



Preparing For a Future Microservices Journey

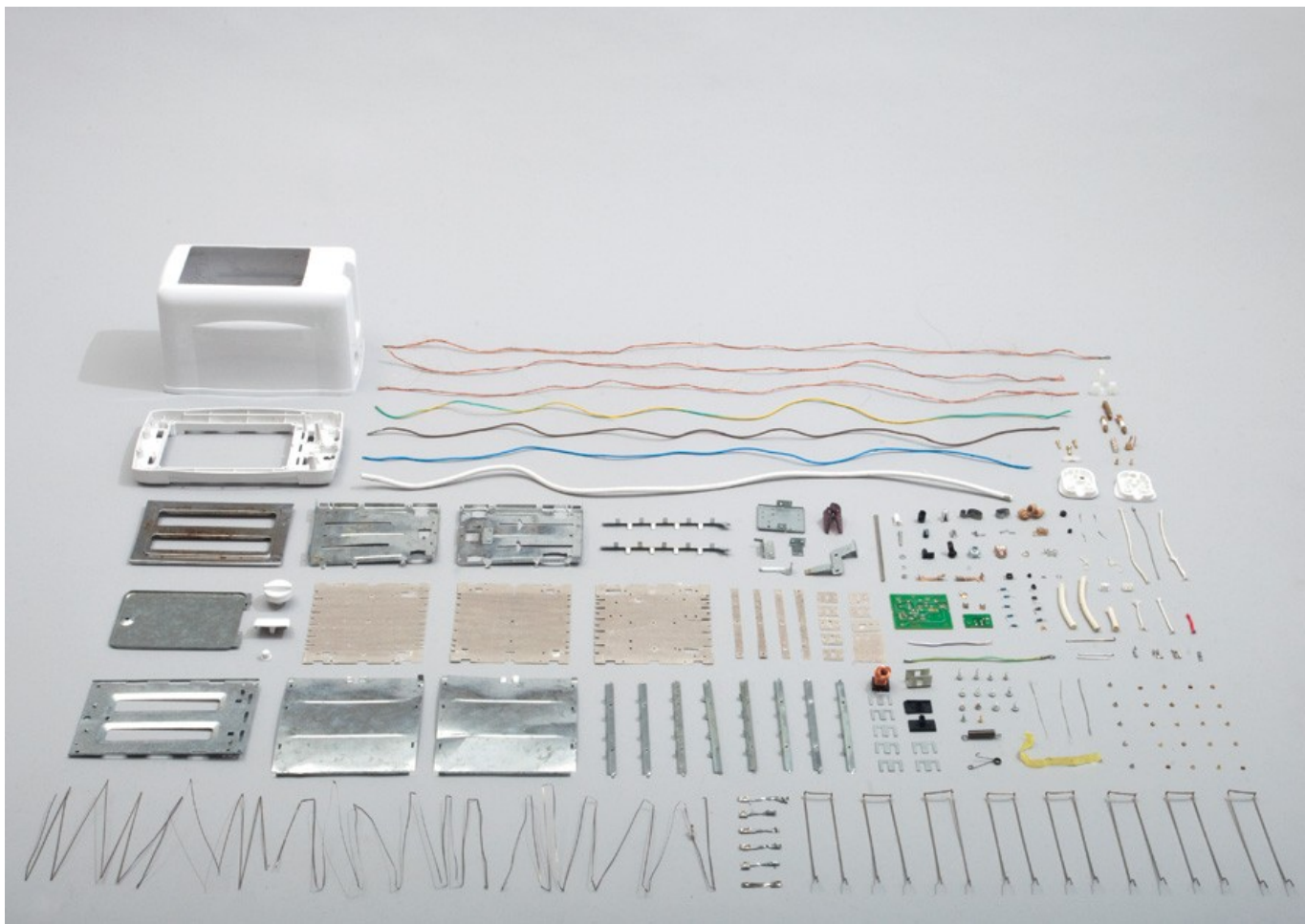
Susanne Kaiser

Independent Tech Consultant

@suksr



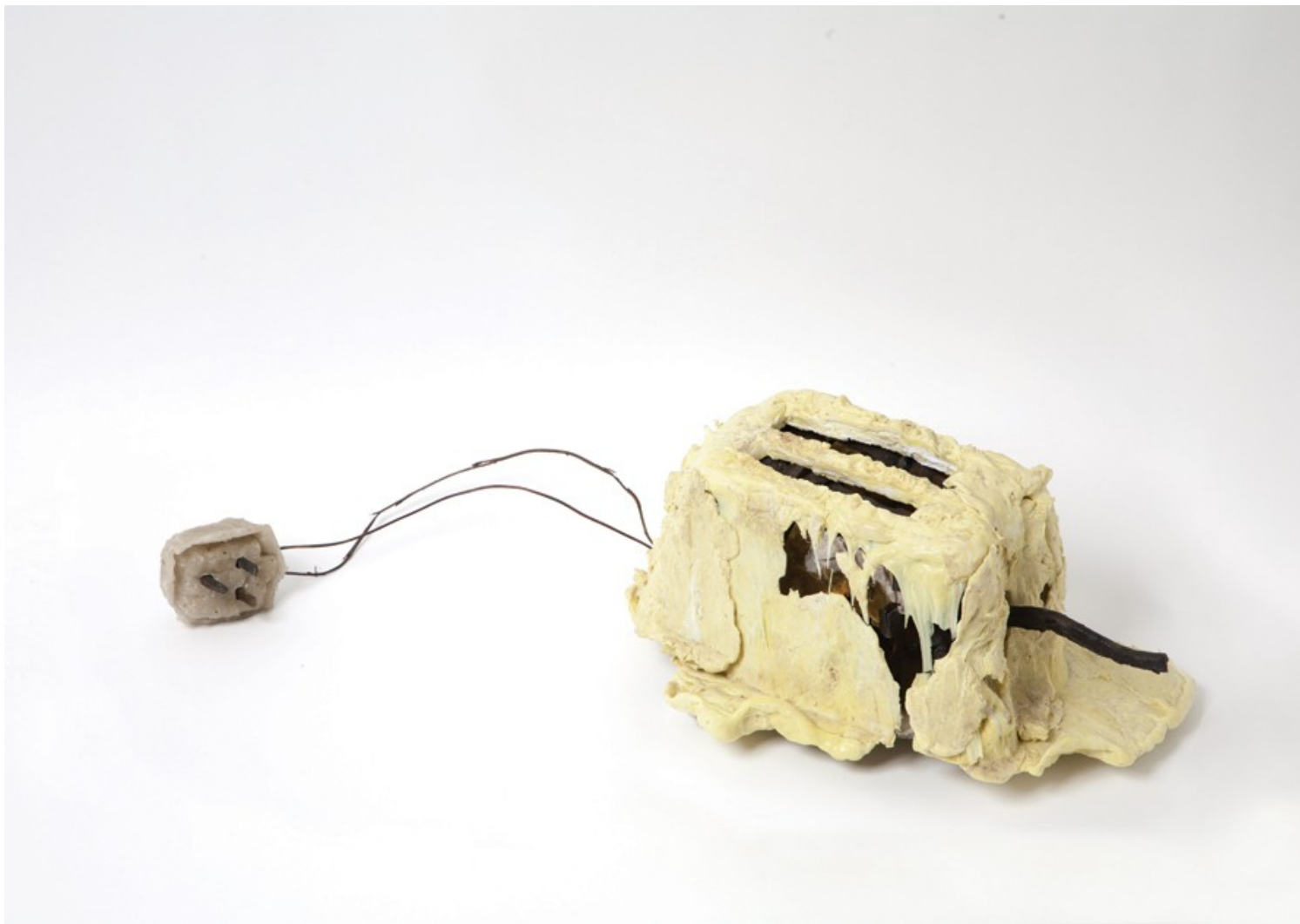




Source: <http://www.thomasthwaites.com>

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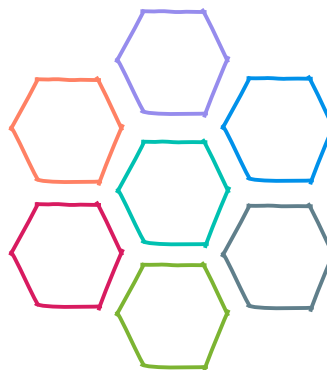


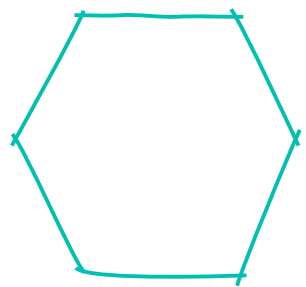
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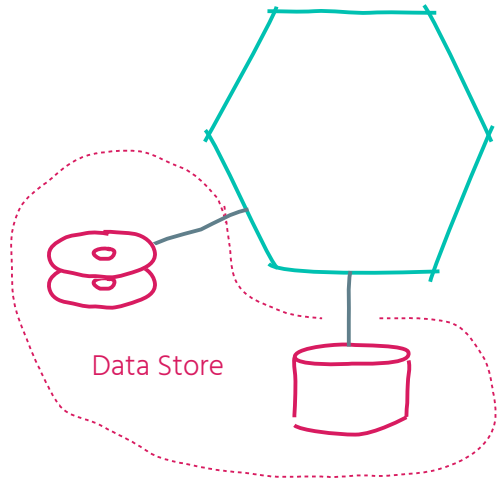
@suksr



2









Runtime



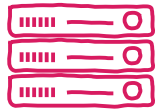
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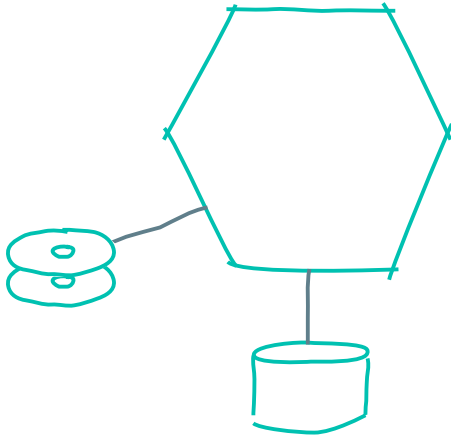
O/S



Virtualization



Hardware





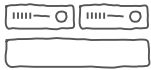
Runtime



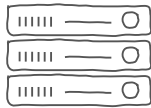
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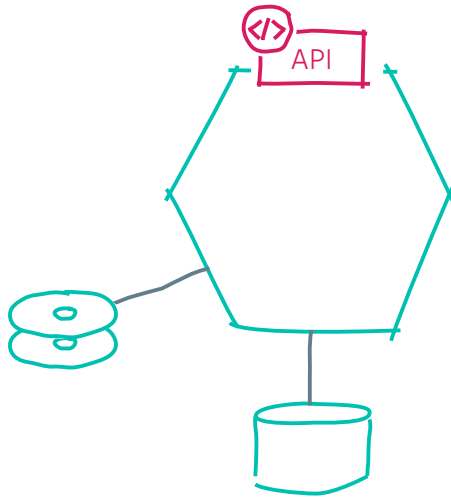
O/S



Virtualization



Hardware





Runtime



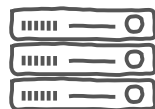
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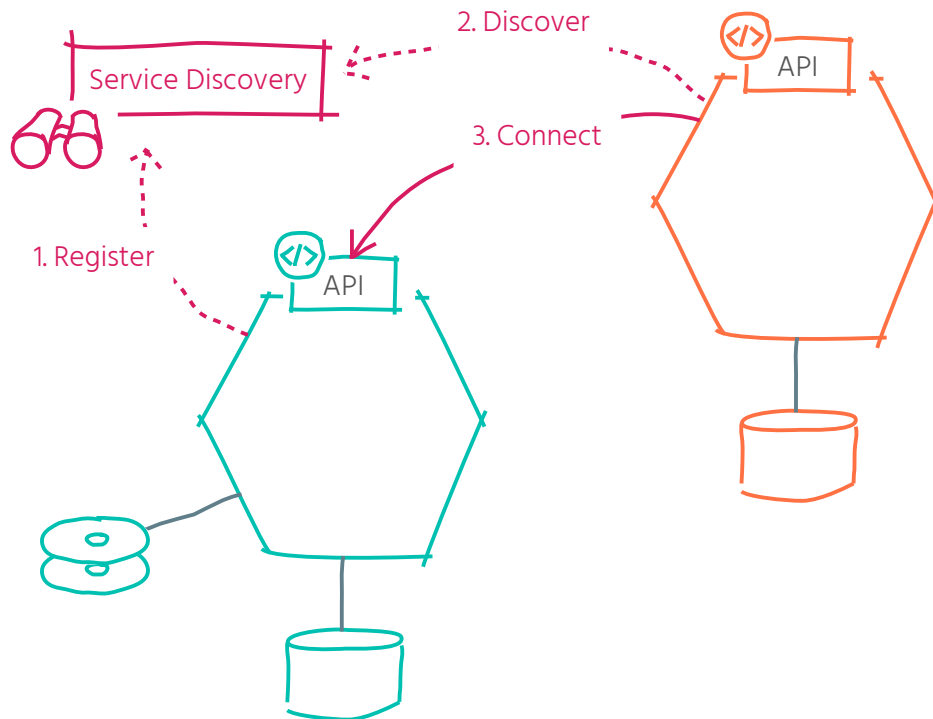
O/S



Virtualization



Hardware





Runtime



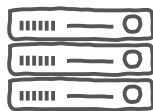
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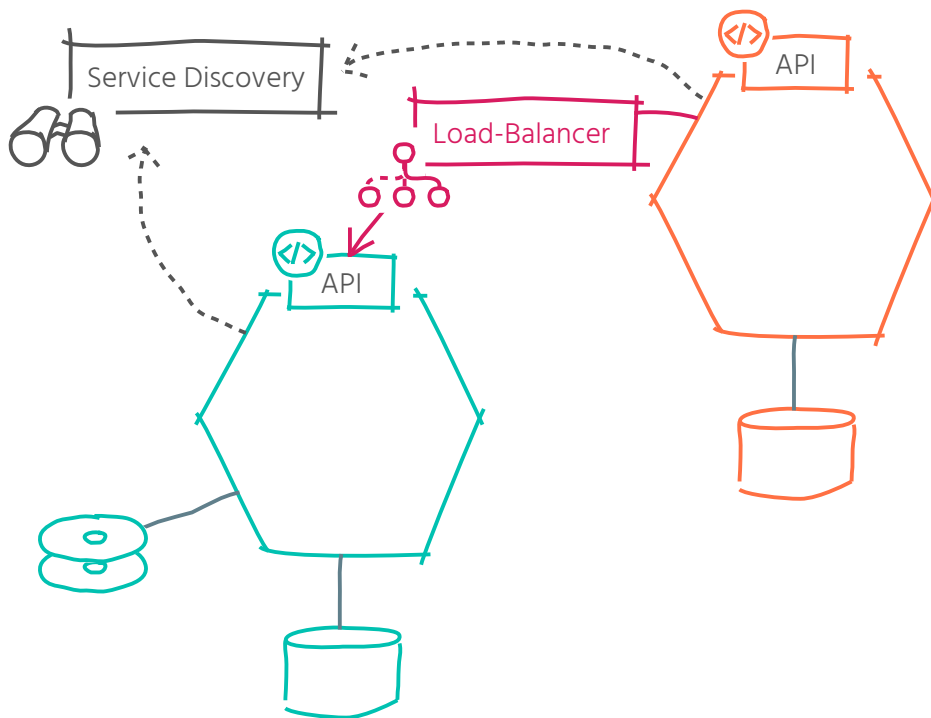
O/S



Virtualization



Hardware





Runtime



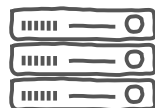
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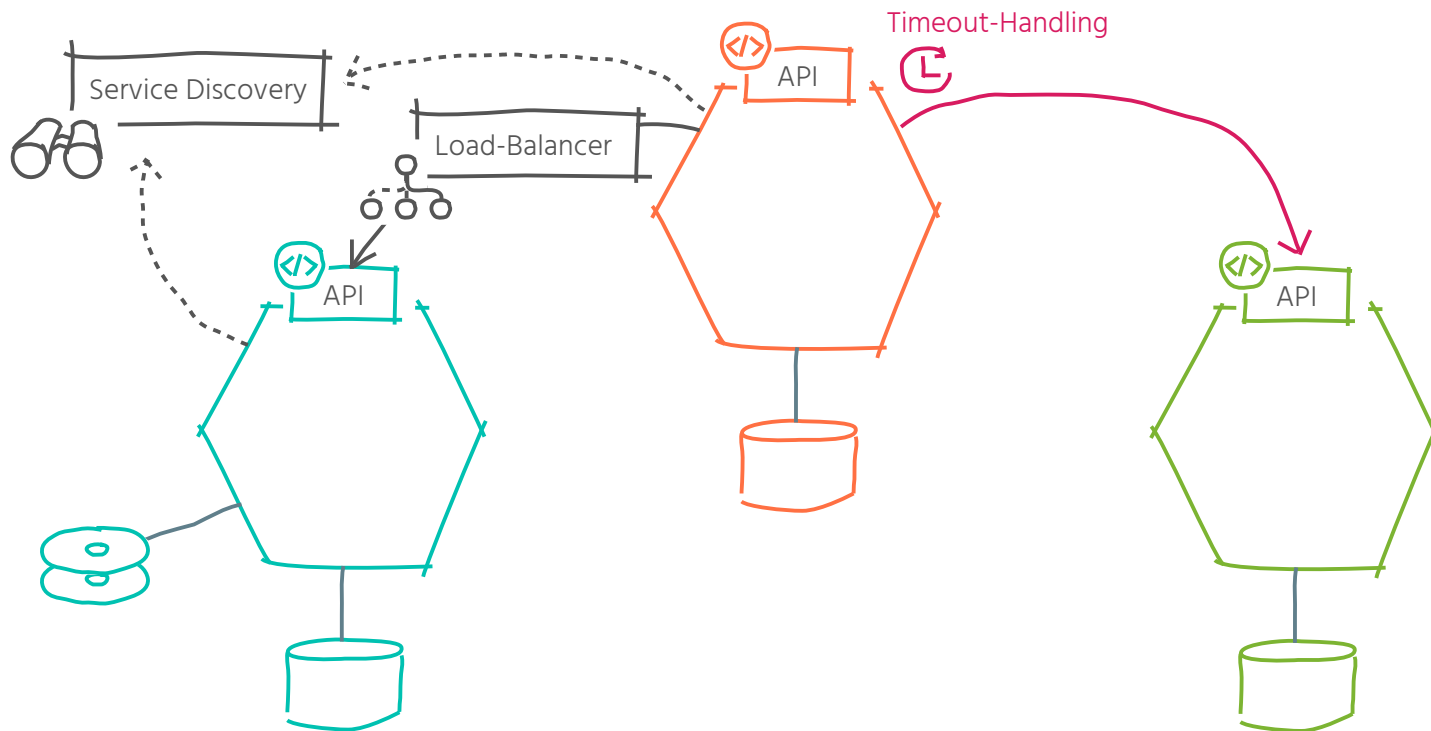
O/S



Virtualization



Hardware





Runtime



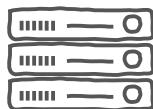
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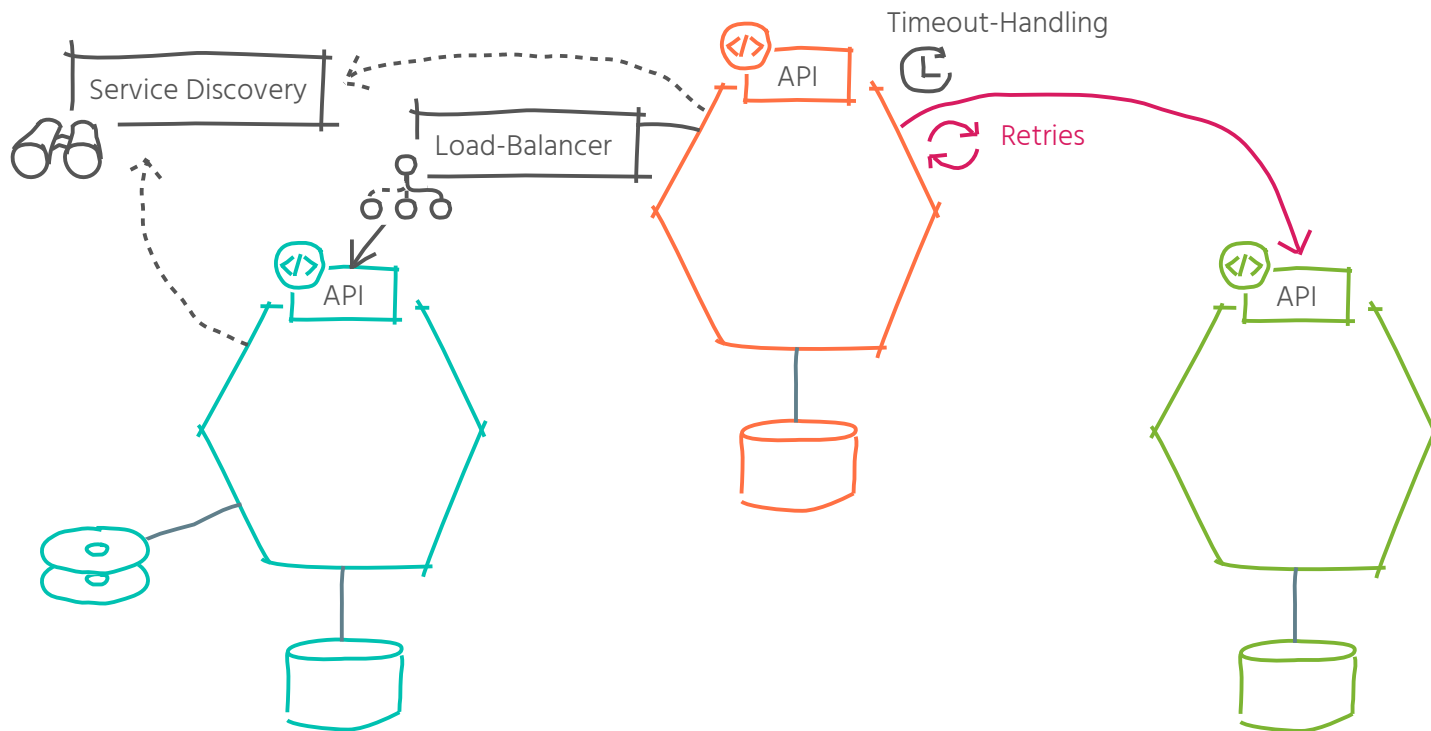
O/S



Virtualization



Hardware





Runtime



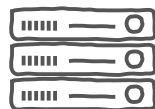
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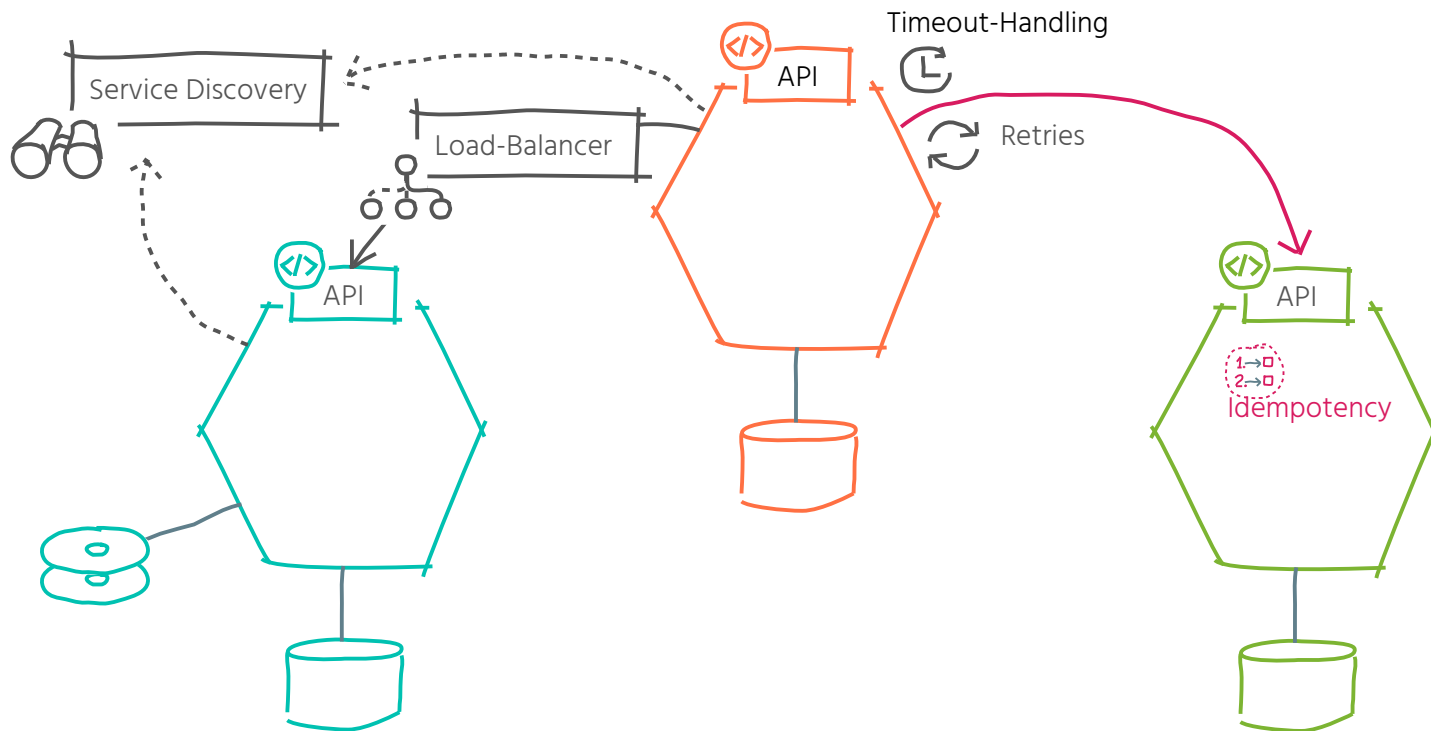
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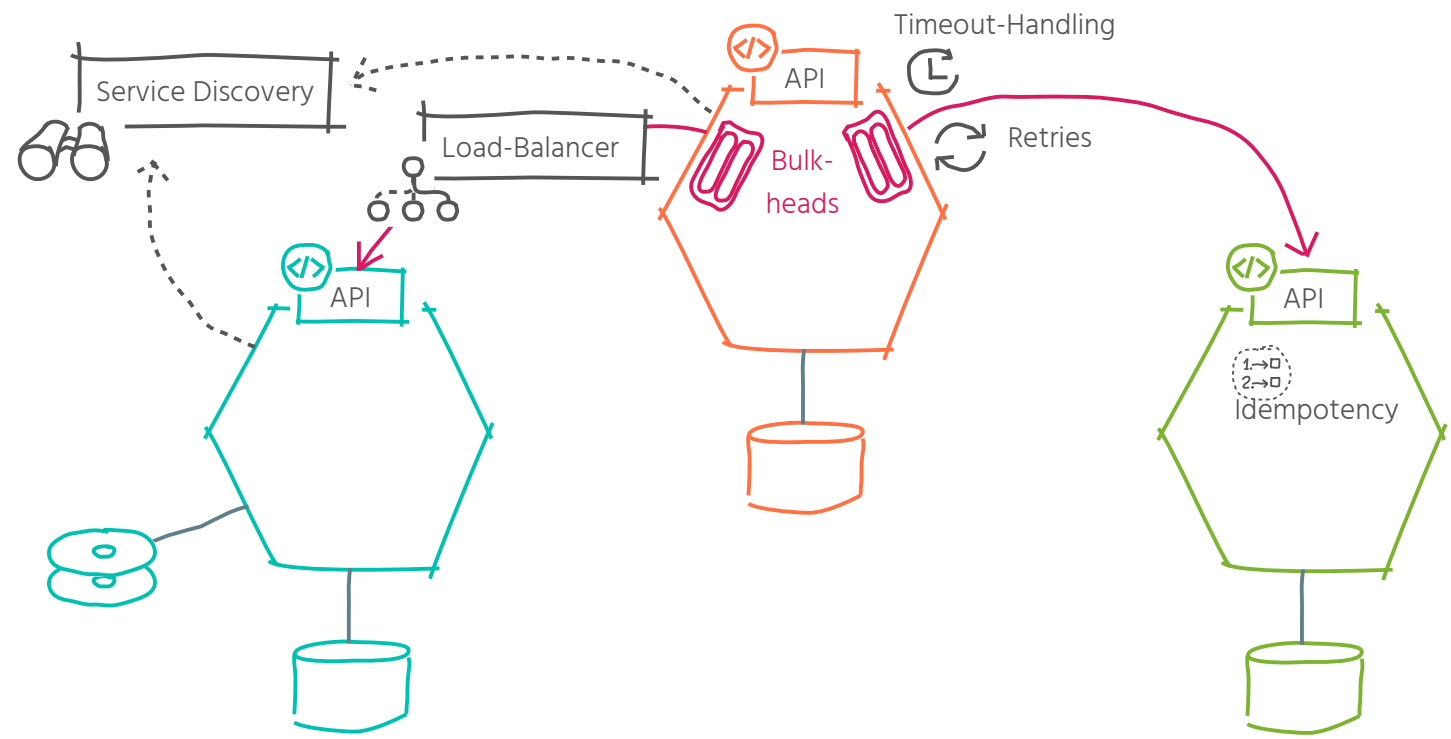


