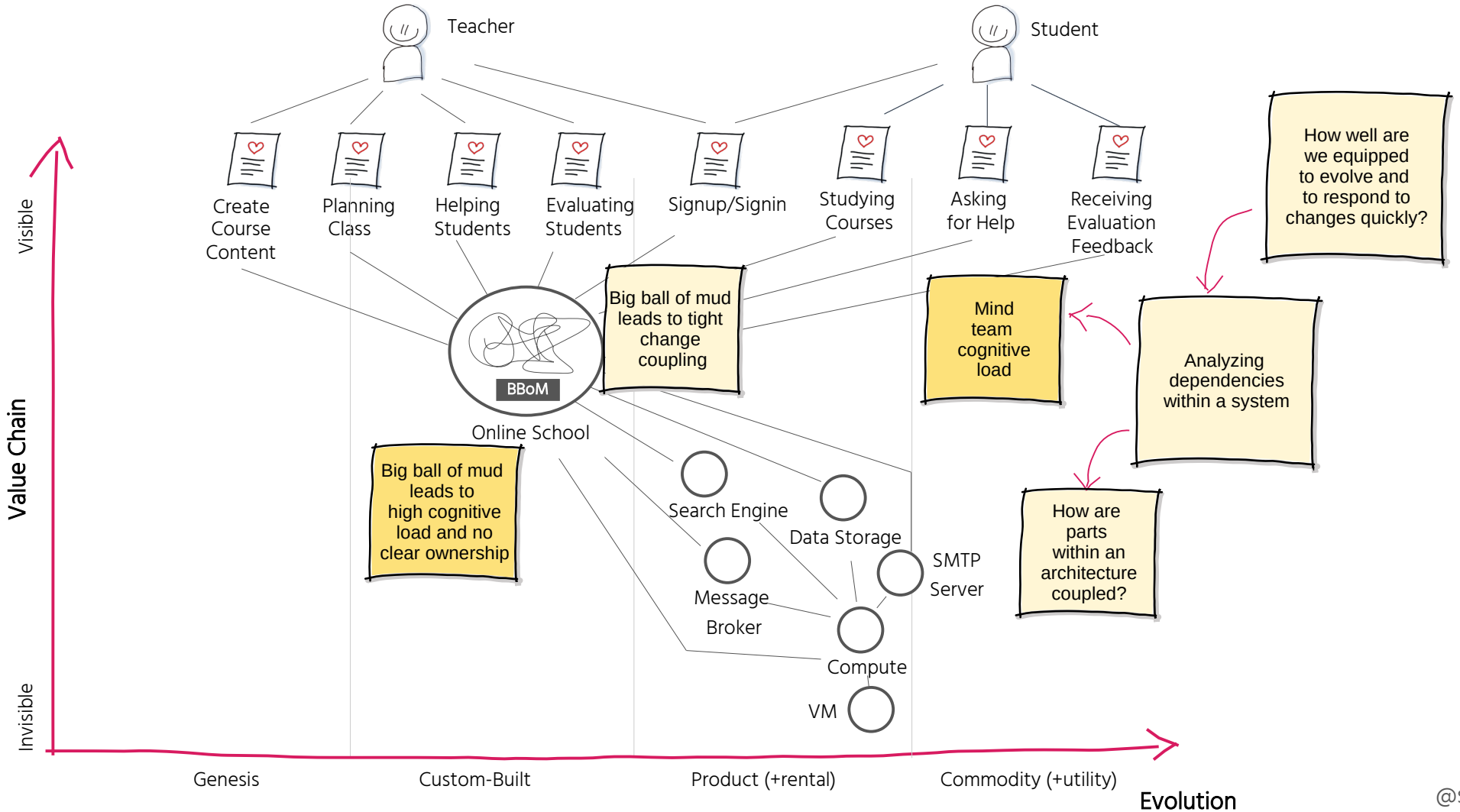
Assessing Responsiveness to Change



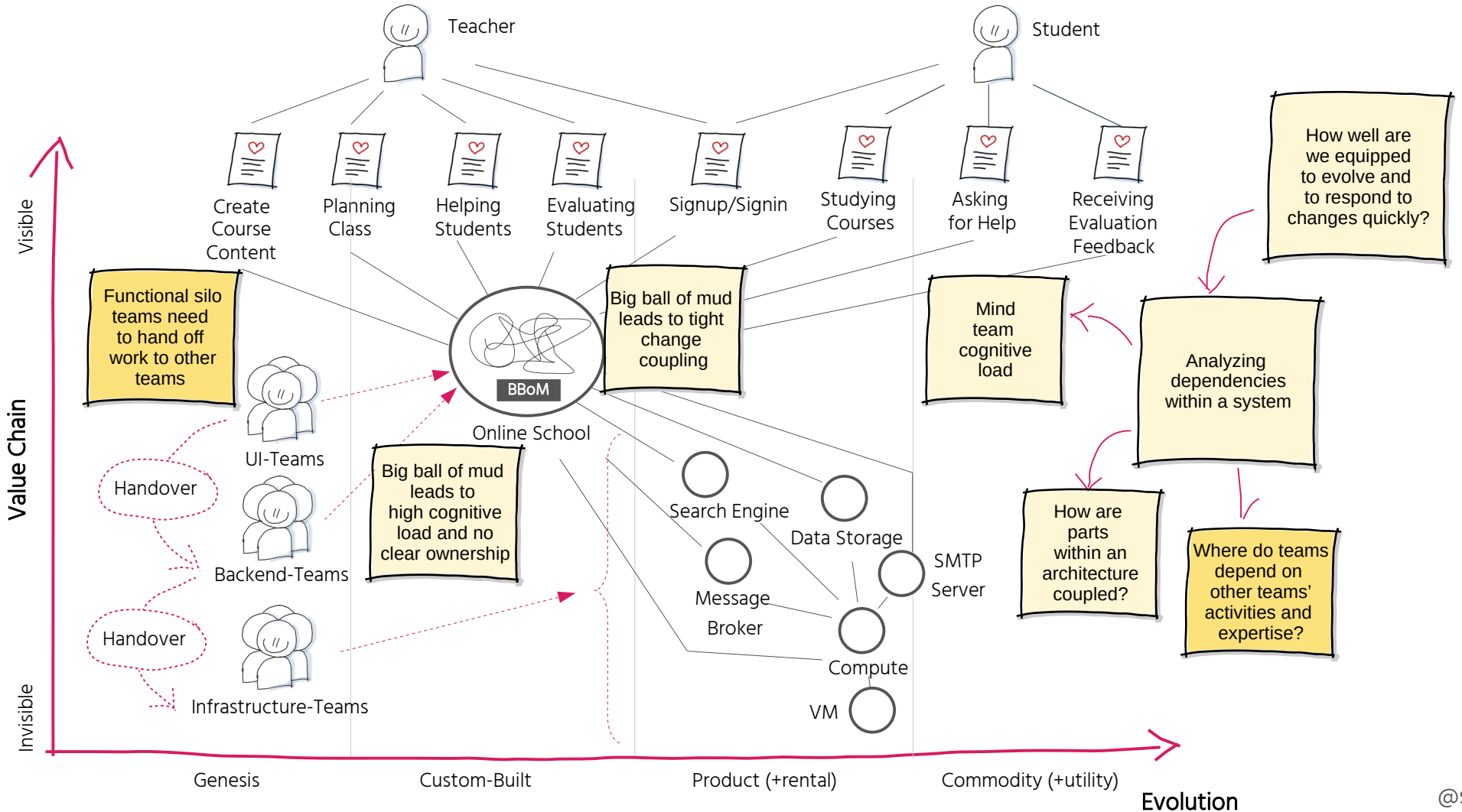
Assessing Responsiveness to Change



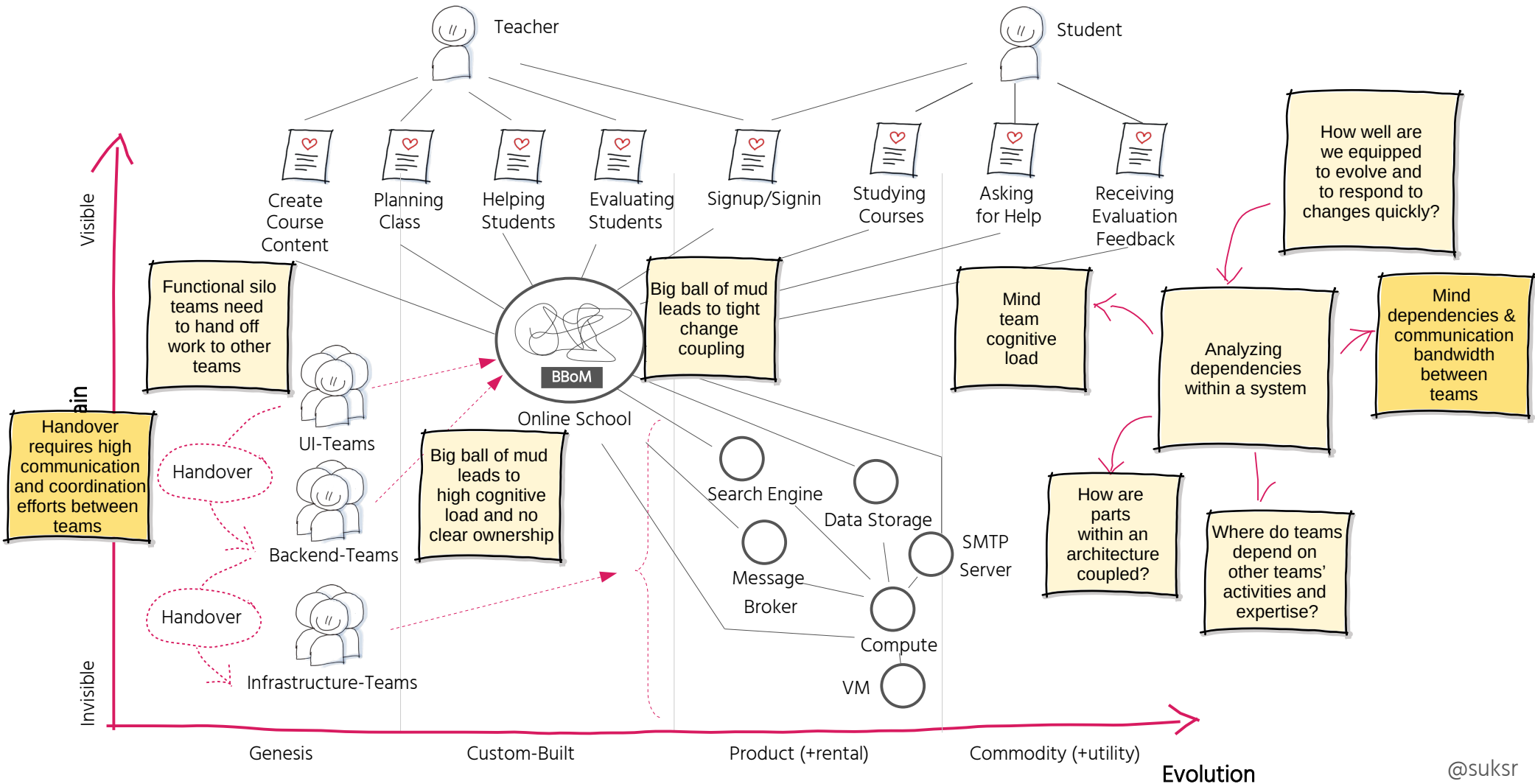
Assessing Responsiveness to Change



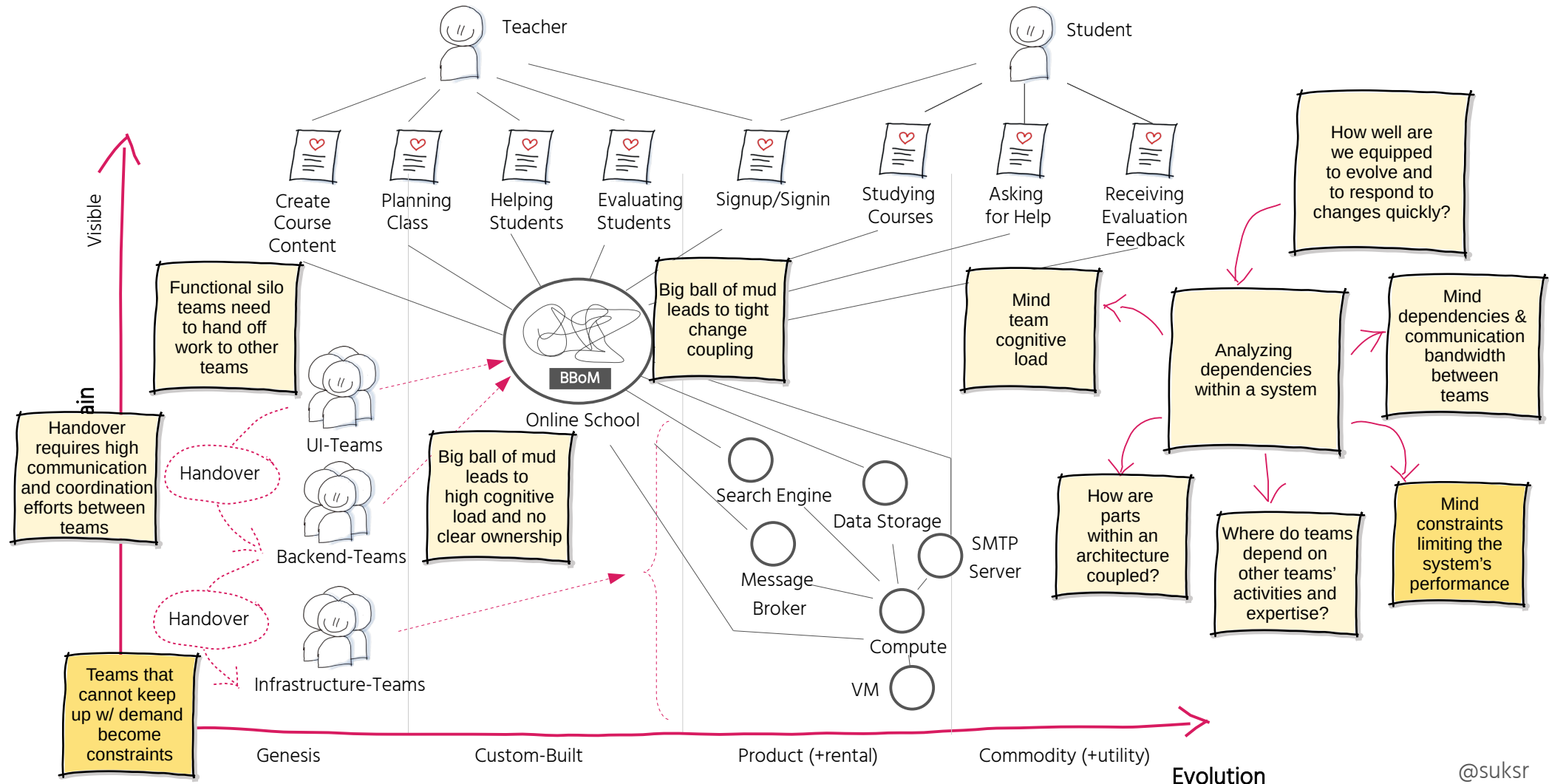
Assessing Responsiveness to Change



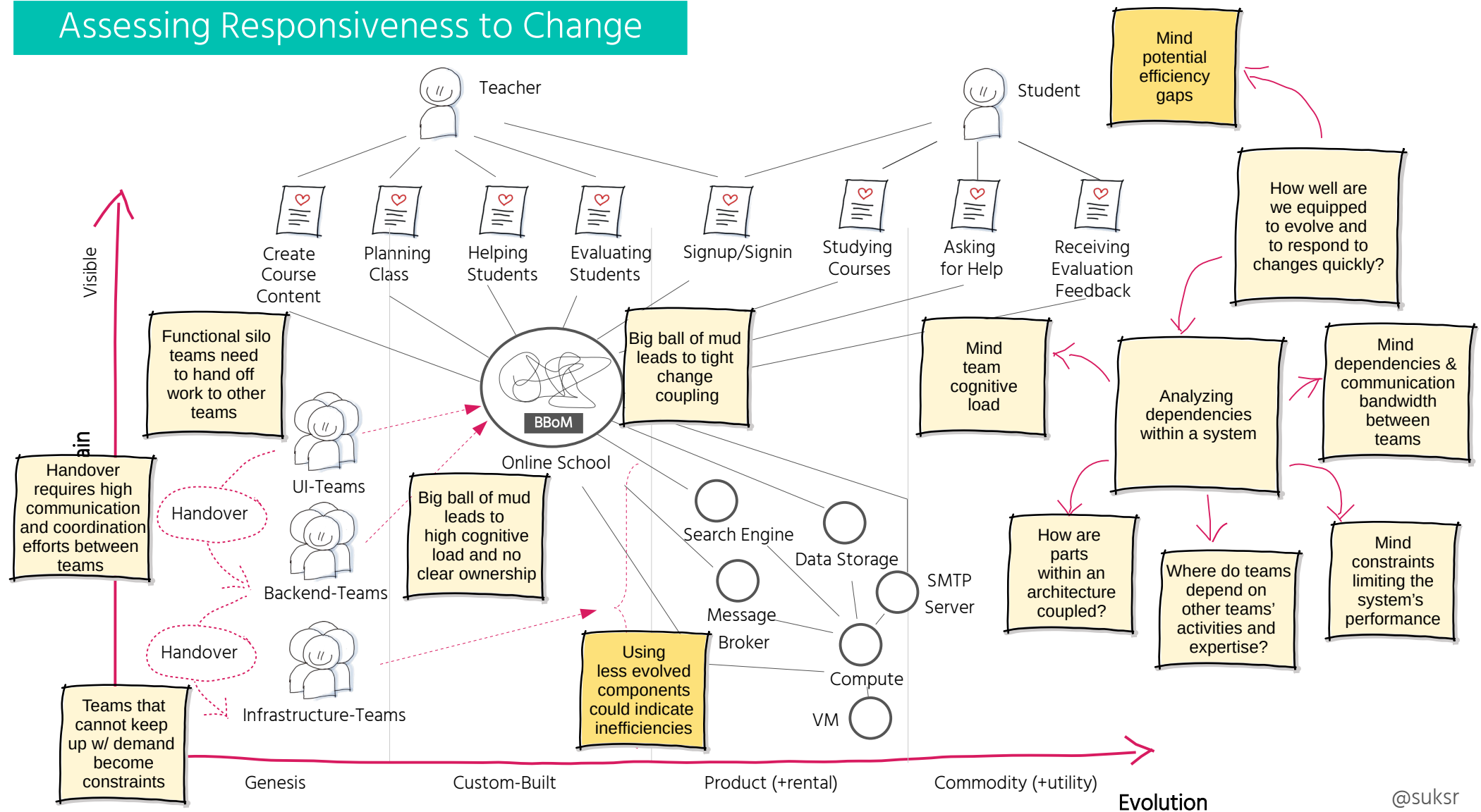
Assessing Responsiveness to Change



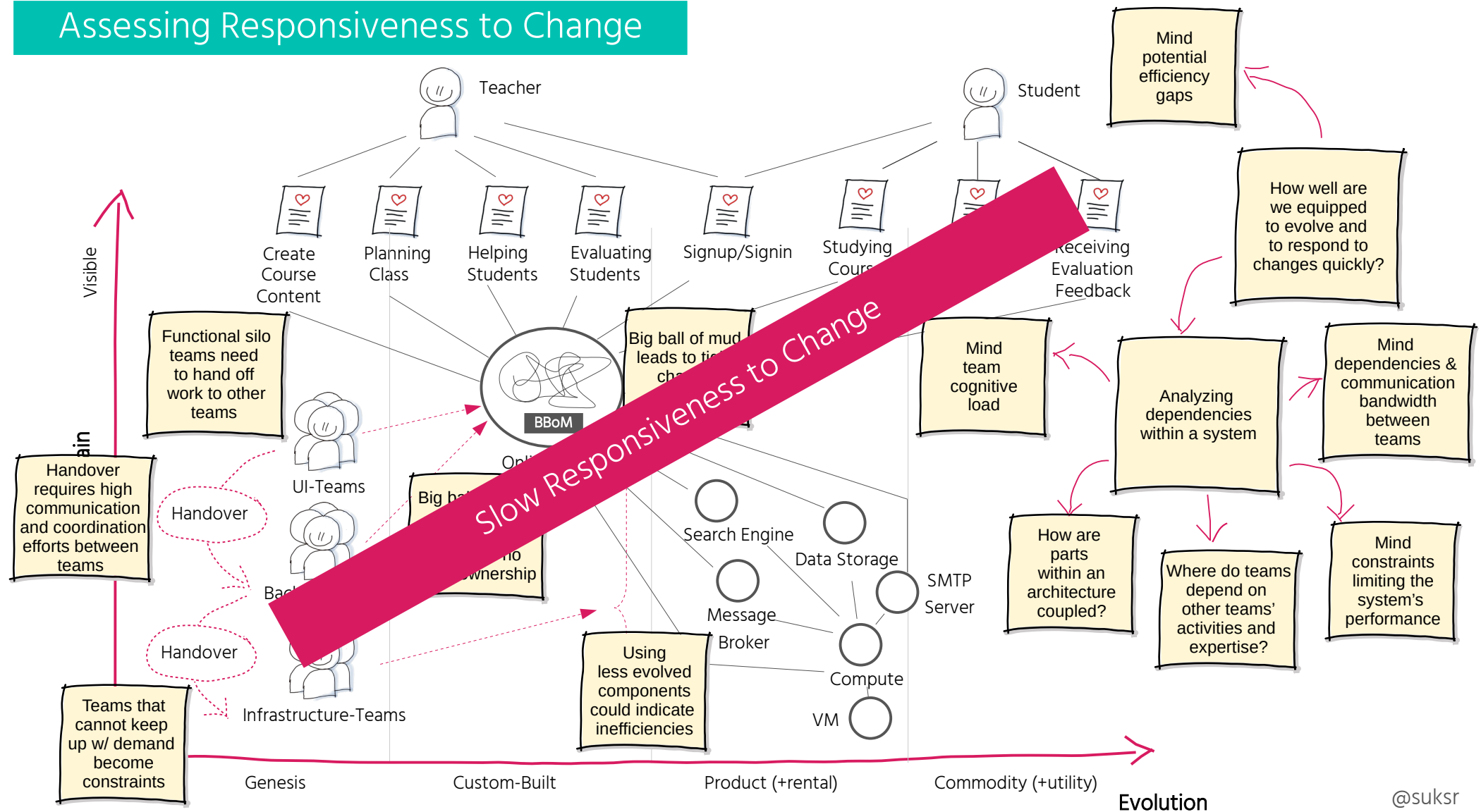
Assessing Responsiveness to Change



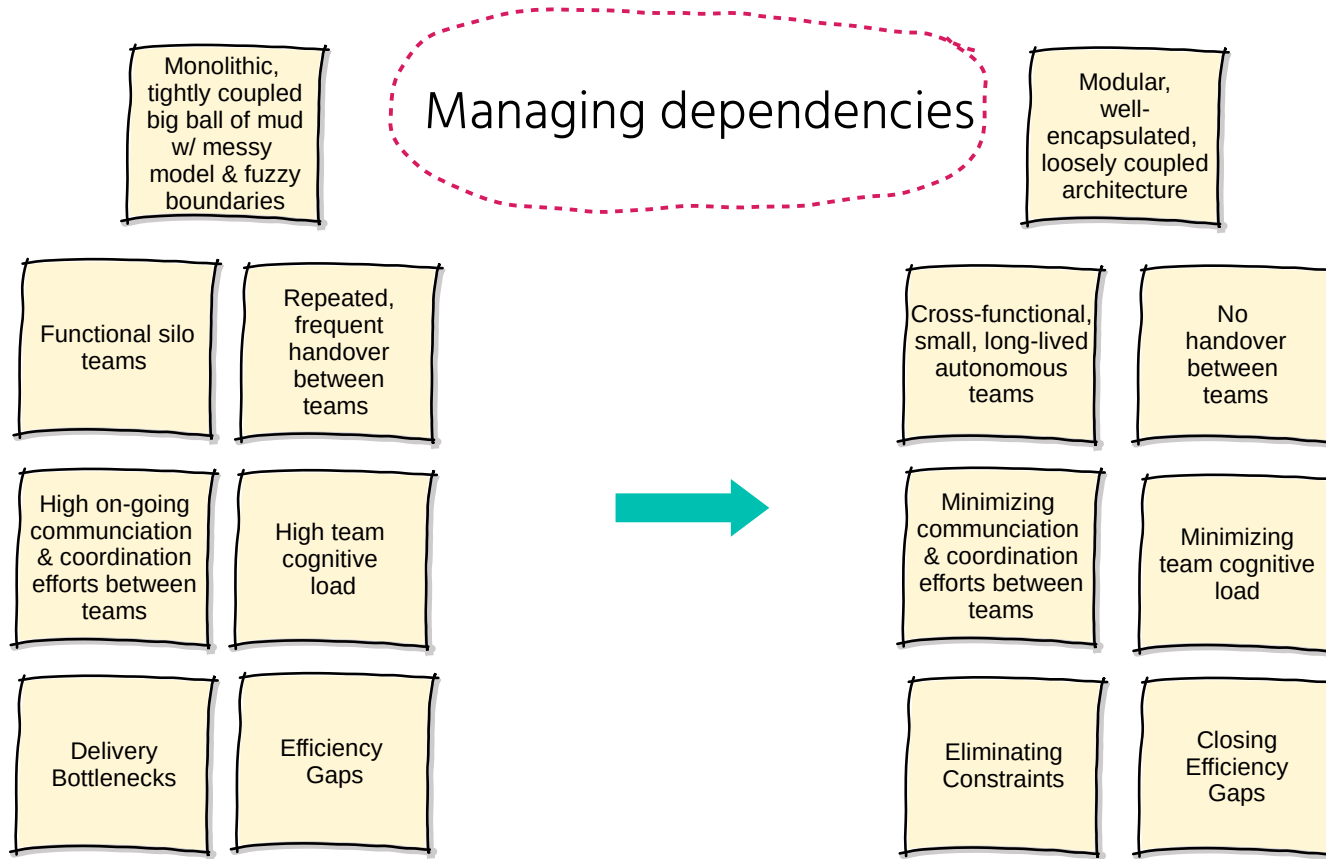
Assessing Responsiveness to Change



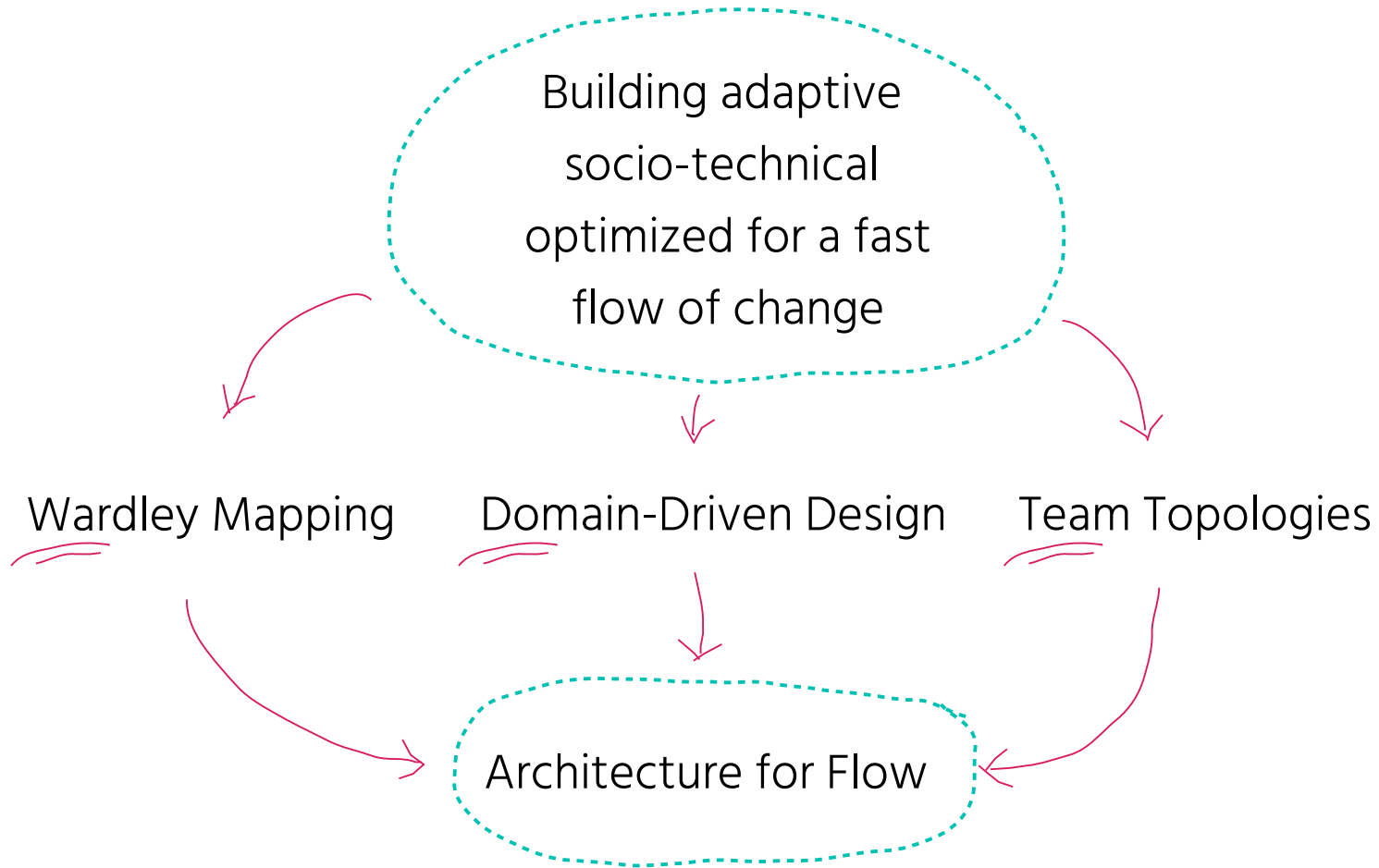
Assessing Responsiveness to Change



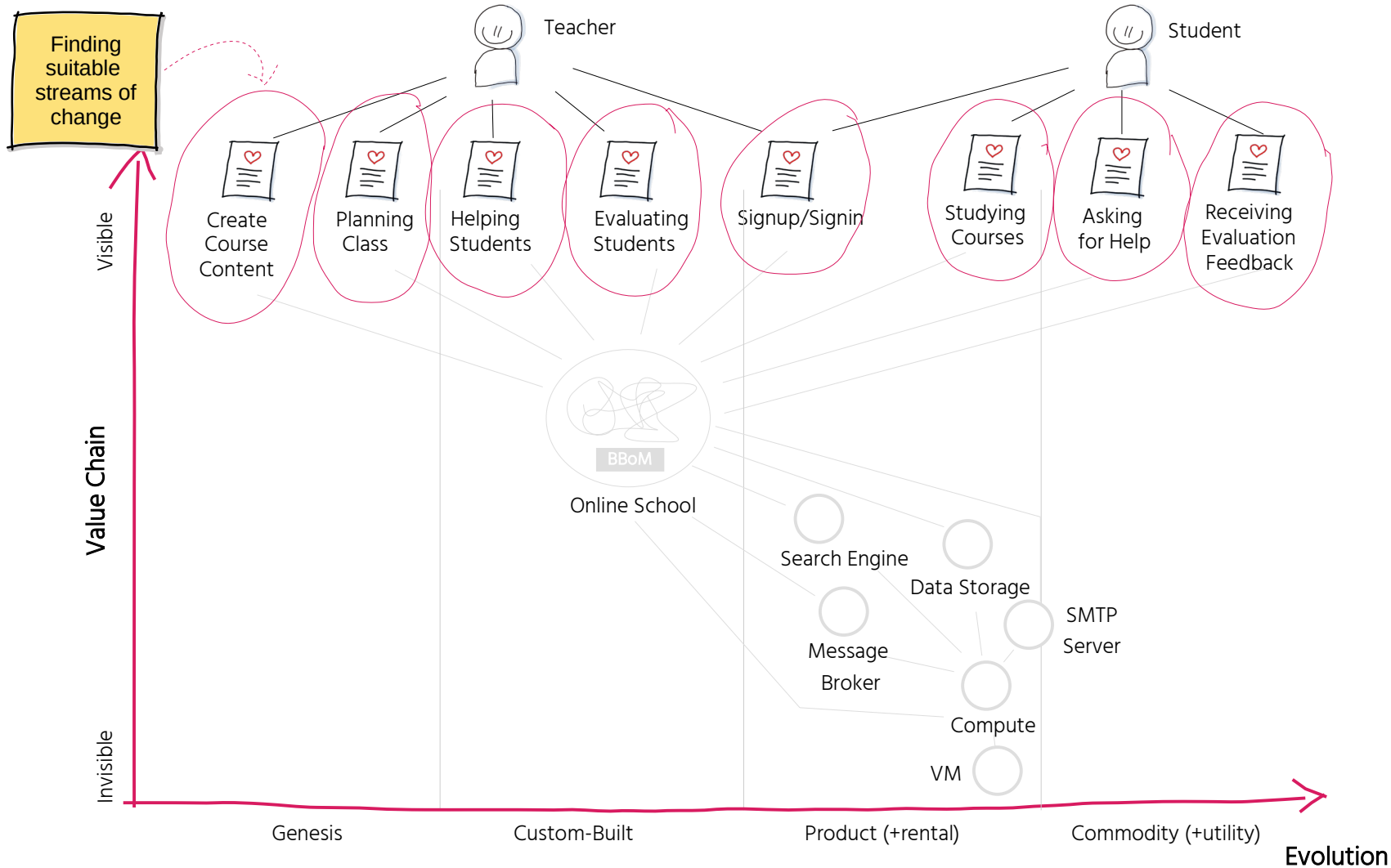
Optmizing Flow of Change



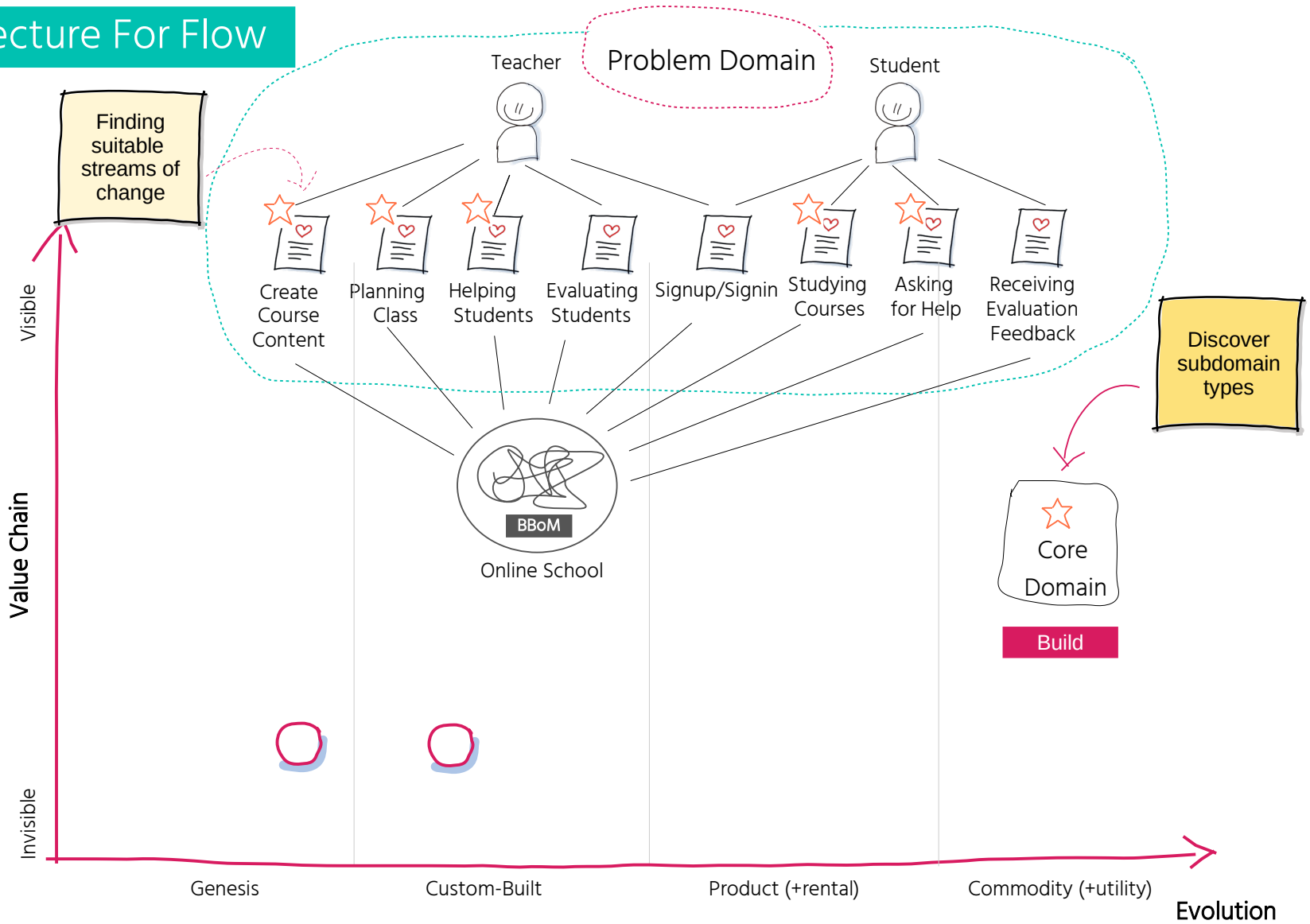
Architecture for Flow



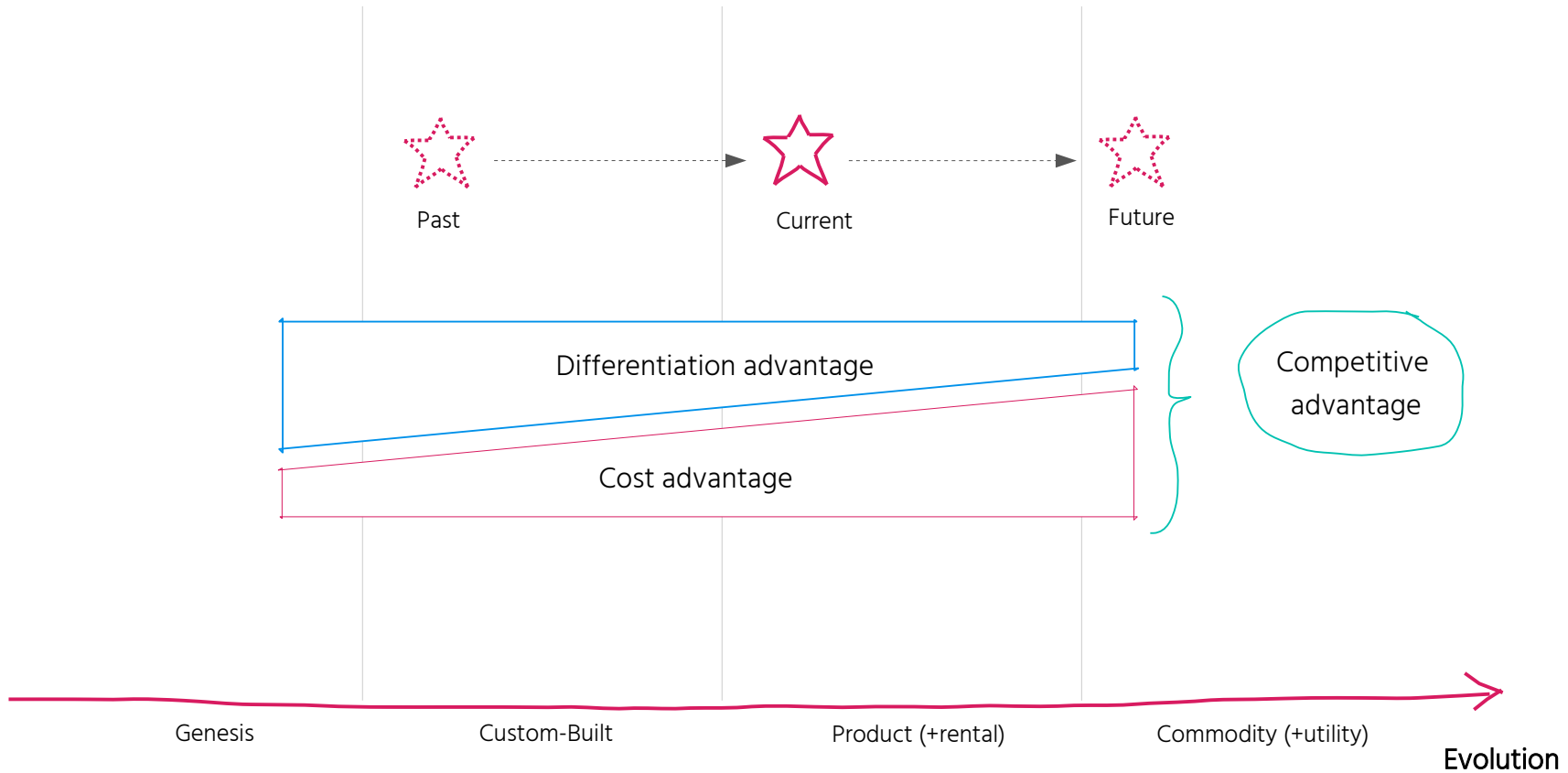
Architecture For Flow



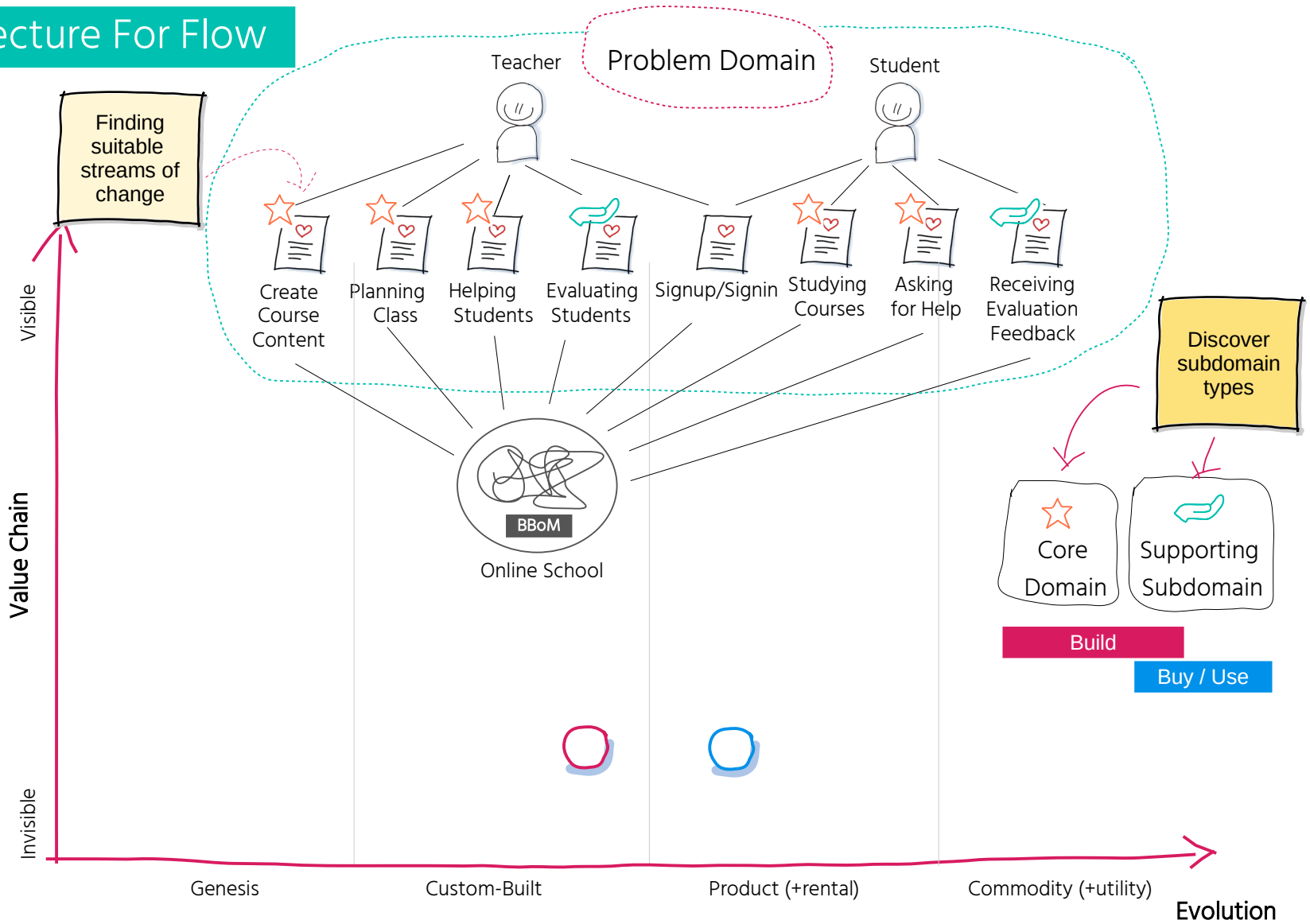
Architecture For Flow