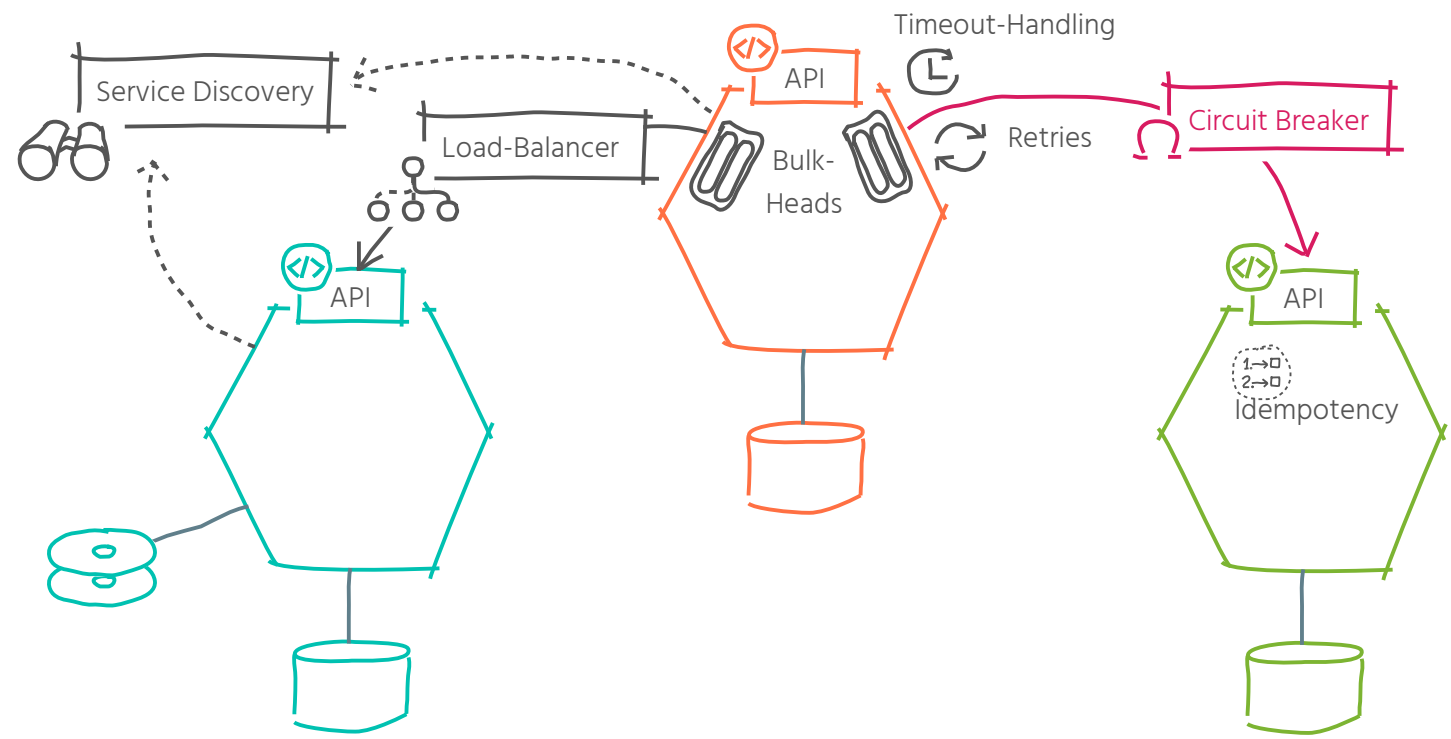
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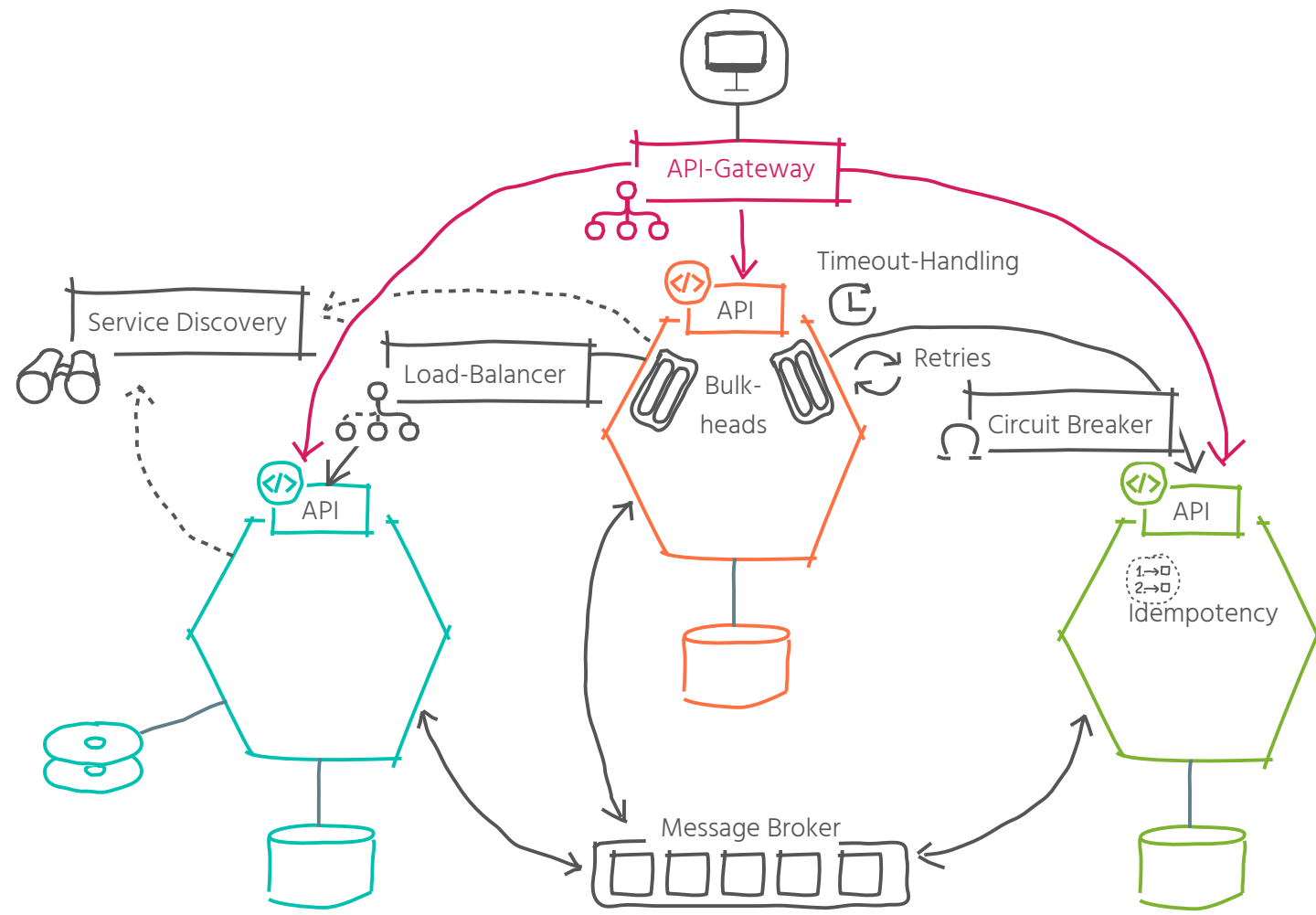
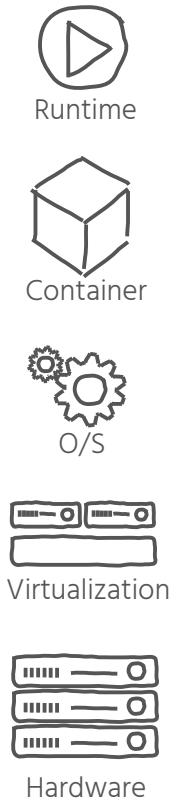


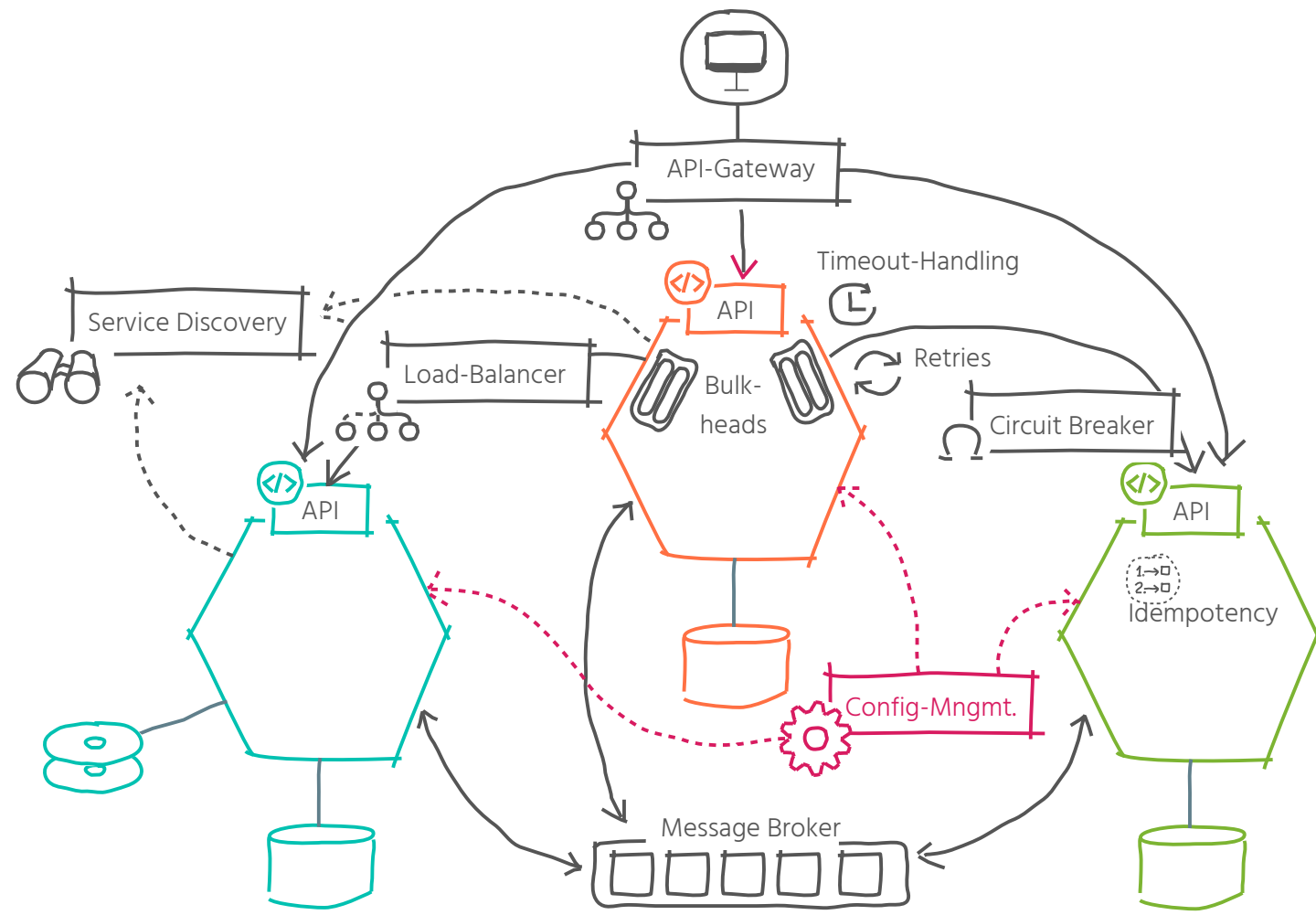
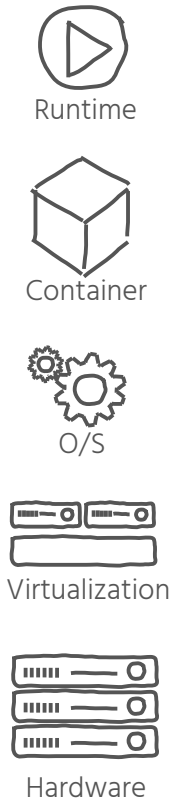
Hardware

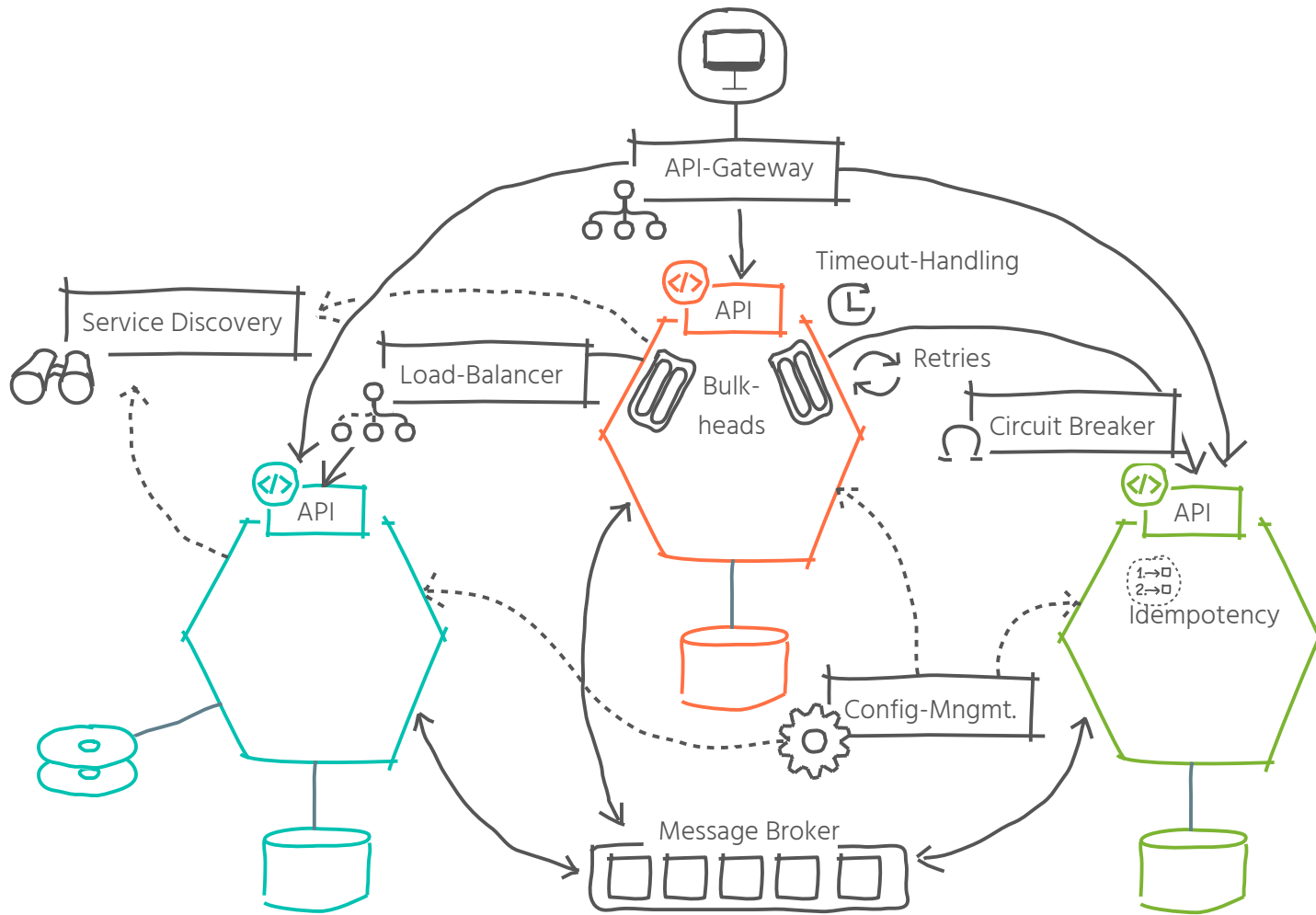



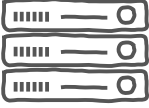


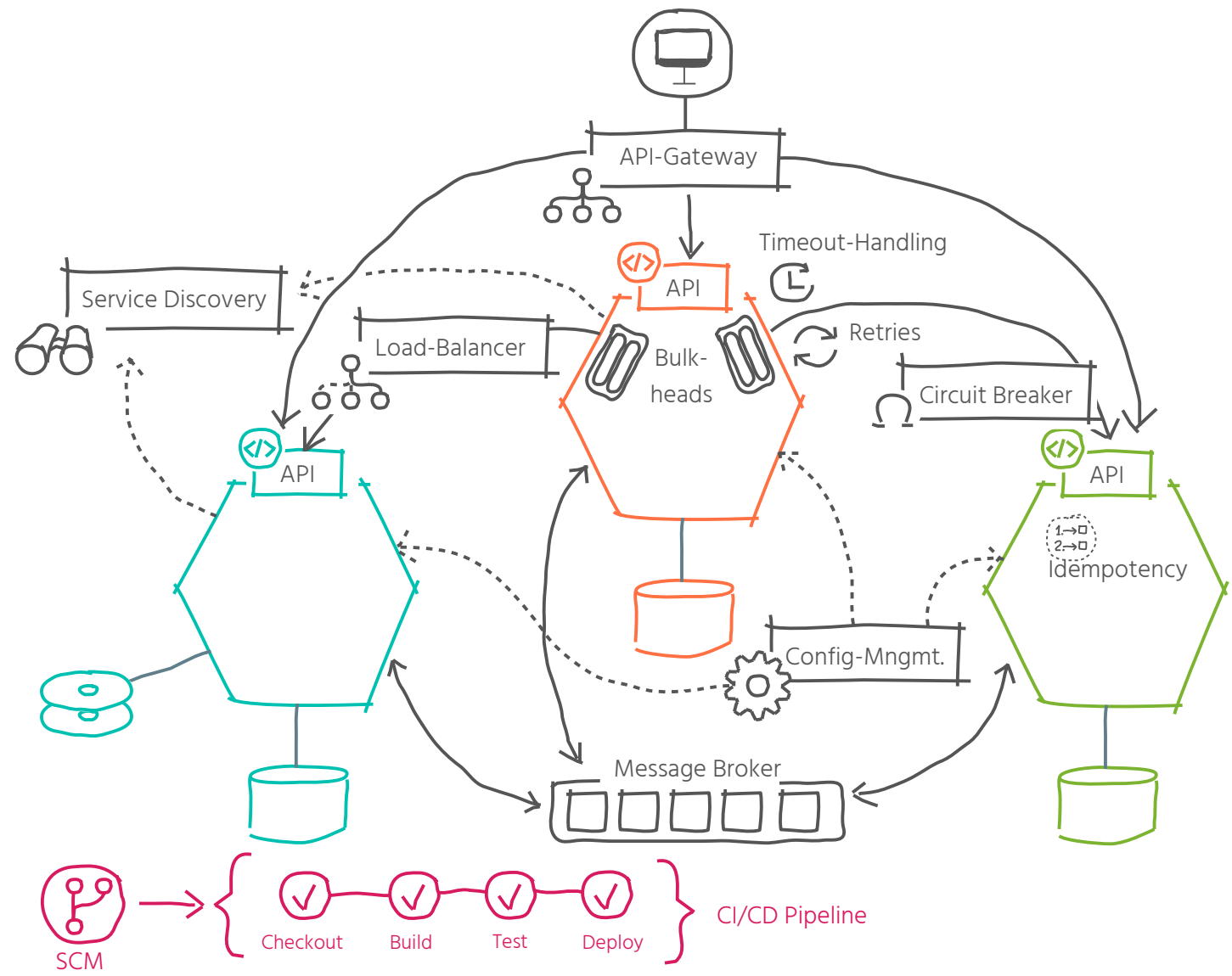










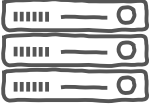


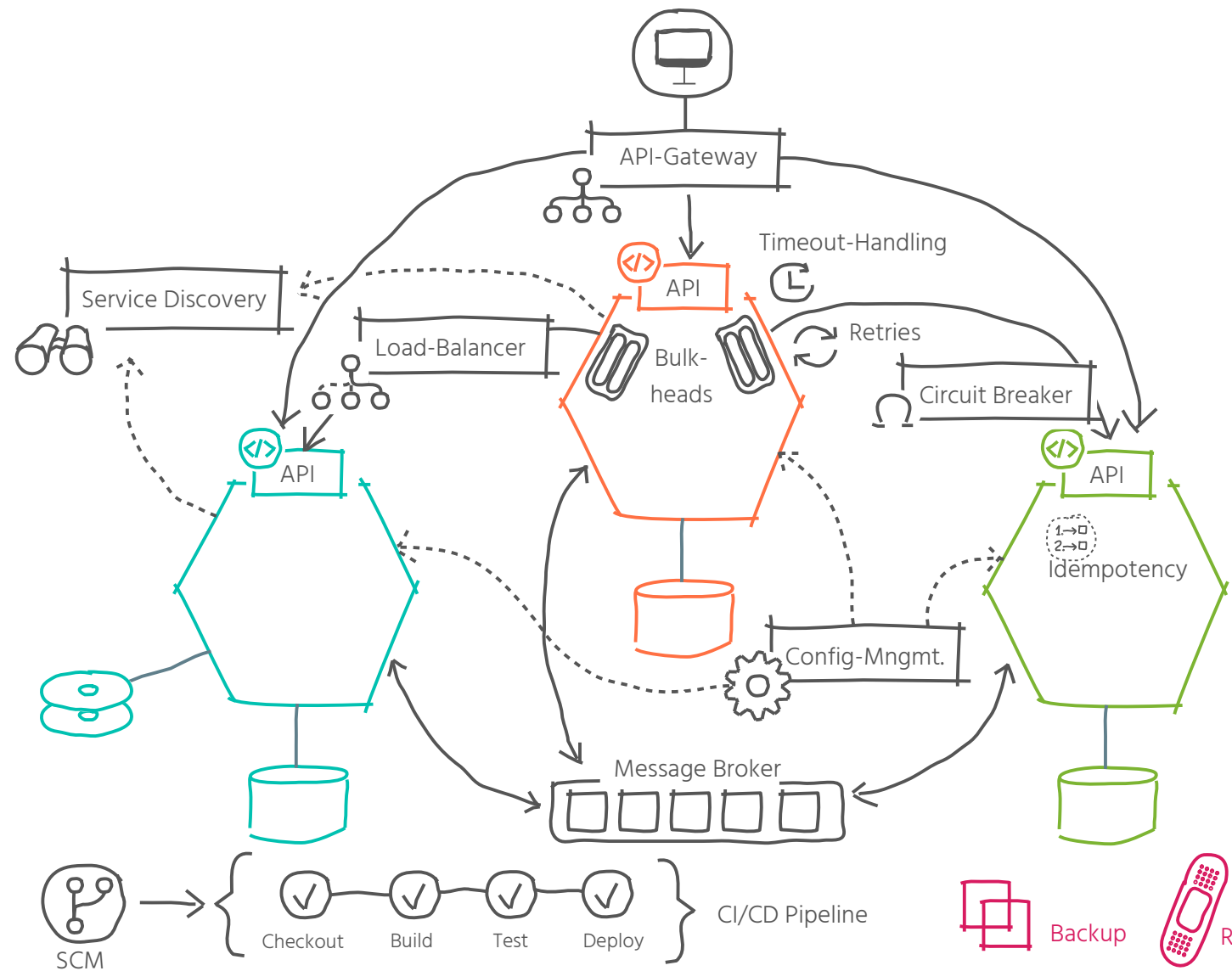



-  Runtime
-  Container
-  O/S
-  Virtualization
-  Hardware



-  Monitoring
-  Log Aggregation
-  Metrics
-  Distributed Tracing
-  Health Checks

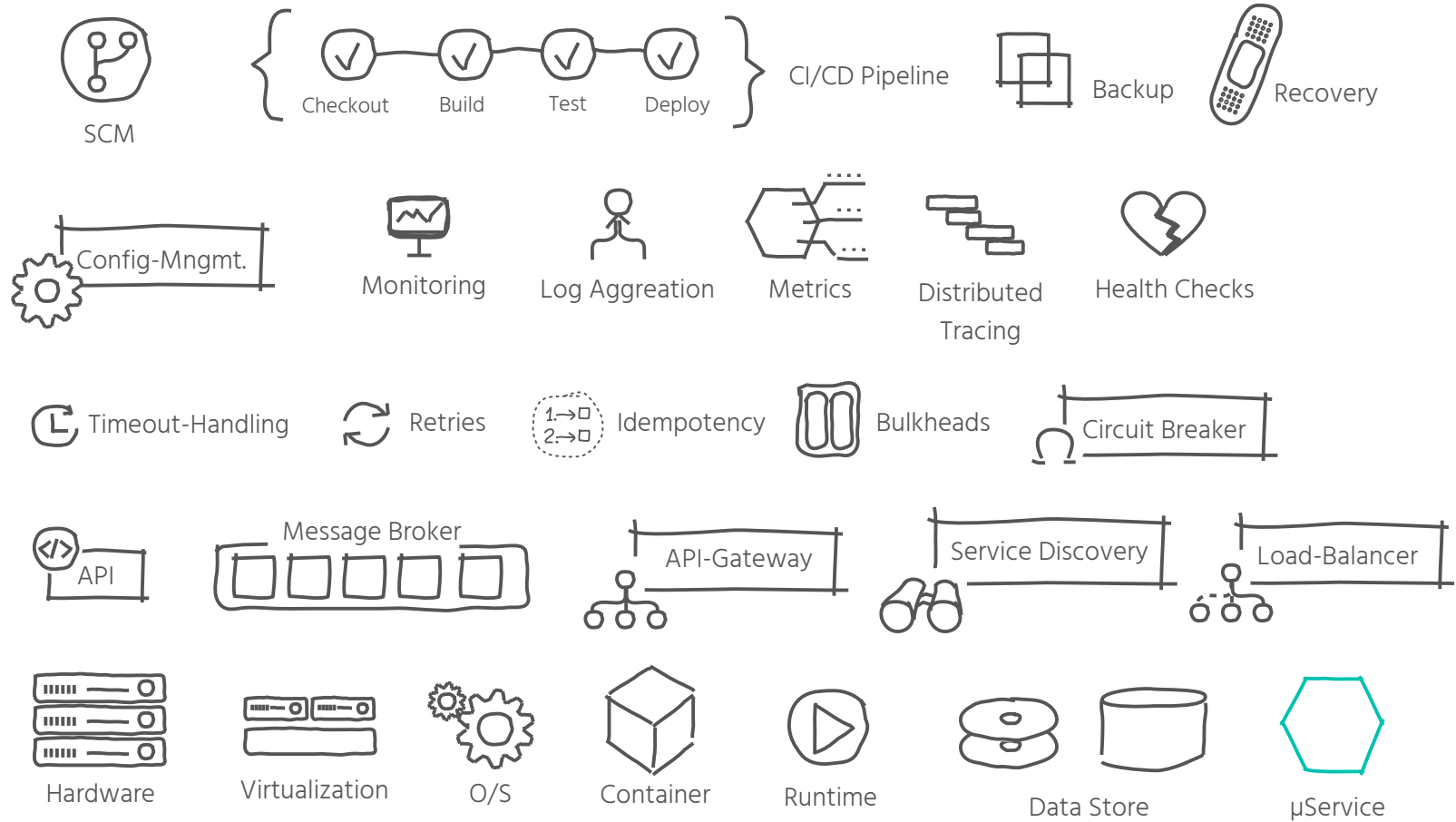
-  Runtime
-  Container
-  O/S
-  Virtualization
-  Hardware



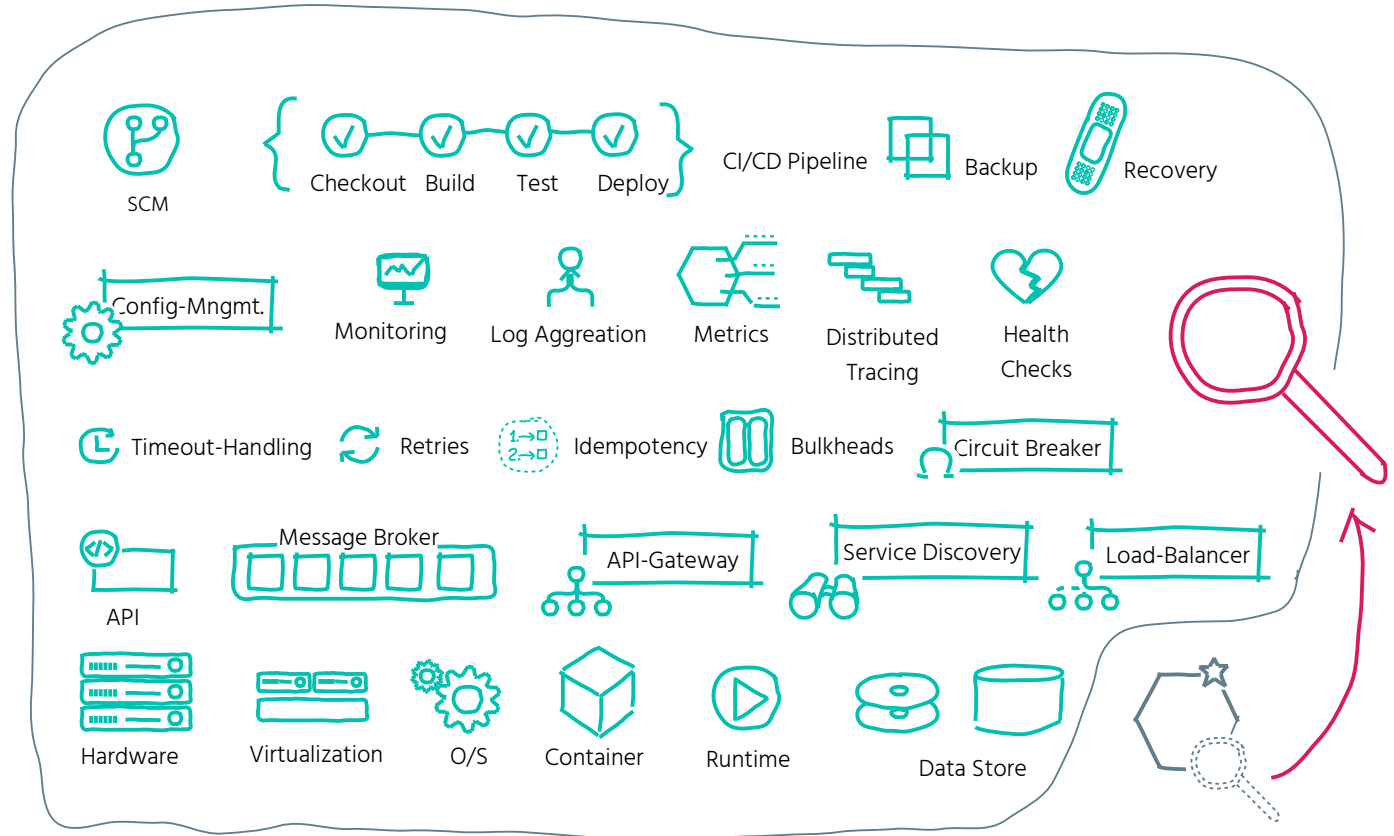
-  Monitoring
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-  Health Checks

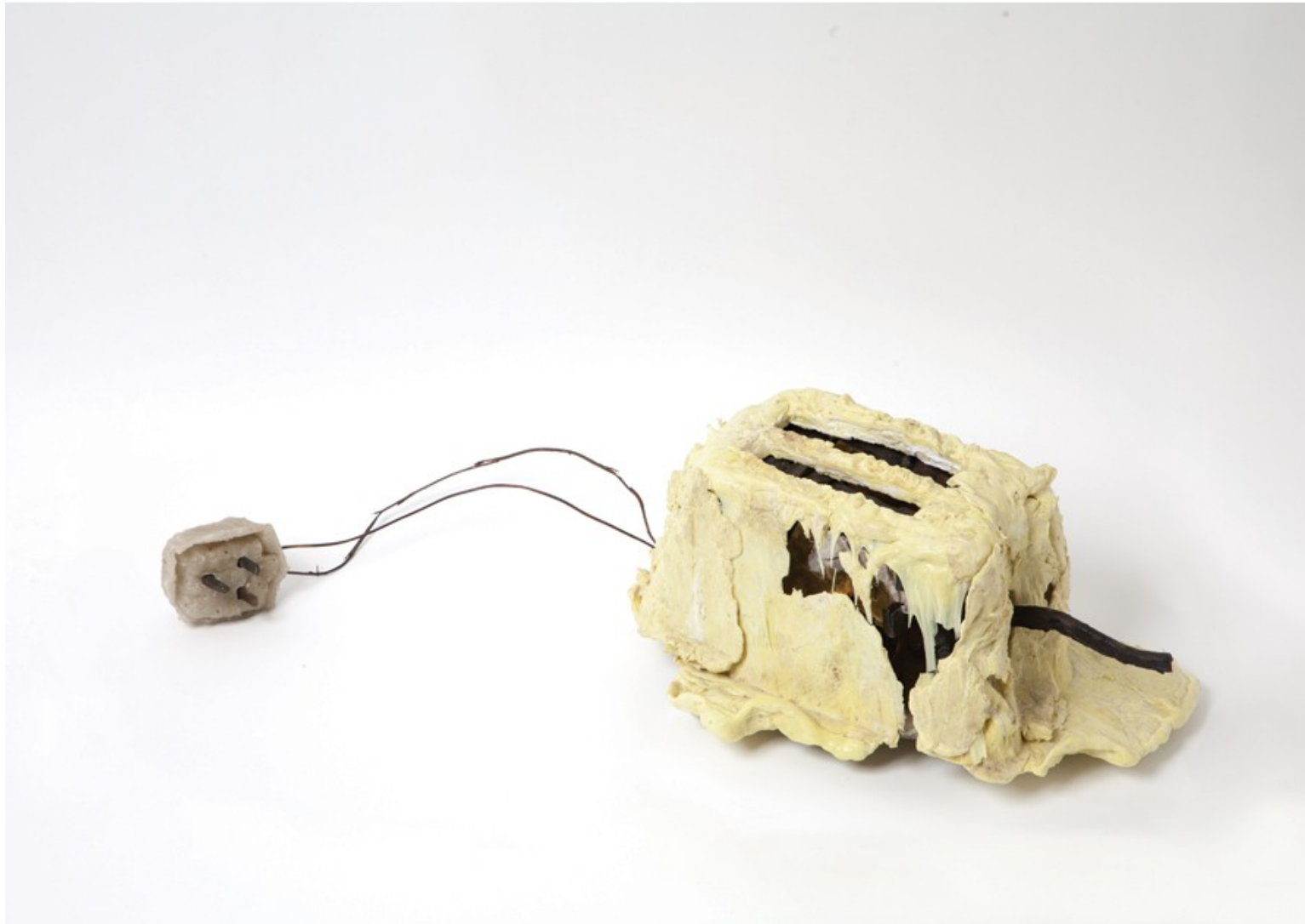


μService



Complexities

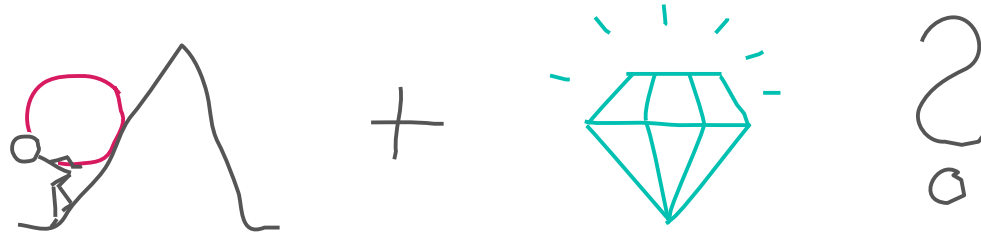




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How can a small team handle infrastructure
complexities
and deliver user & business value?