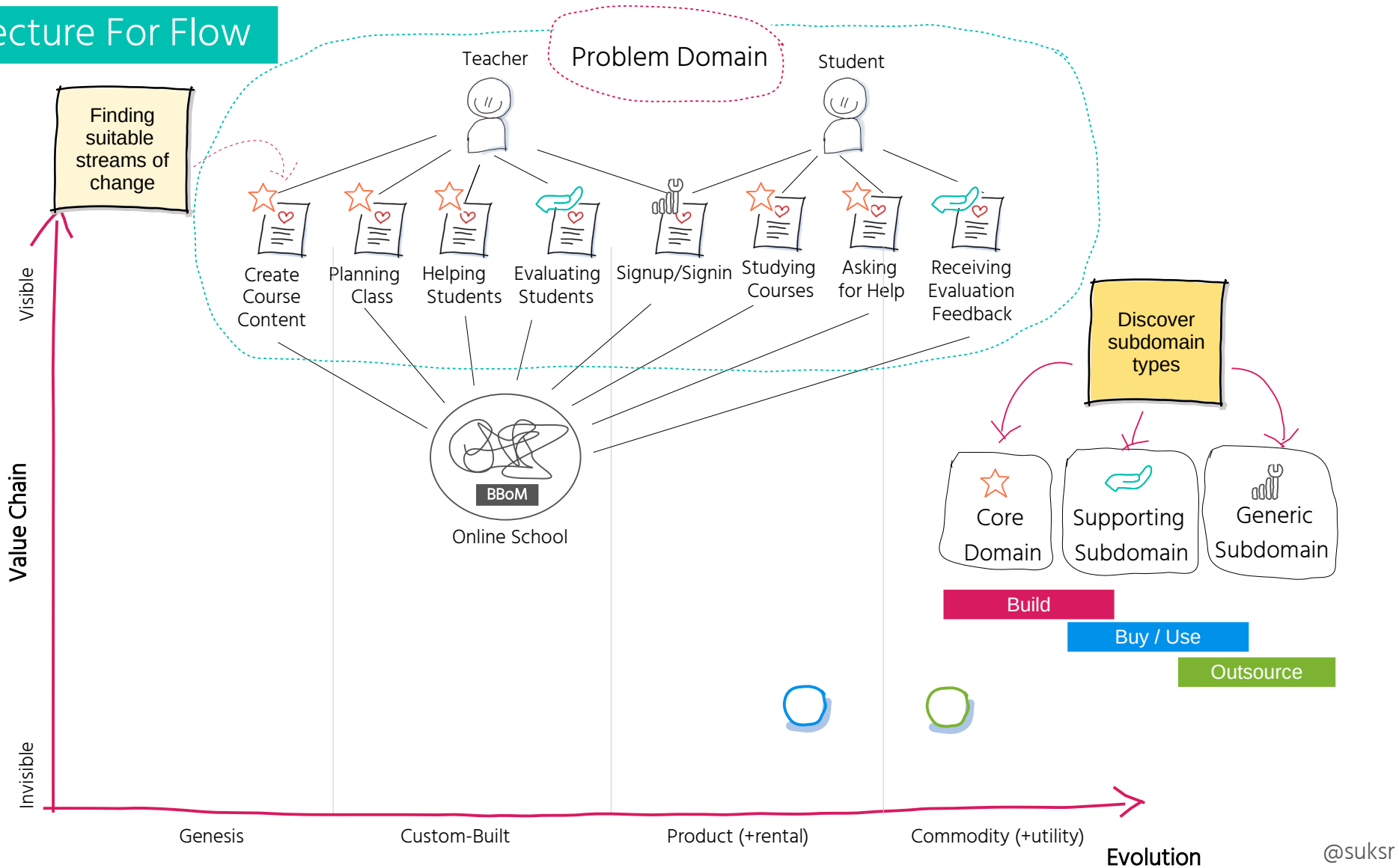
The Core Domain And Evolution



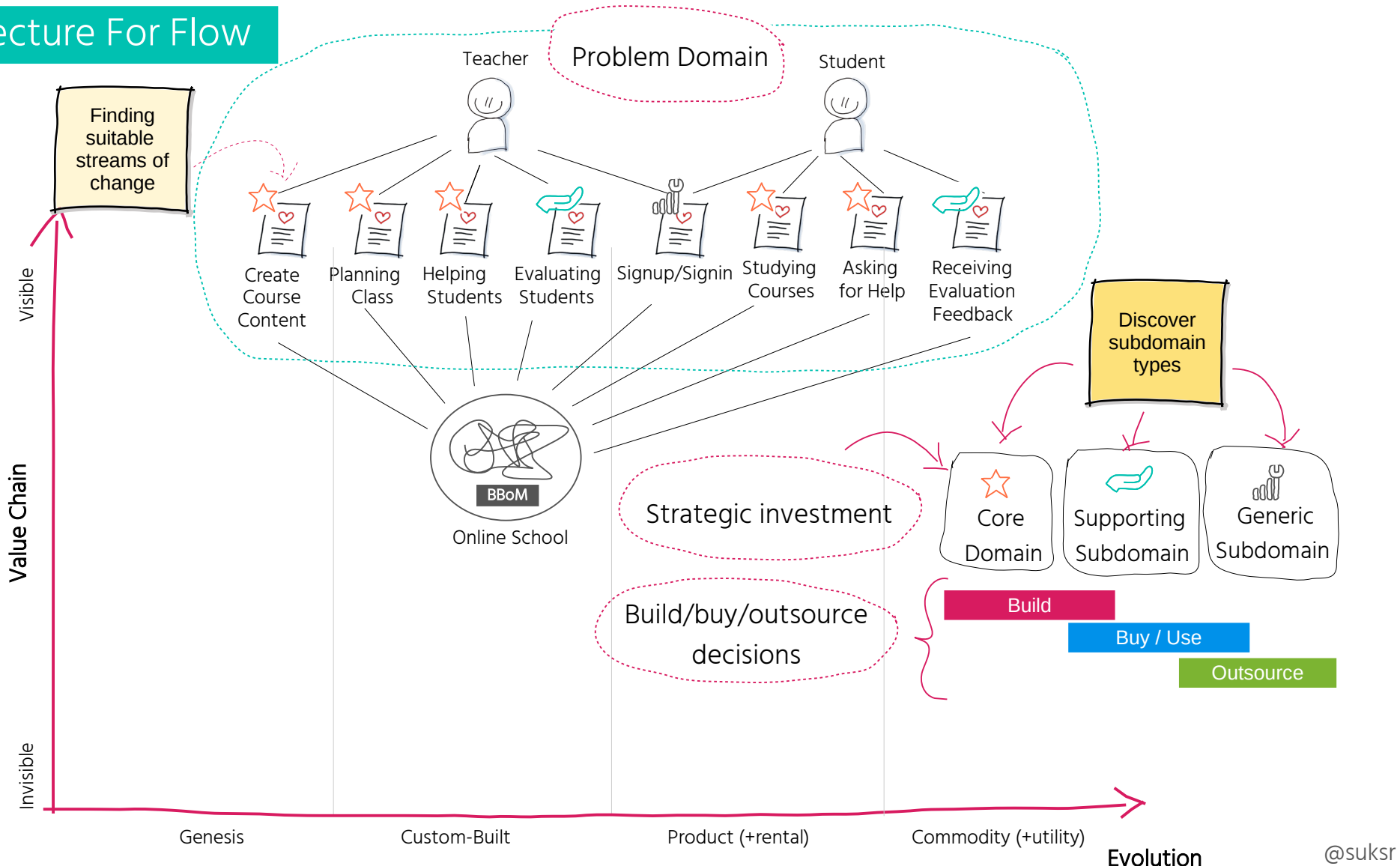
Architecture For Flow



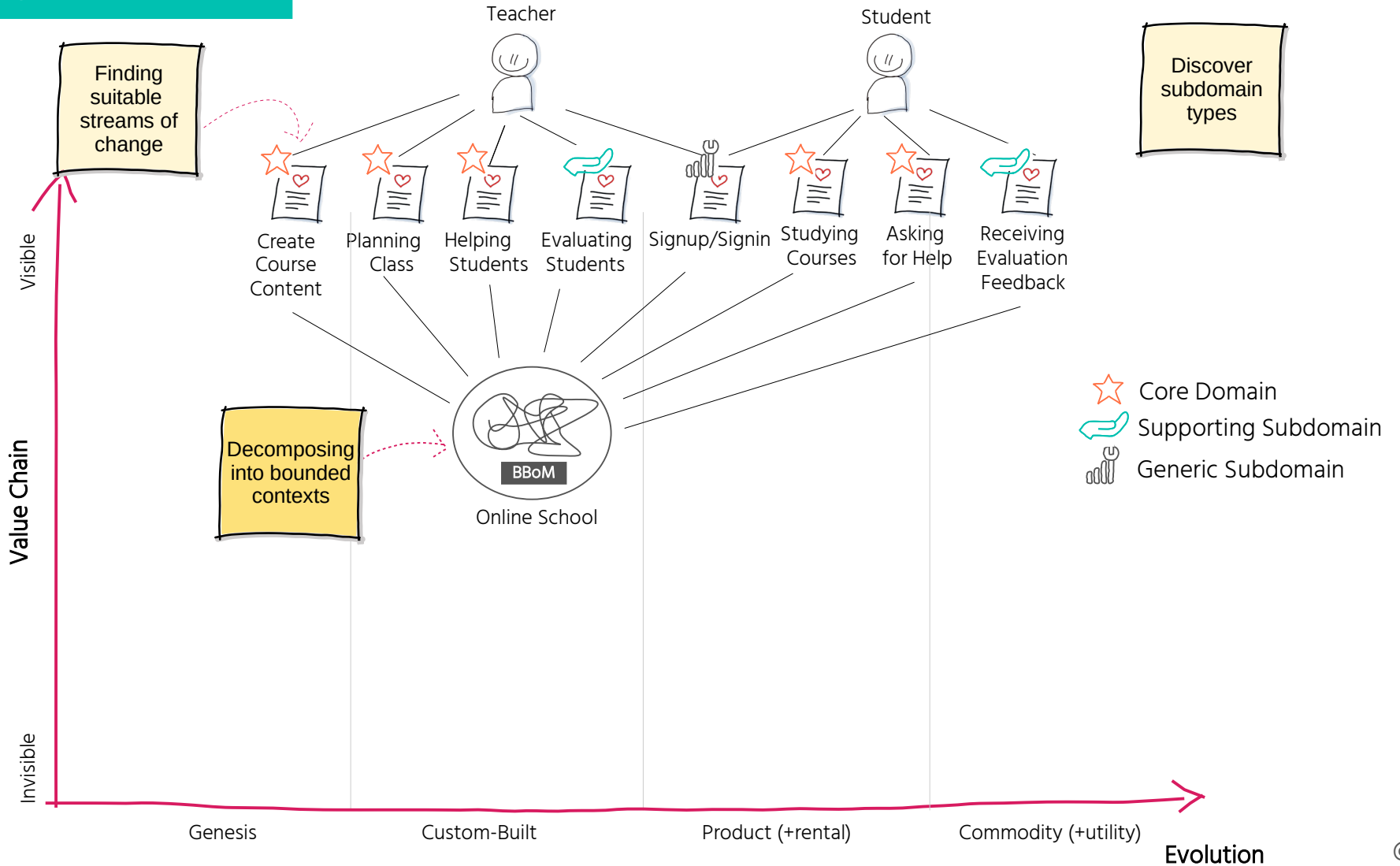
Architecture For Flow



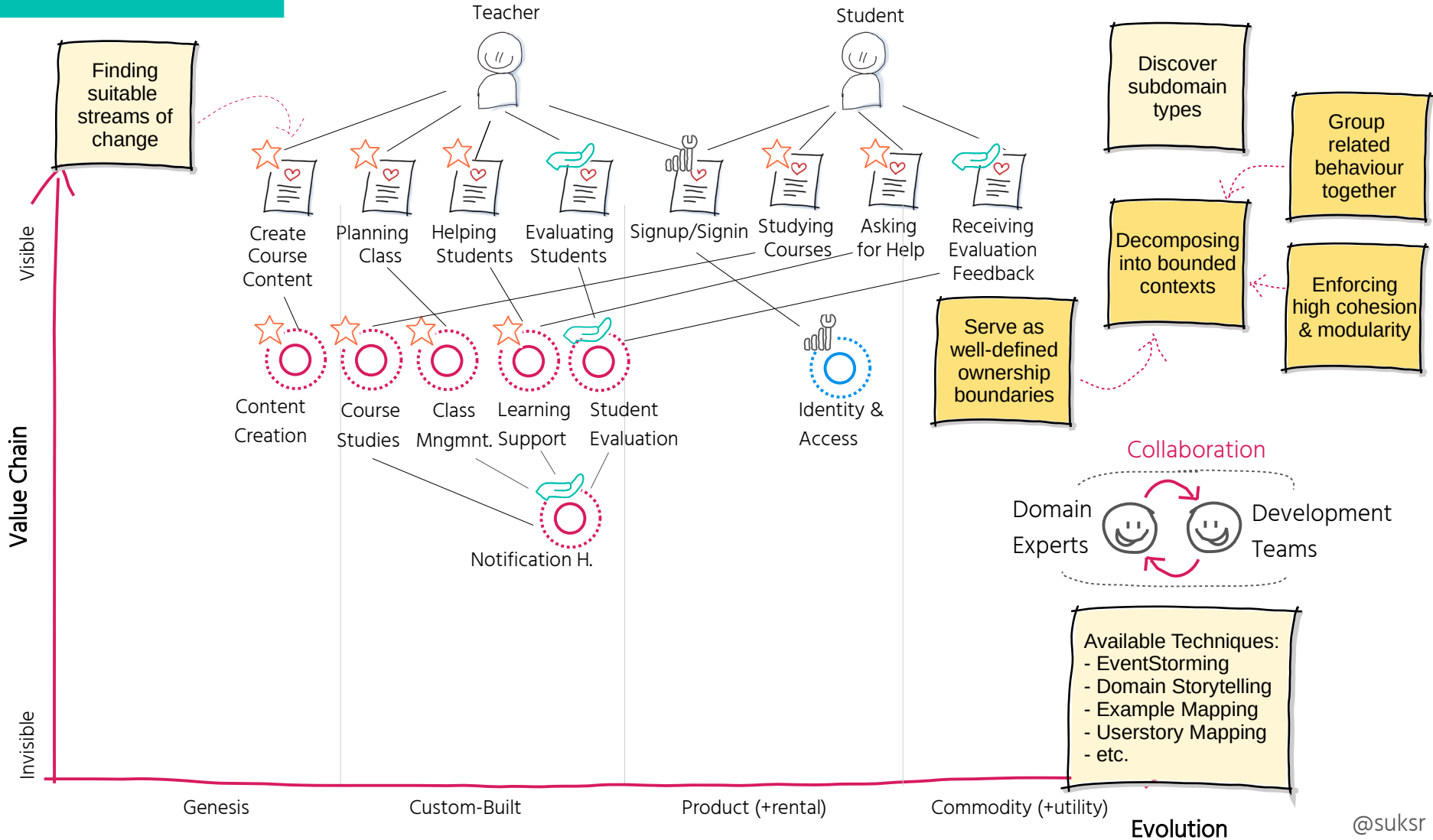
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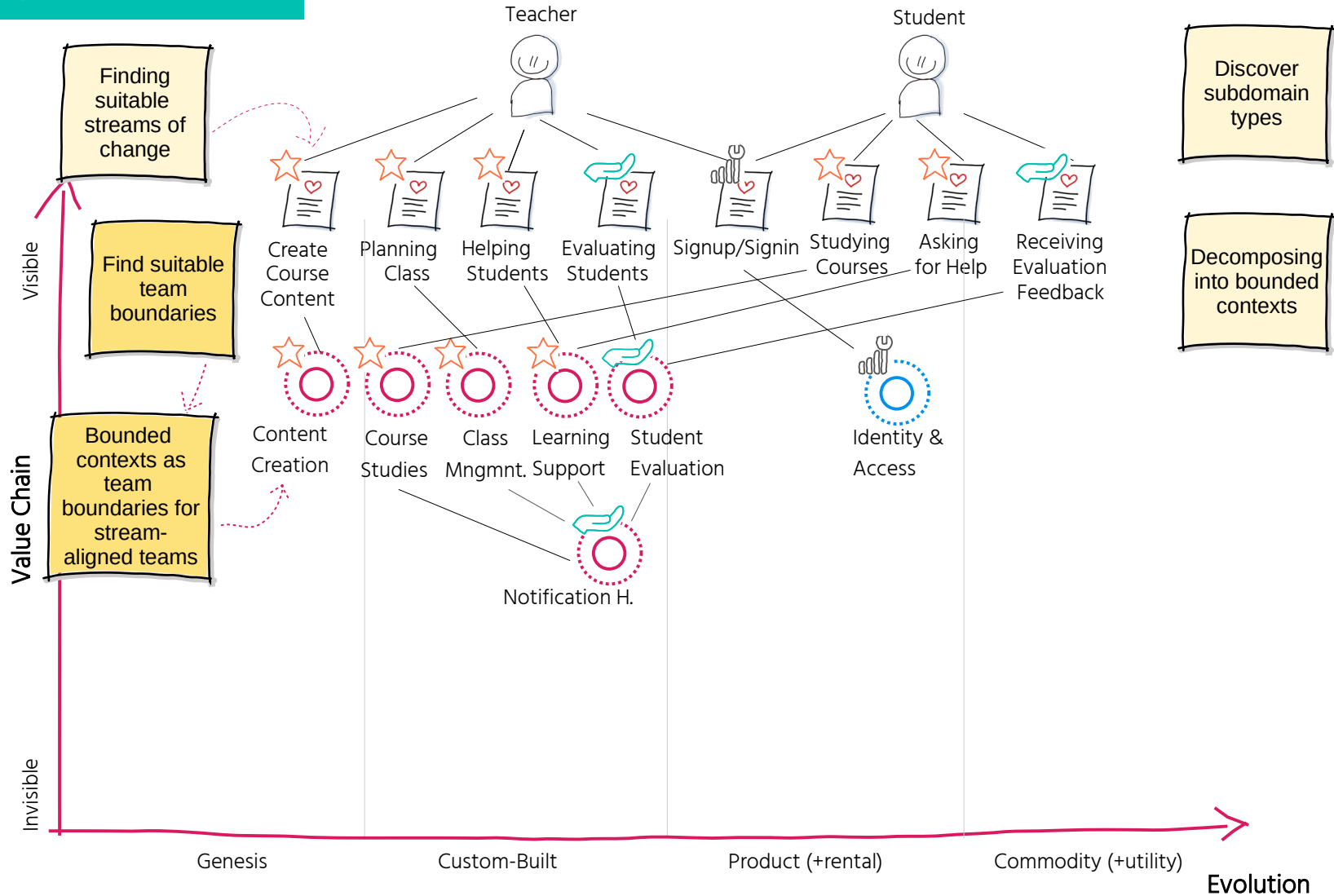
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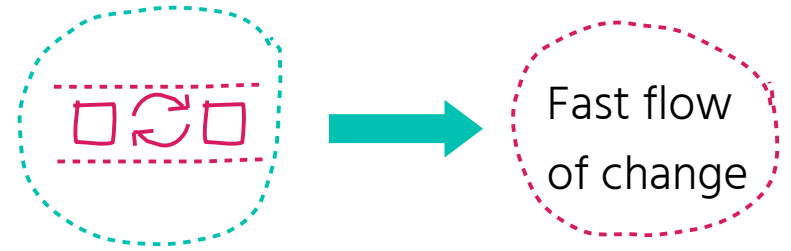
Architecture For Flow



Architecture For Flow



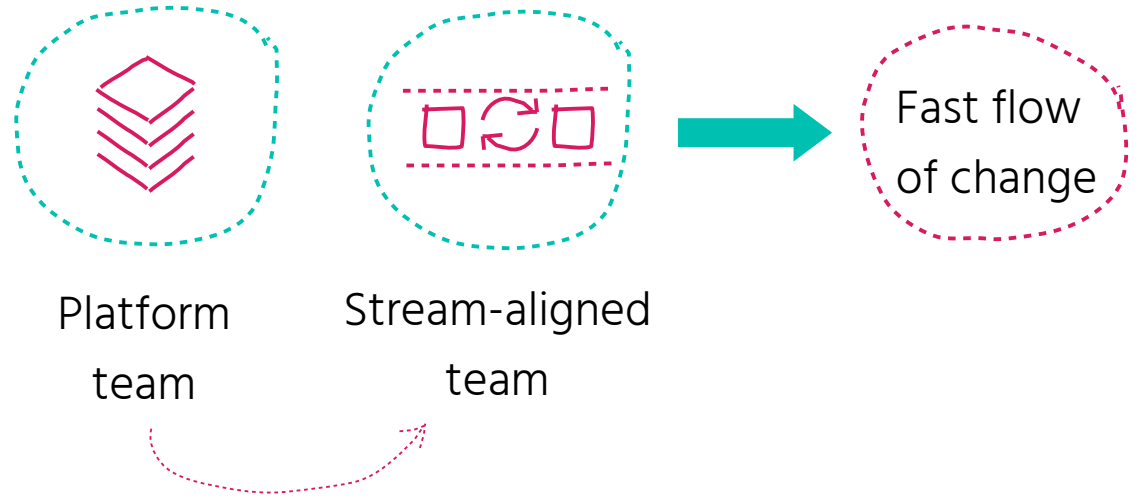
Four Team Types of Team Topologies



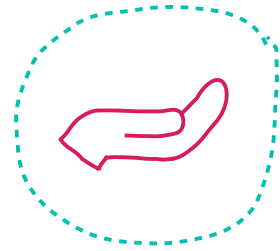
Stream-aligned
team

Fast flow
of change

Four Team Types of Team Topologies



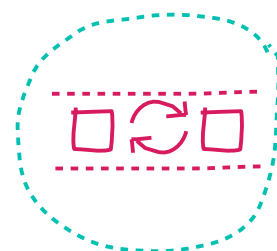
Four Team Types of Team Topologies



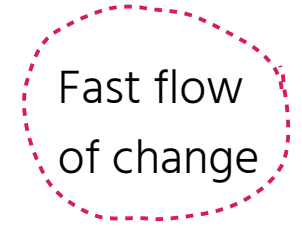
Enabling
team



Platform
team



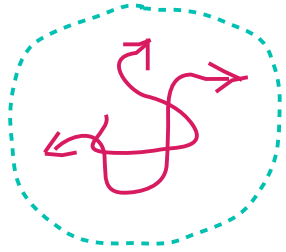
Stream-aligned
team



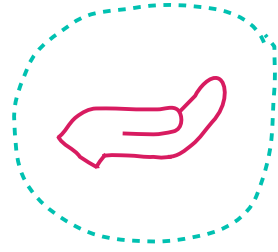
Fast flow
of change



Four Team Types of Team Topologies



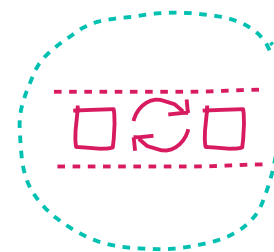
Complicated
subsystem team



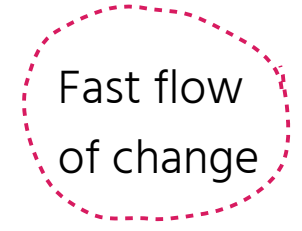
Enabling
team



Platform
team



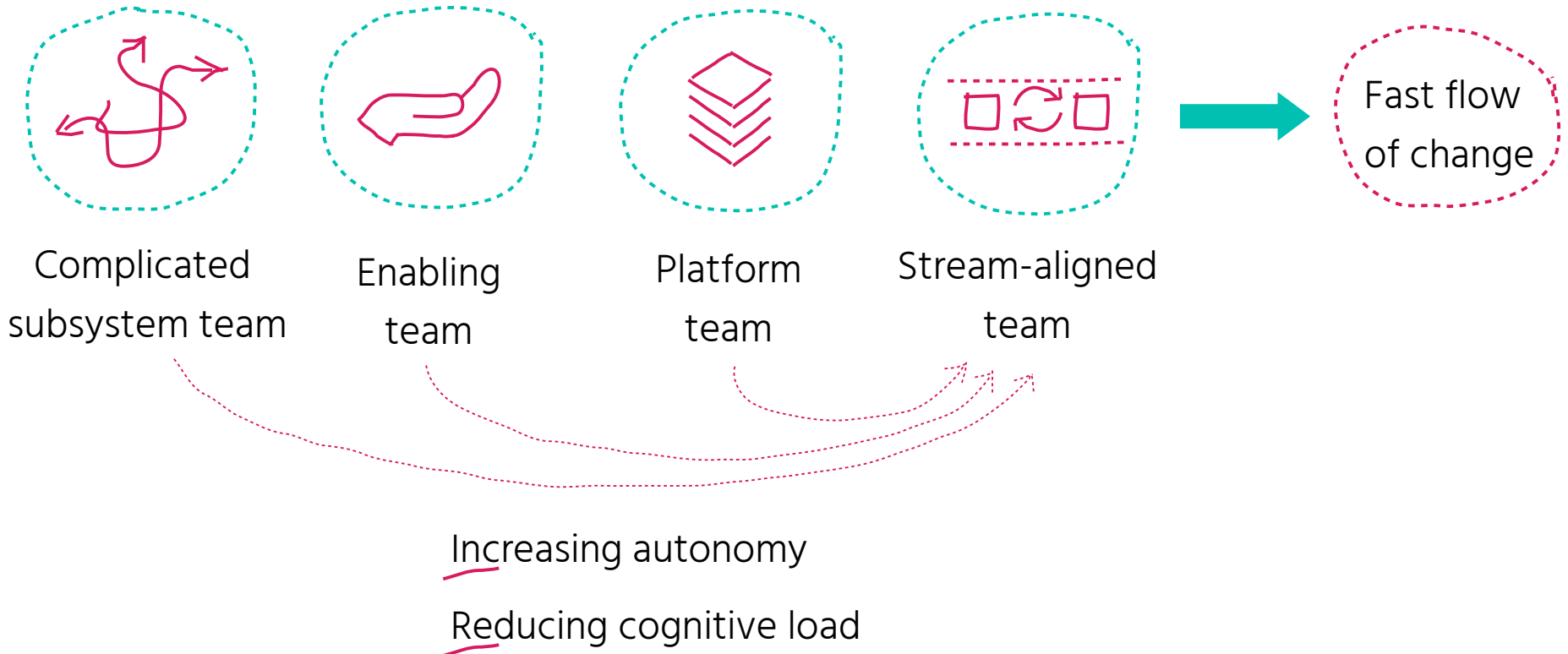
Stream-aligned
team



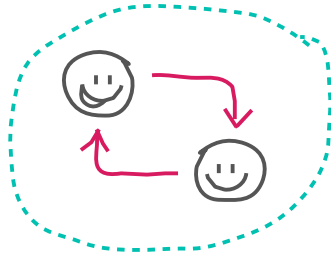
Fast flow
of change



Four Team Types of Team Topologies



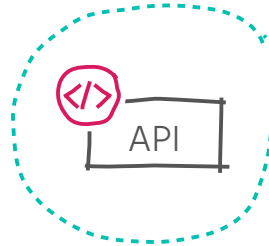
Three Interaction Modes



Collaboration



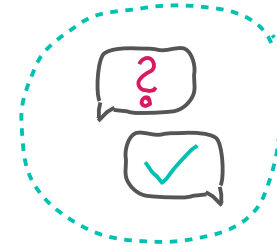