Focus on Core Domain



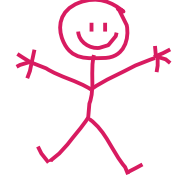
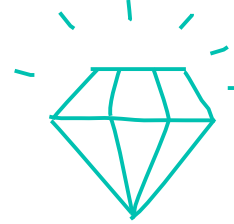
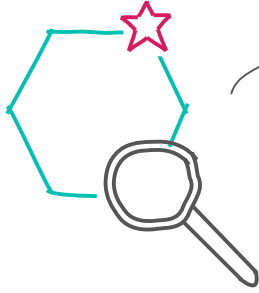
Offload commodities

Build in-house

Core Domain Focus

User Needs

User Value

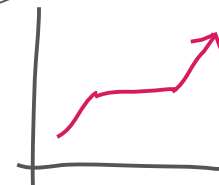
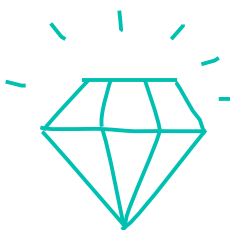
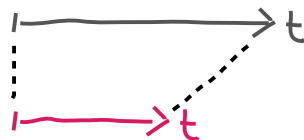
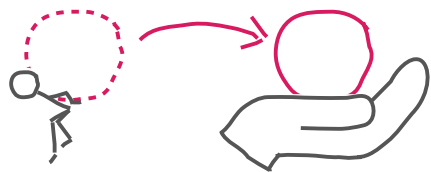
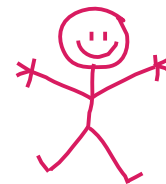
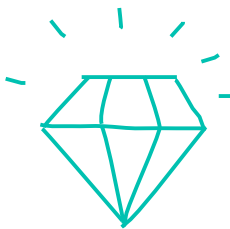
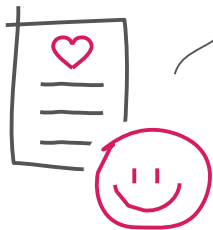
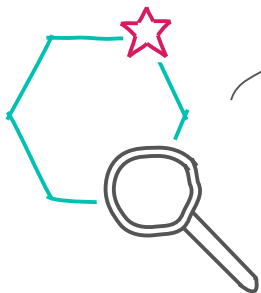


Build in-house

Core Domain Focus

User Needs

User Value

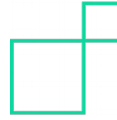


Offloading commodities

Business Needs

Business Value

Outsource to utility suppliers



Independent Tech Consultant
@suksr



EX- CTO
at Just Software
@JustSocialApps



Co-Organizer @microXchg, Berlin

Susanne Kaiser ... who?



Program committee &
track host
QCon, New York
@qconnewyork



Program committee
MicroCPH, Copenhagen
@MicroCPH



Program committee
ServerlessDays, Hamburg
@ServerlessHAM



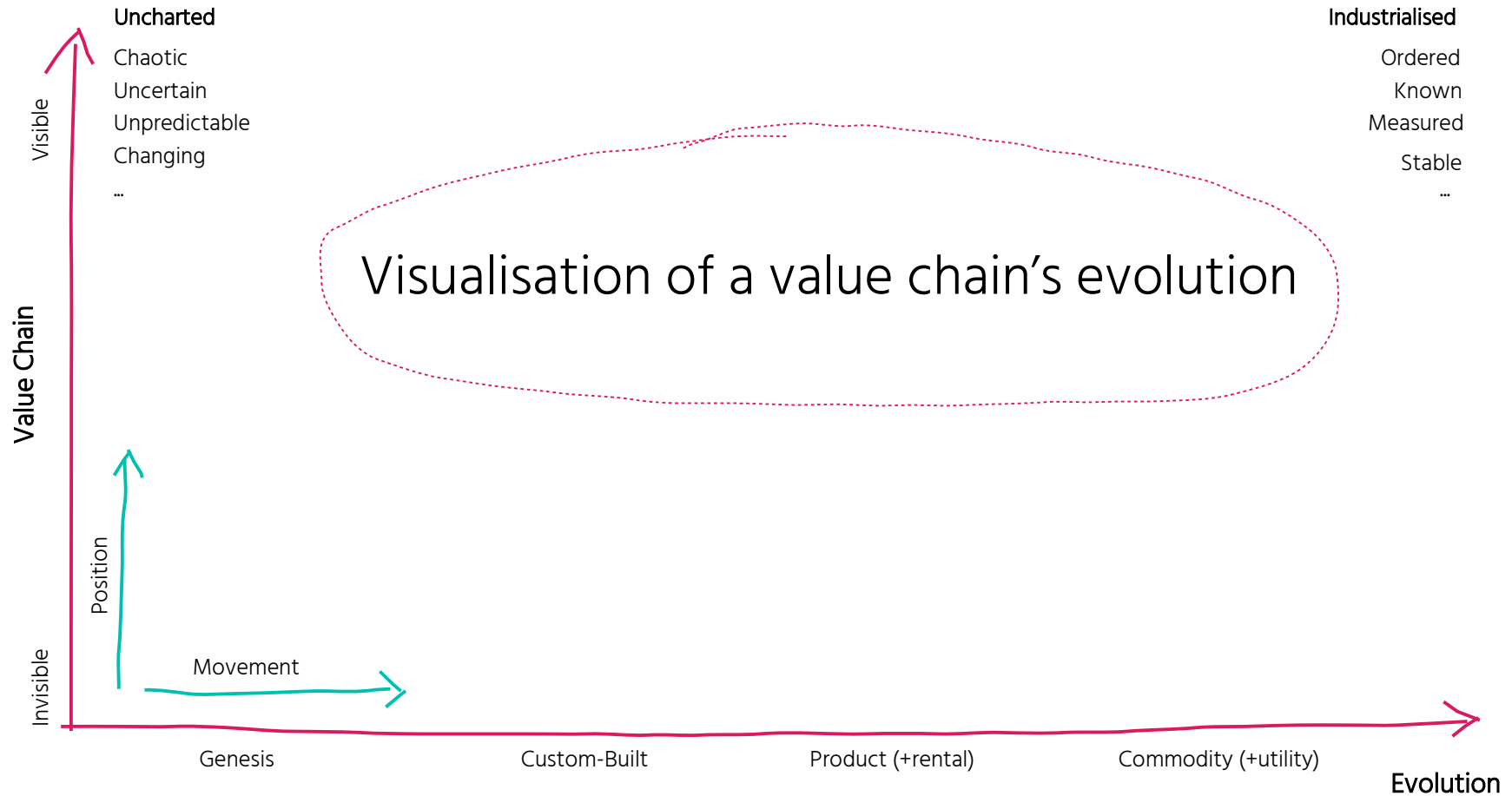
What to build in-house?



What to outsource?

Wardley Maps

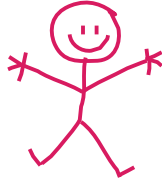
By Simon Wardley



Wardley Maps

Value Chain

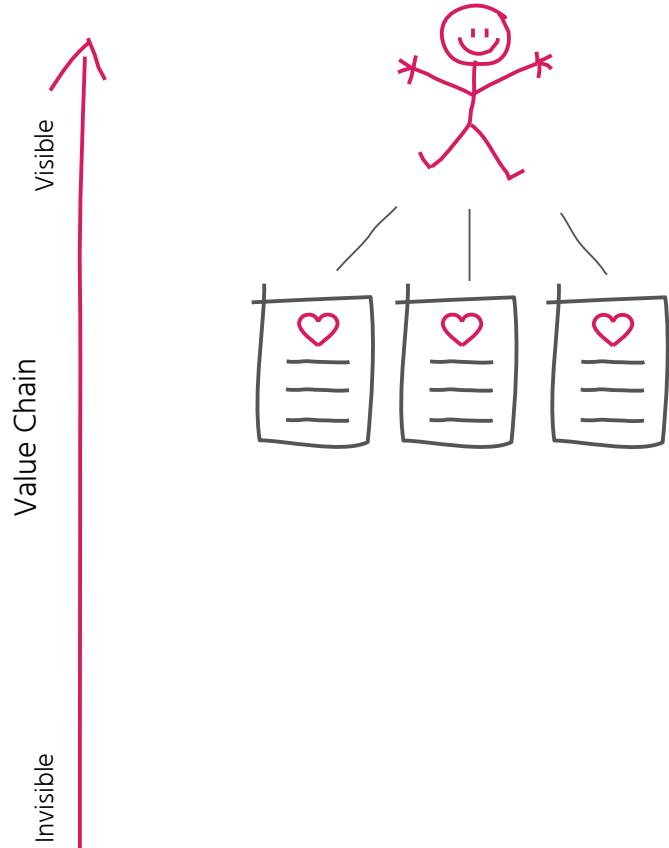
Visible
Value Chain
Invisible



Who are your users?

Wardley Maps

Value Chain

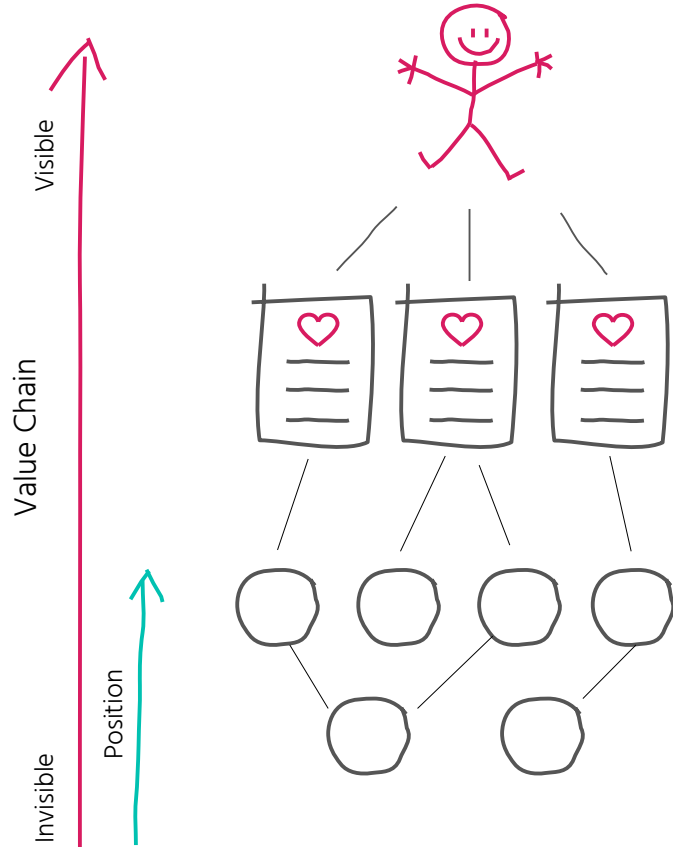


Who are your users?

What are your users' needs?

Wardley Maps

Value Chain



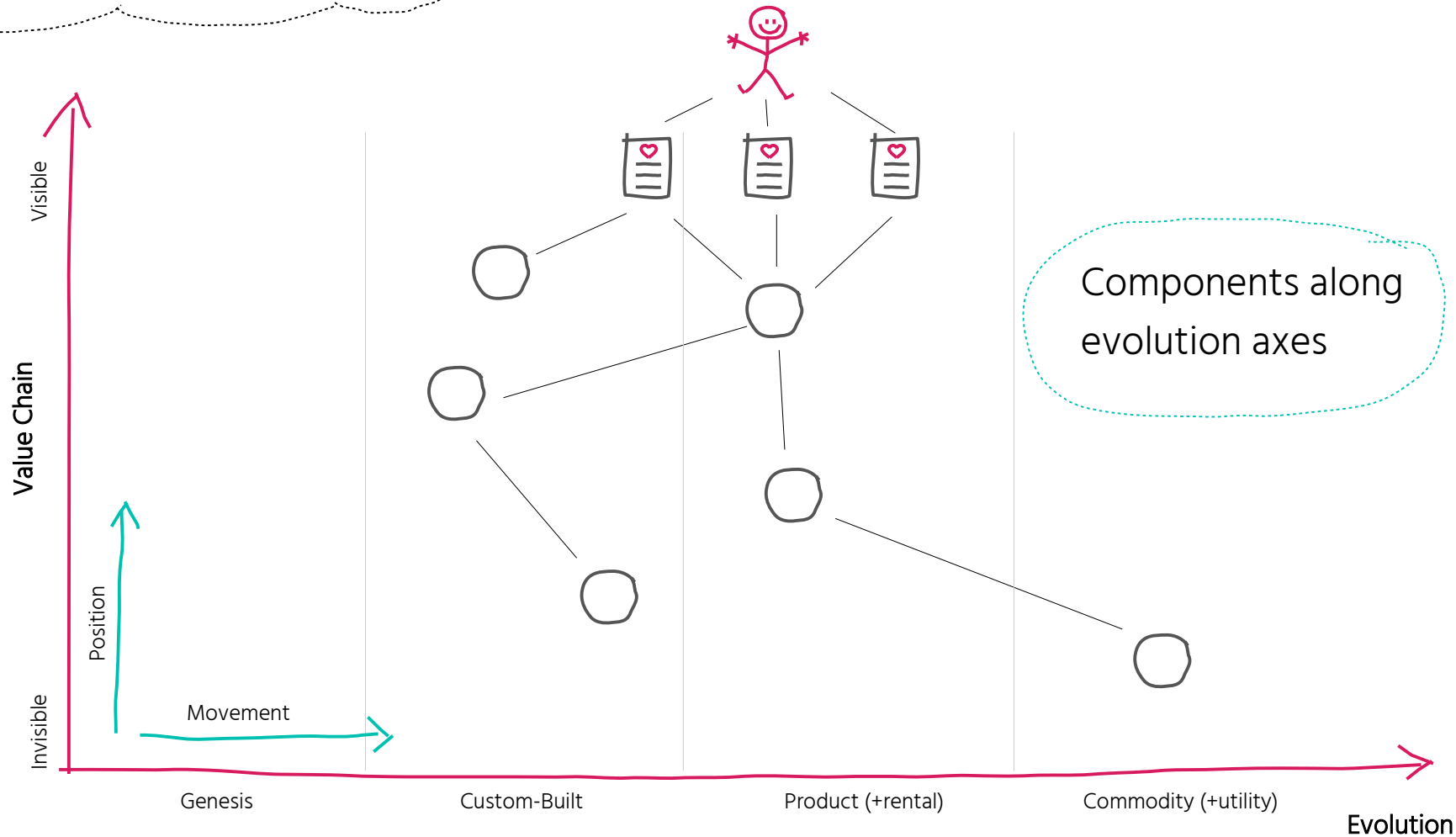
Who are your users?

What are your users' needs?

What are the components/activities to fulfil your users' needs incl. dependencies?