Rapid discovery



X-as-a-Service



Predictable
delivery

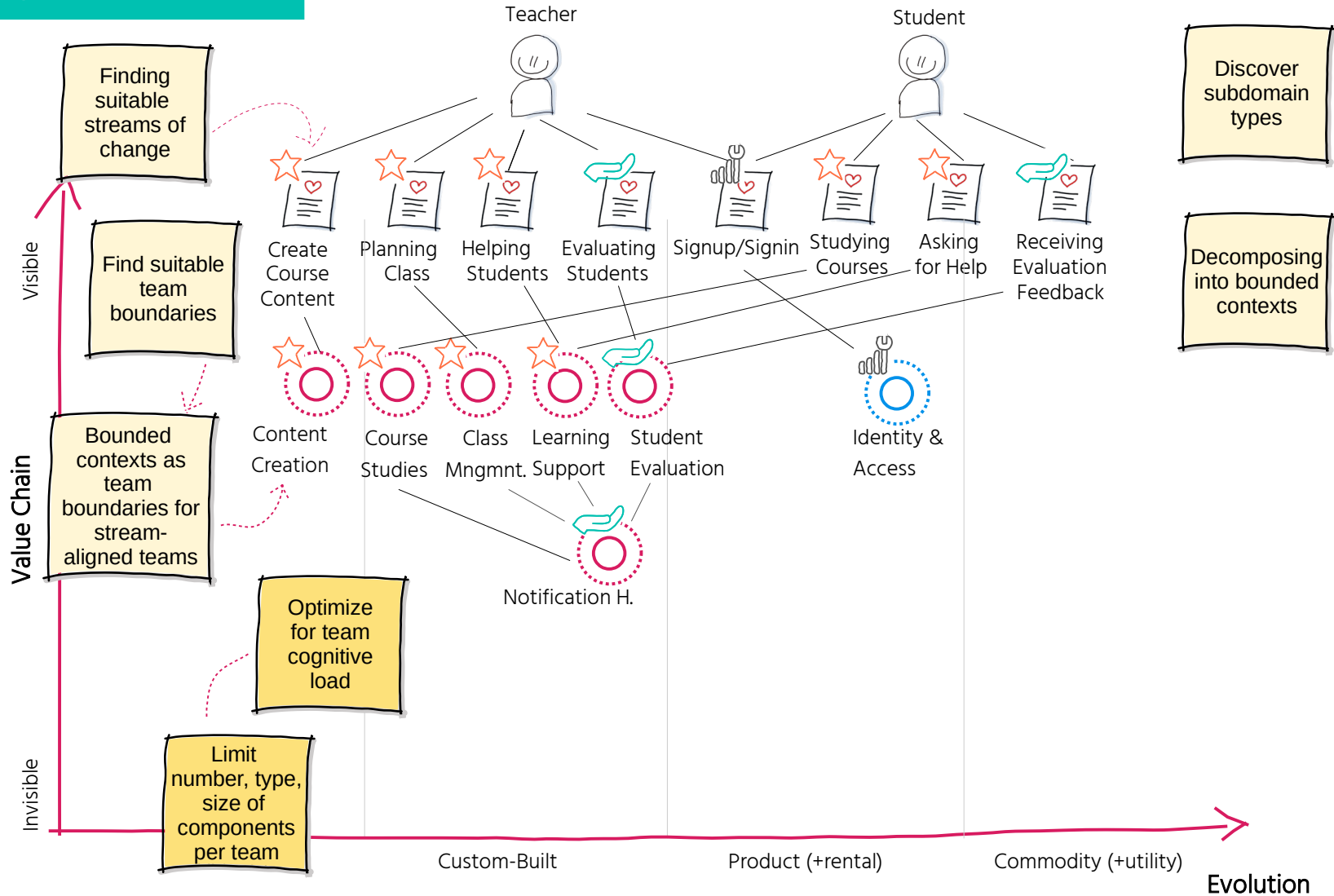


Facilitating

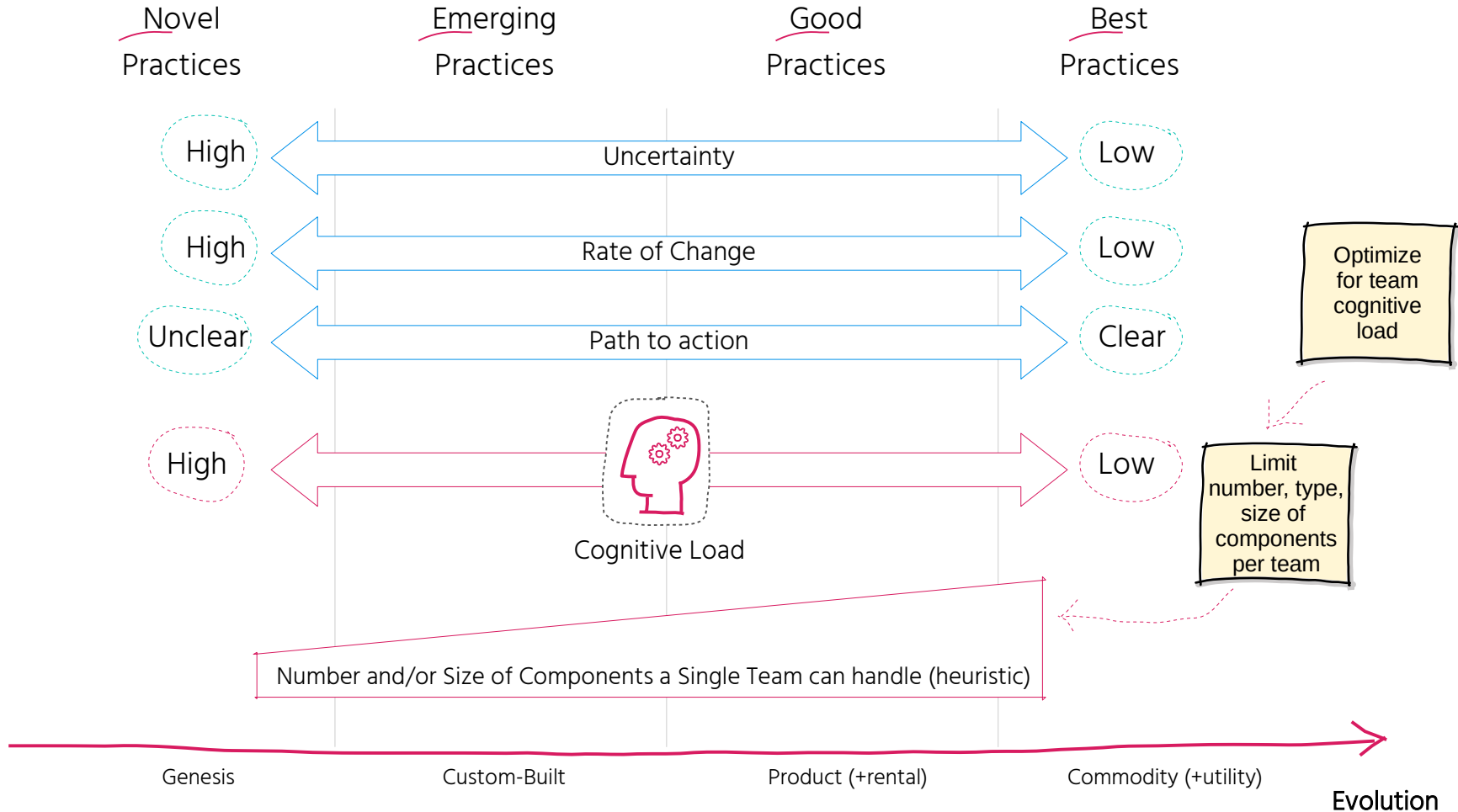


Active help

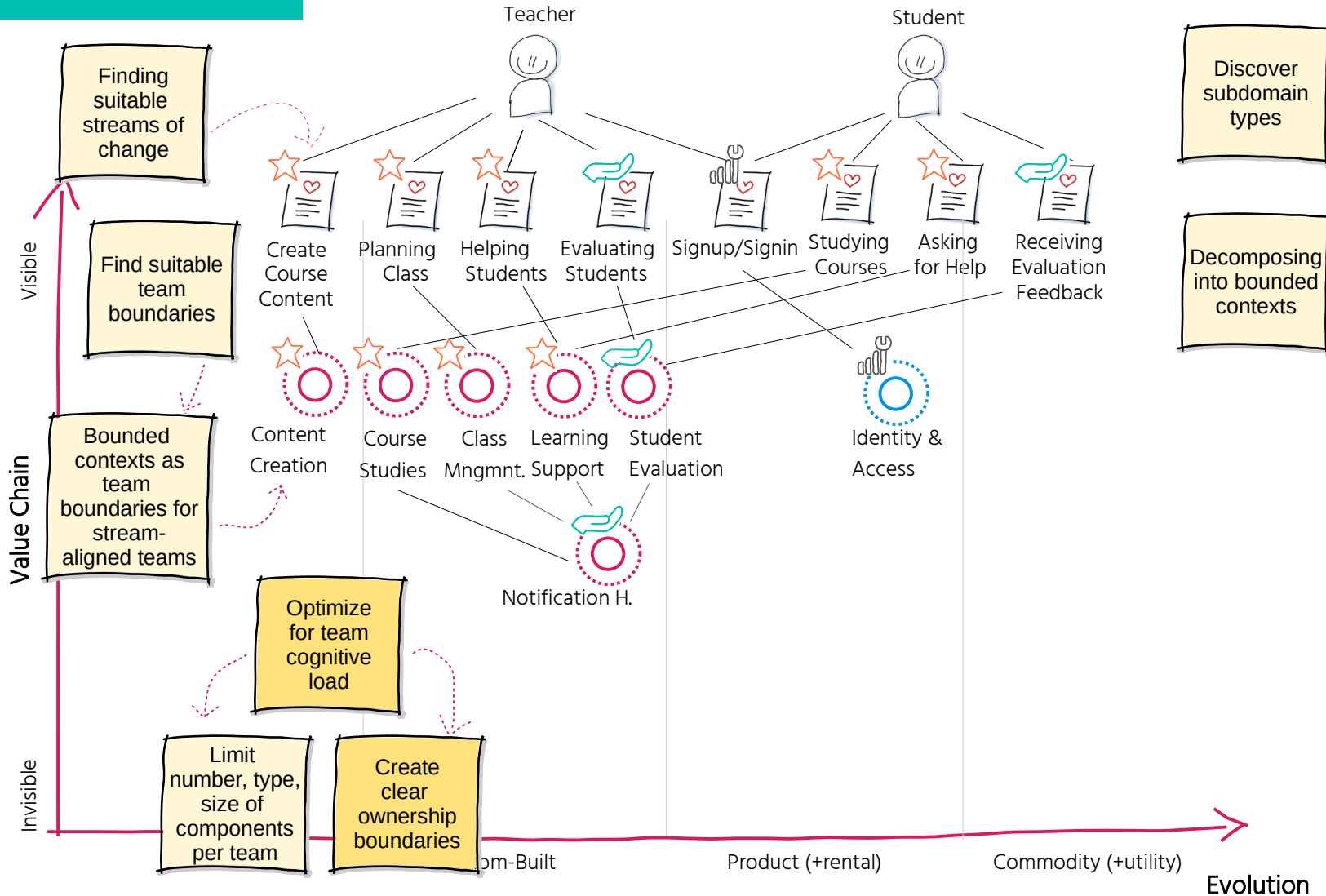
Architecture For Flow

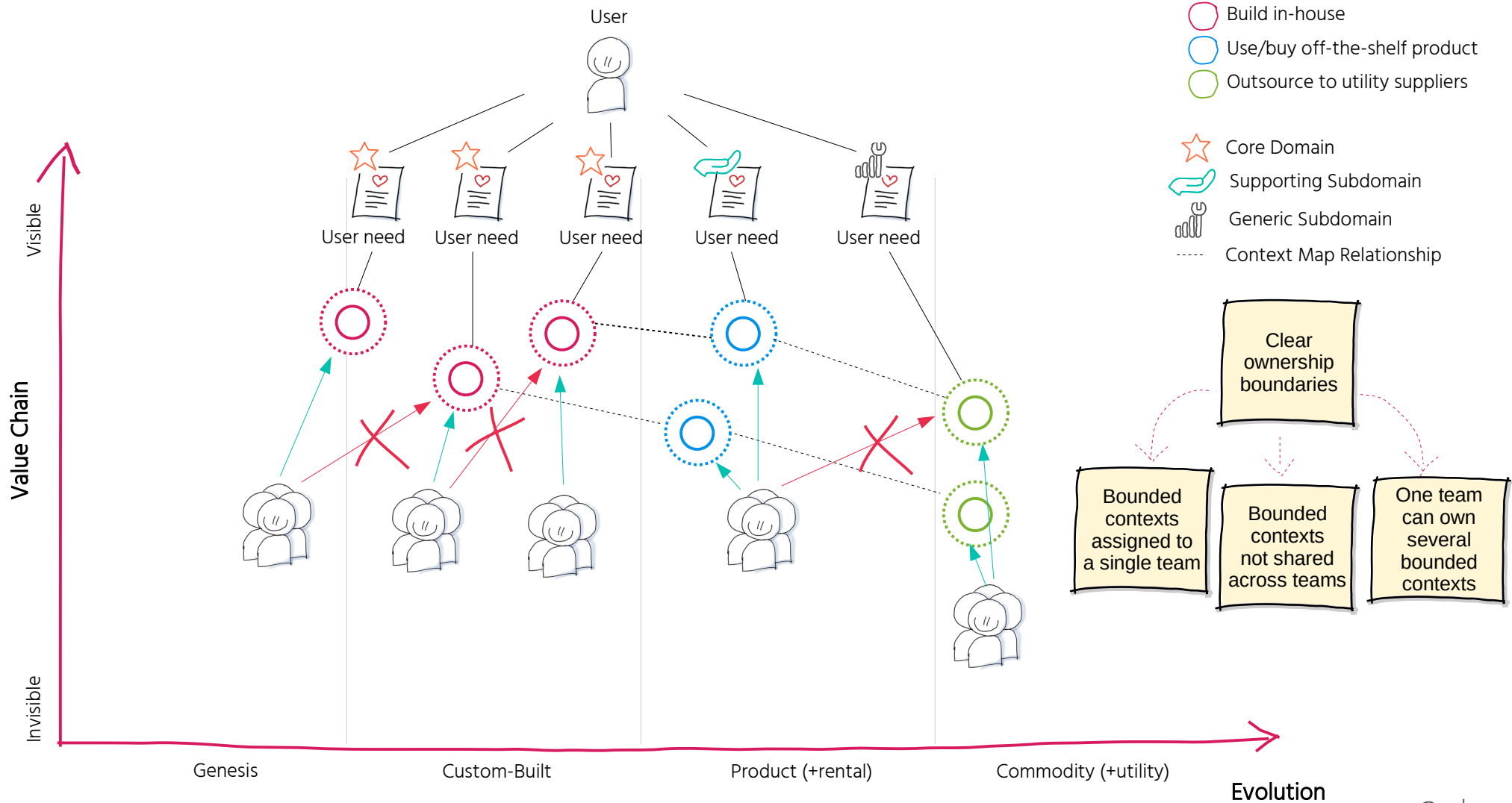


Architecture For Flow

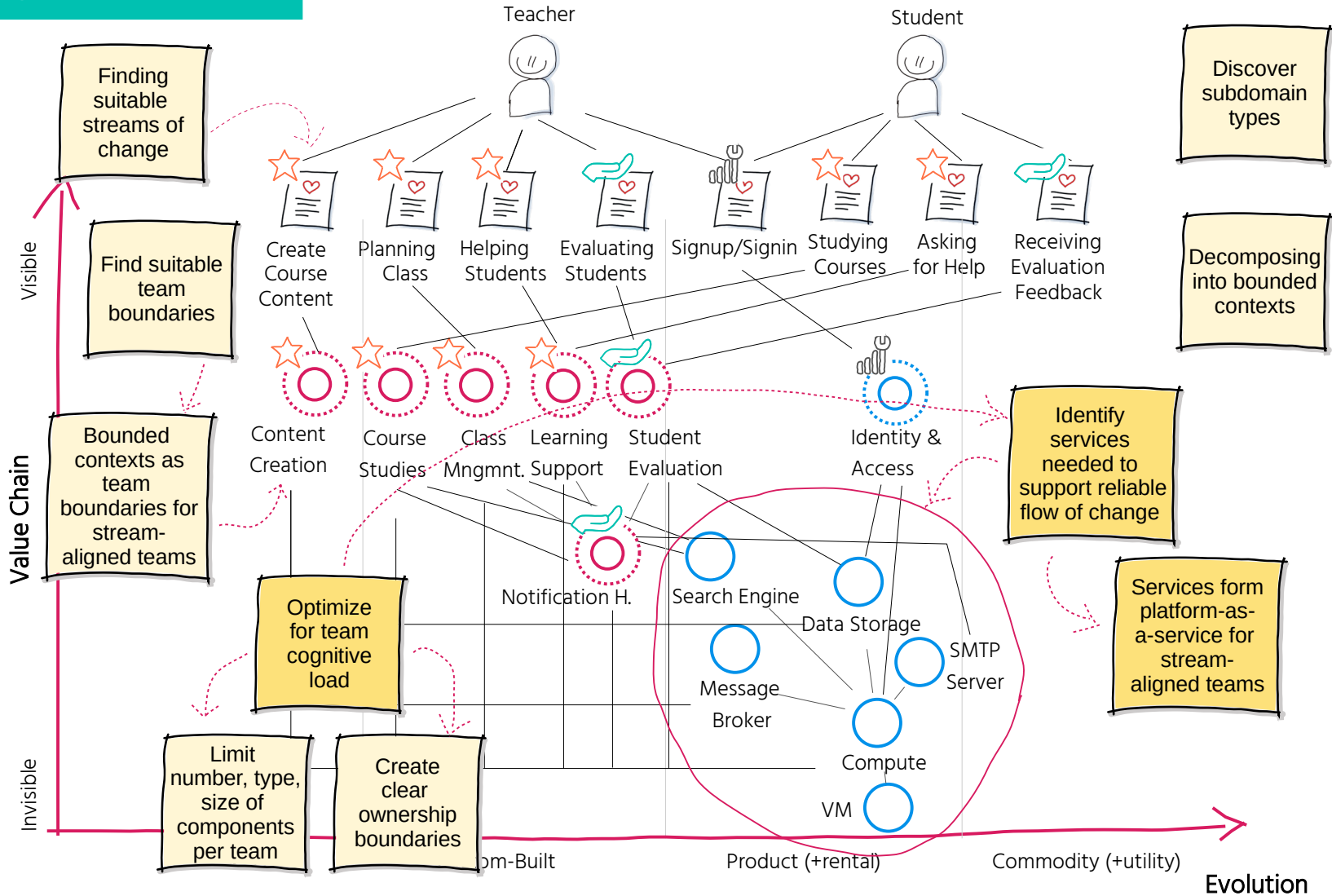


Architecture For Flow

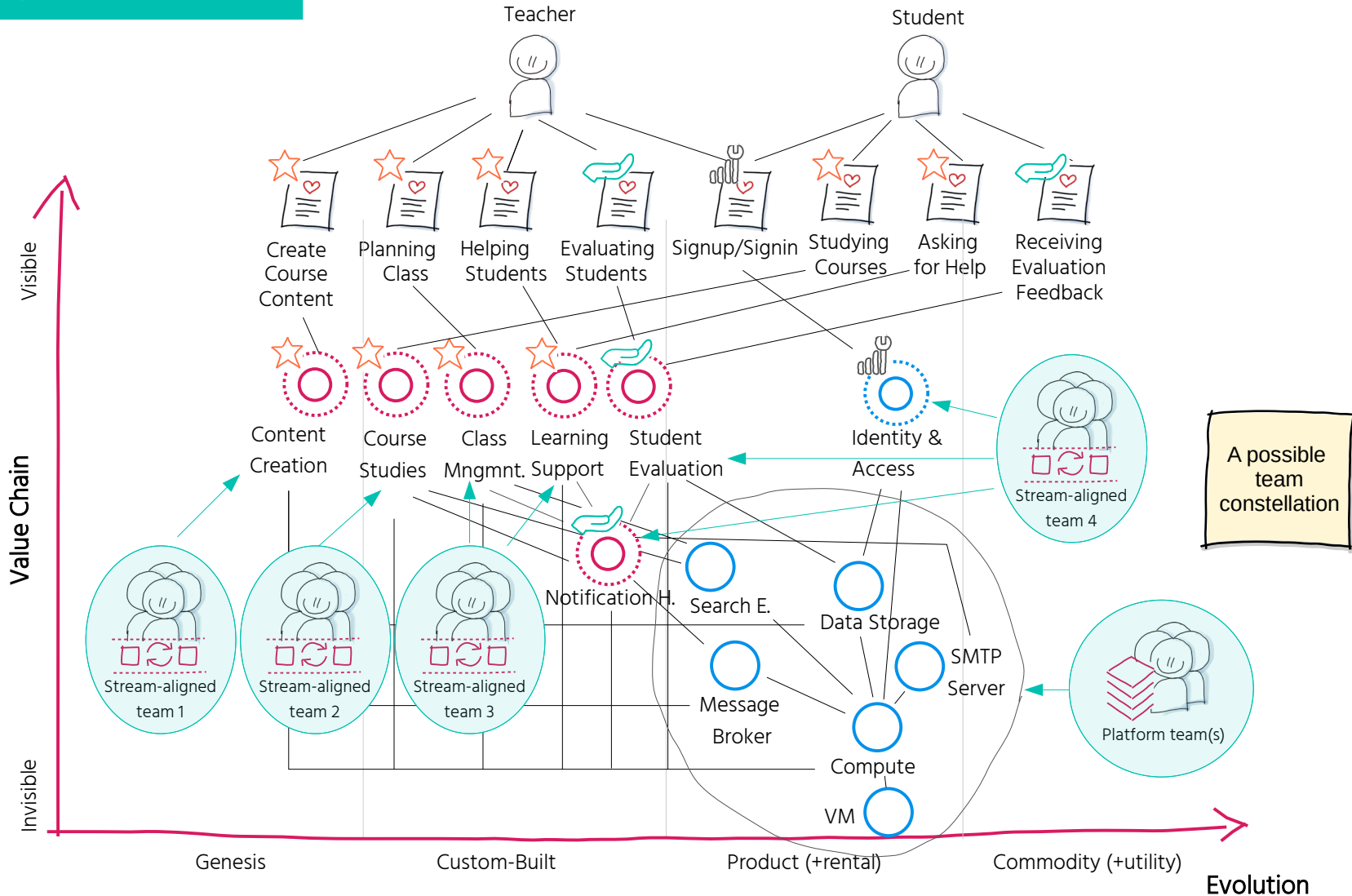




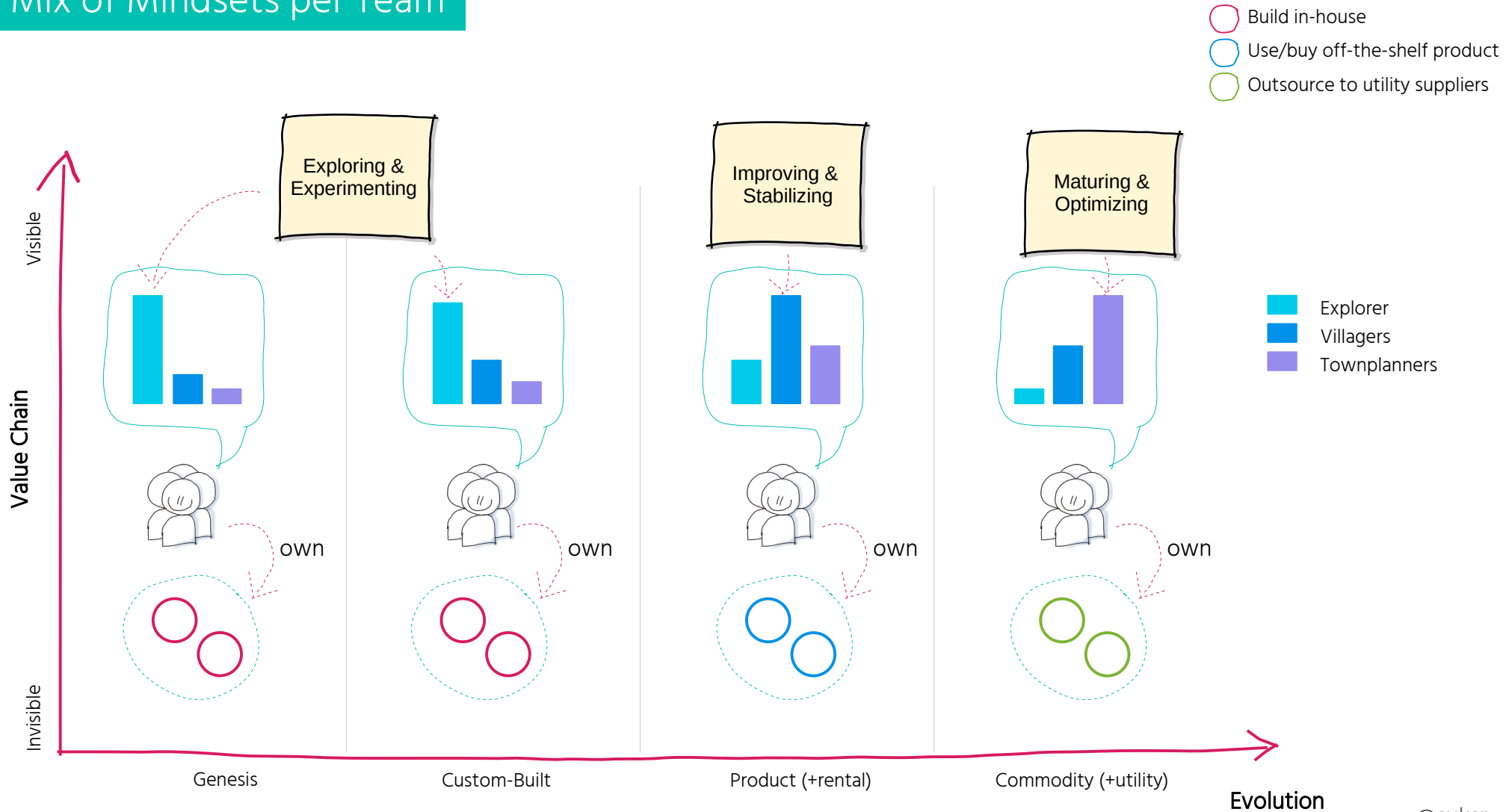
Architecture For Flow



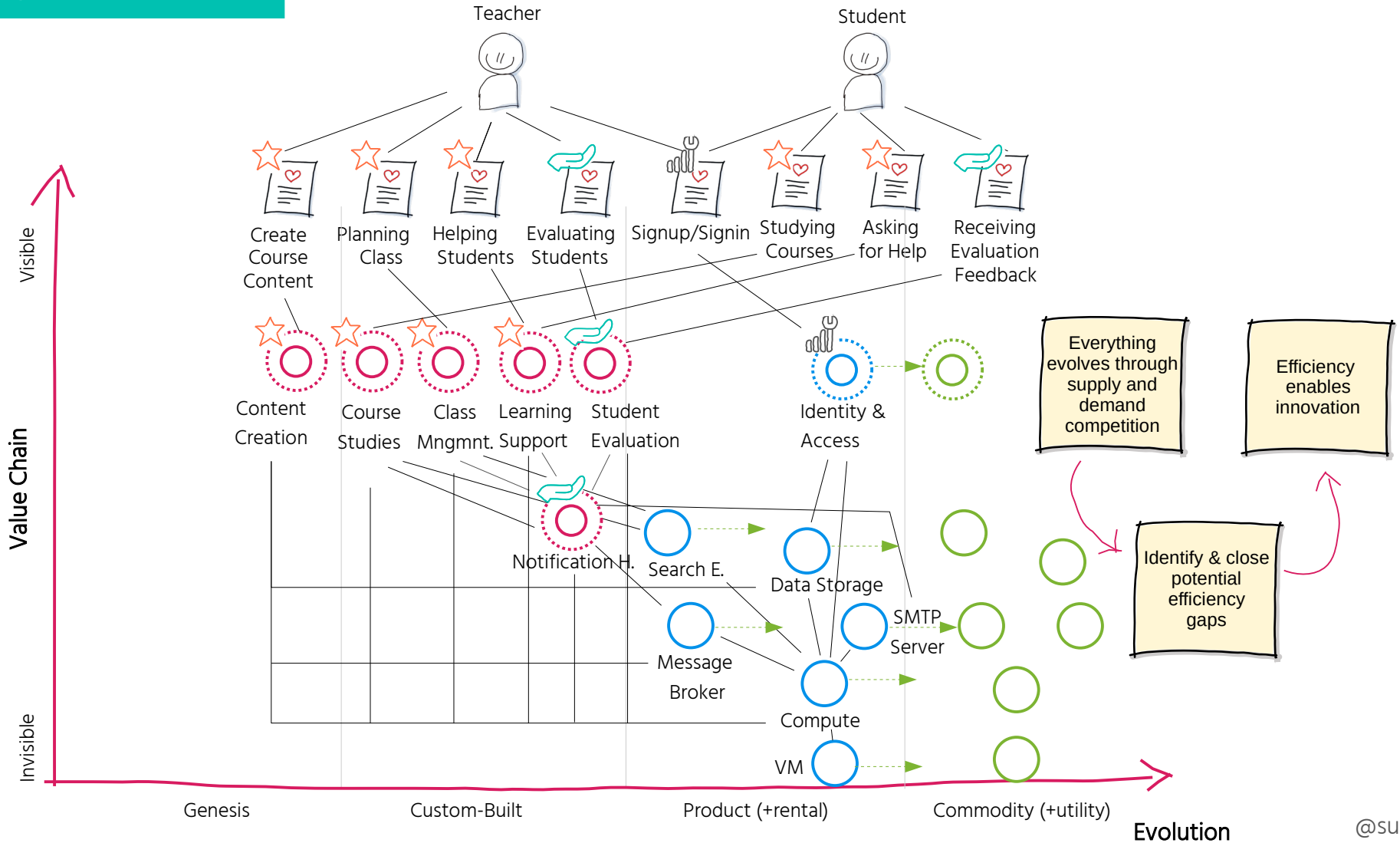
Architecture For Flow



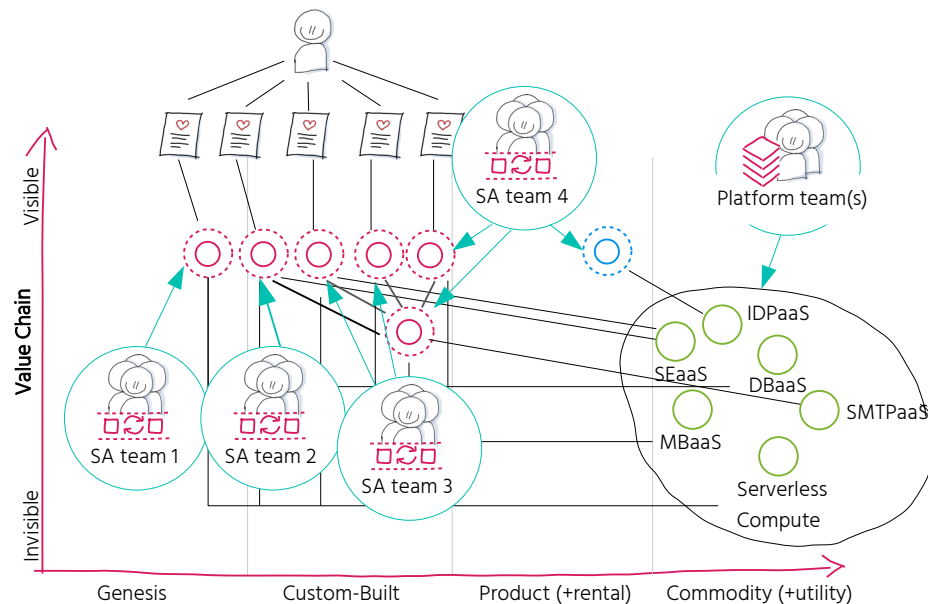
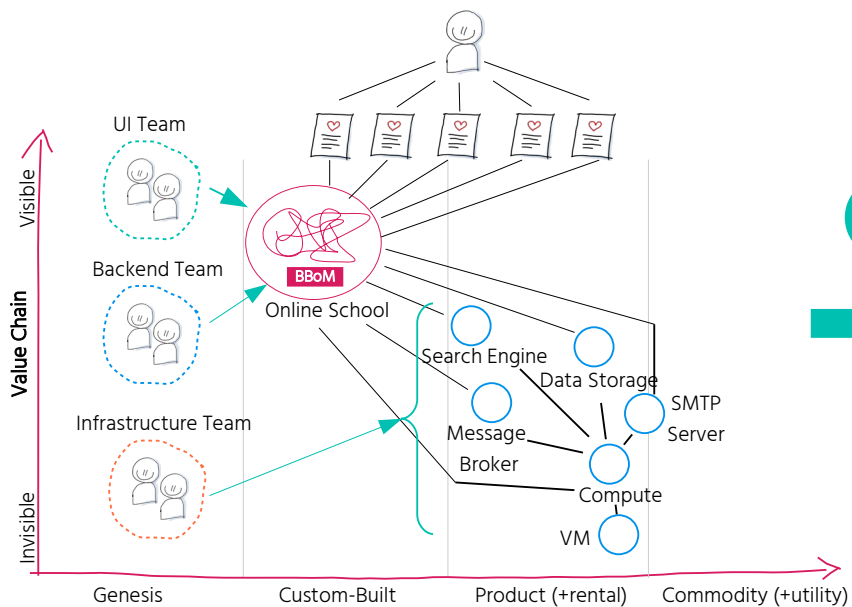
A Mix of Mindsets per Team



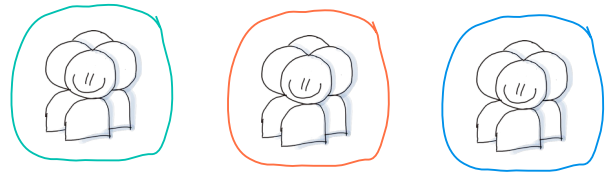
Architecture For Flow



How to transition?



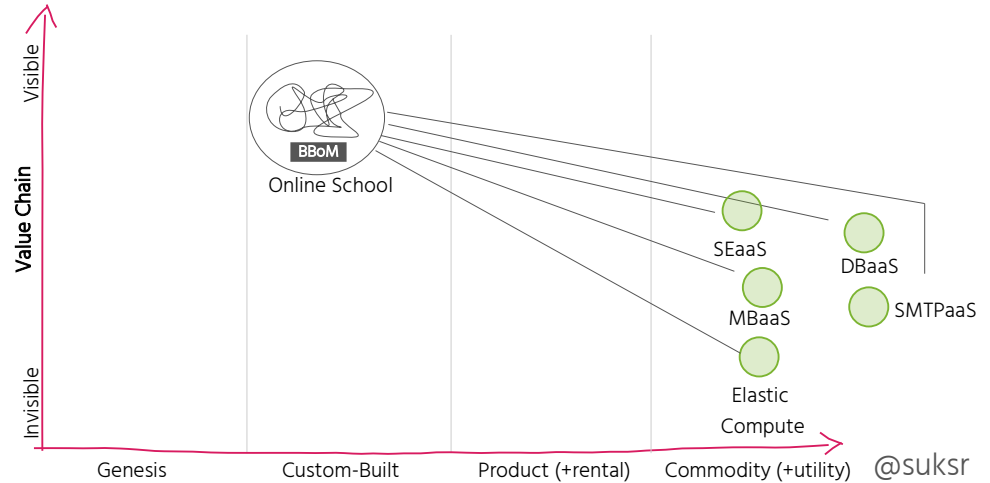
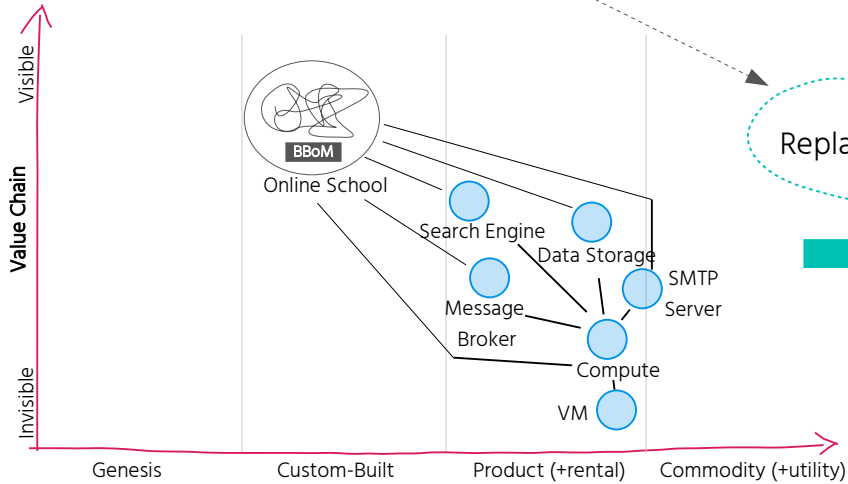
Evolution of Team Topologies



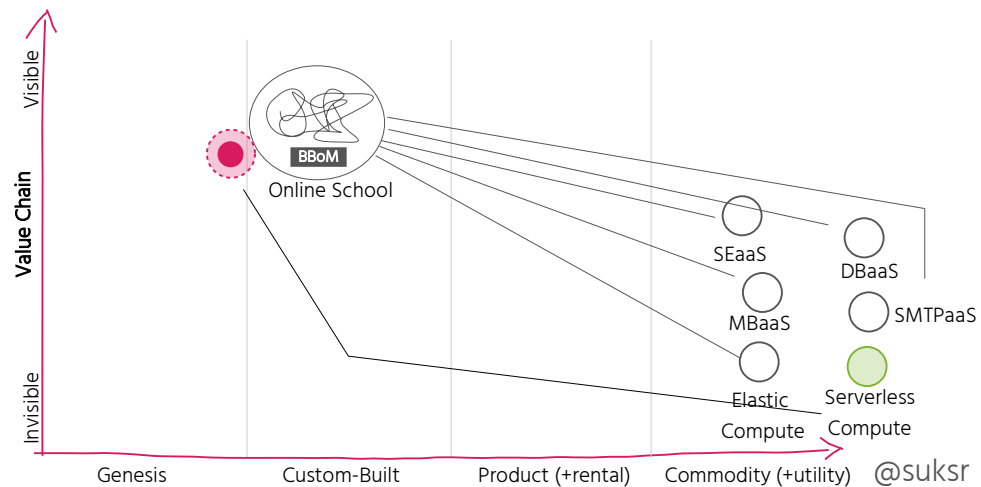
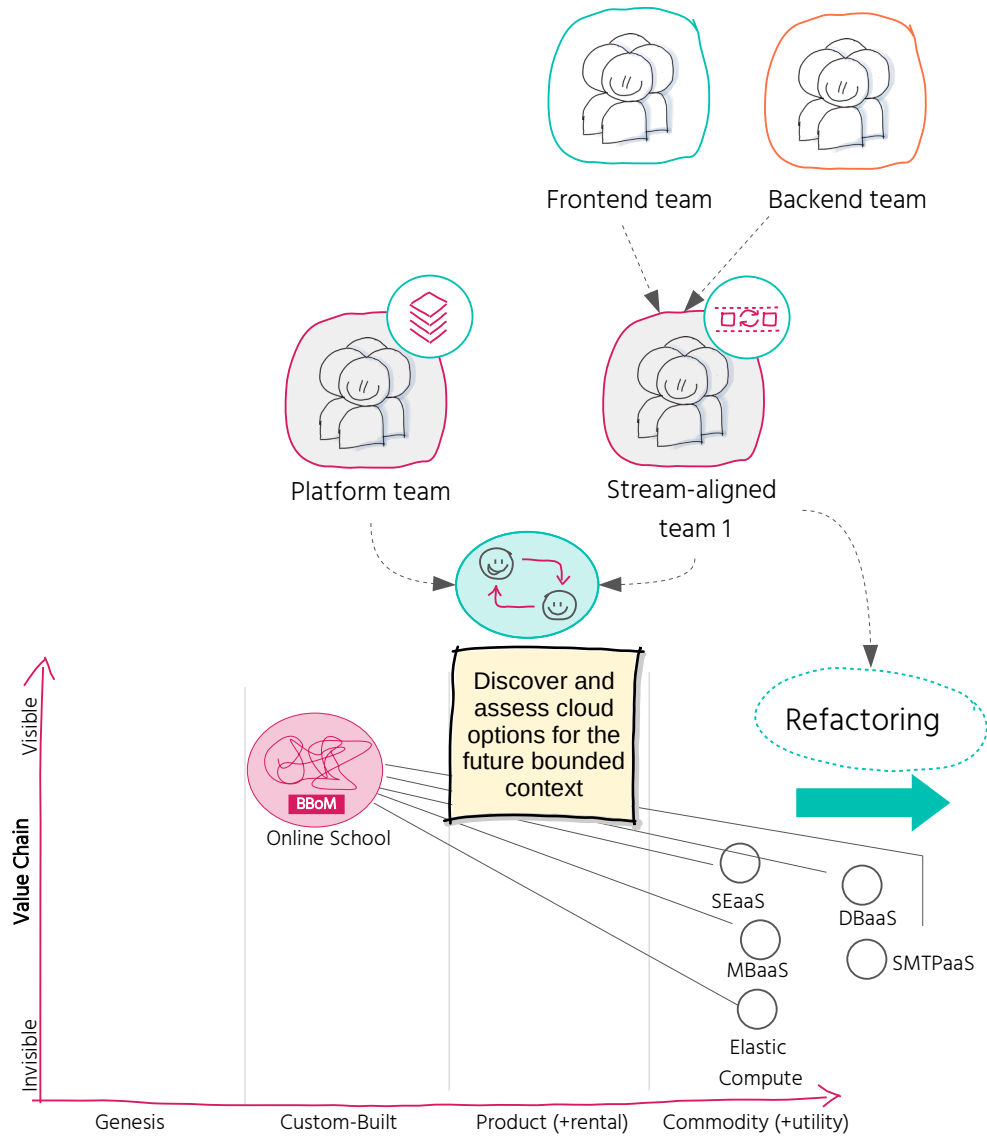
Frontend team Backend team Infrastructure team



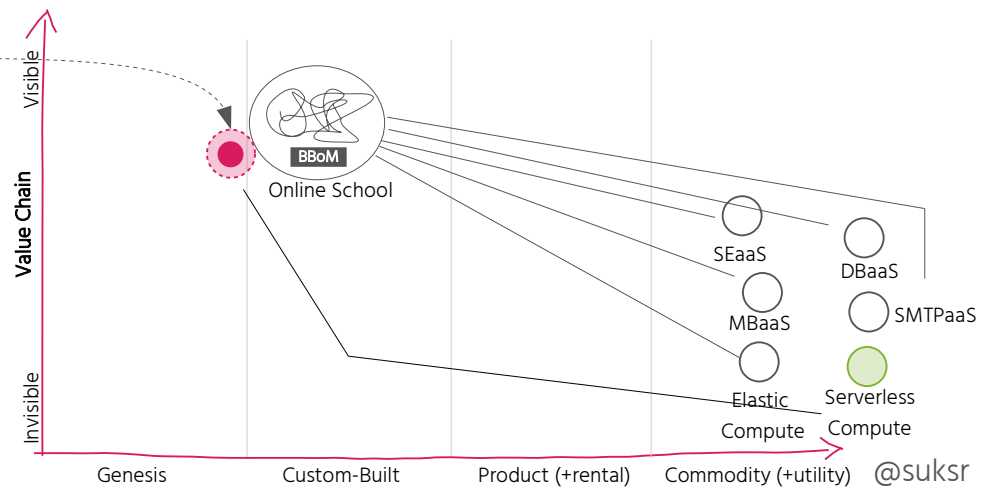
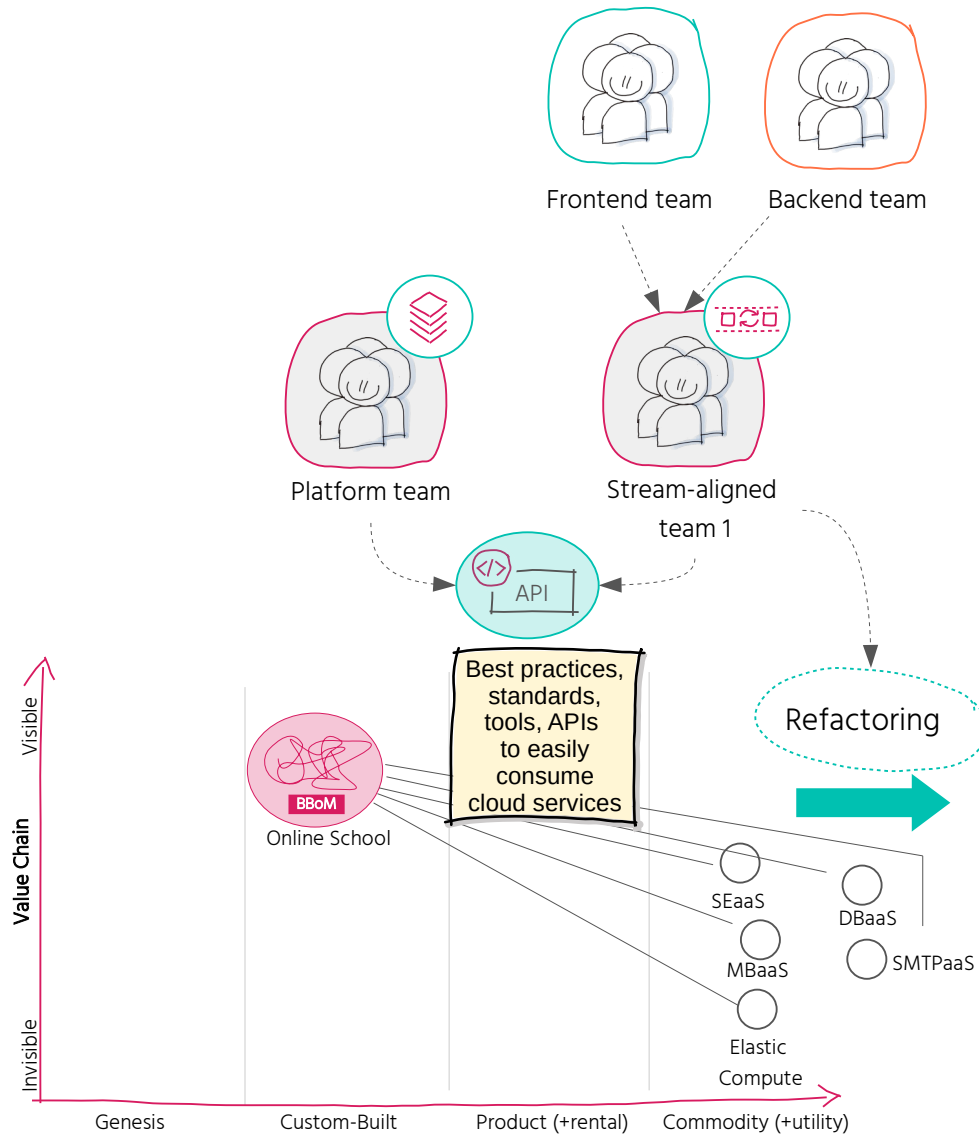
Platform team



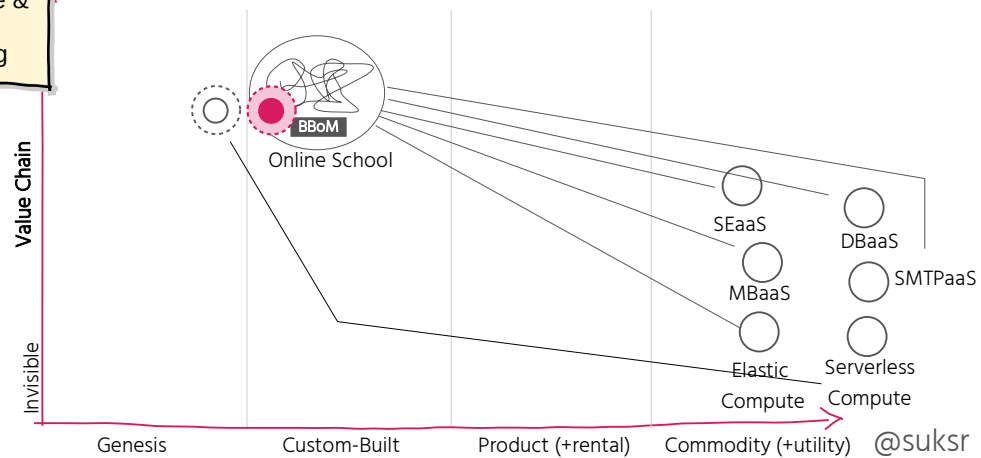
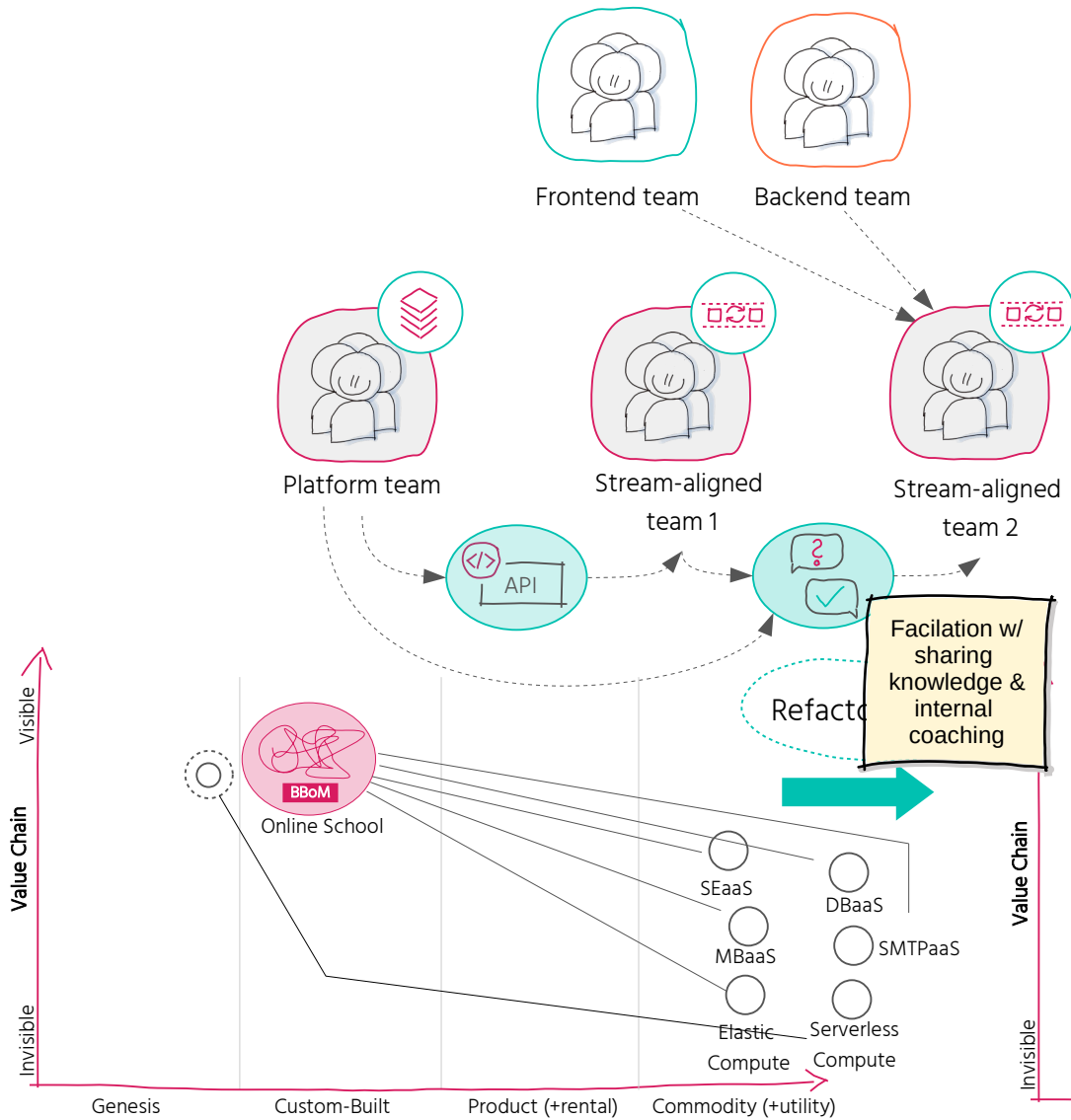
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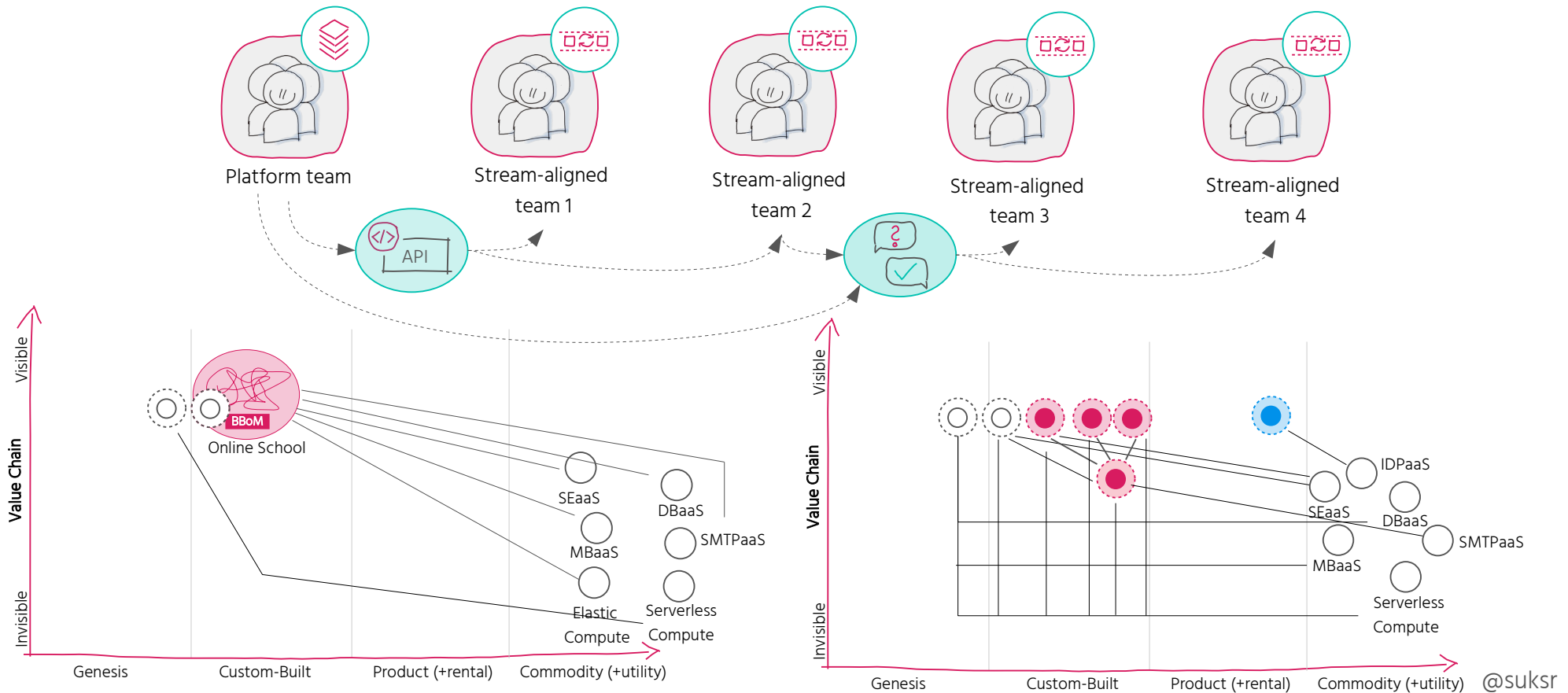
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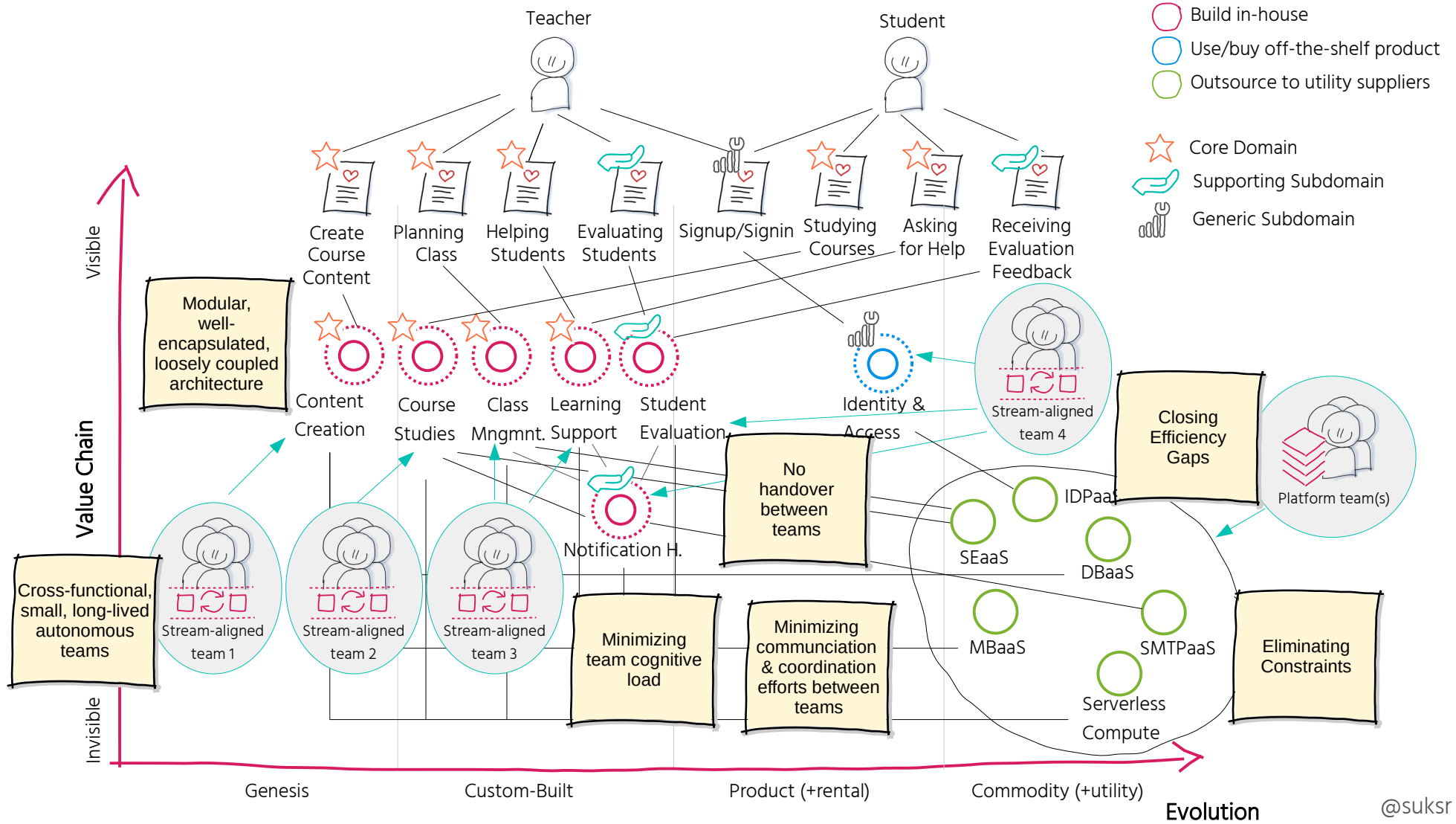