Wardley Maps

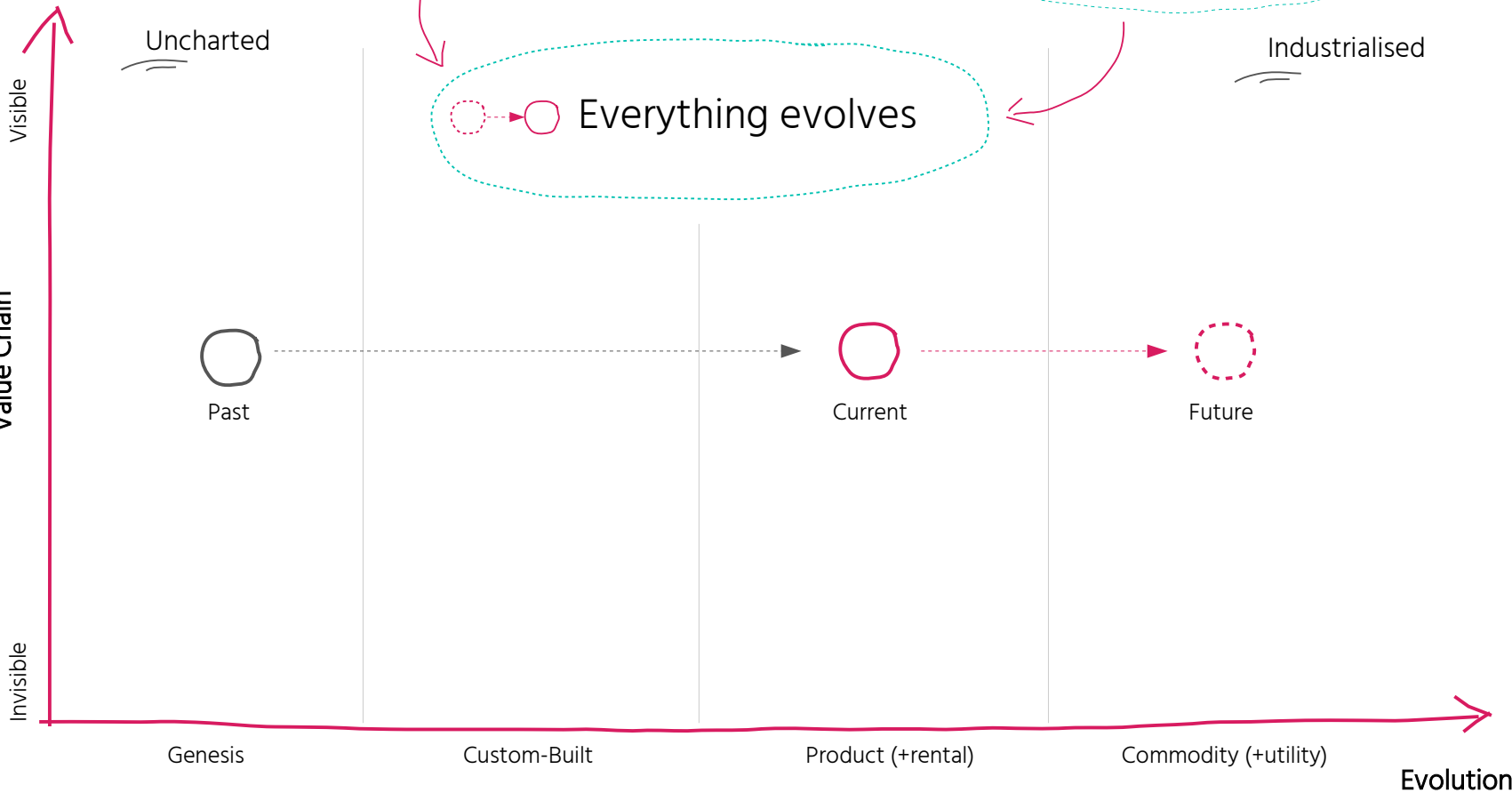
Landscape



Wardley Maps

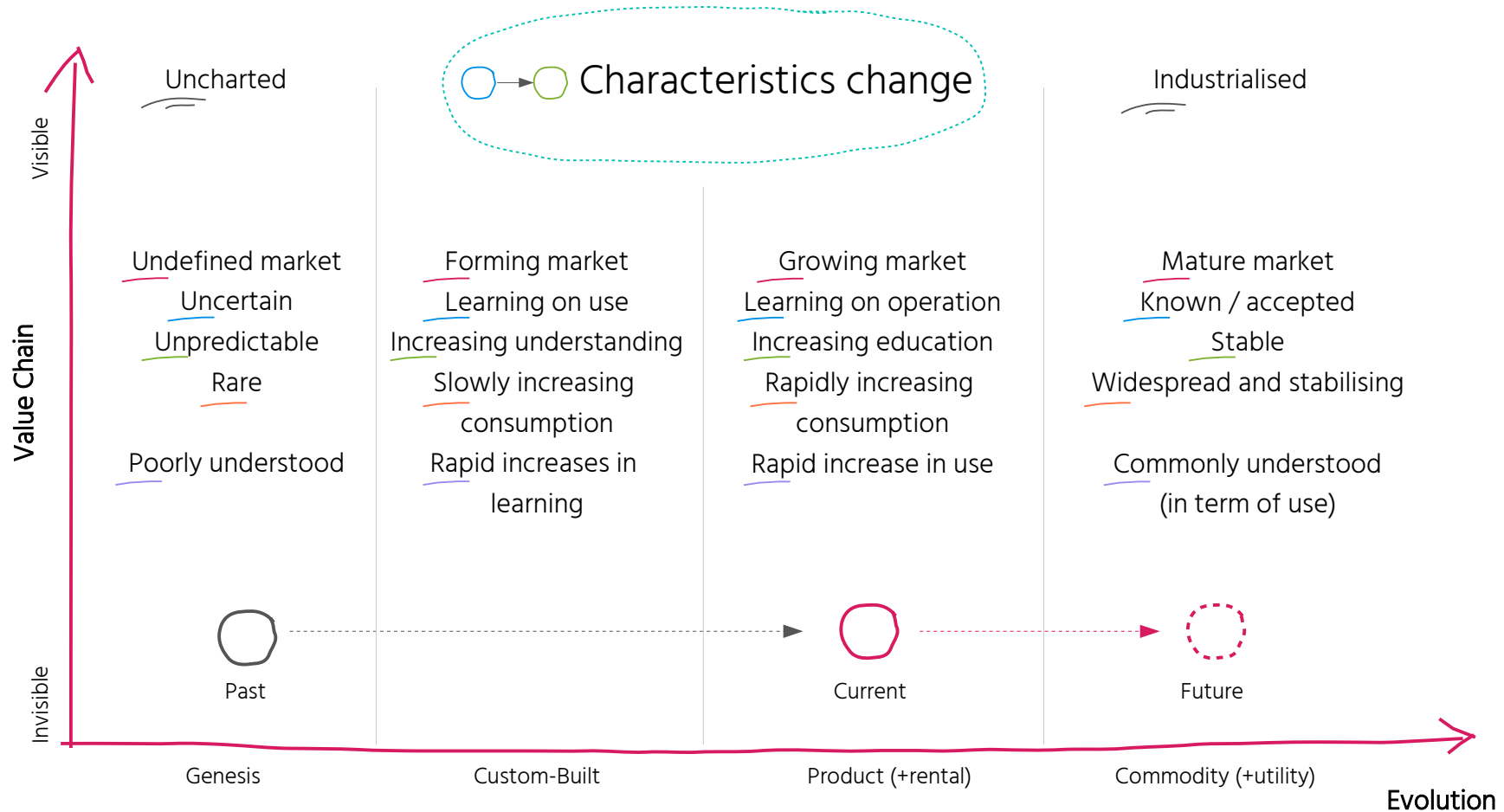
Patterns

Value Chain



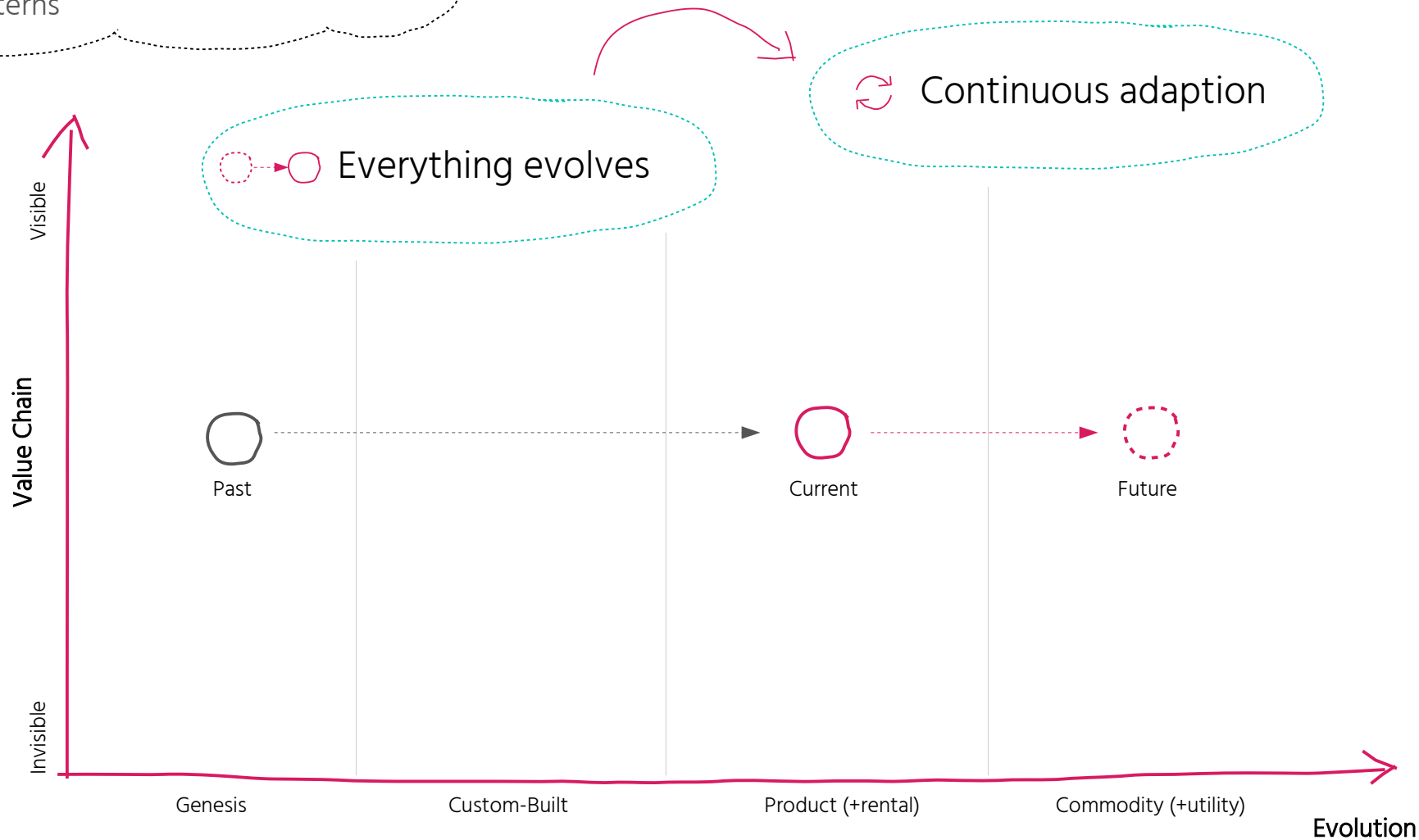
Wardley Maps

Patterns



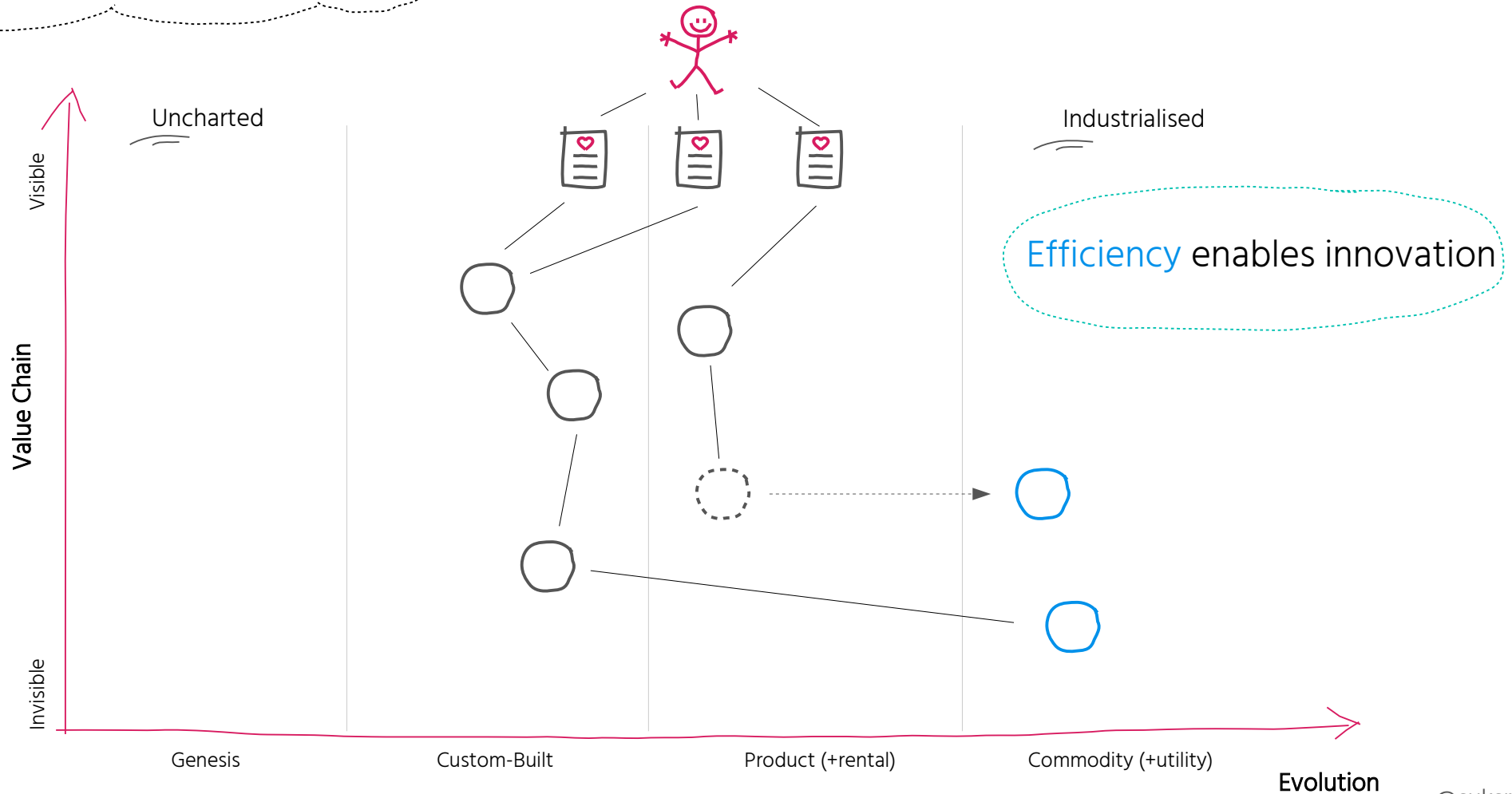
Wardley Maps

Patterns



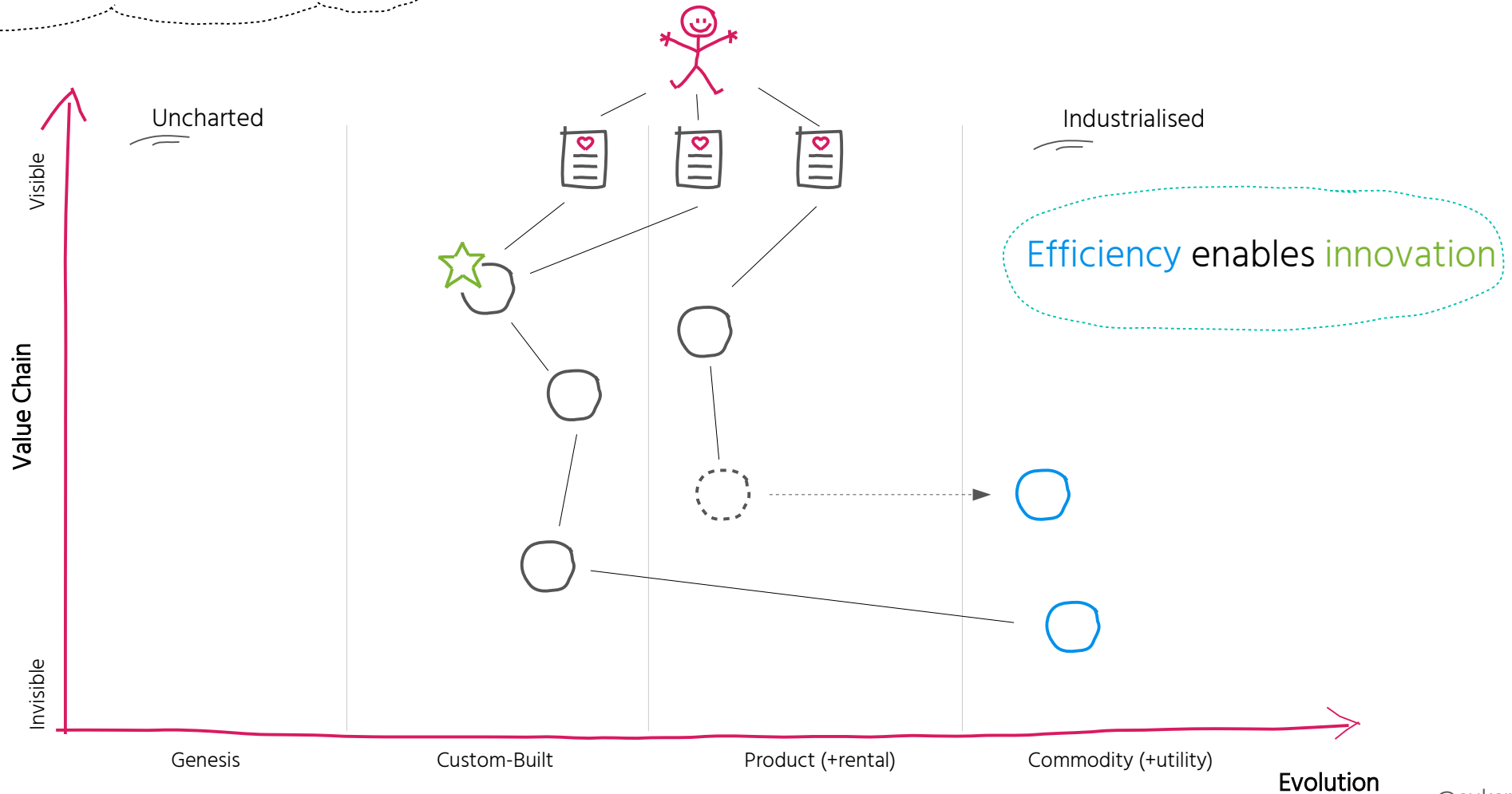
Wardley Maps

Patterns



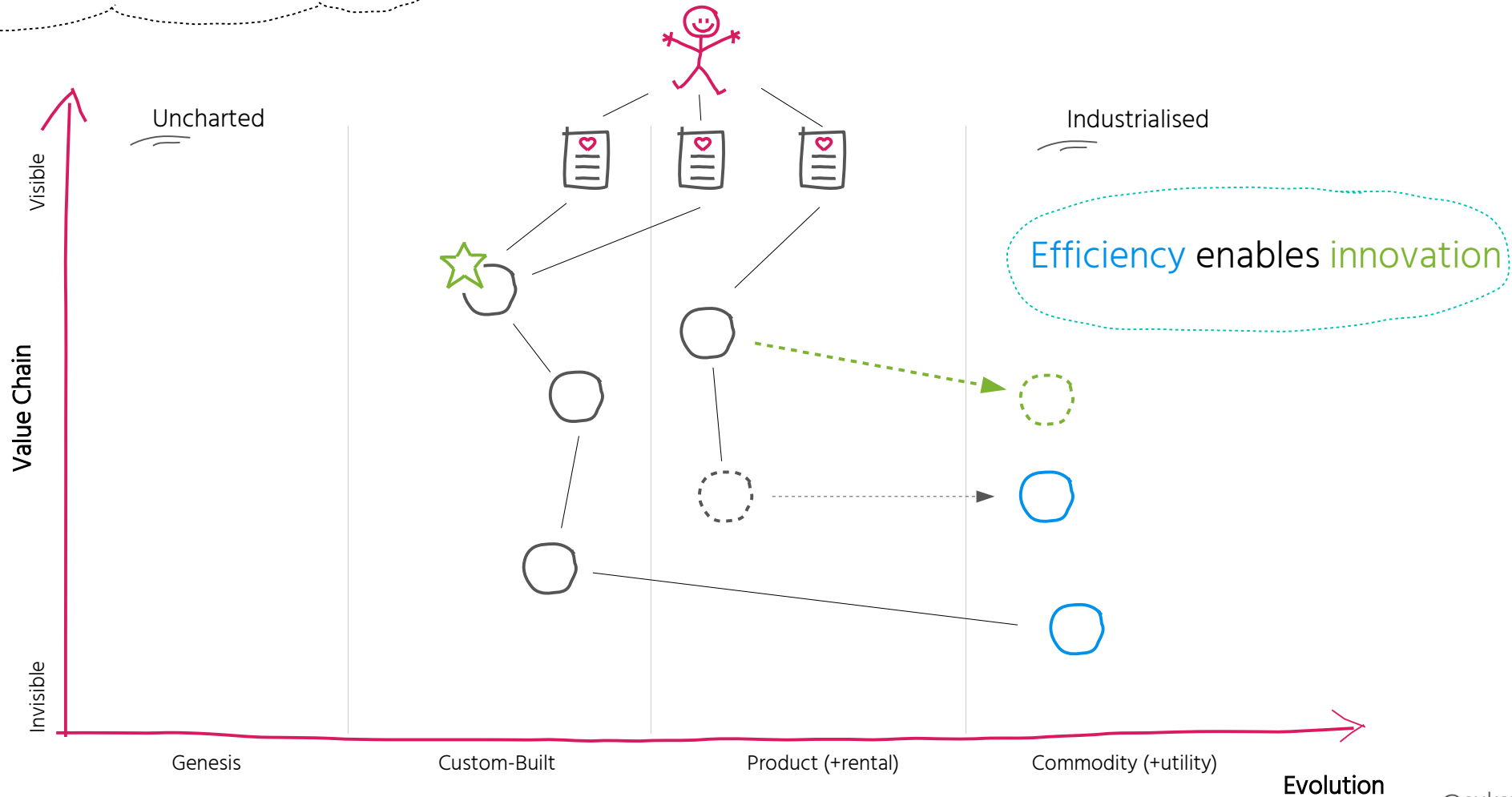
Wardley Maps

Patterns



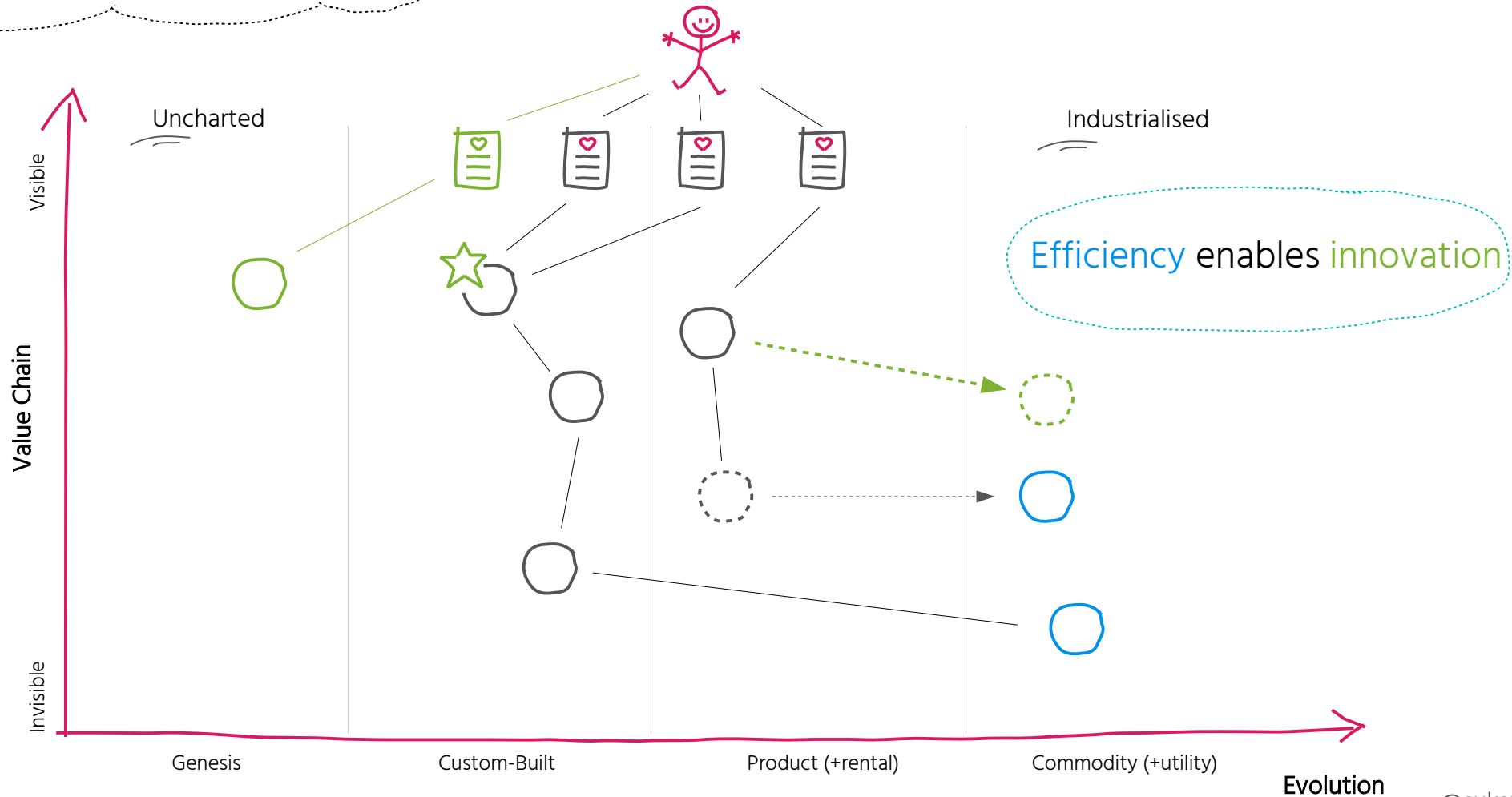
Wardley Maps

Patterns



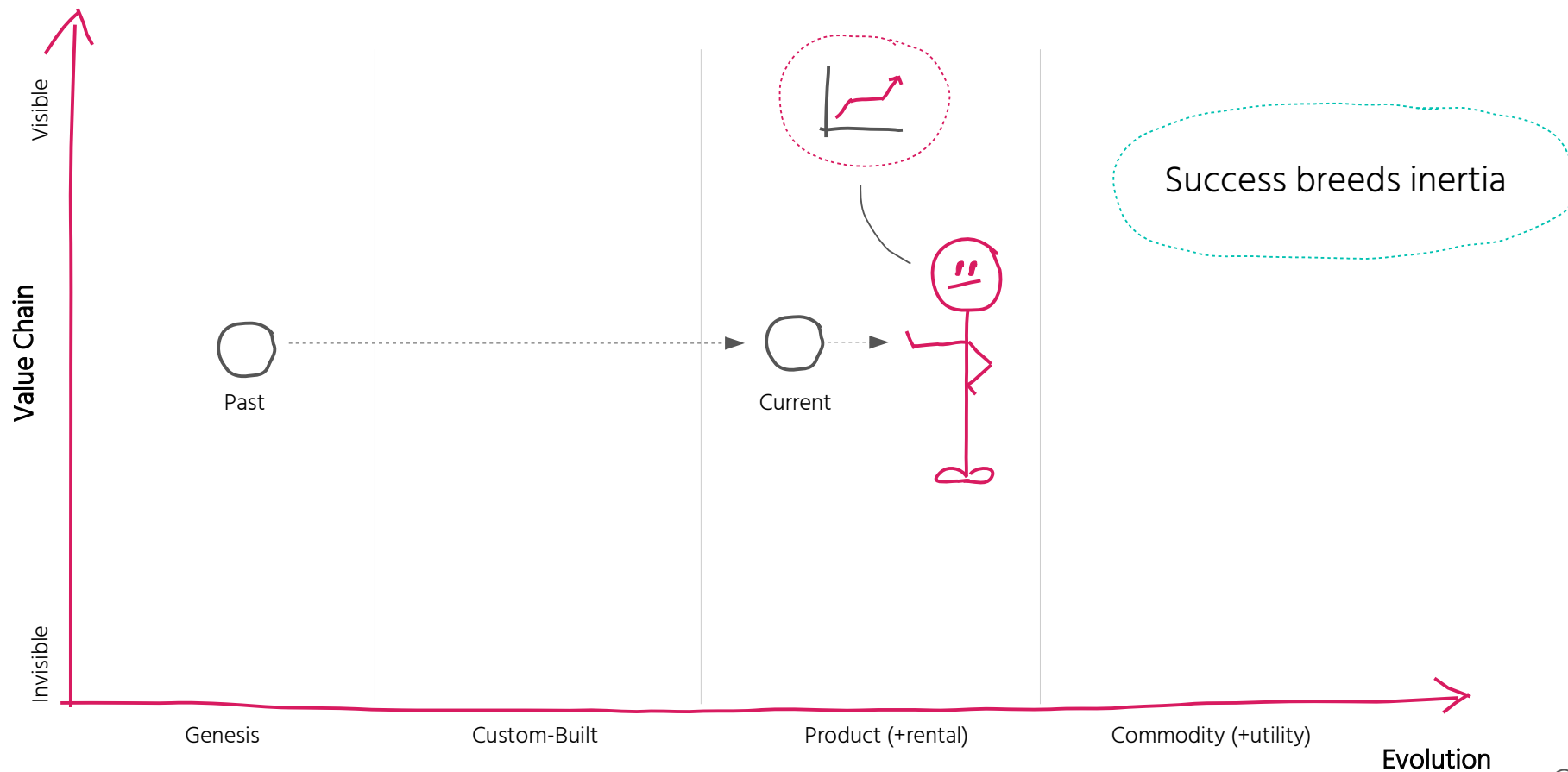
Wardley Maps

Patterns



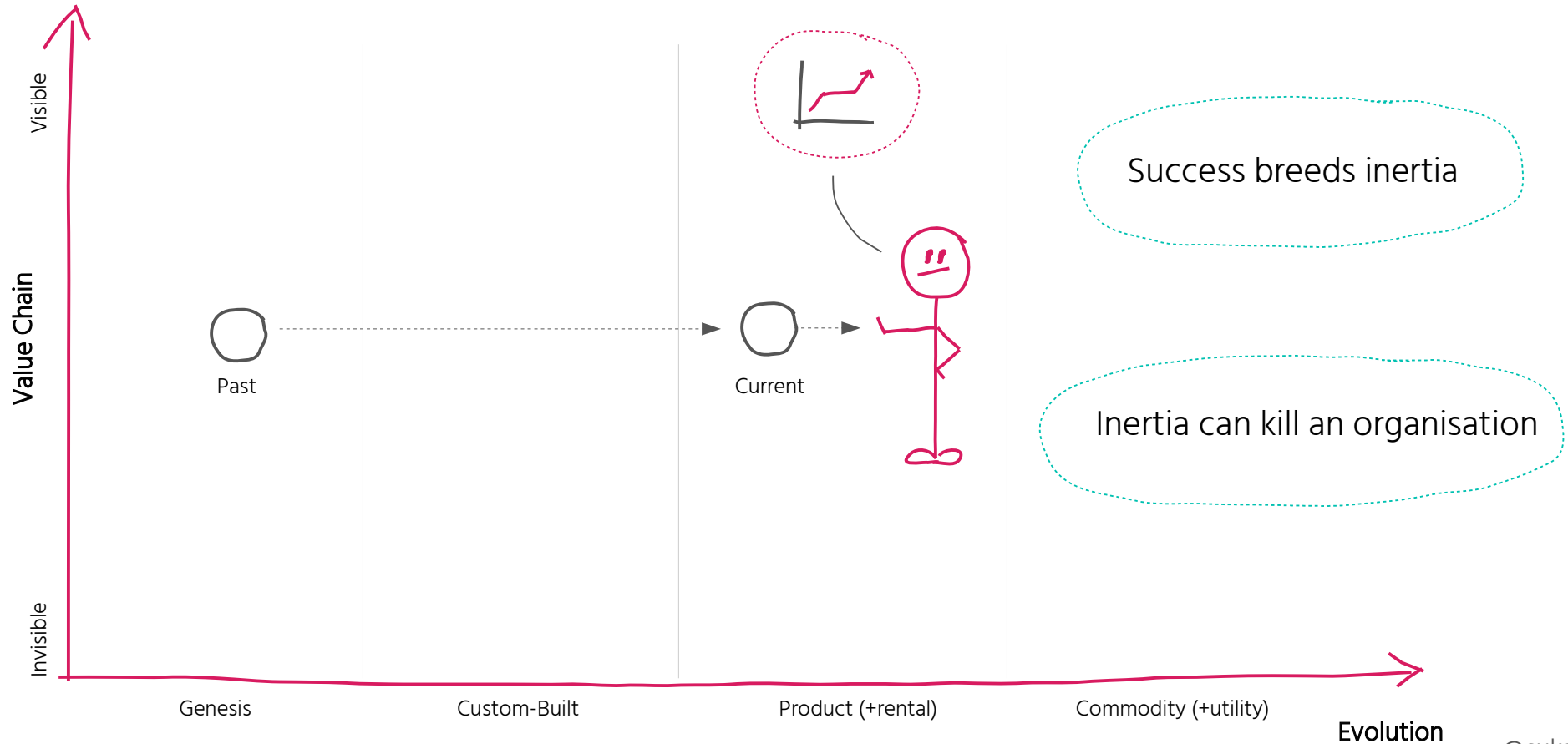
Wardley Maps

Patterns



Wardley Maps

Patterns



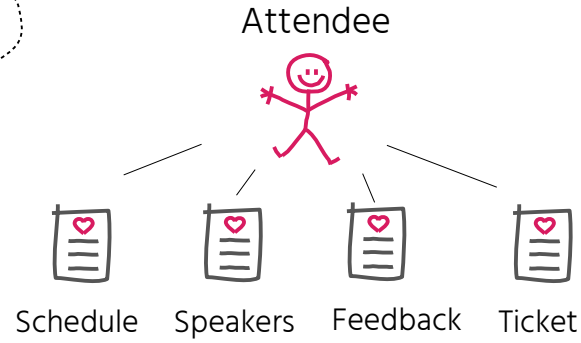
Wardley Maps

Example Conference Solution

Value Chain

Visible

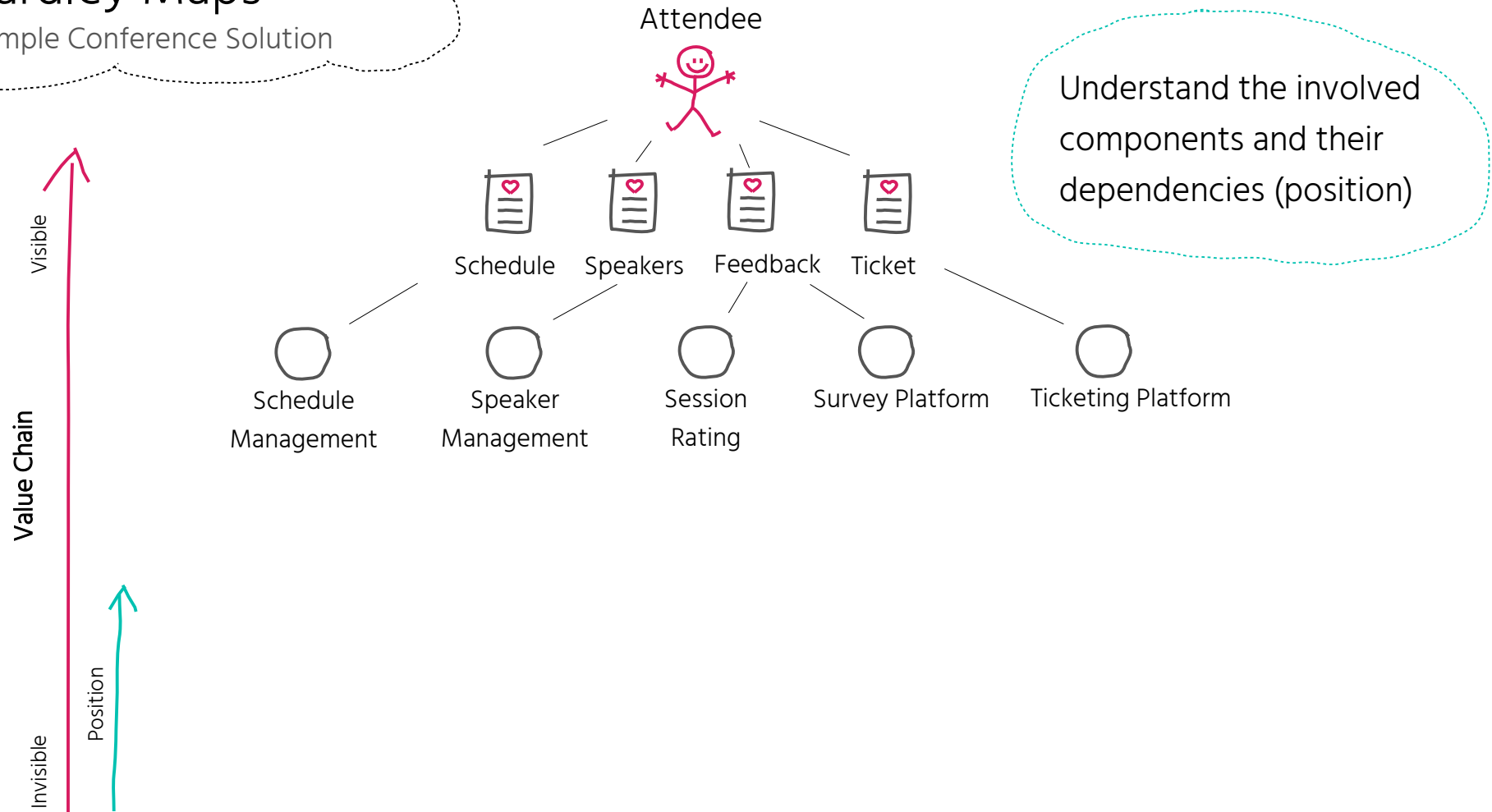
Invisible



Focus on user needs

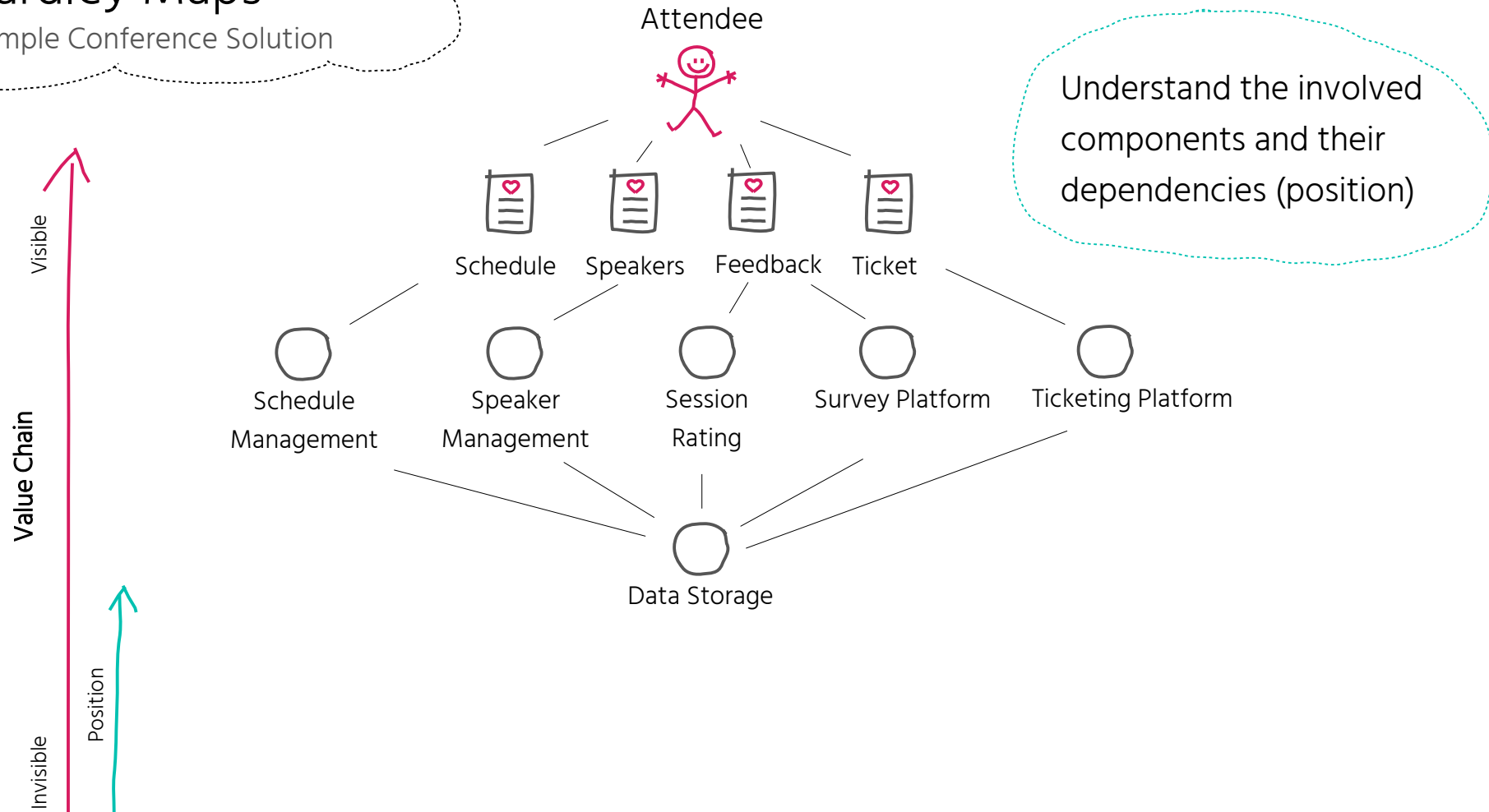
Wardley Maps

Example Conference Solution



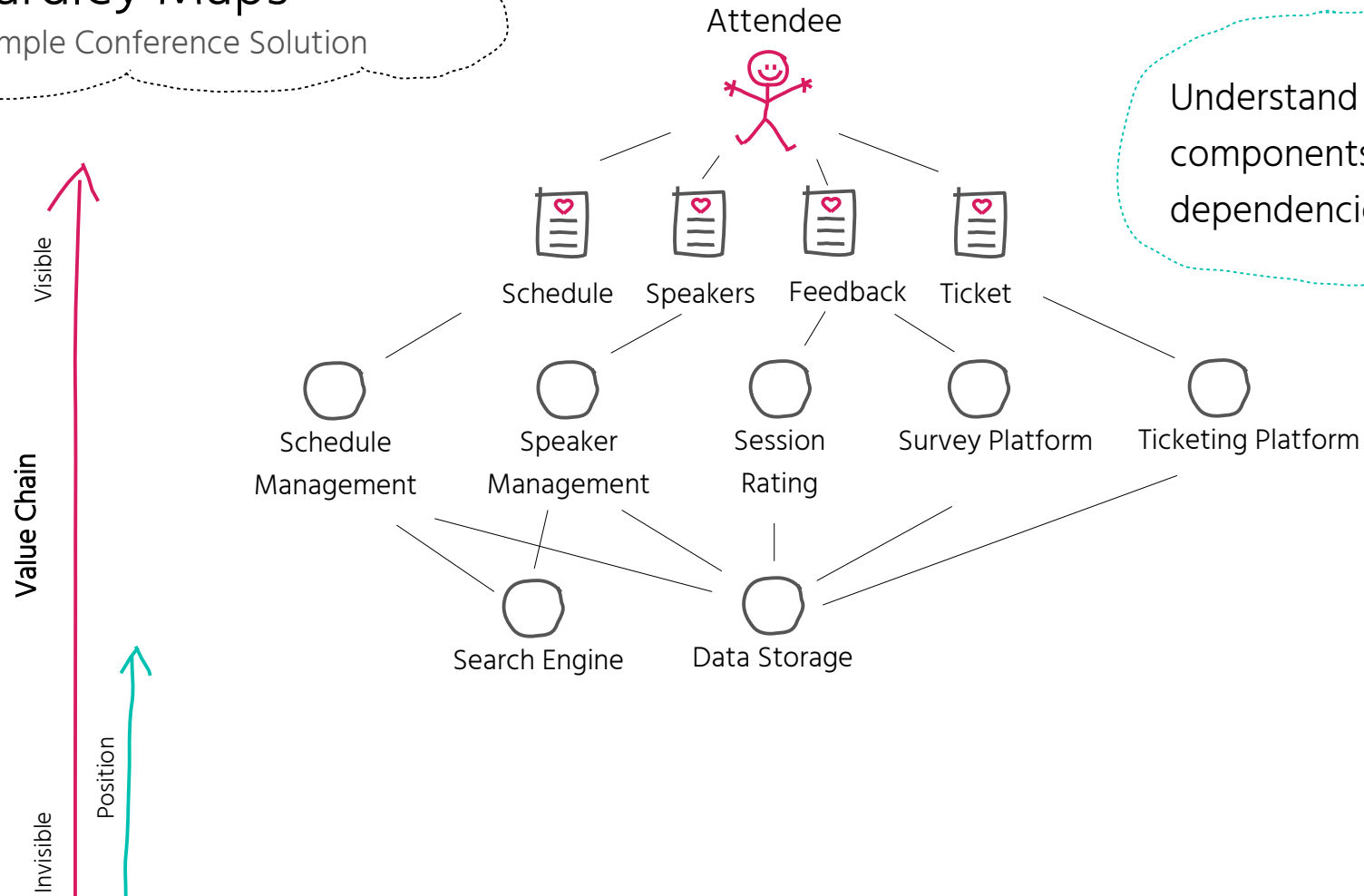
Wardley Maps

Example Conference Solution



Wardley Maps

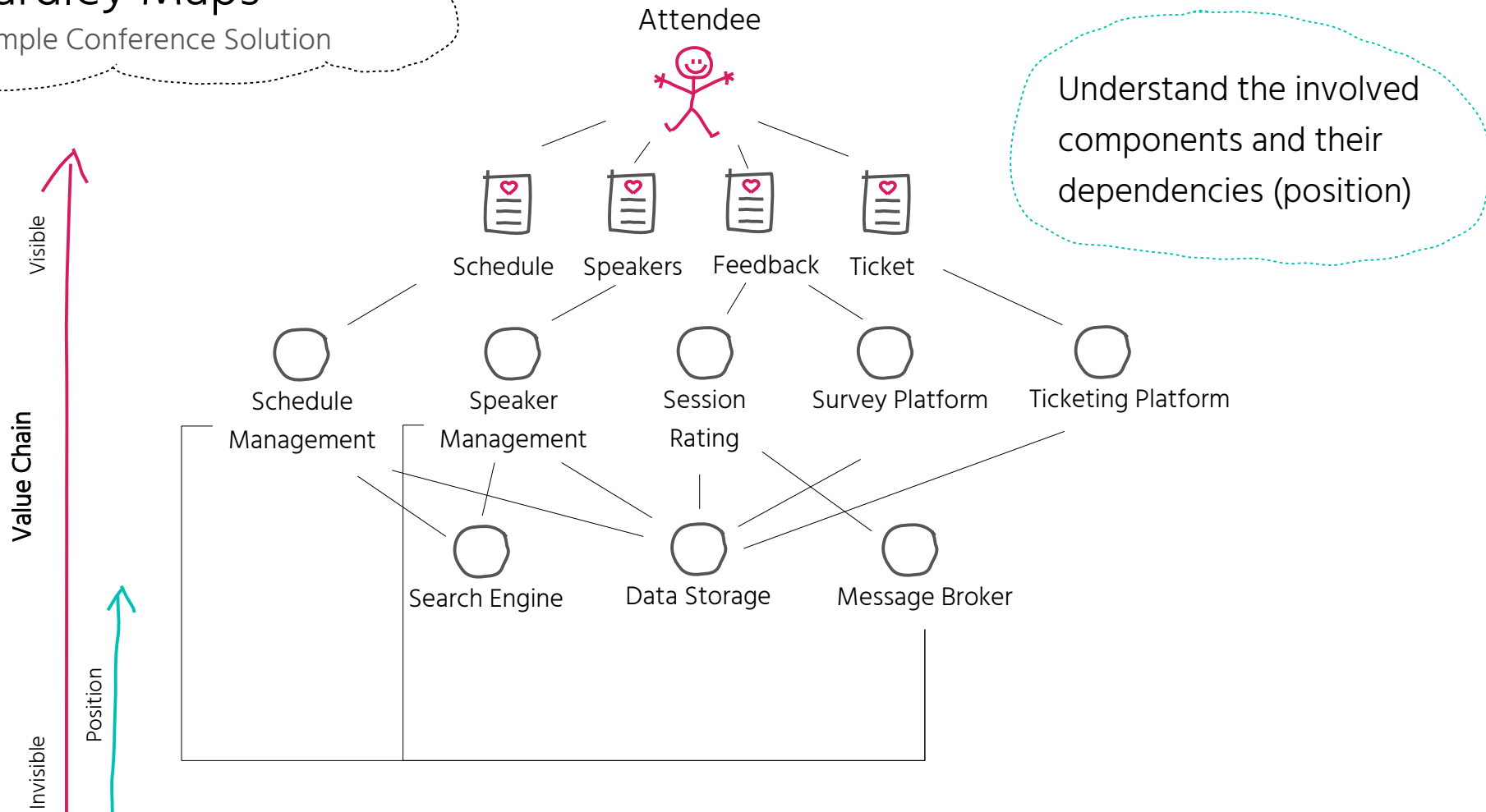
Example Conference Solution



Understand the involved components and their dependencies (position)