Evolution of Team Topologies

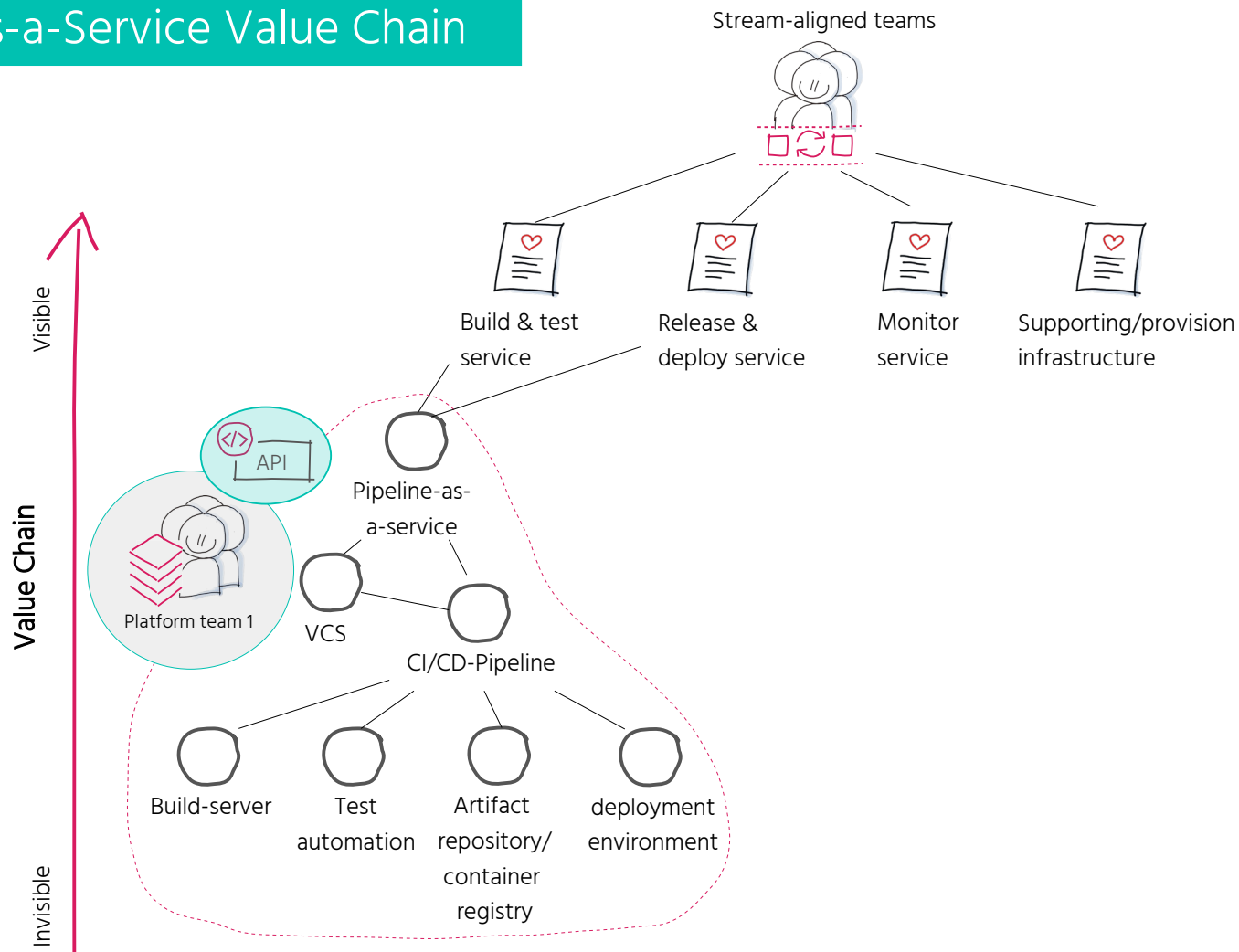


Evolution of Team Topologies

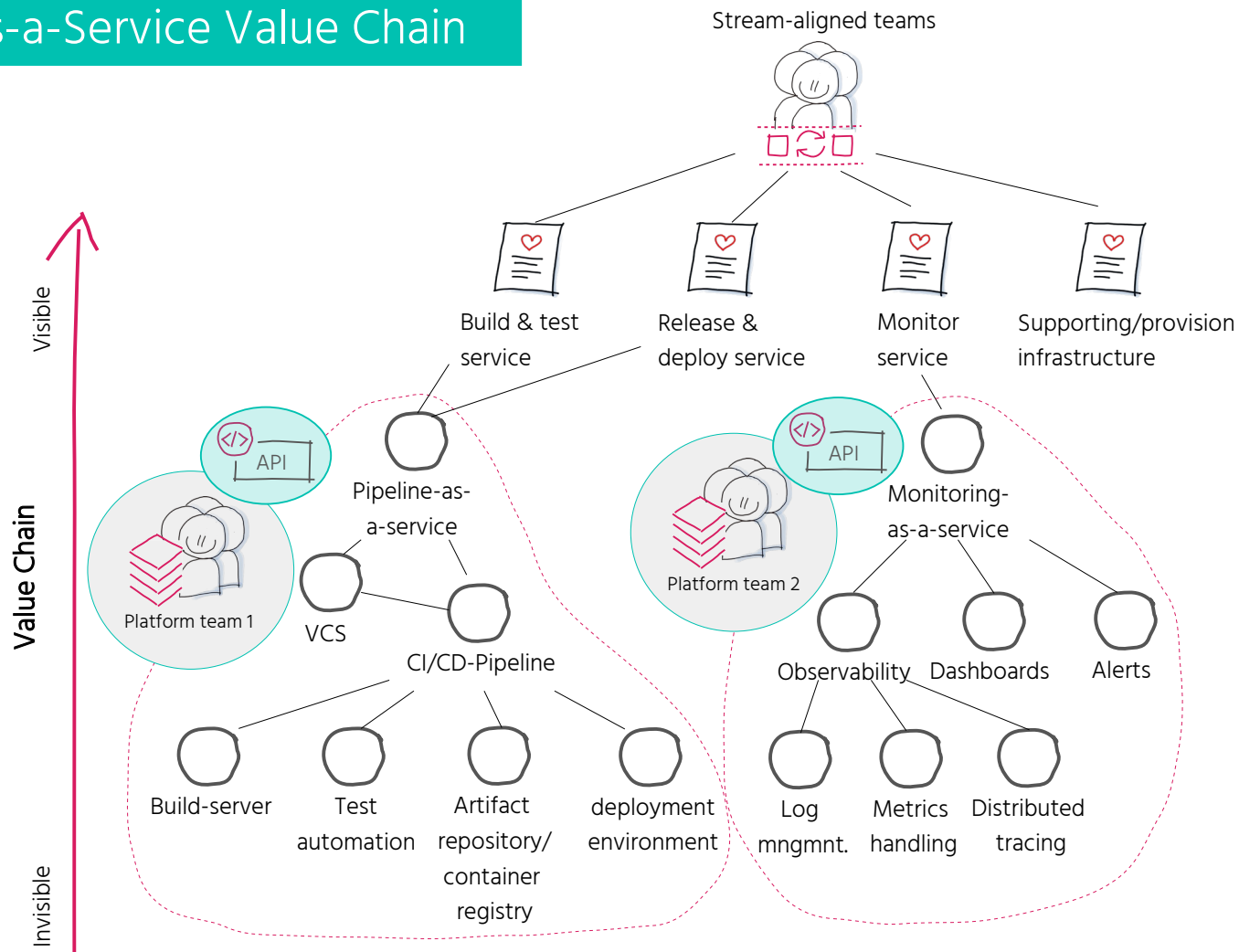




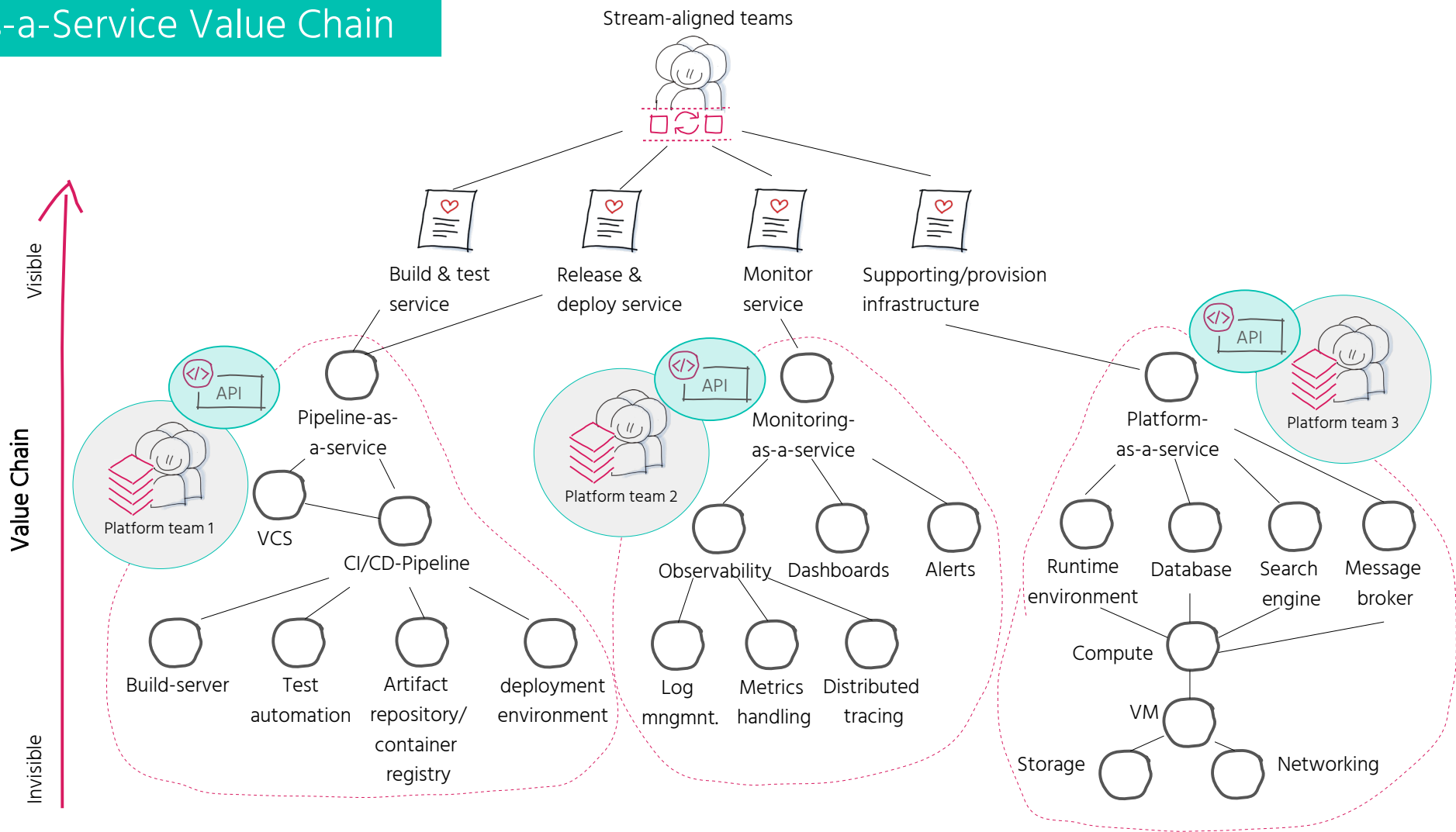
X-as-a-Service Value Chain



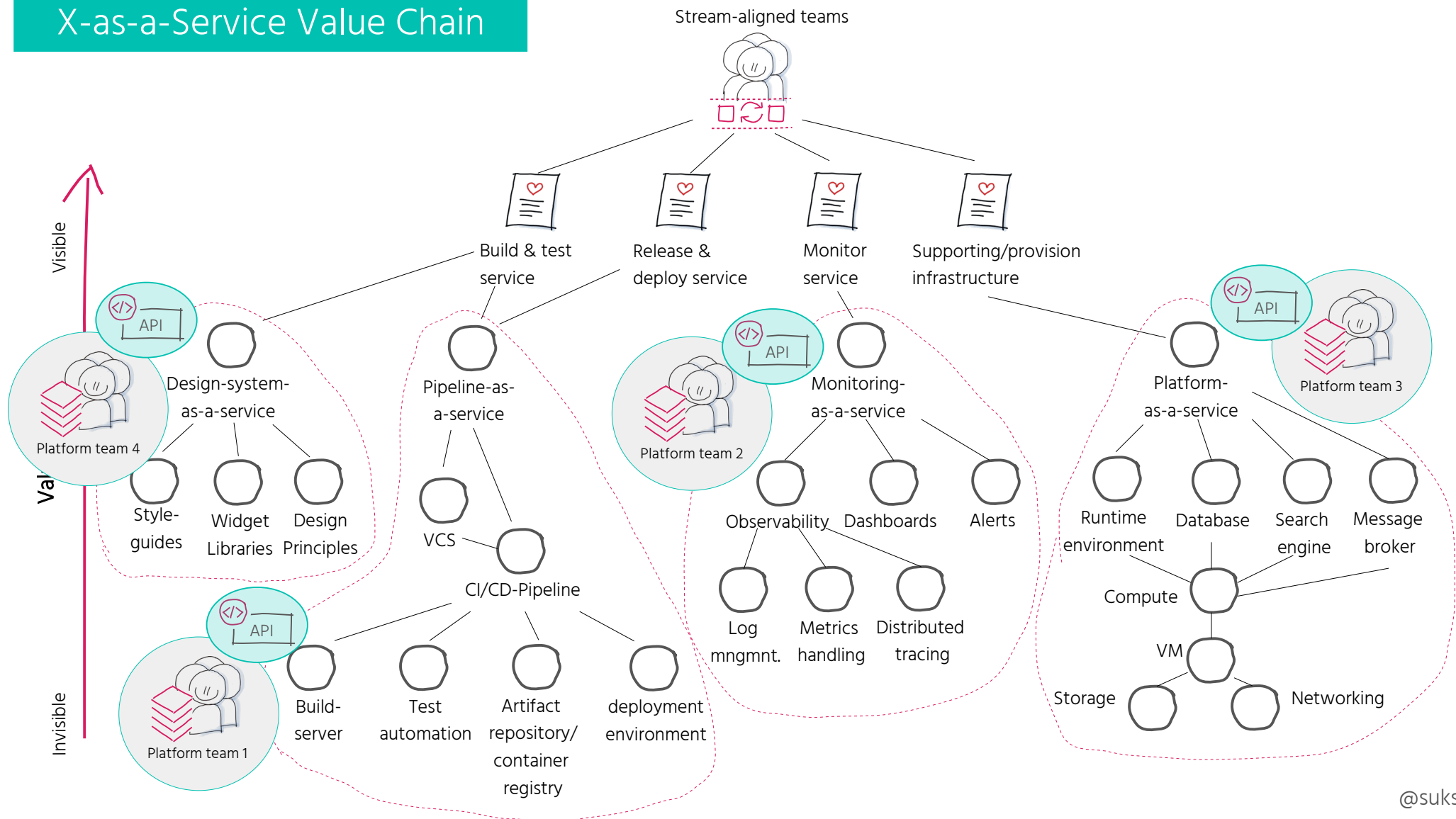
X-as-a-Service Value Chain



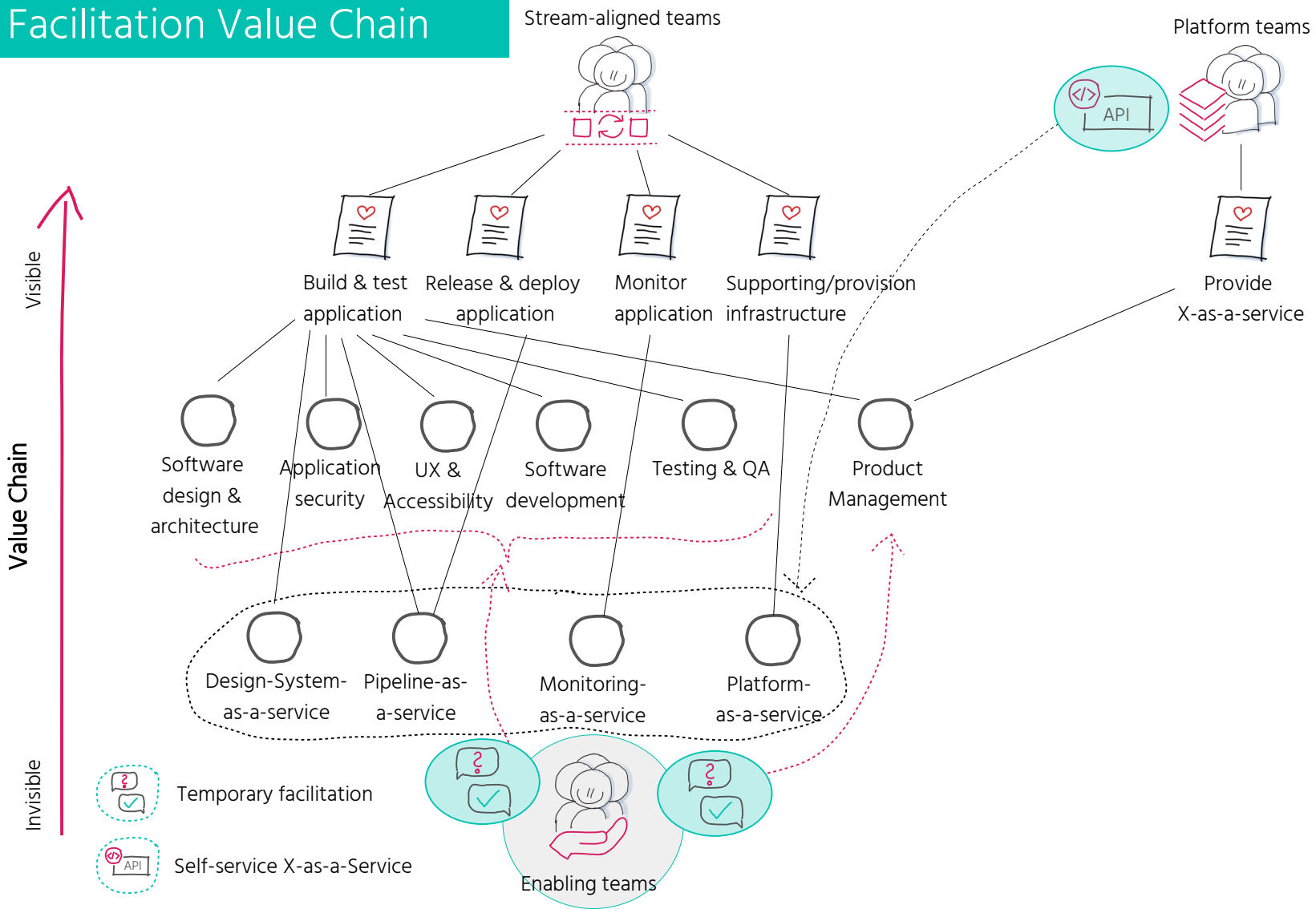
X-as-a-Service Value Chain



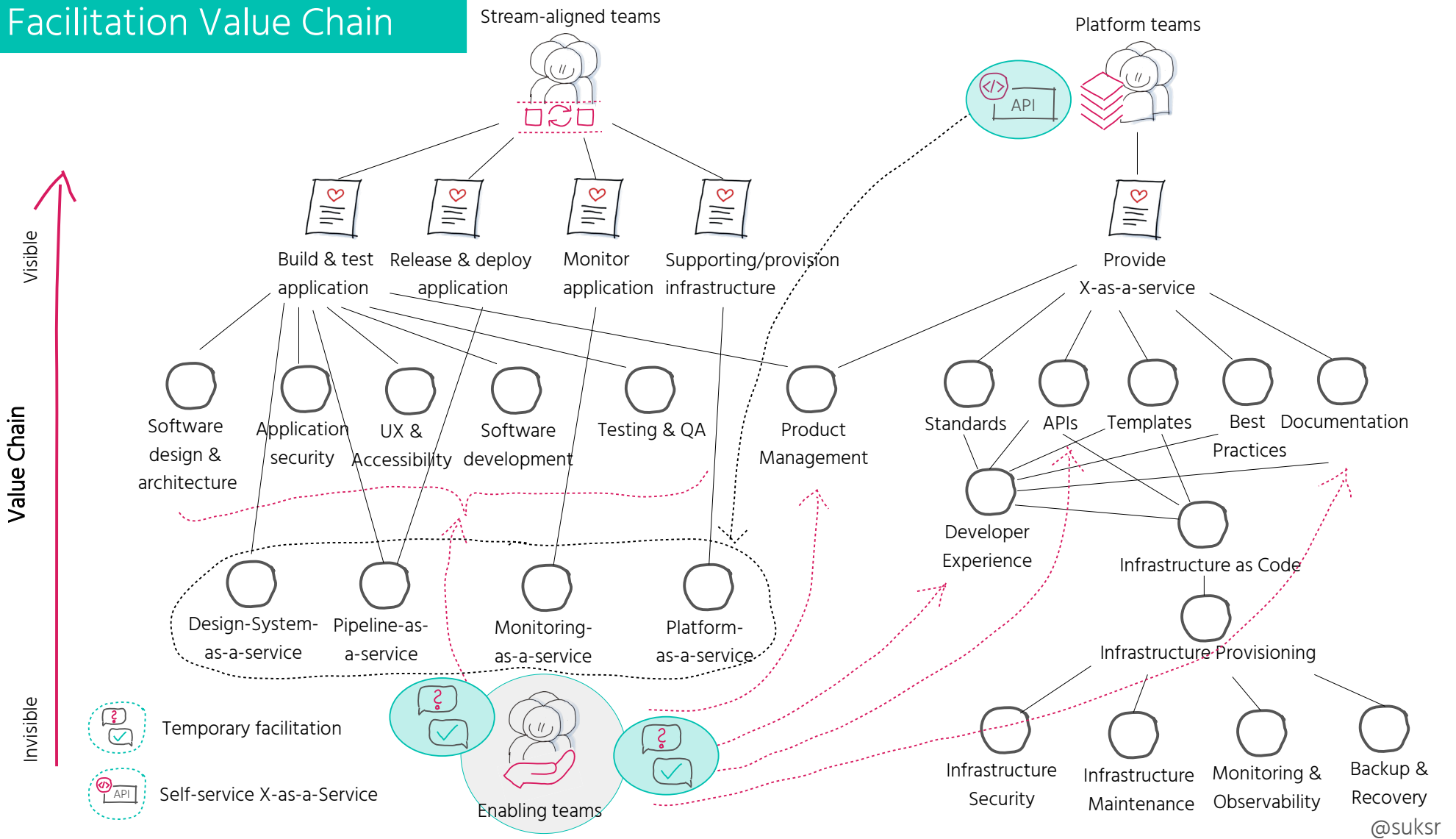
X-as-a-Service Value Chain



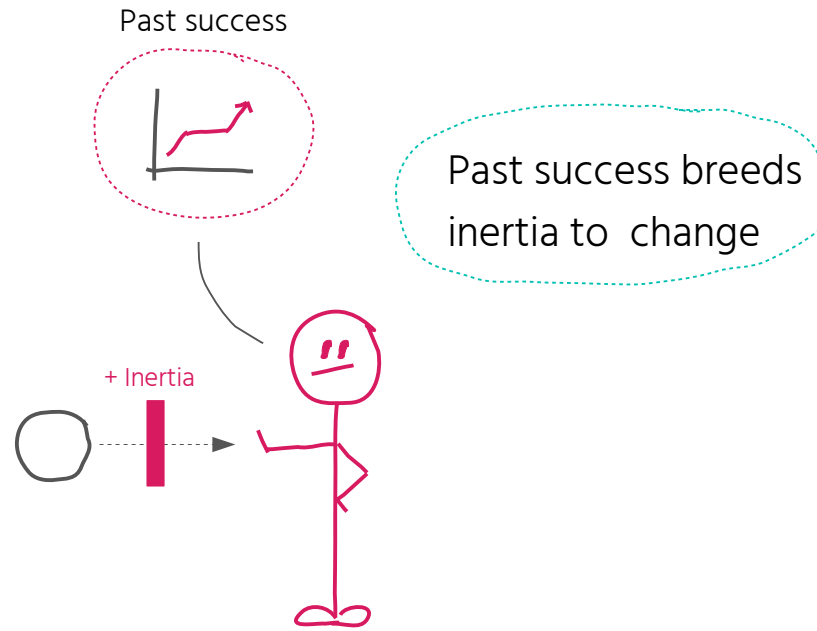
Facilitation Value Chain



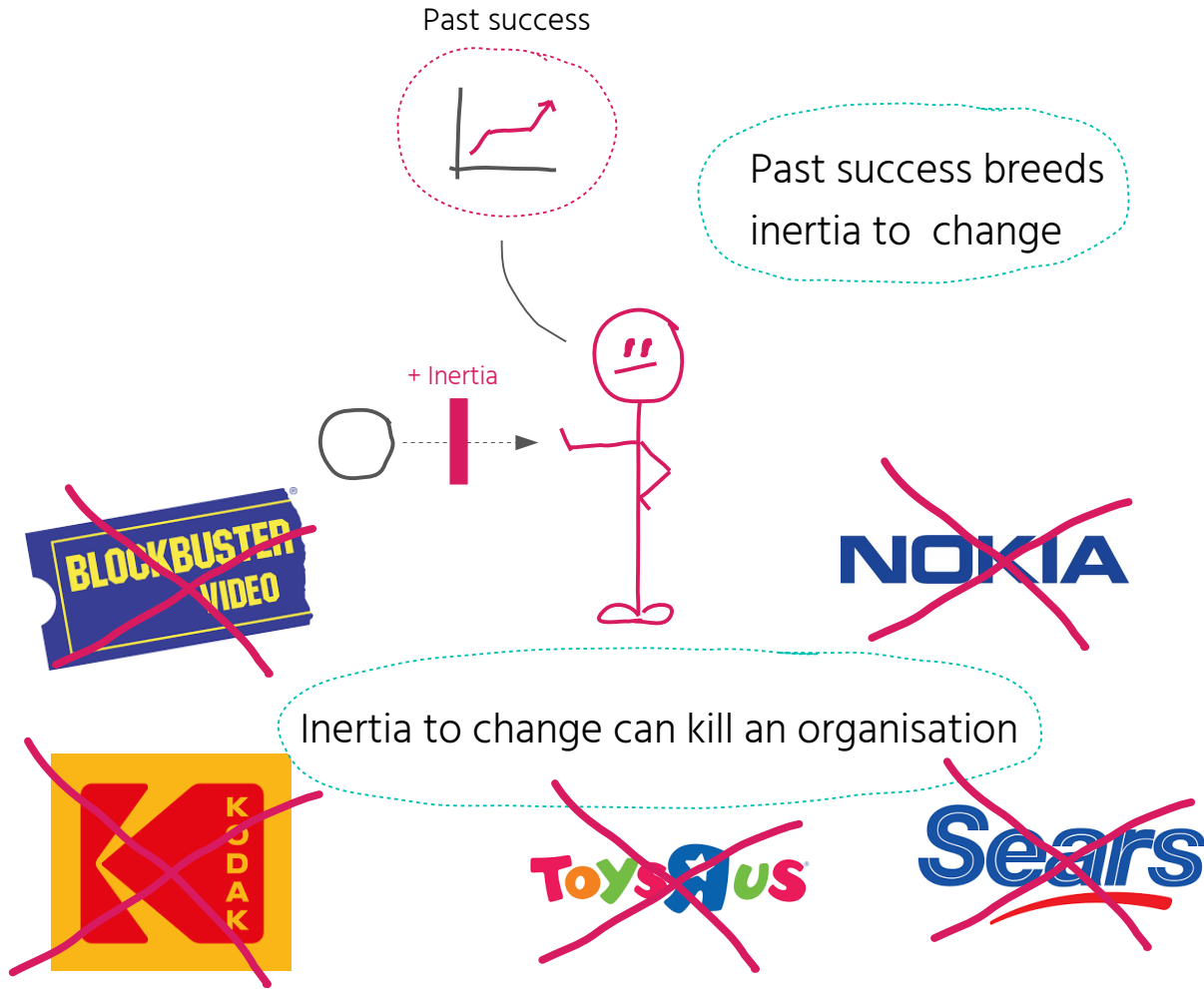
Facilitation Value Chain

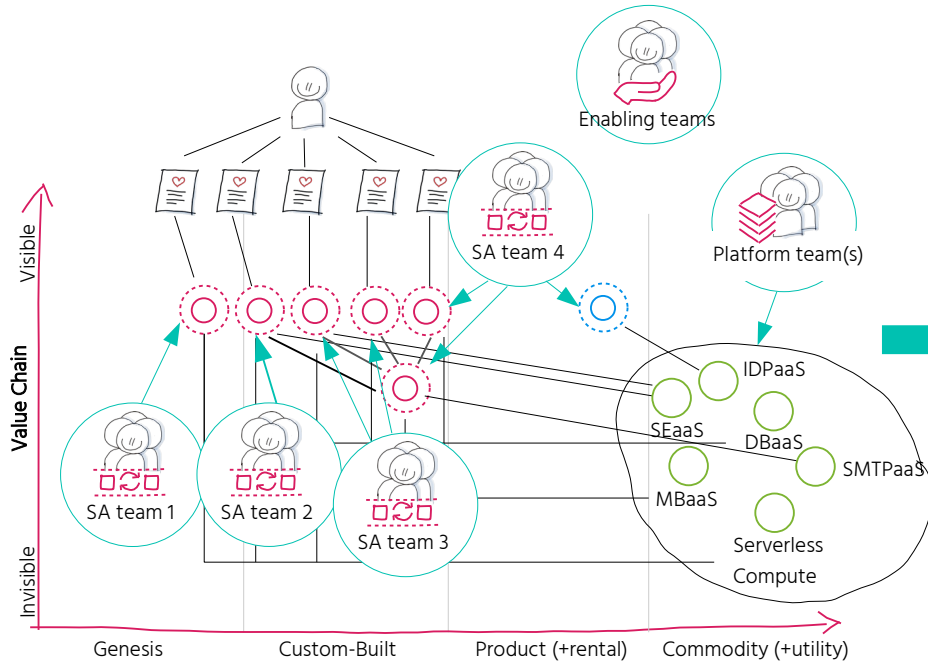


But we are successful, why should we change?

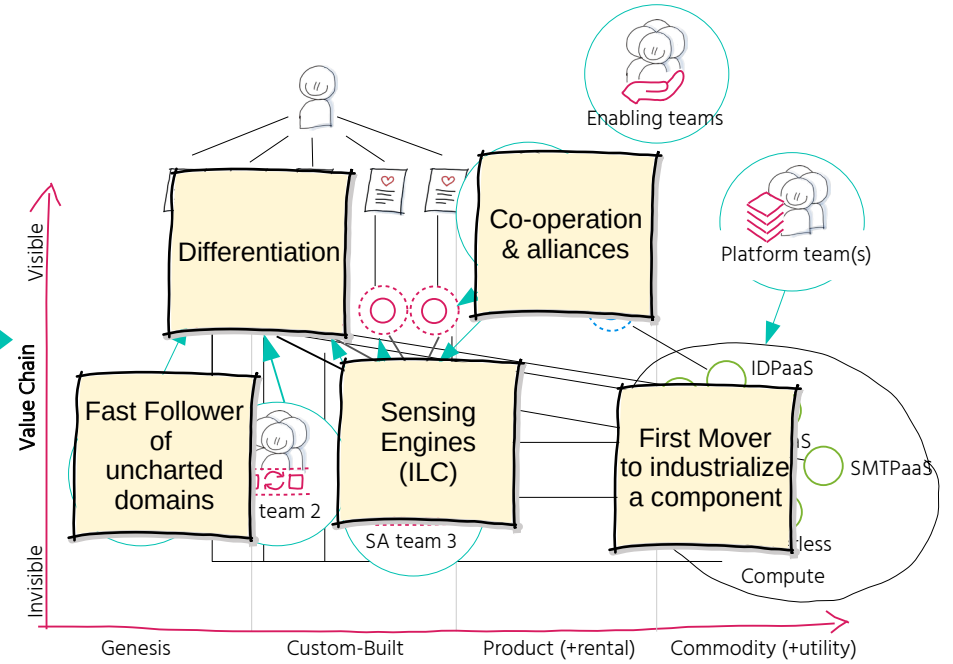


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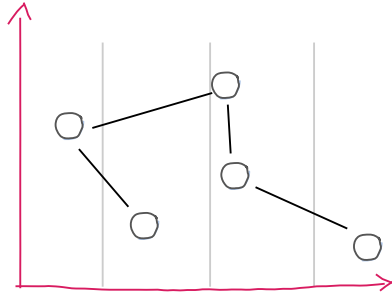
Responsive to Change



Leading future Change

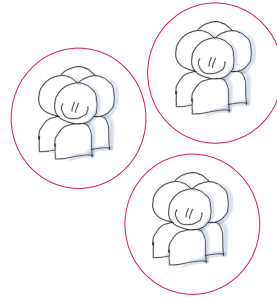
Start small

You could start with ...

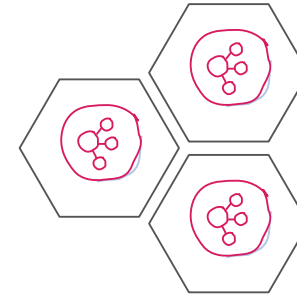


... a Wardley Map

to understand your competitive landscape, and use the map as a foundation for future discussions



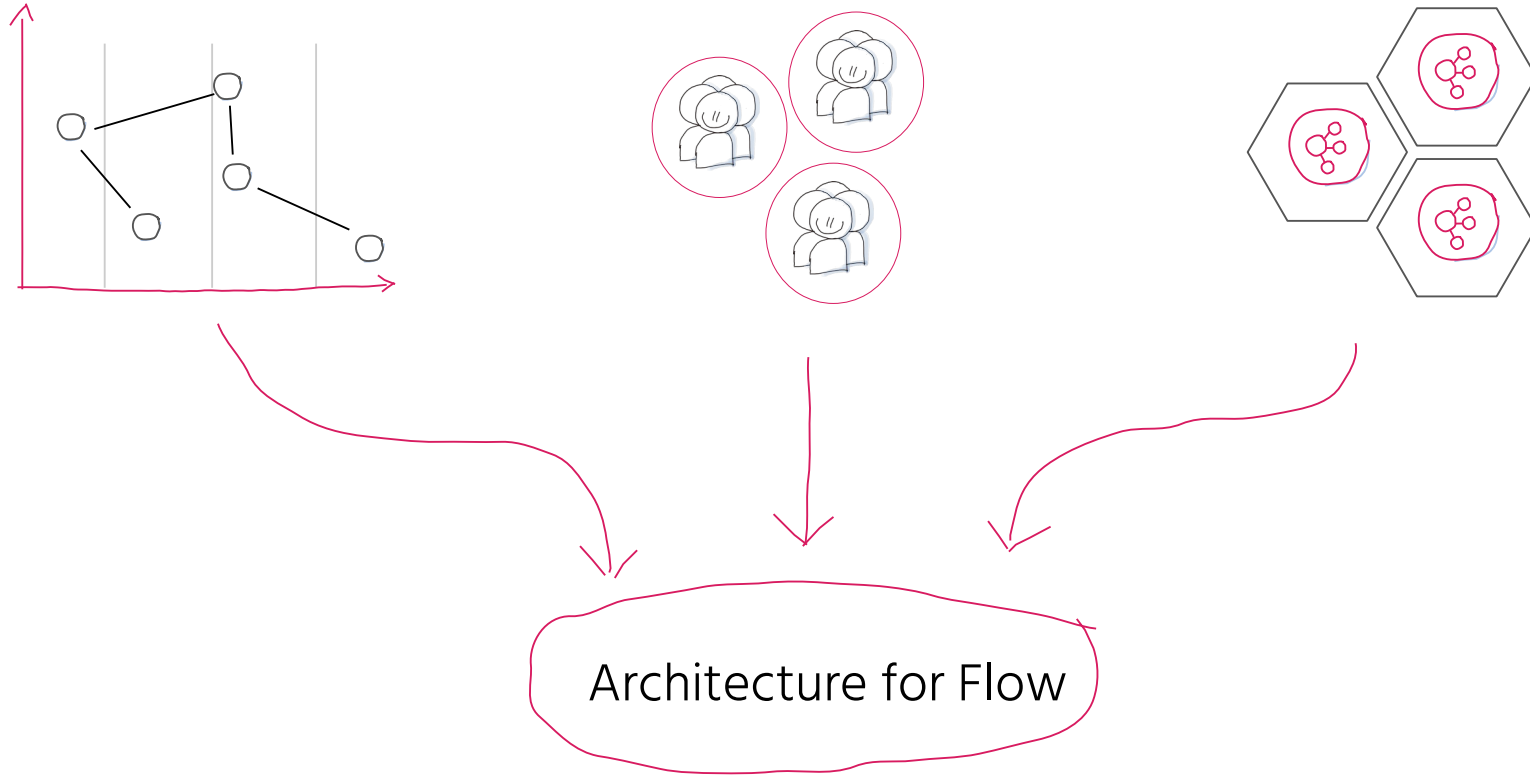
... or your current teams
and analyse their current cognitive load and bottlenecks



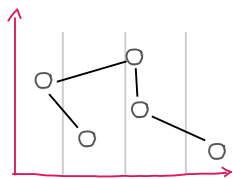
... or identifying suitable seams for modularisation
with subdomains & bounded contexts

Start small

And their paths eventually cross ...



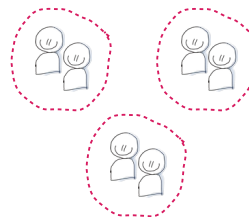
Key Takeaways



Wardley Mapping



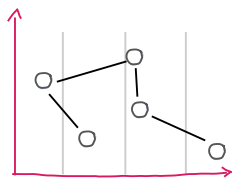
Domain-Driven Design



Team Topologies