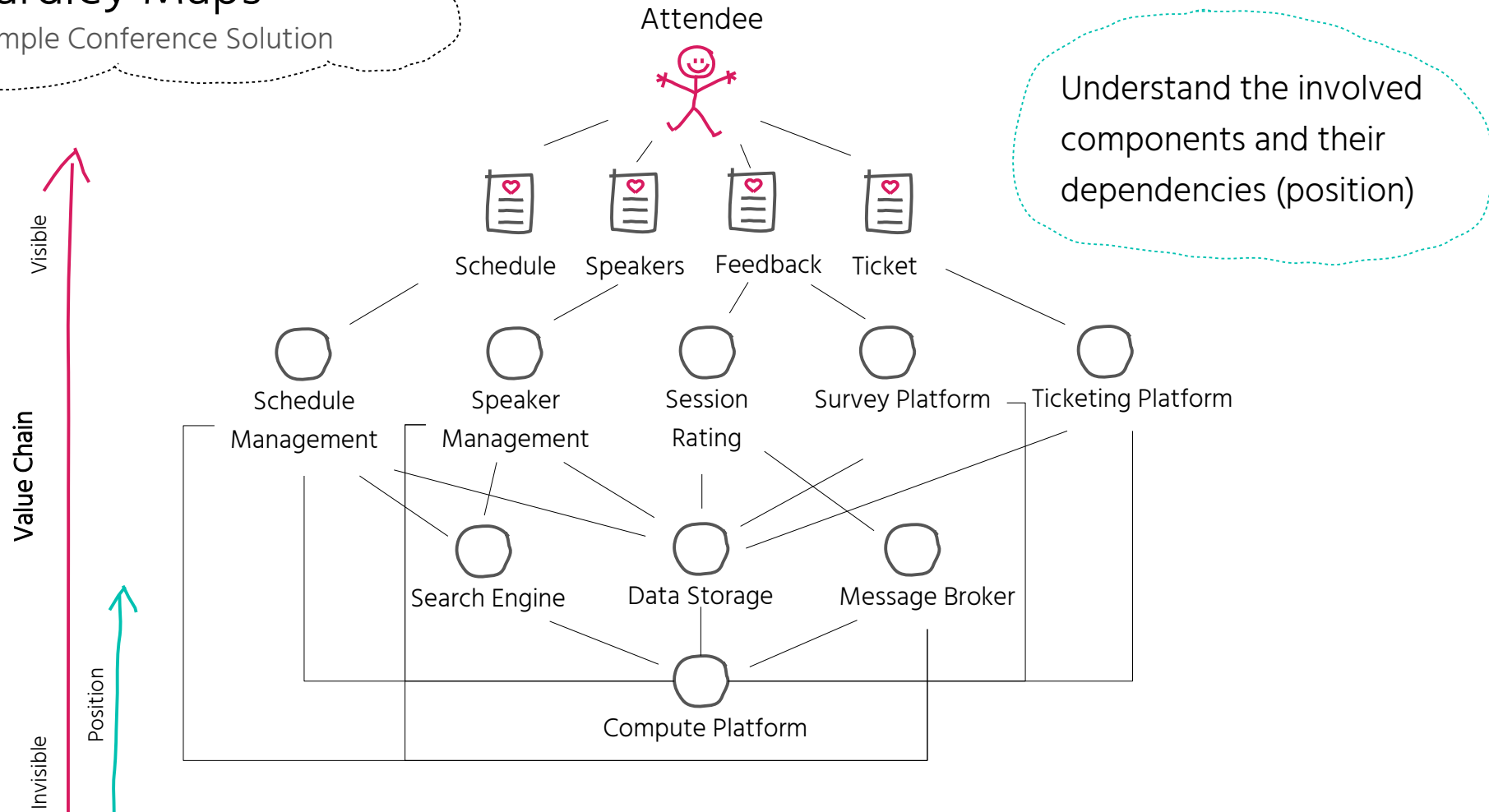
Wardley Maps

Example Conference Solution



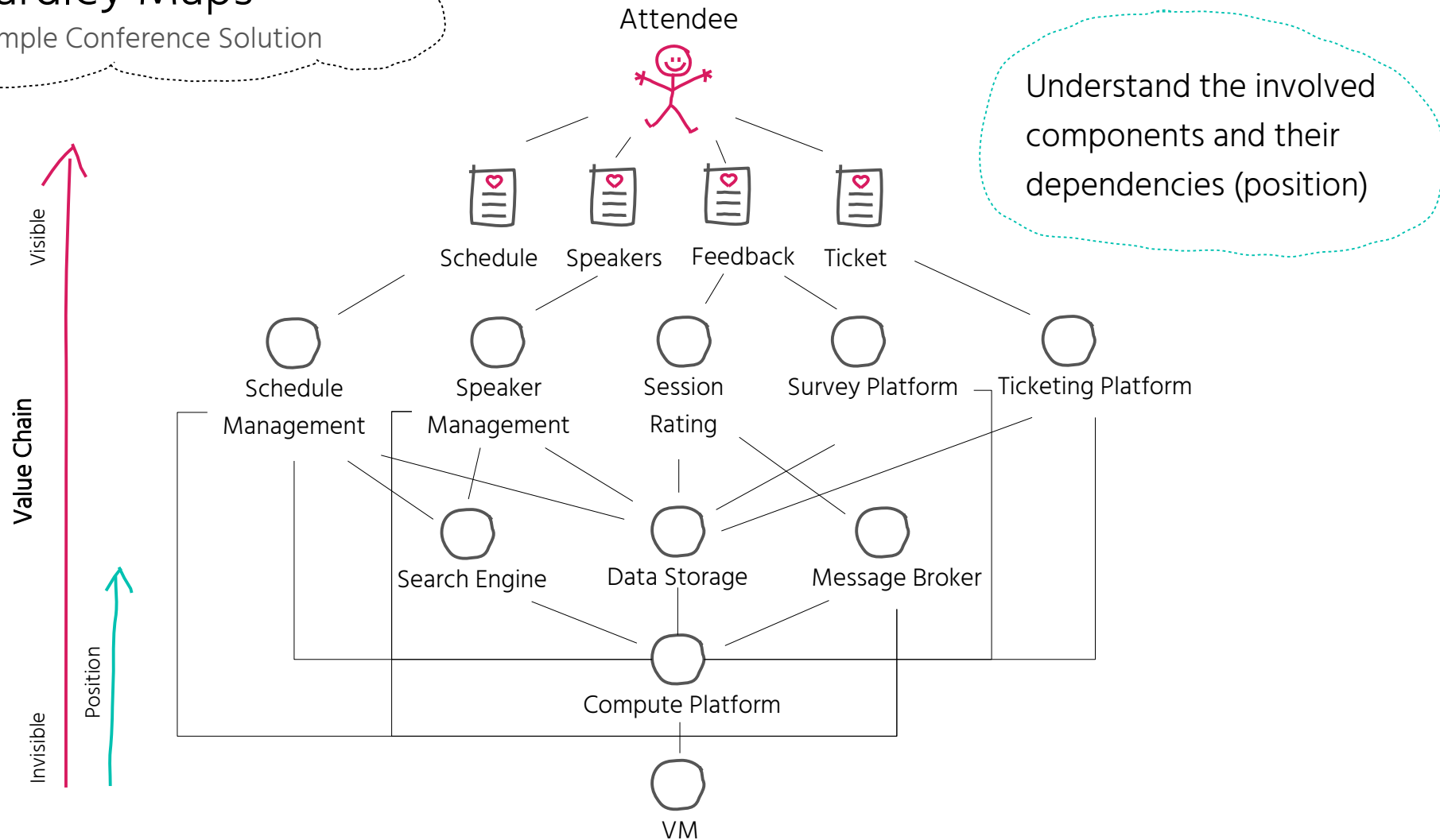
Wardley Maps

Example Conference Solution



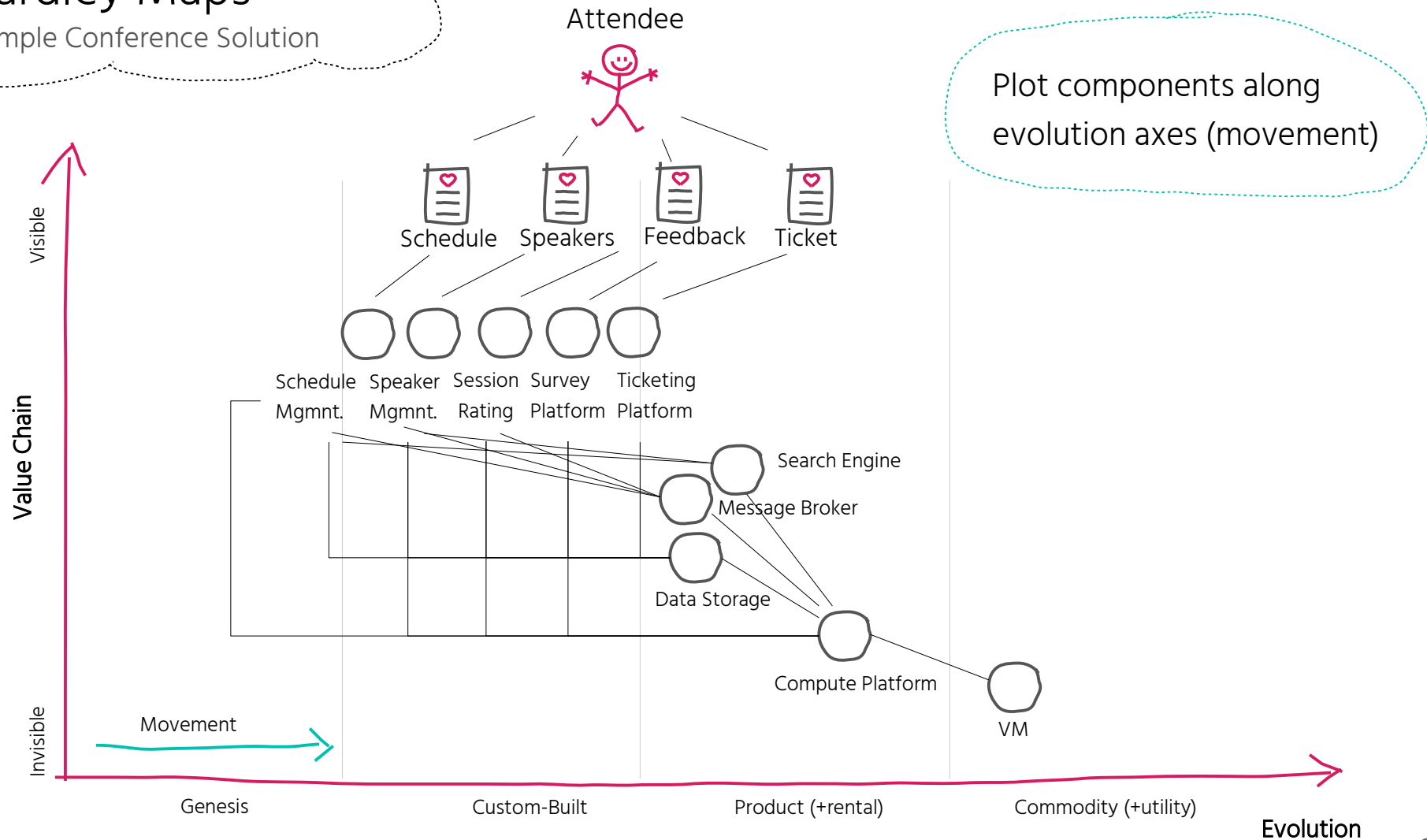
Wardley Maps

Example Conference Solution



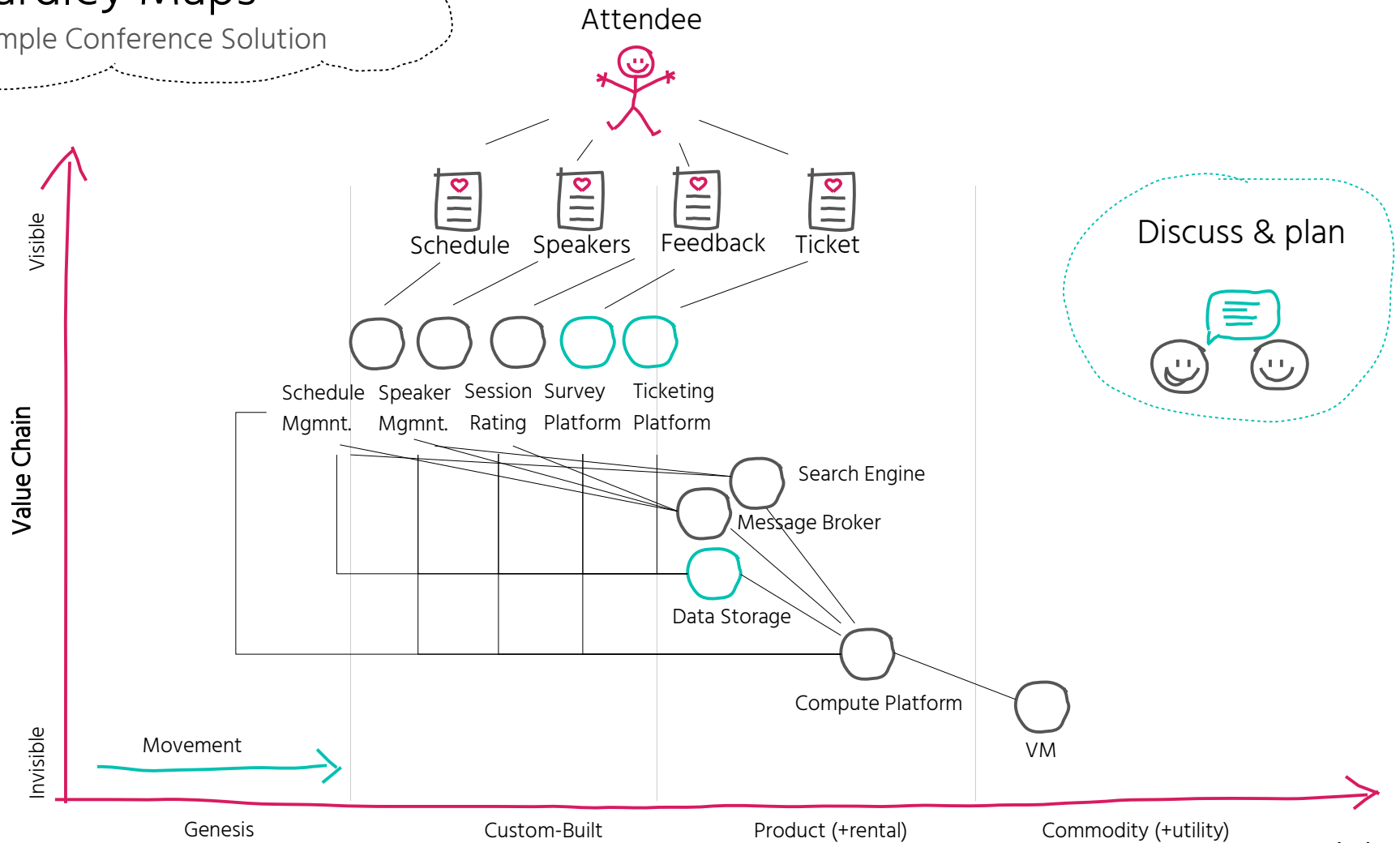
Wardley Maps

Example Conference Solution



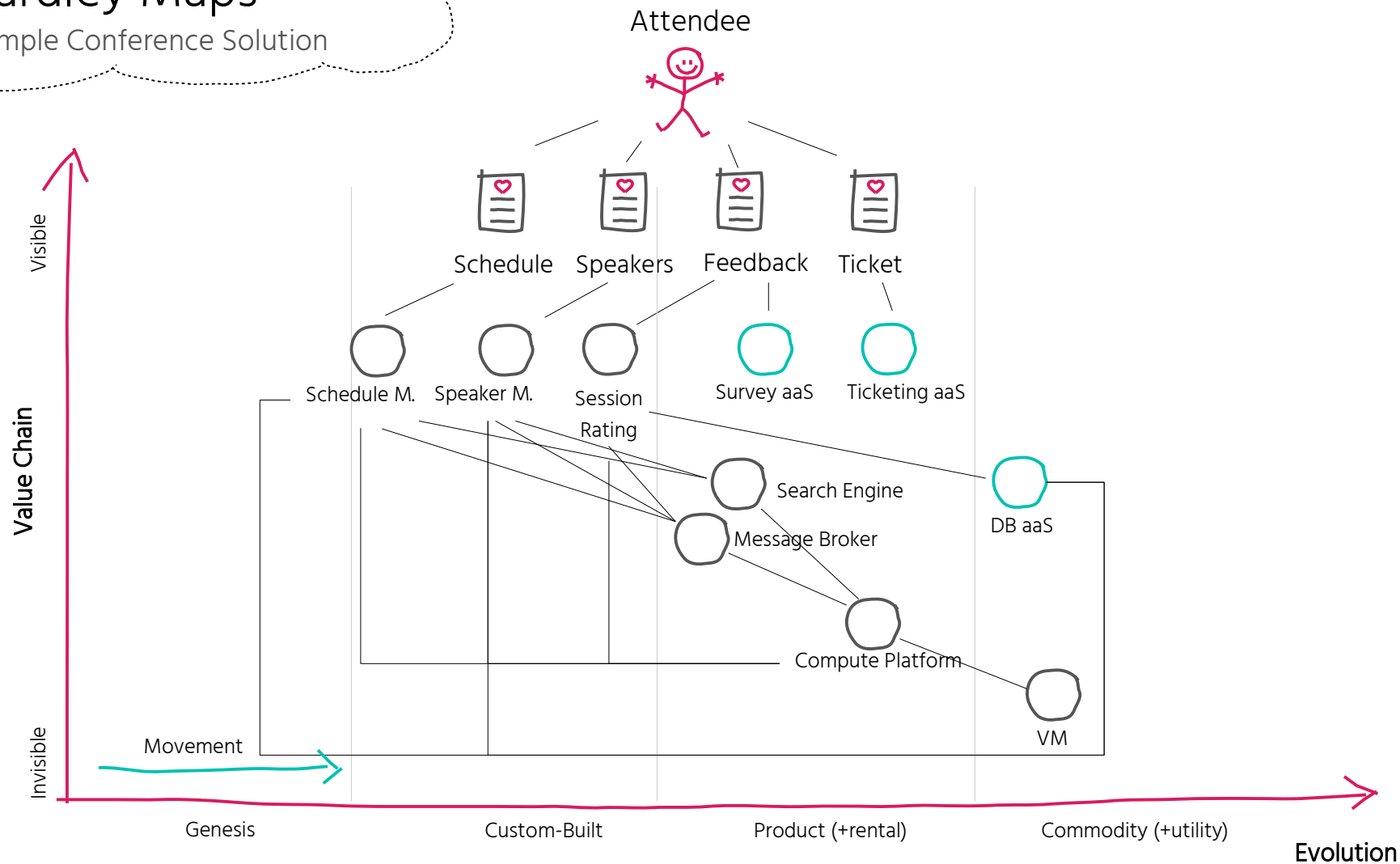
Wardley Maps

Example Conference Solution



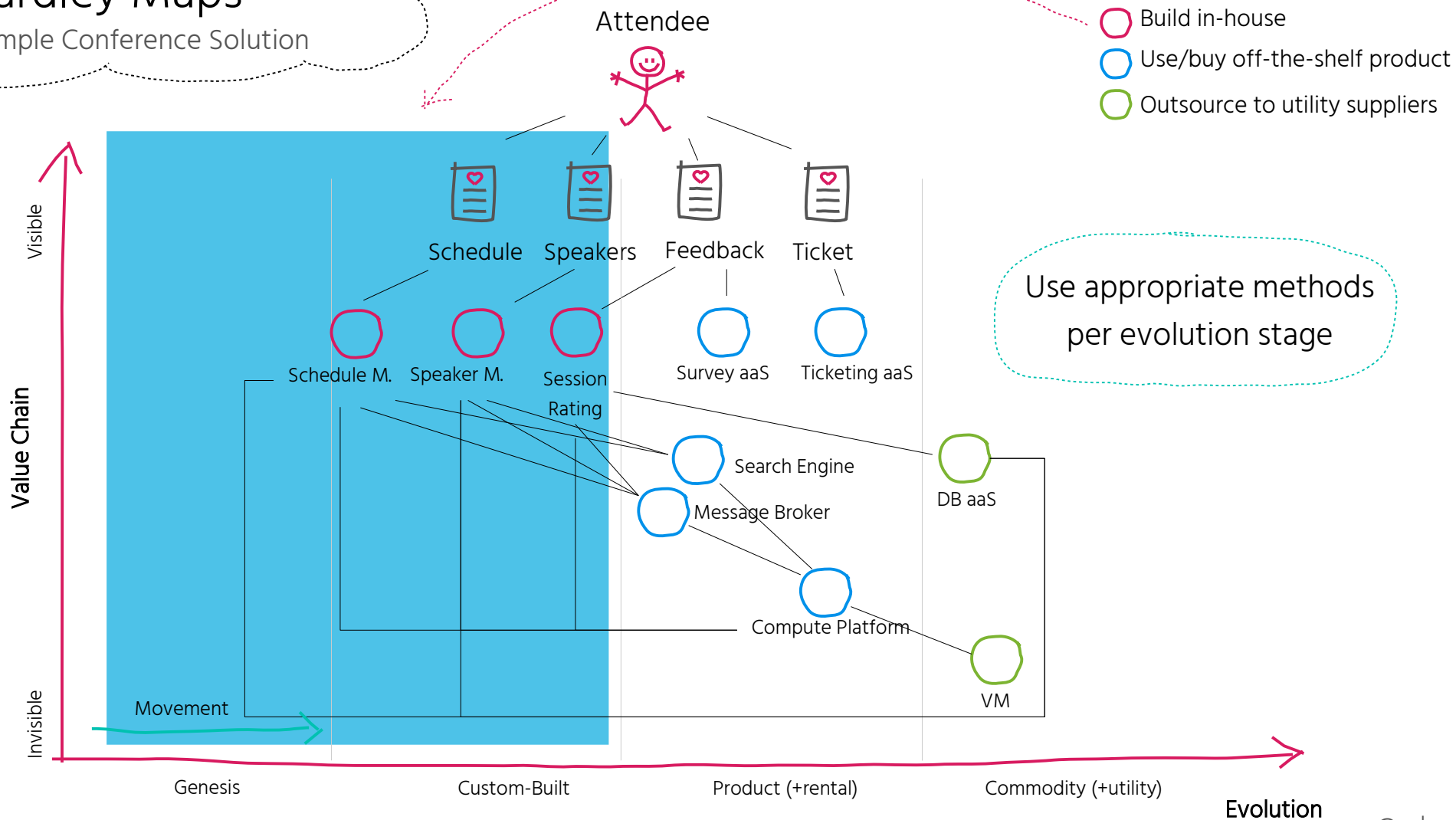
Wardley Maps

Example Conference Solution



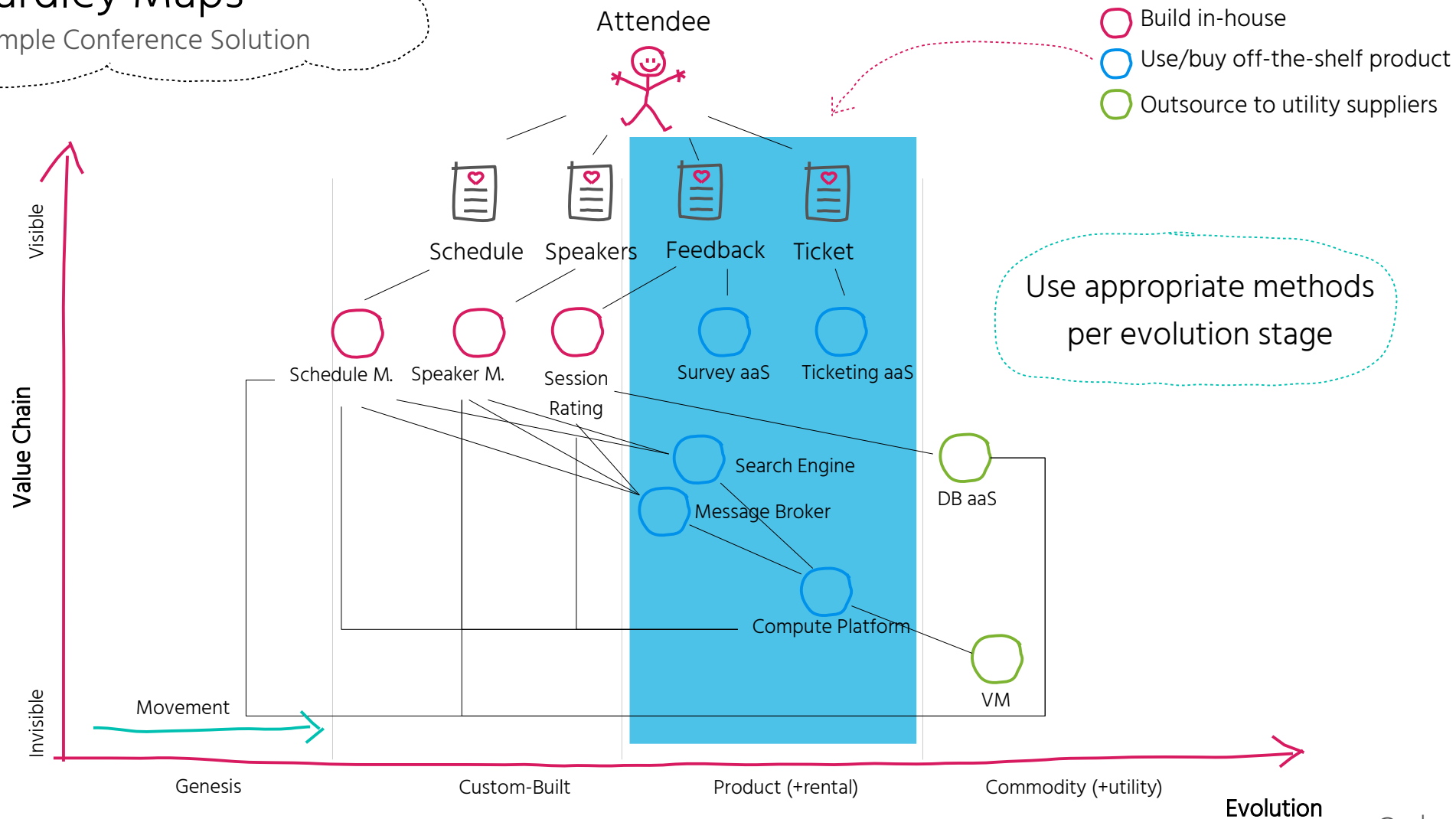
Wardley Maps

Example Conference Solution



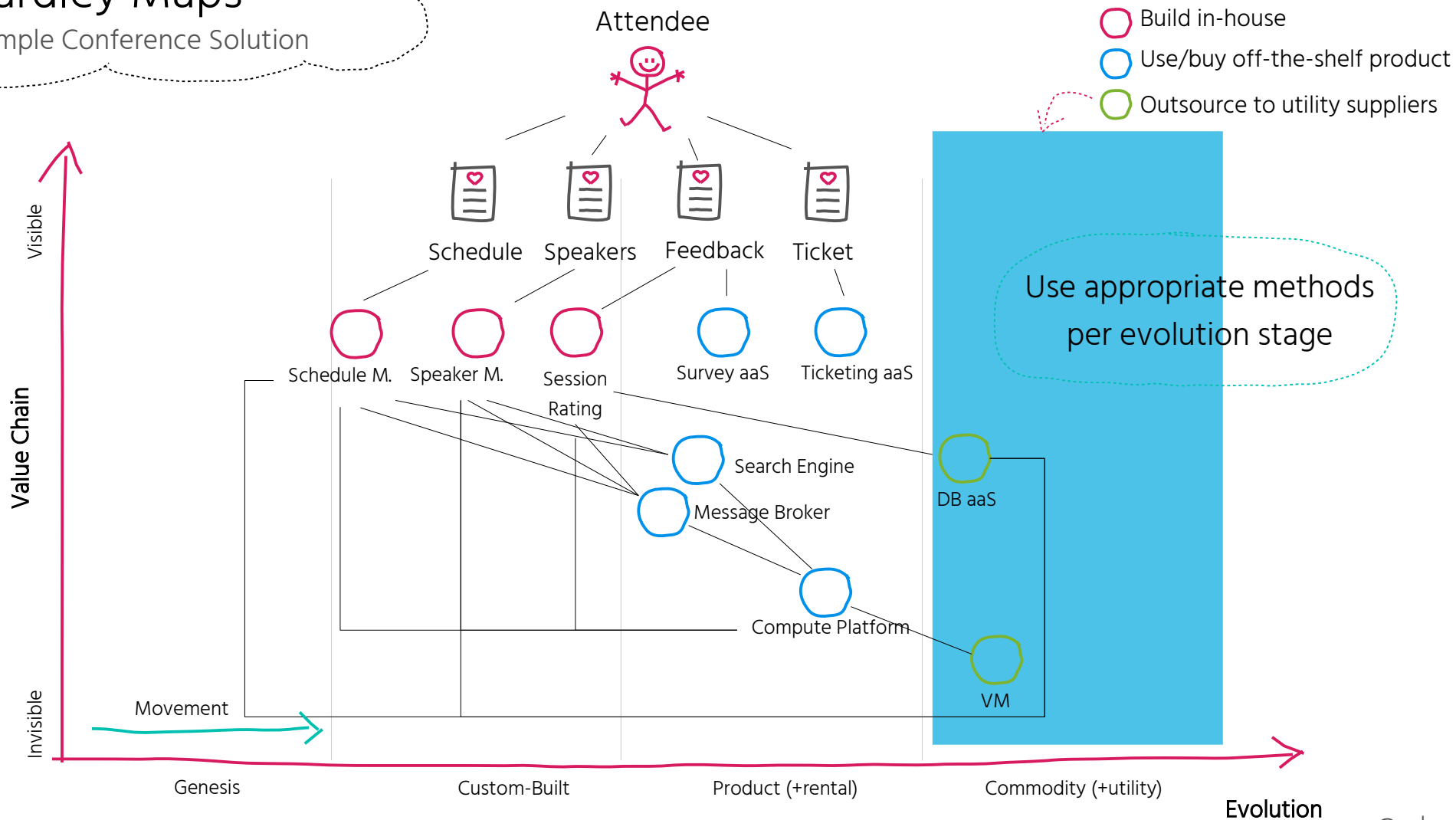
Wardley Maps

Example Conference Solution



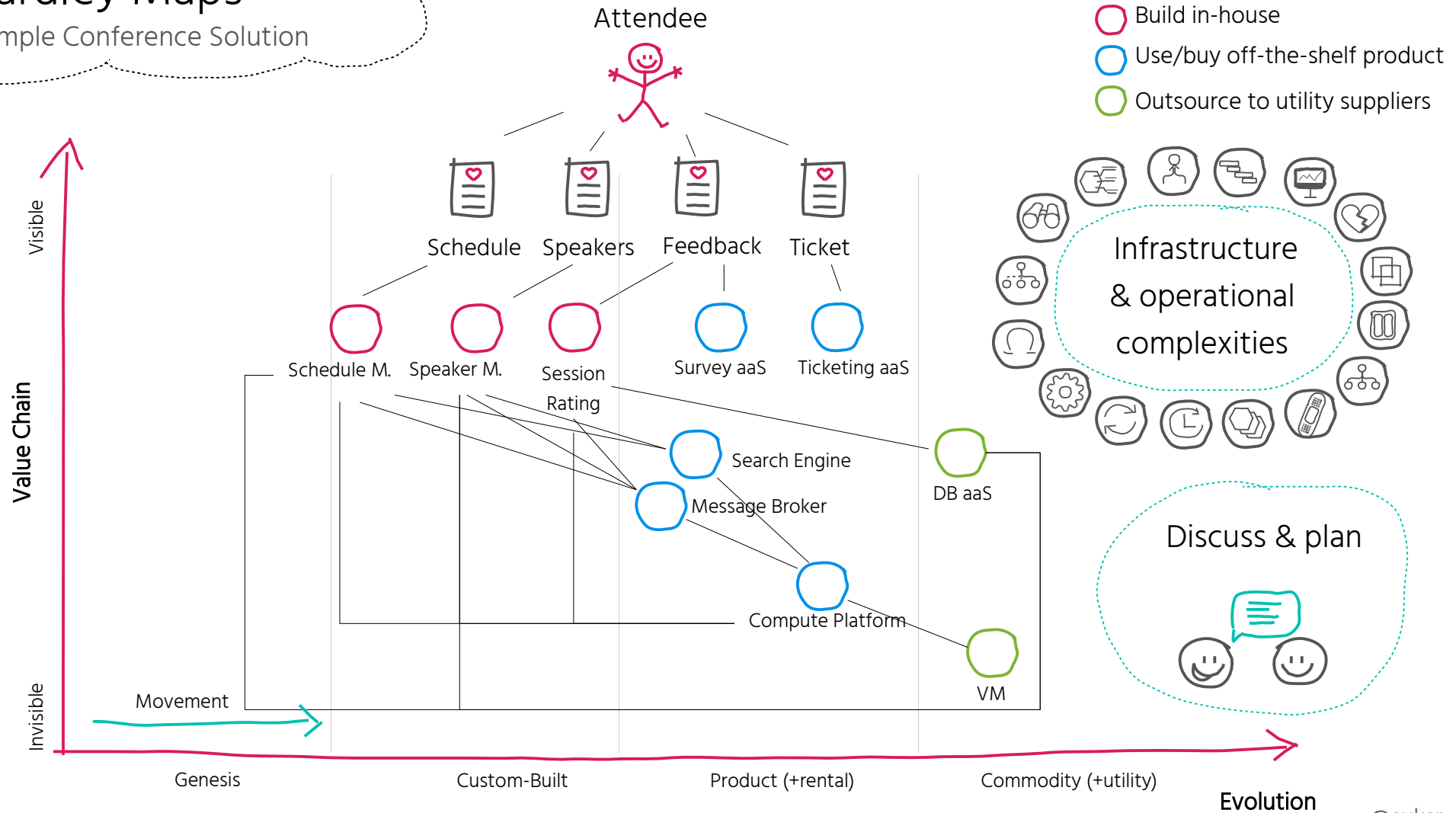
Wardley Maps

Example Conference Solution



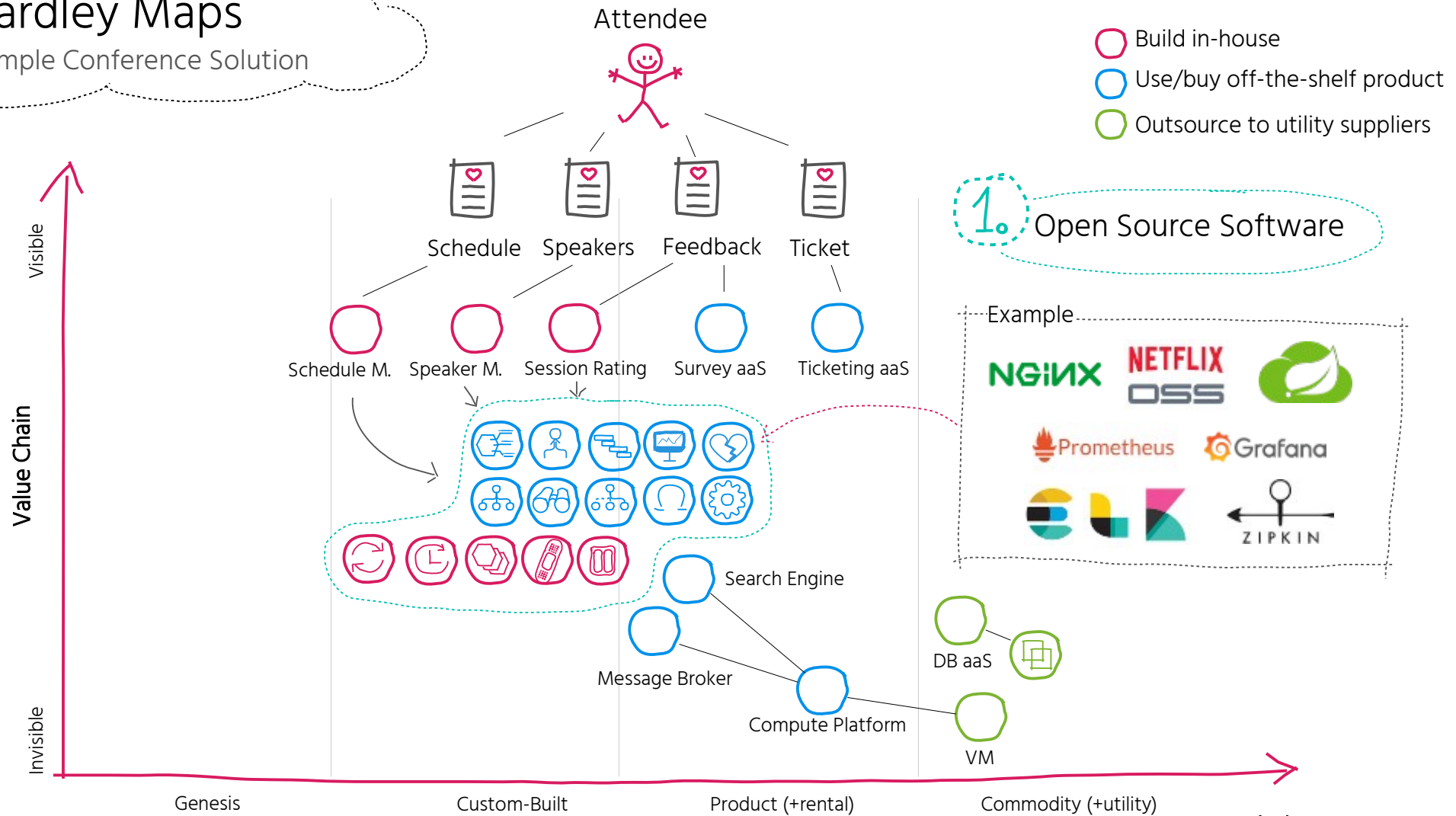
Wardley Maps

Example Conference Solution



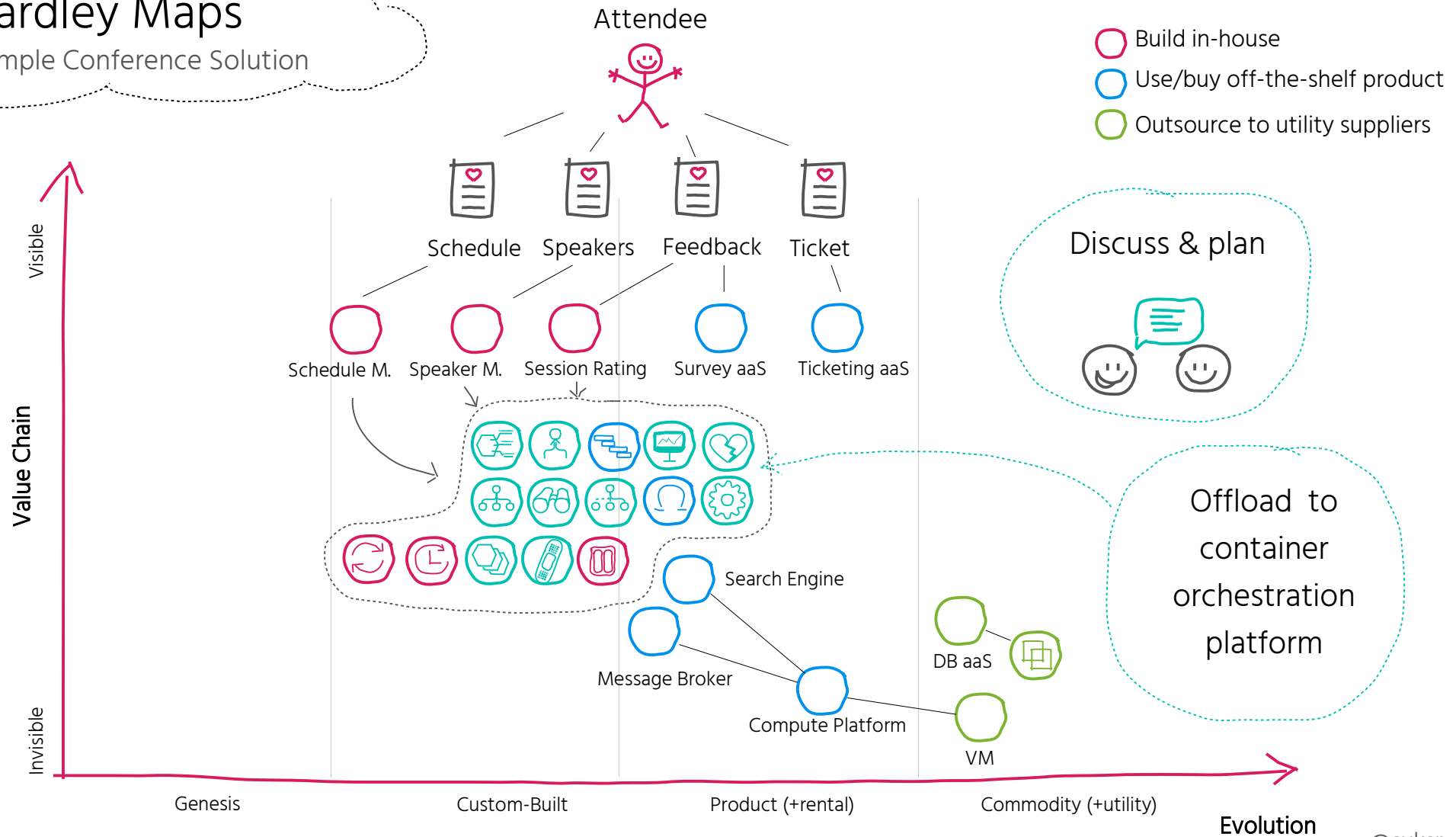
Wardley Maps

Example Conference Solution

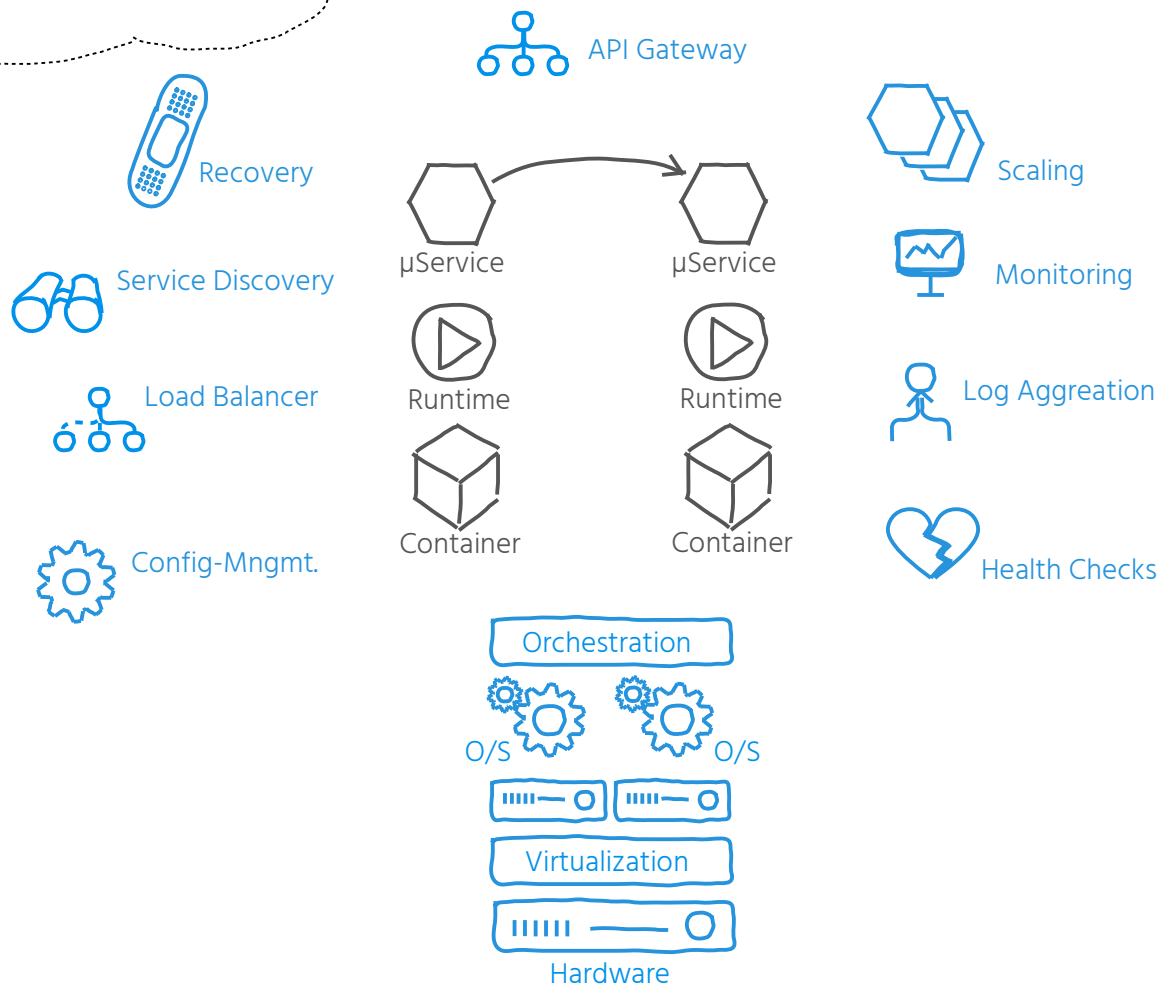


Wardley Maps

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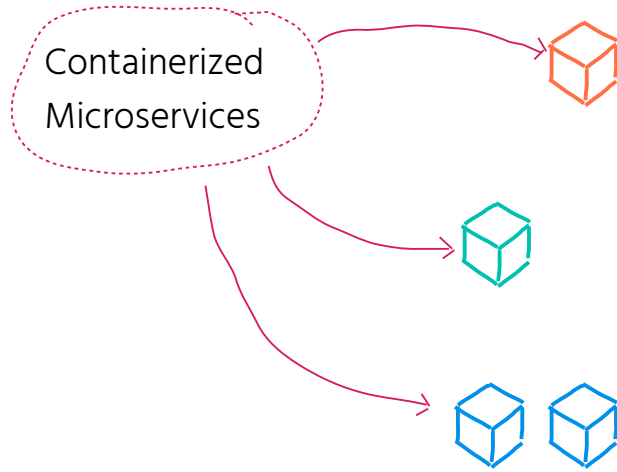


Container Orchestration



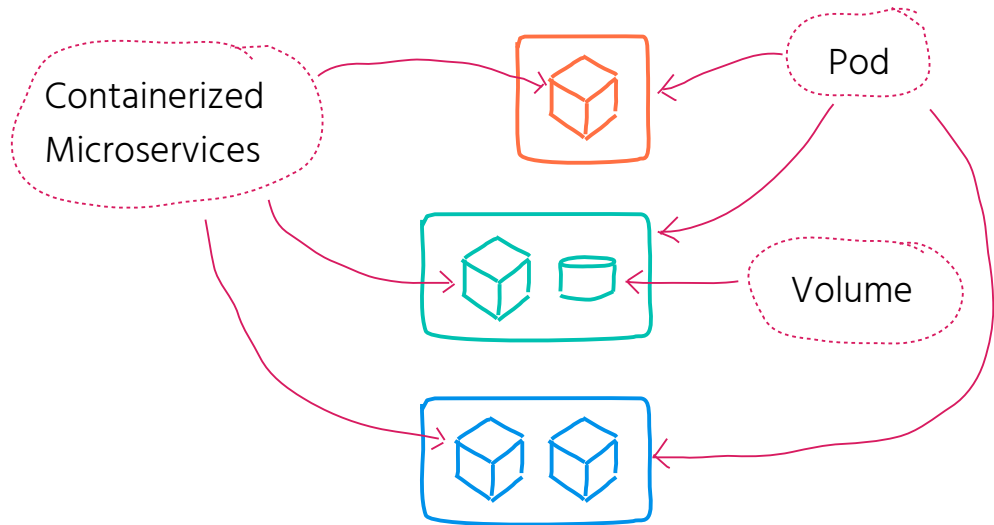
Container Orchestration

Basic components of Kubernetes



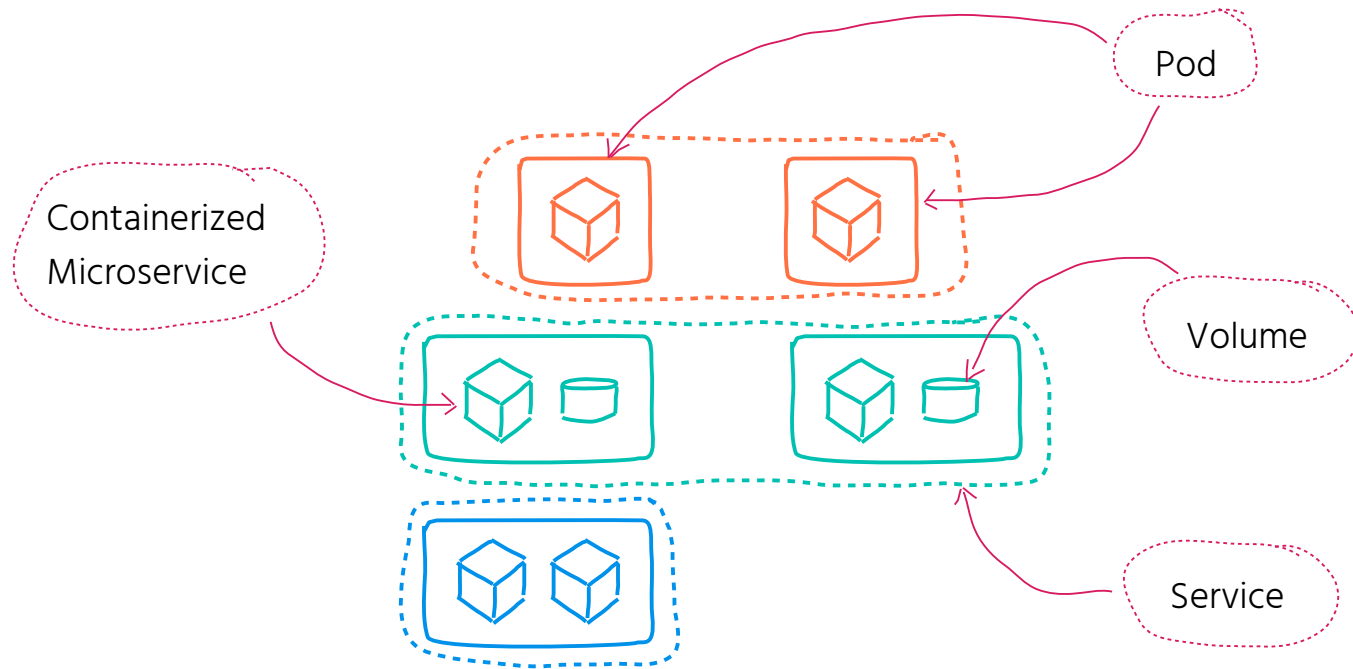
Container Orchestration

Basic components of Kubernetes



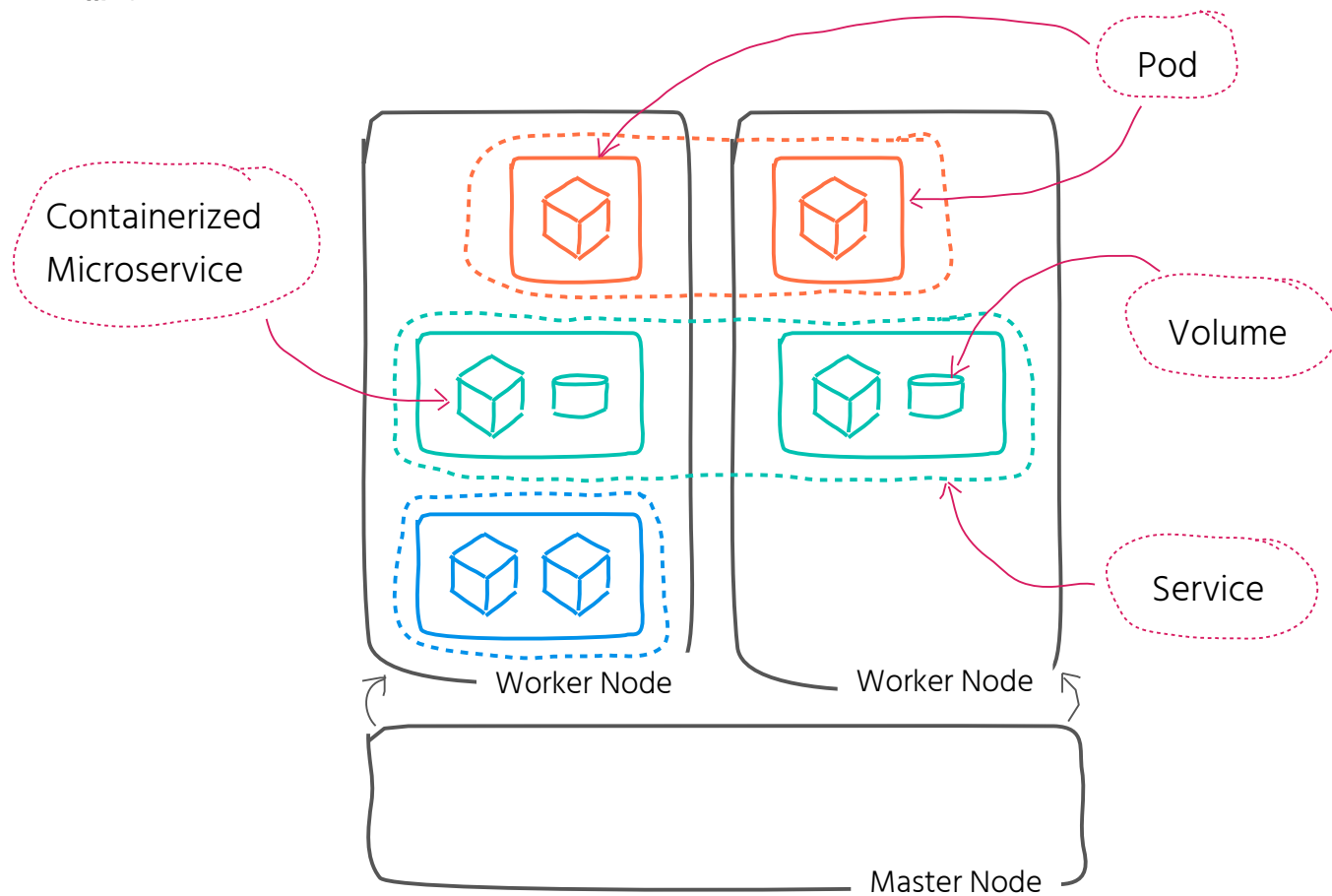
Container Orchestration

Basic components of Kubernetes



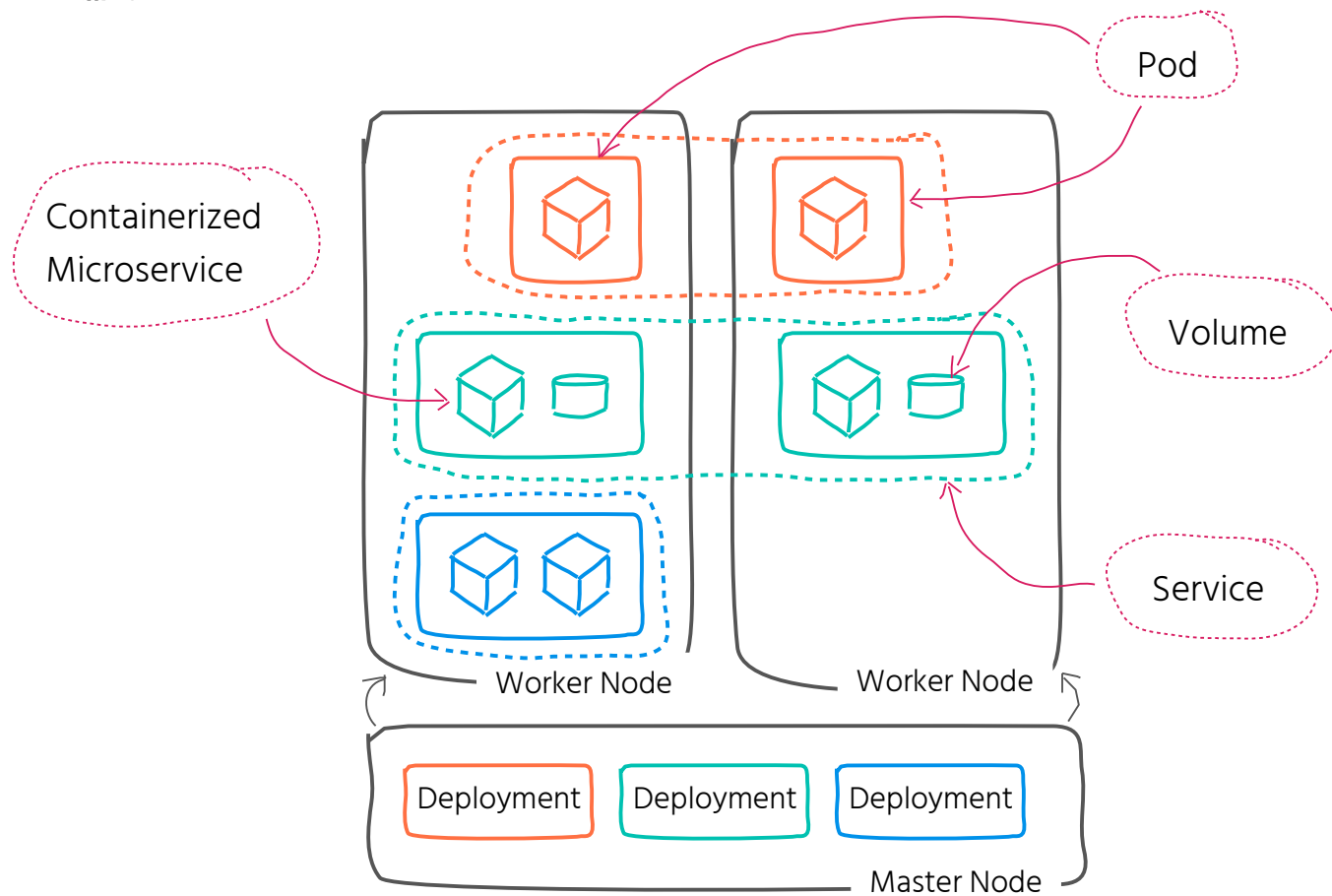
Container Orchestration

Basic components of Kubernetes



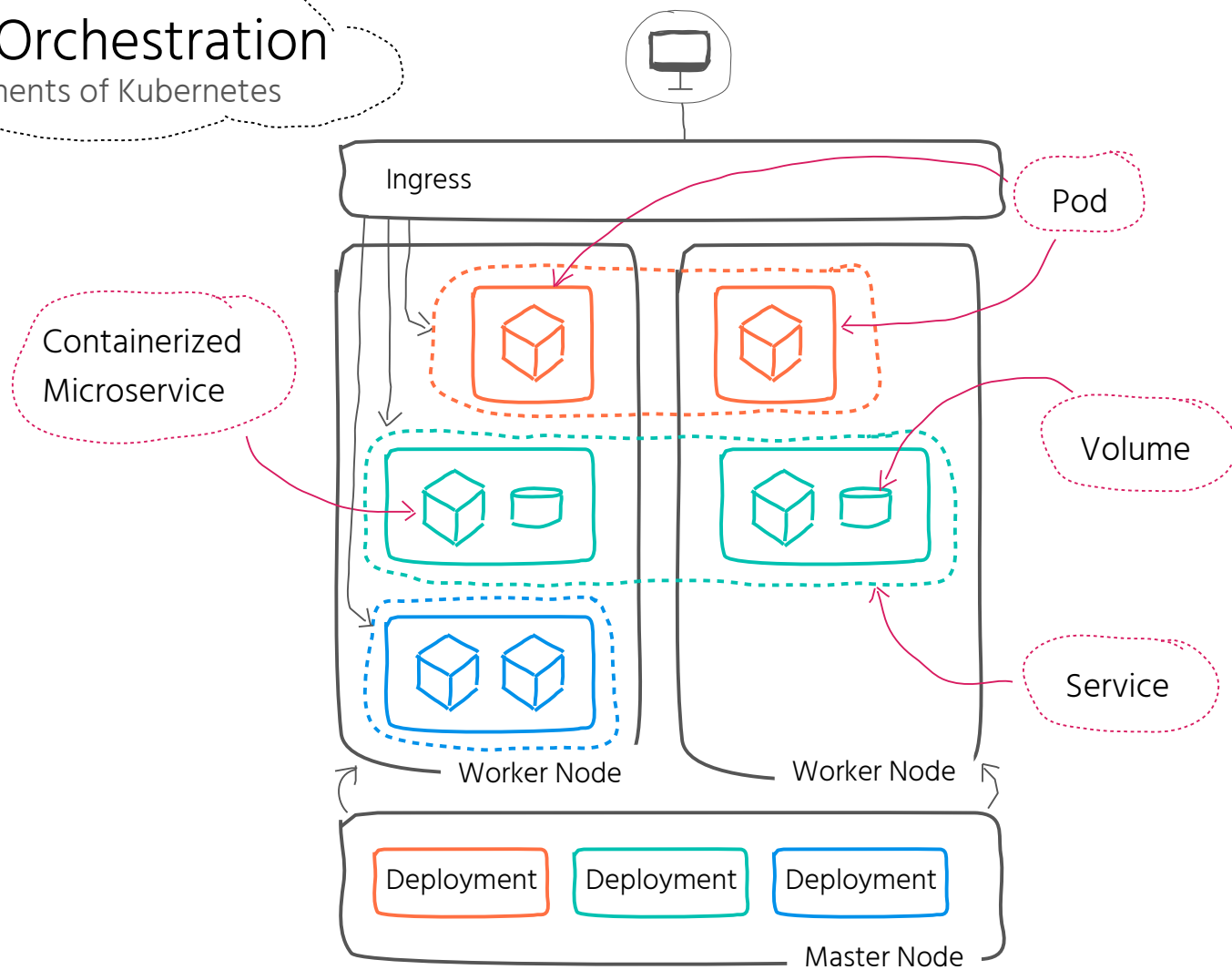
Container Orchestration

Basic components of Kubernetes



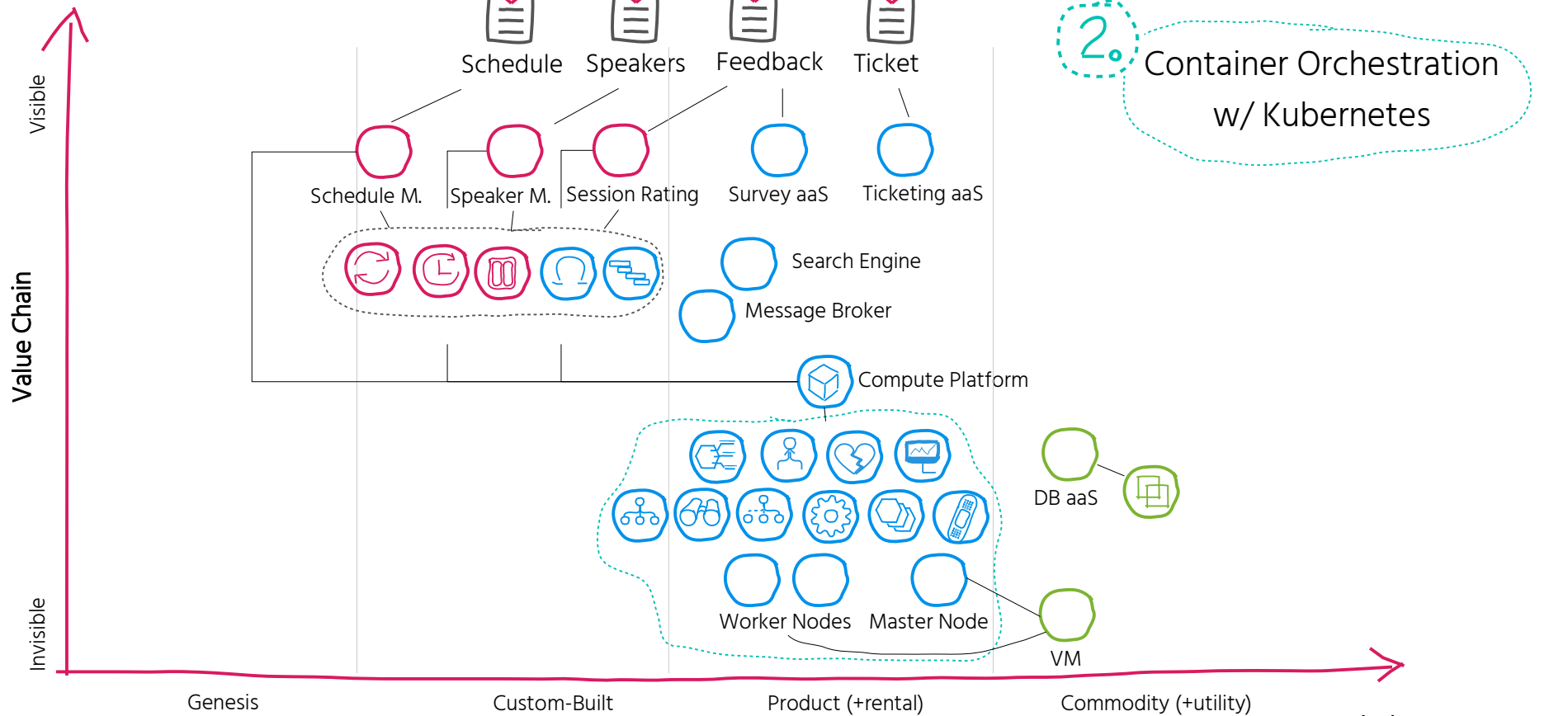
Container Orchestration

Basic components of Kubernetes



Wardley Maps

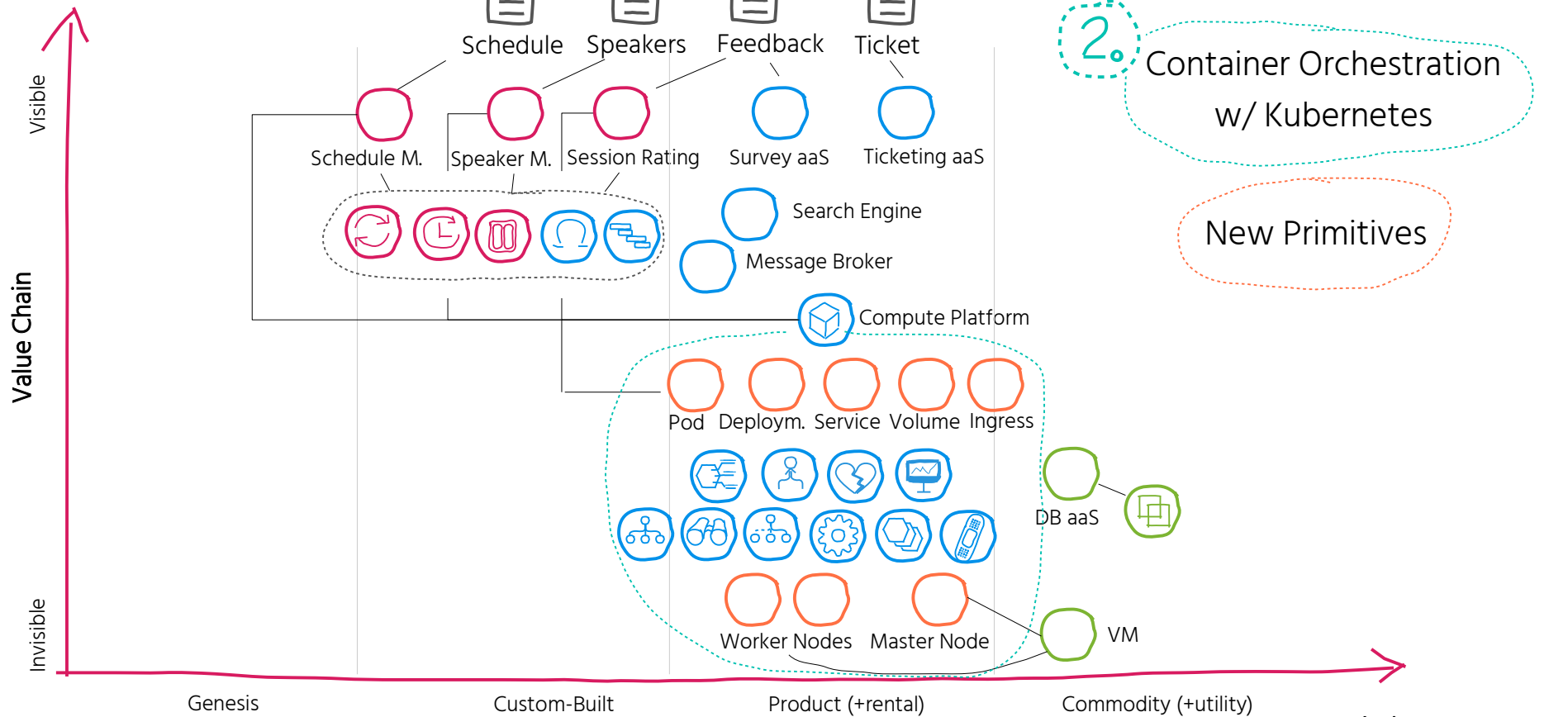
Example Conference Solution



Evolution

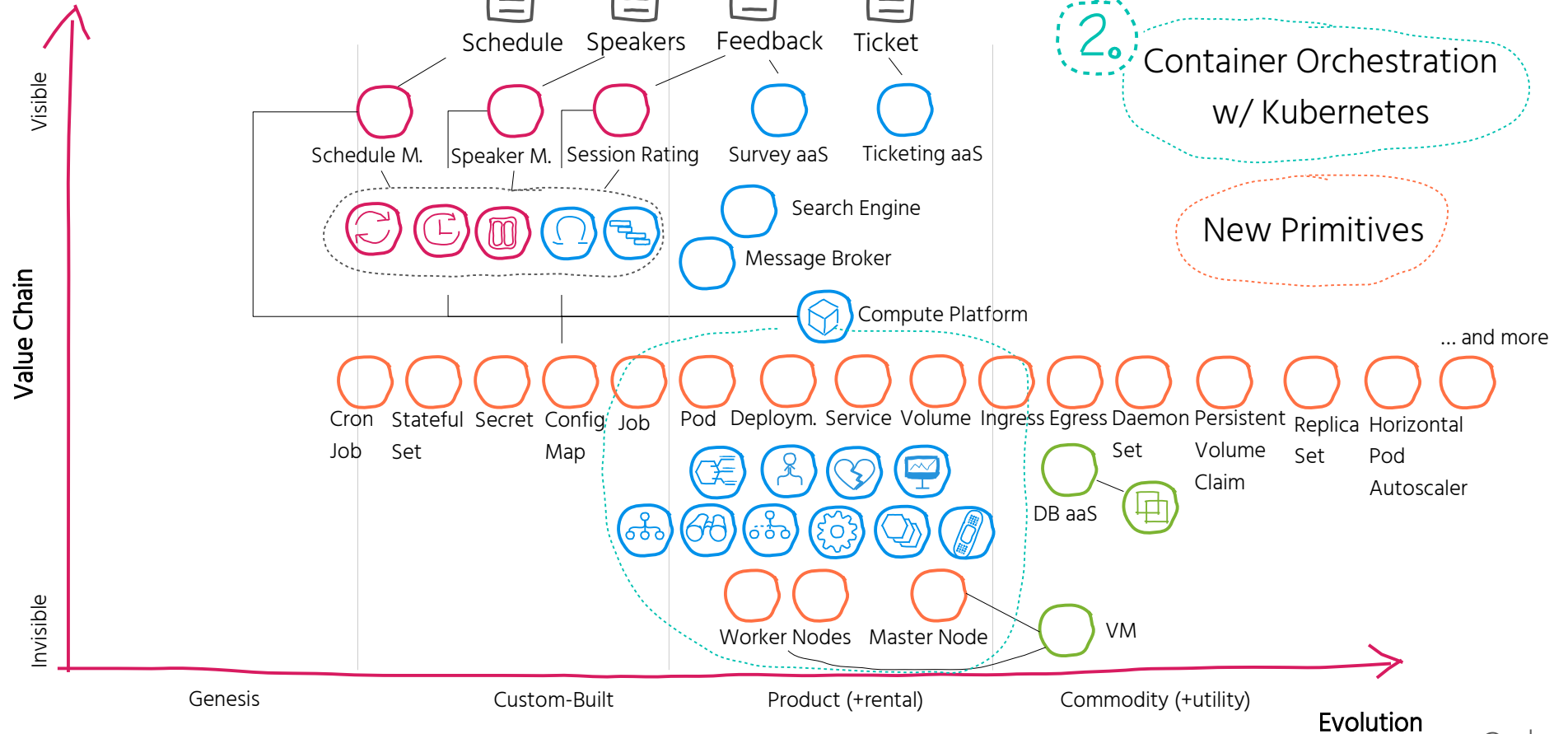
Wardley Maps

Example Conference Solution



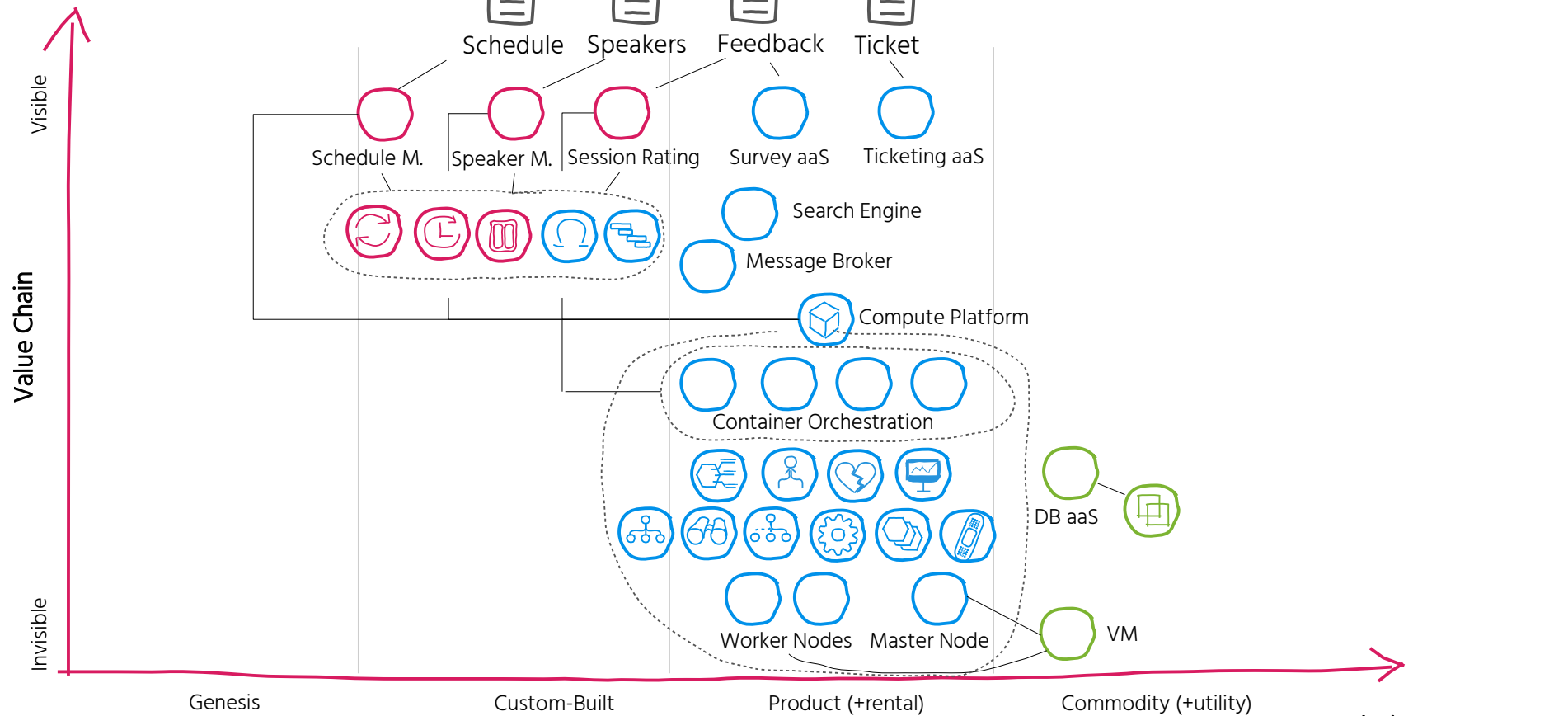
Wardley Maps

Example Conference Solution



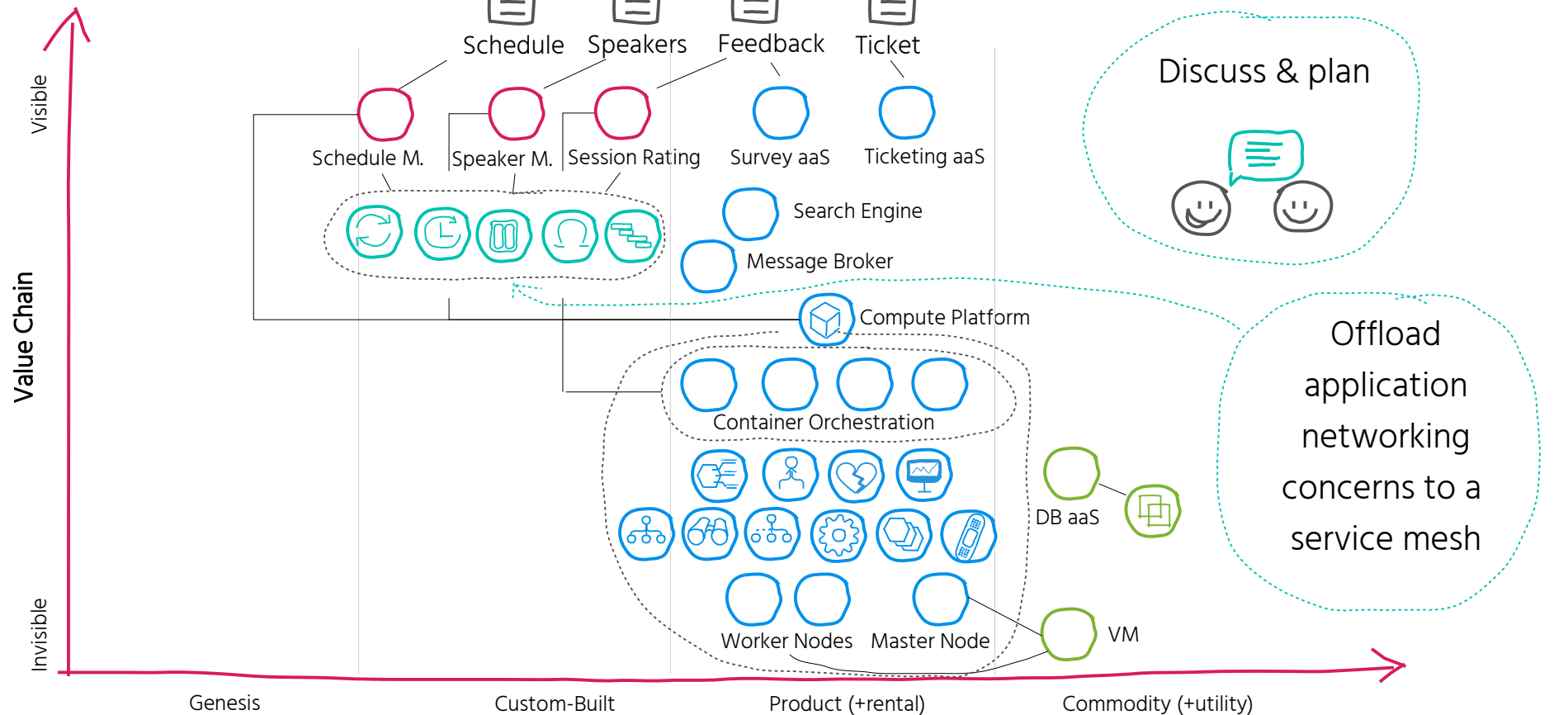
Wardley Maps

Example Conference Solution



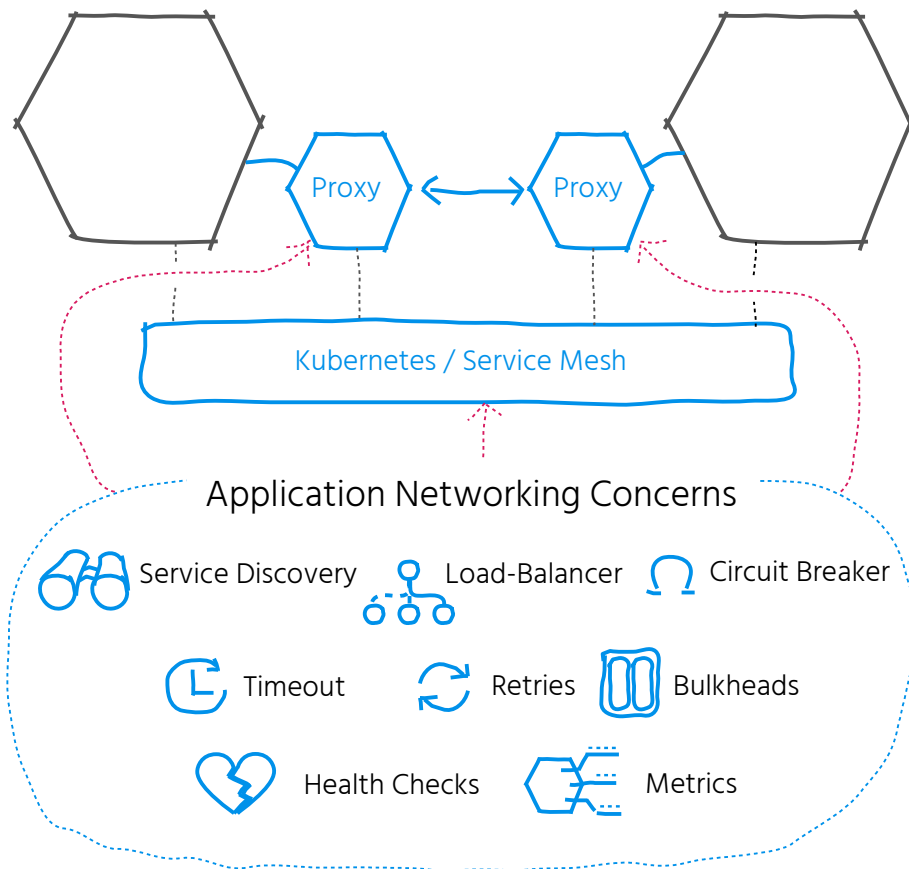
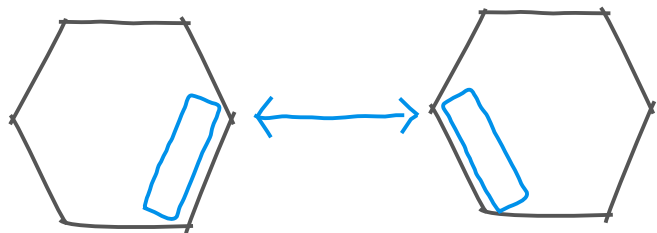
Wardley Maps