- Understanding the landscape an organization is operating & competing in including the external forces acting on the landscape
- Anticipate changes and identifying potential points to invest
- Gaining domain knowledge & discovering the core
- Knowing what components to build, buy/use, or outsource

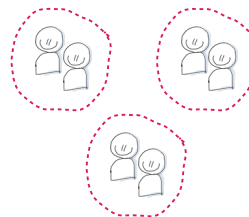
Key Takeaways



Wardley Mapping



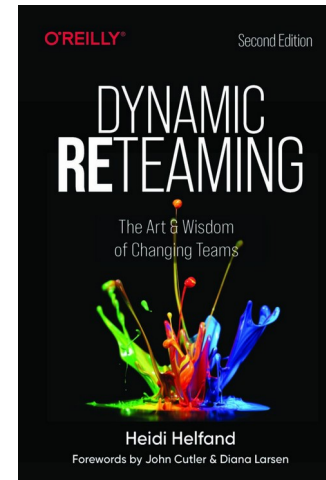
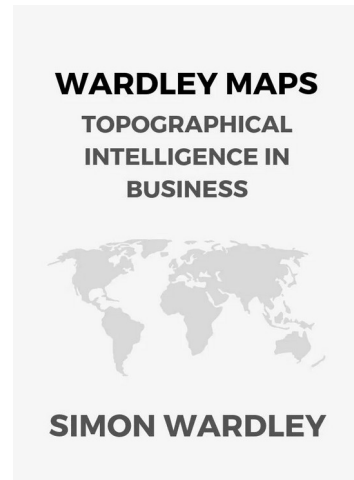
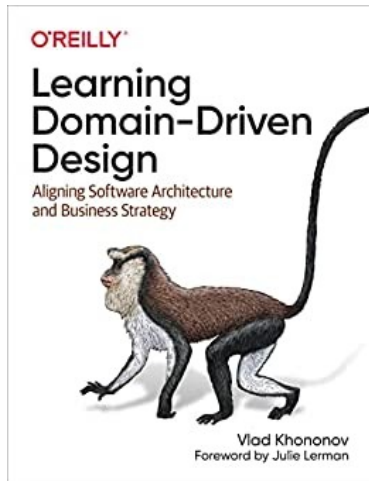
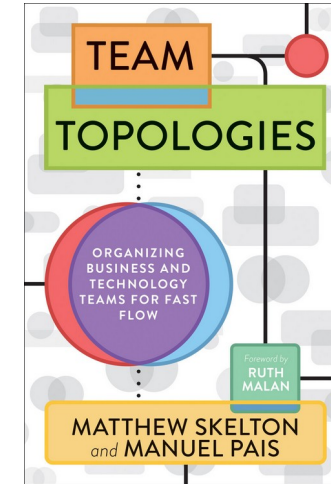
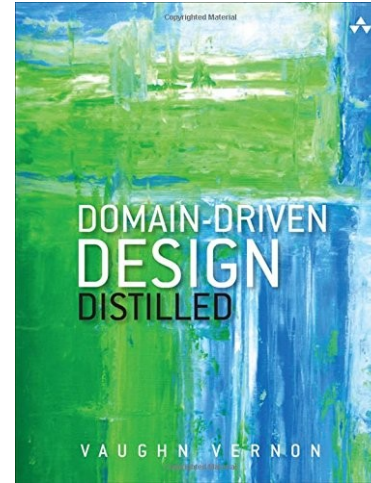
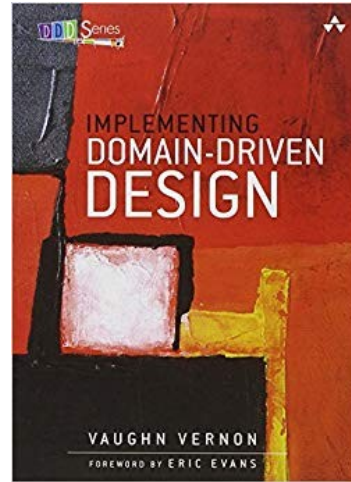
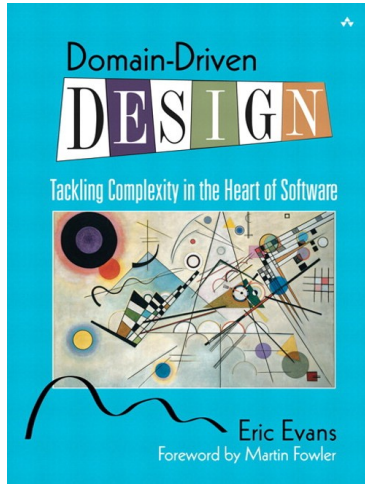
Domain-Driven Design



Team Topologies

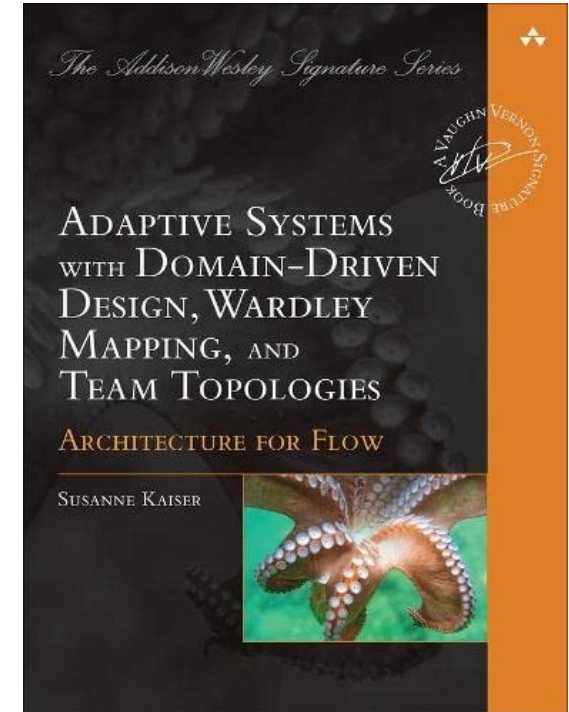
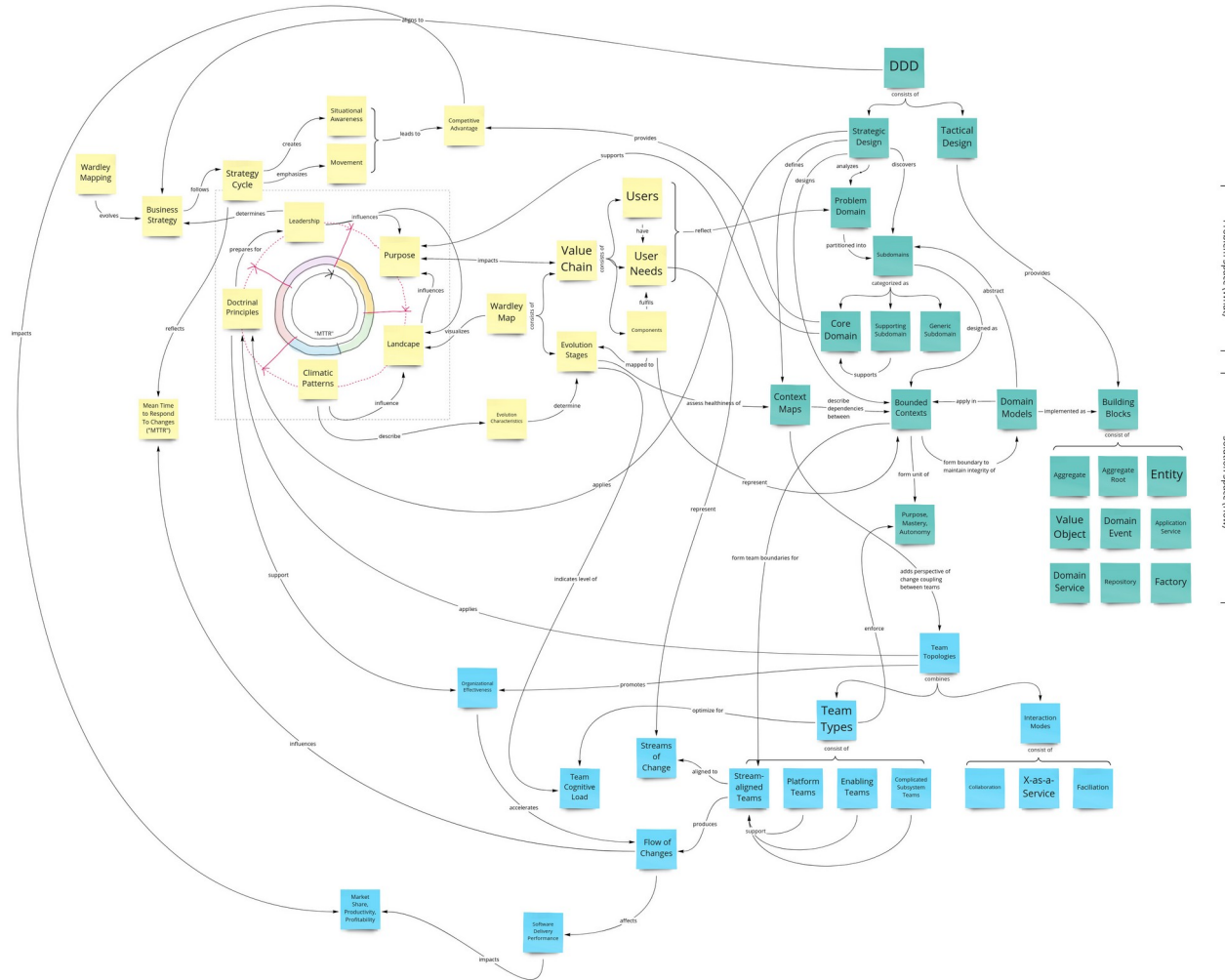
- Understanding the landscape an organization is operating & competing in including the external forces acting on the landscape
- Anticipate changes and identifying potential points to invest
- Gaining domain knowledge & discovering the core
- Knowing what components to build, buy/use, or outsource
- Modular, well-encapsulated architecture & well-defined ownership boundaries w/ bounded contexts
- Aligning teams and evolving their interactions to the system we build & the strategy we plan
- Eliminating delivery bottlenecks & increasing software delivery performance
- Optimizing for a a fast flow of change to be able to adapt, evolve and thrive in the face of constant change

Some References



<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>

If you are interested in more details ...



THANK YOU

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