Example Conference Solution



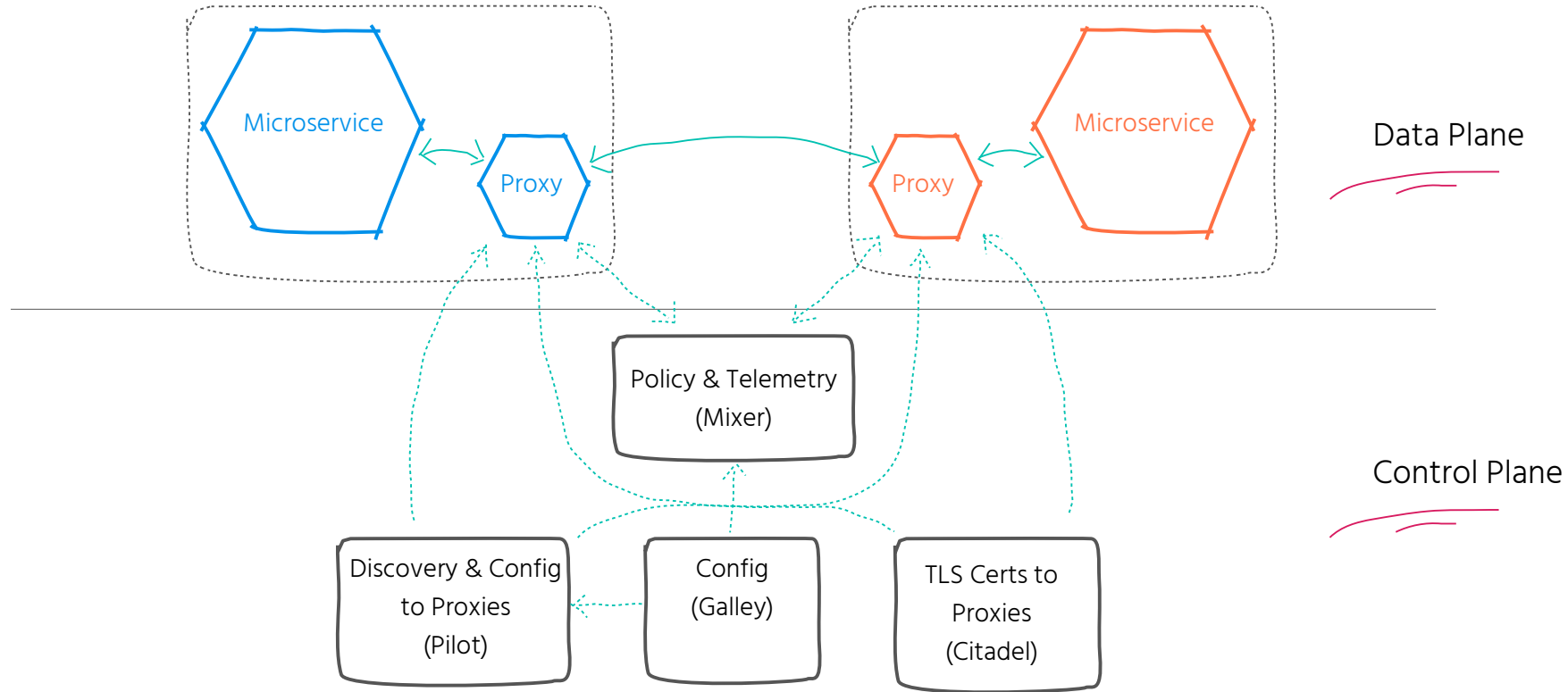
Separation Of Concerns

Service Mesh



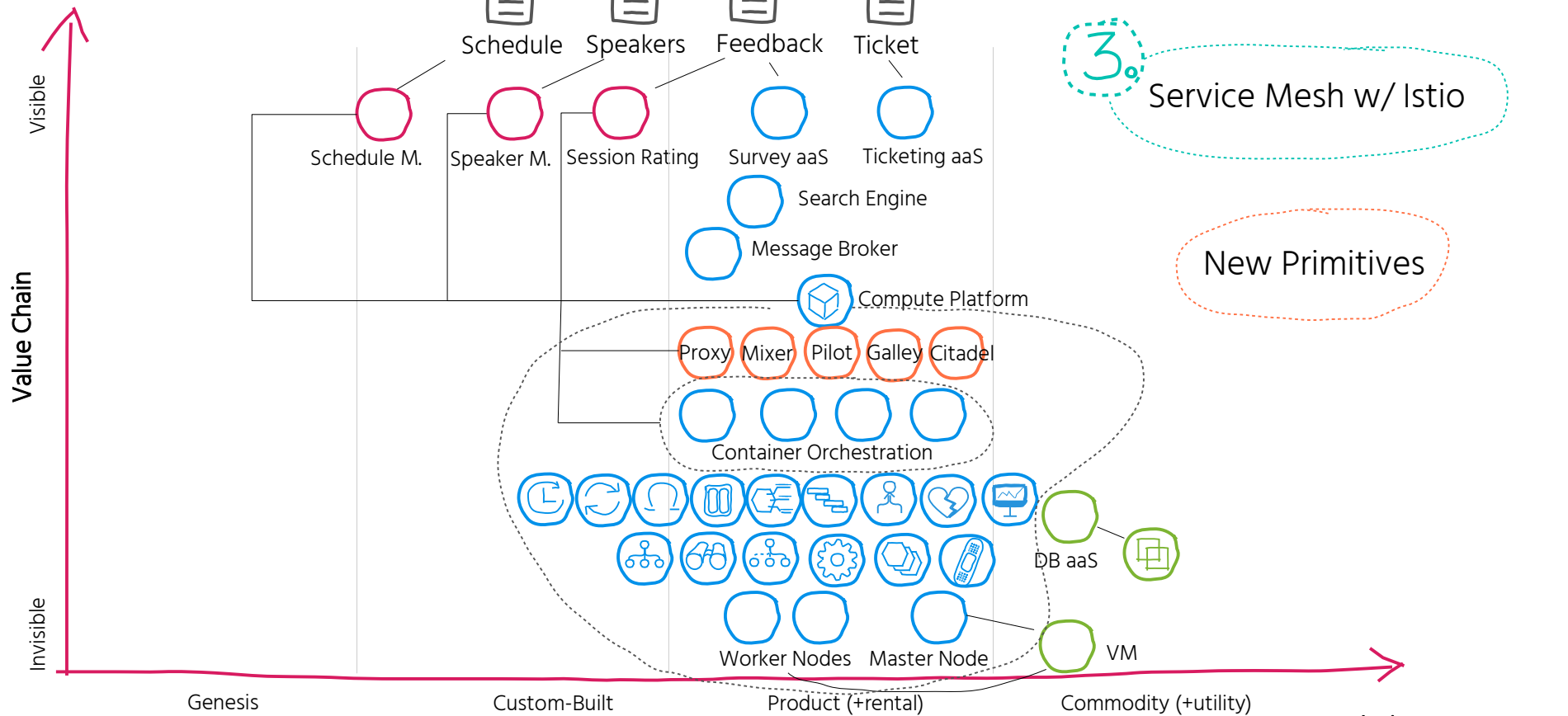
Service Mesh

Components of Istio



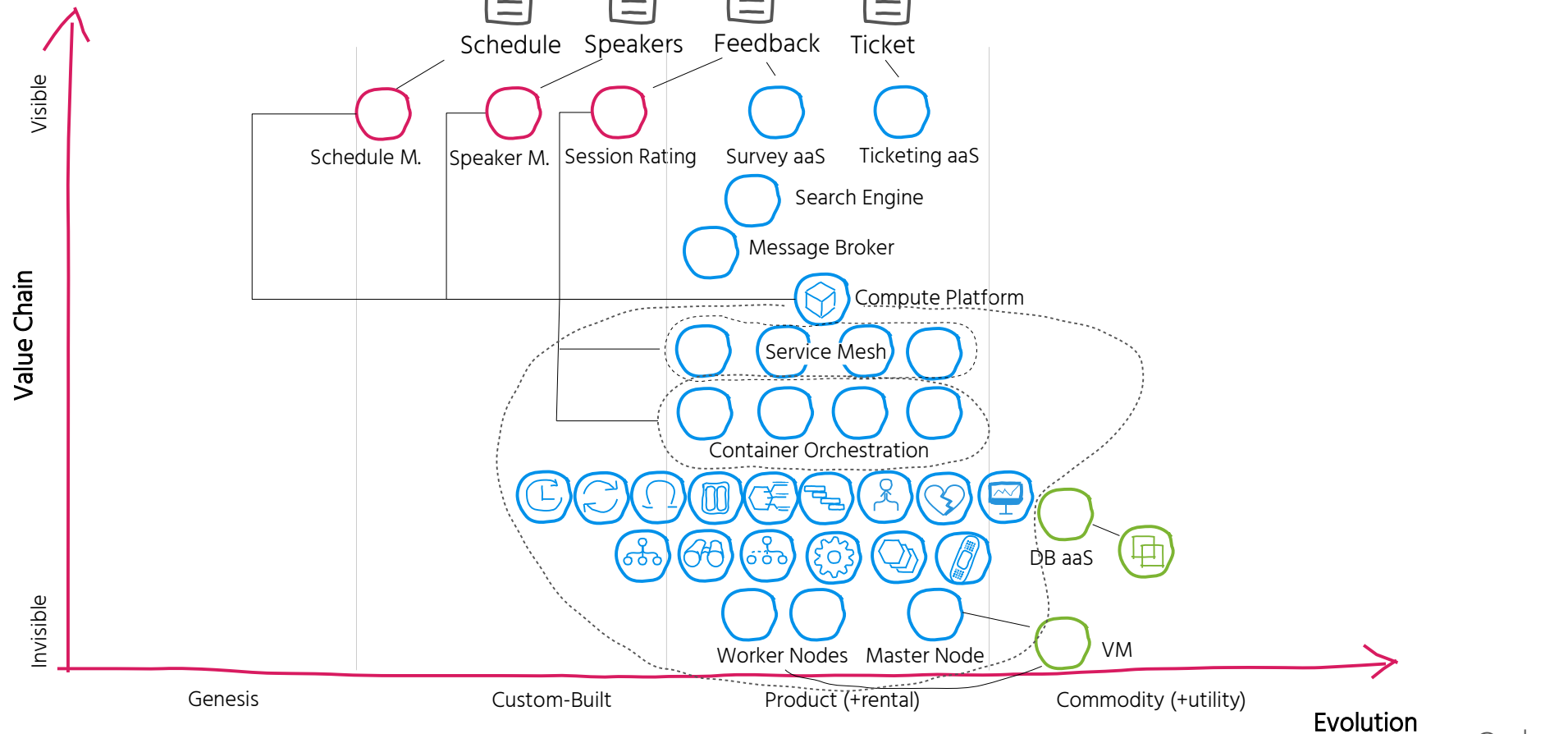
Wardley Maps

Example Conference Solution



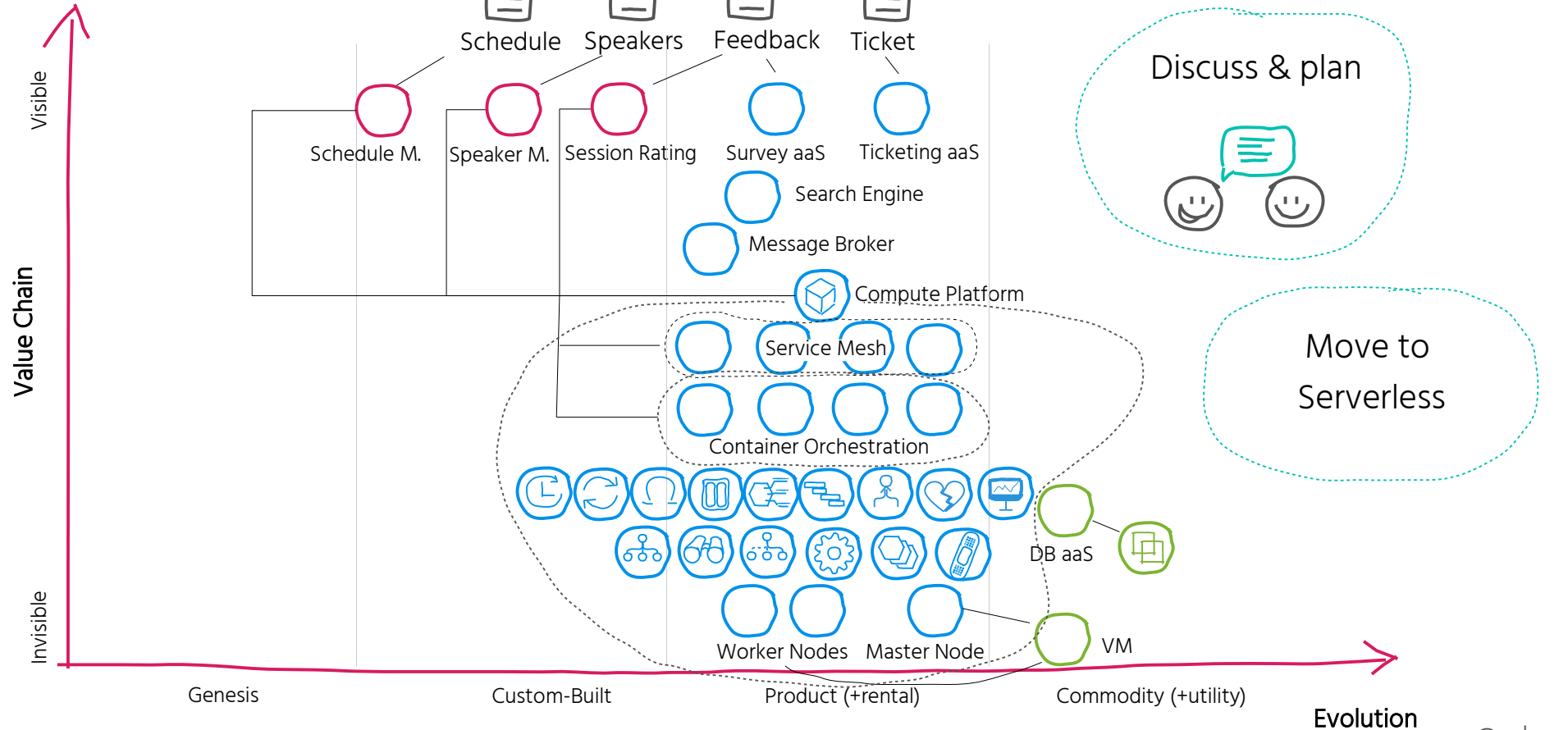
Wardley Maps

Example Conference Solution



Wardley Maps

Example Conference Solution



Serverless

Characteristics

Event-Driven Workflow

Ephemeral Function



triggers

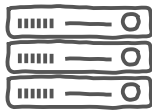


Auto-Scaling



Pay-per-Execution

Fully Managed By Third Party



Hardware



Virtualization



O/S



Container



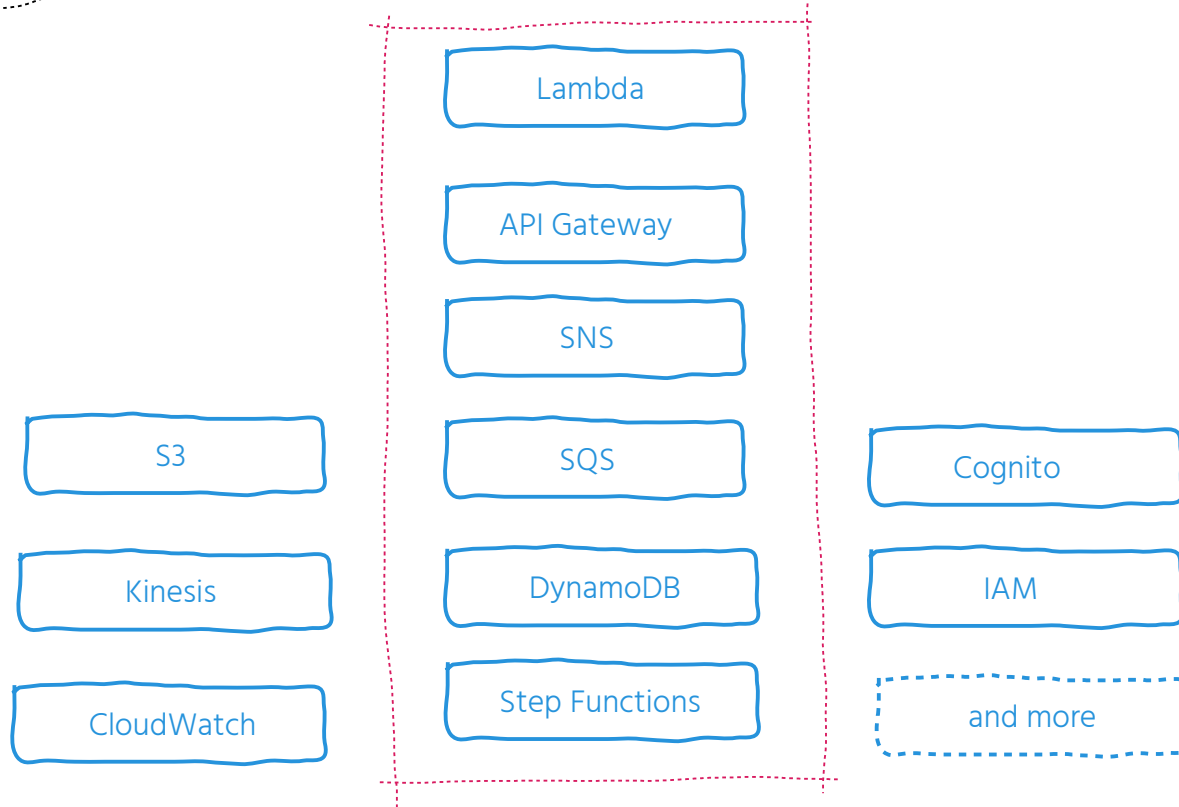
Runtime



Data Store

Serverless

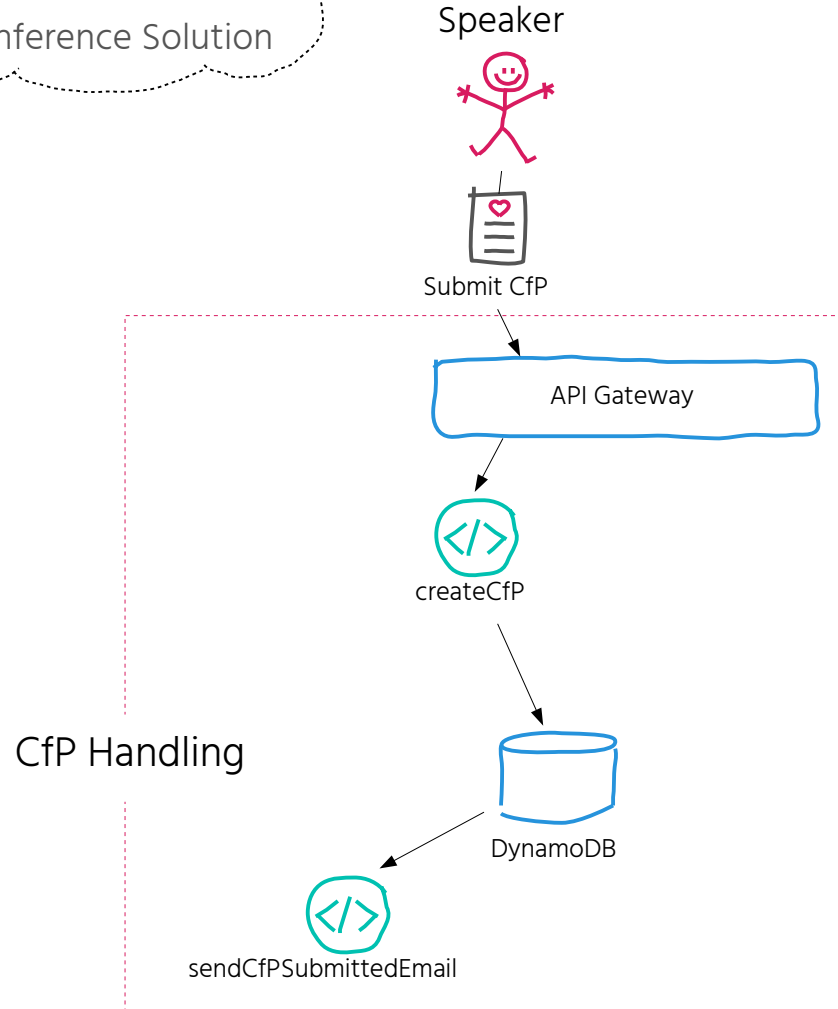
AWS Building Blocks



Core AWS Serverless Building Blocks

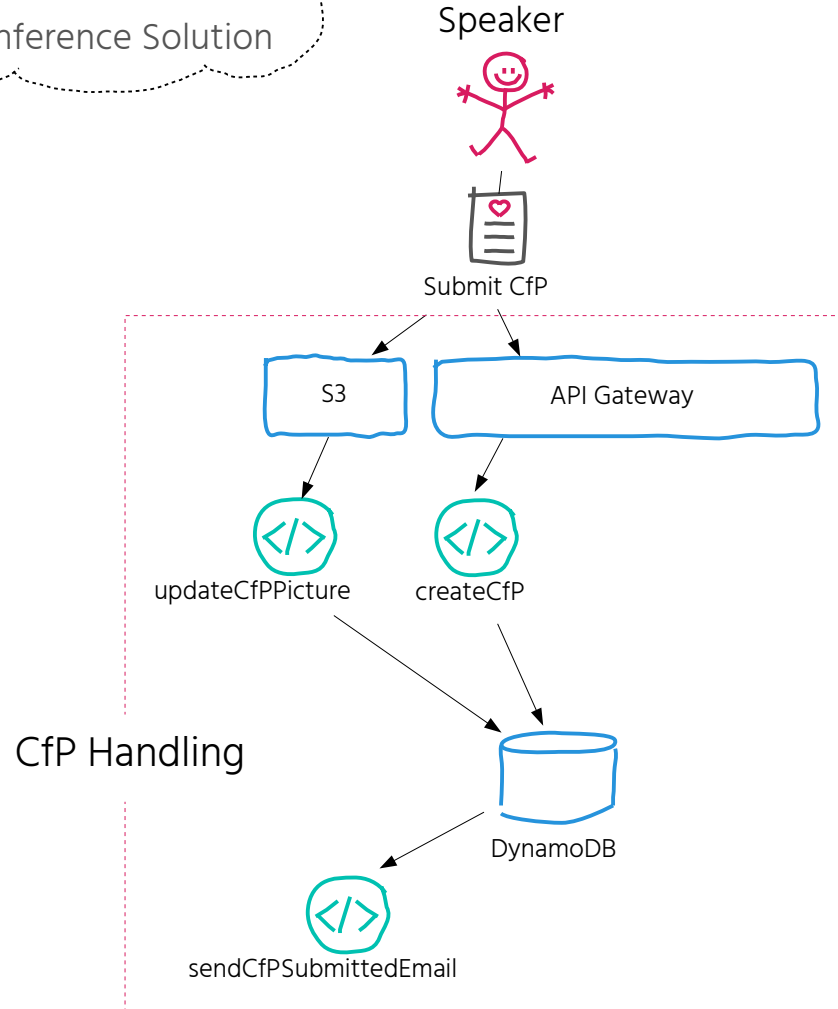
Serverless

Example Conference Solution



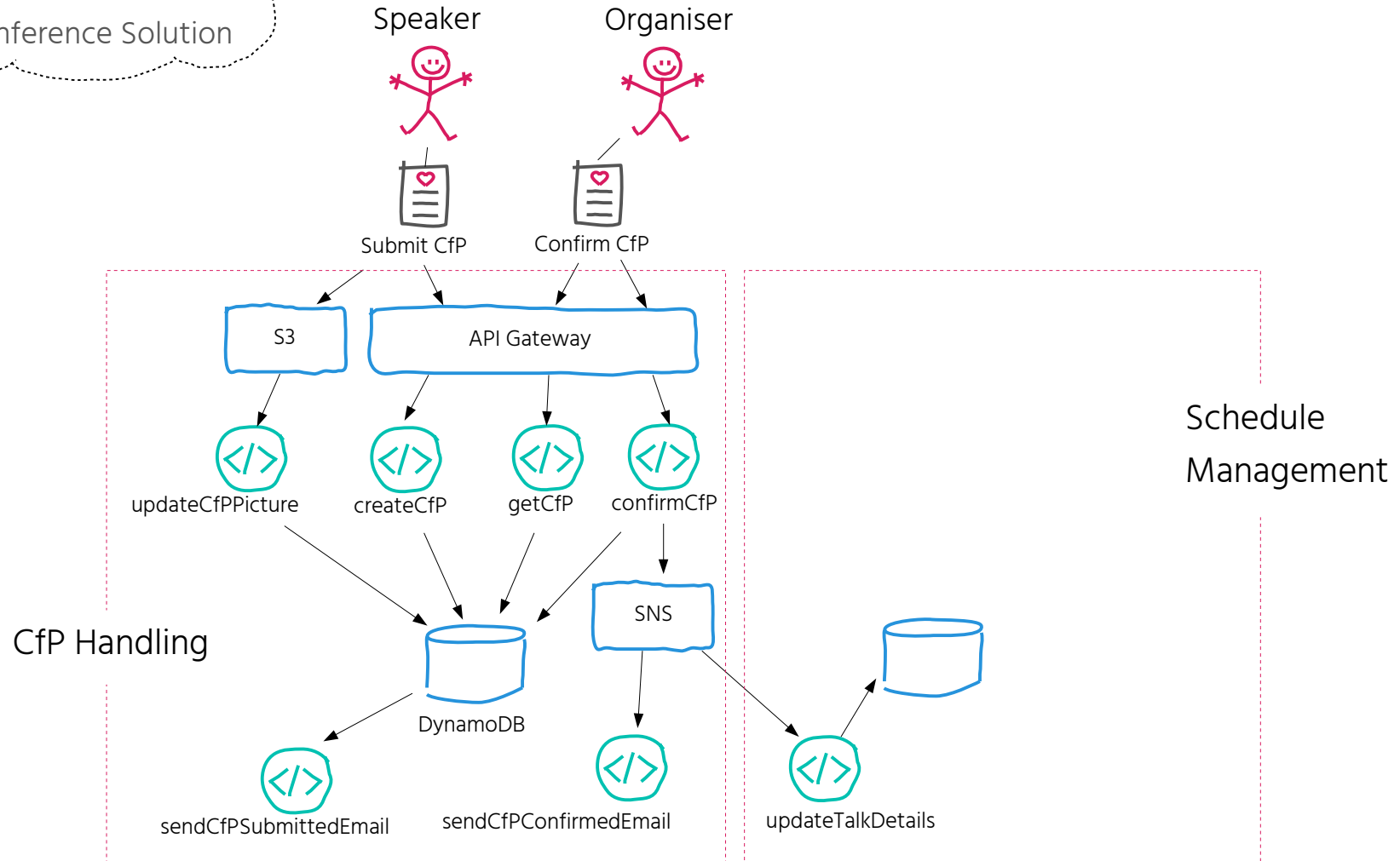
Serverless

Example Conference Solution



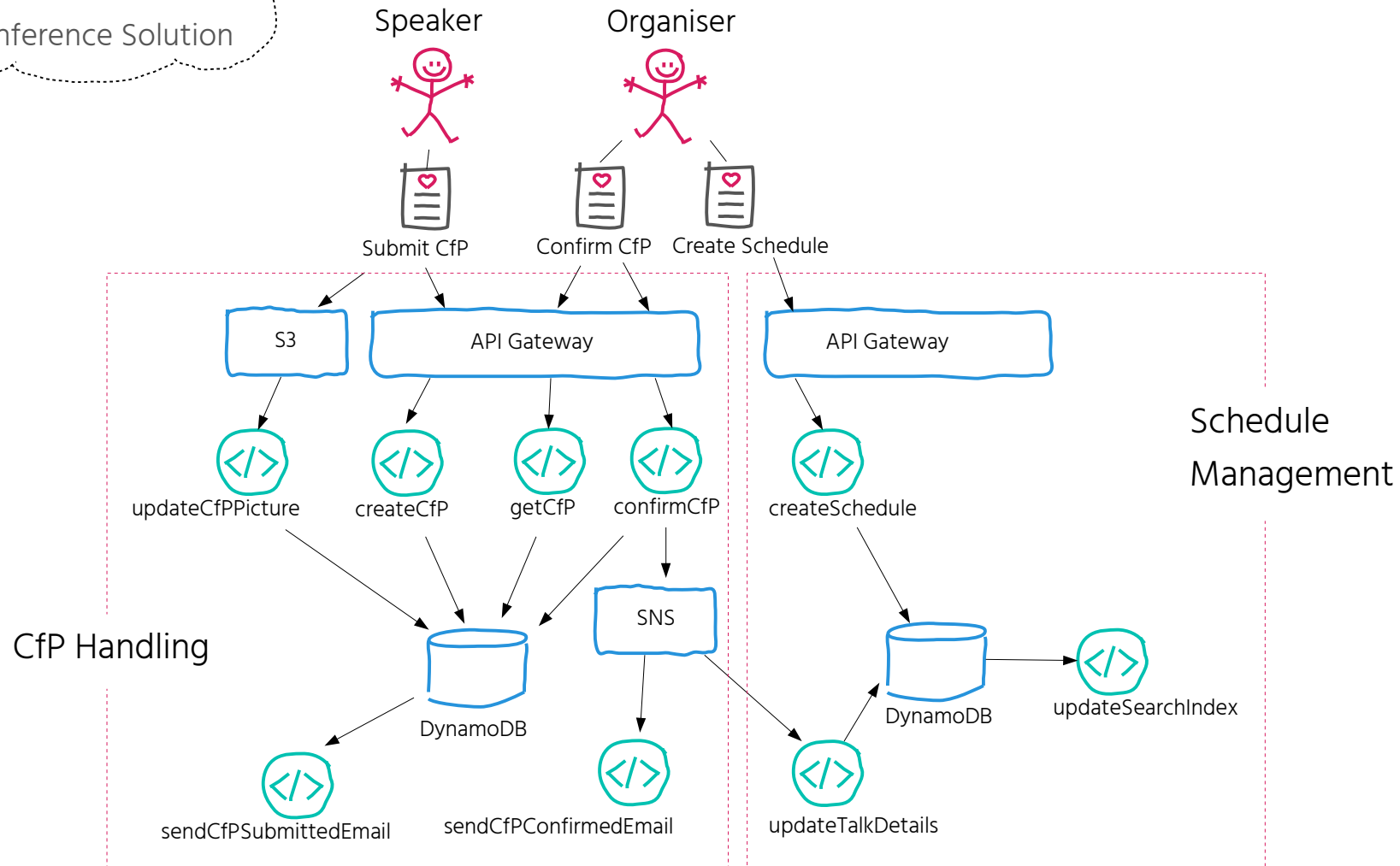
Serverless

Example Conference Solution



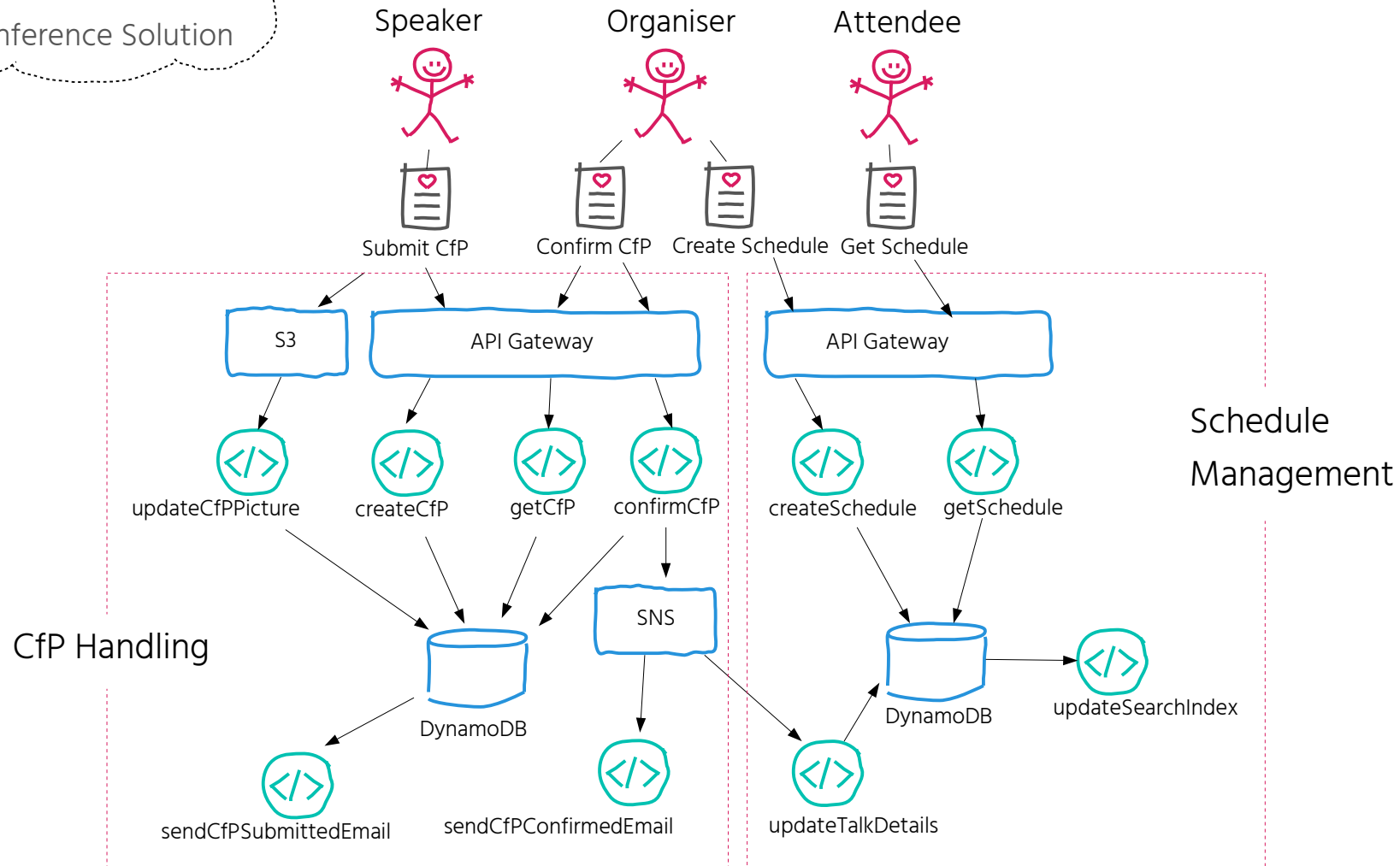
Serverless

Example Conference Solution



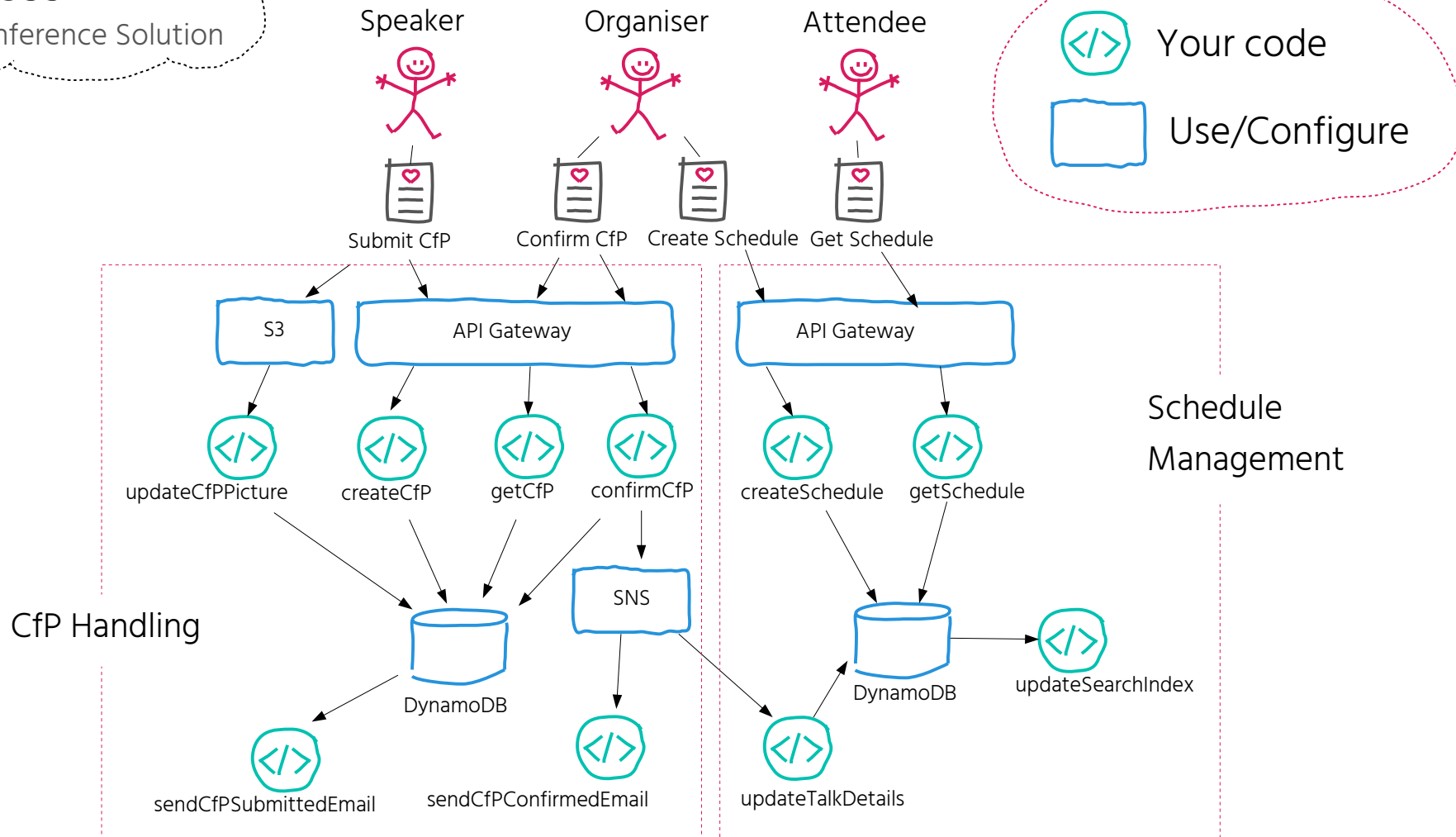
Serverless

Example Conference Solution



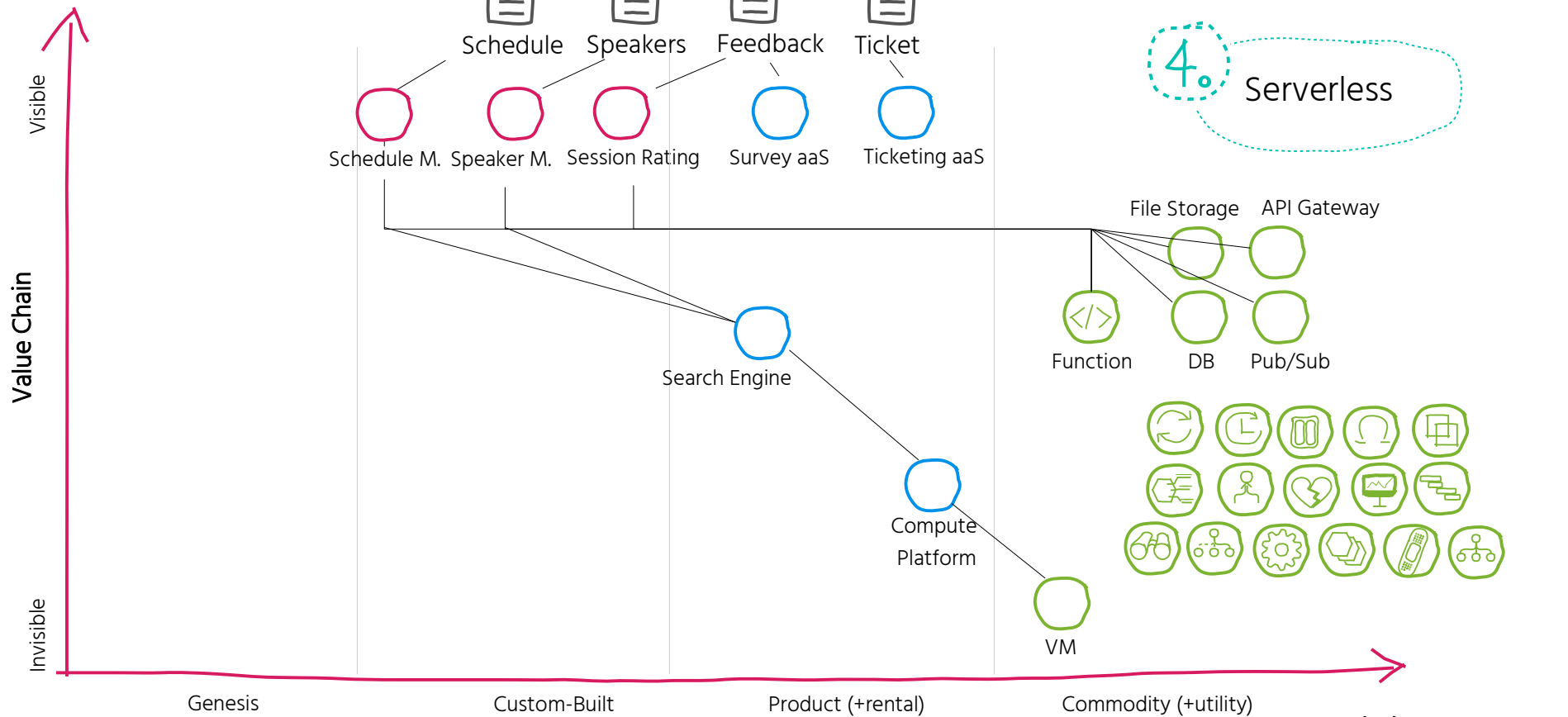
Serverless

Example Conference Solution



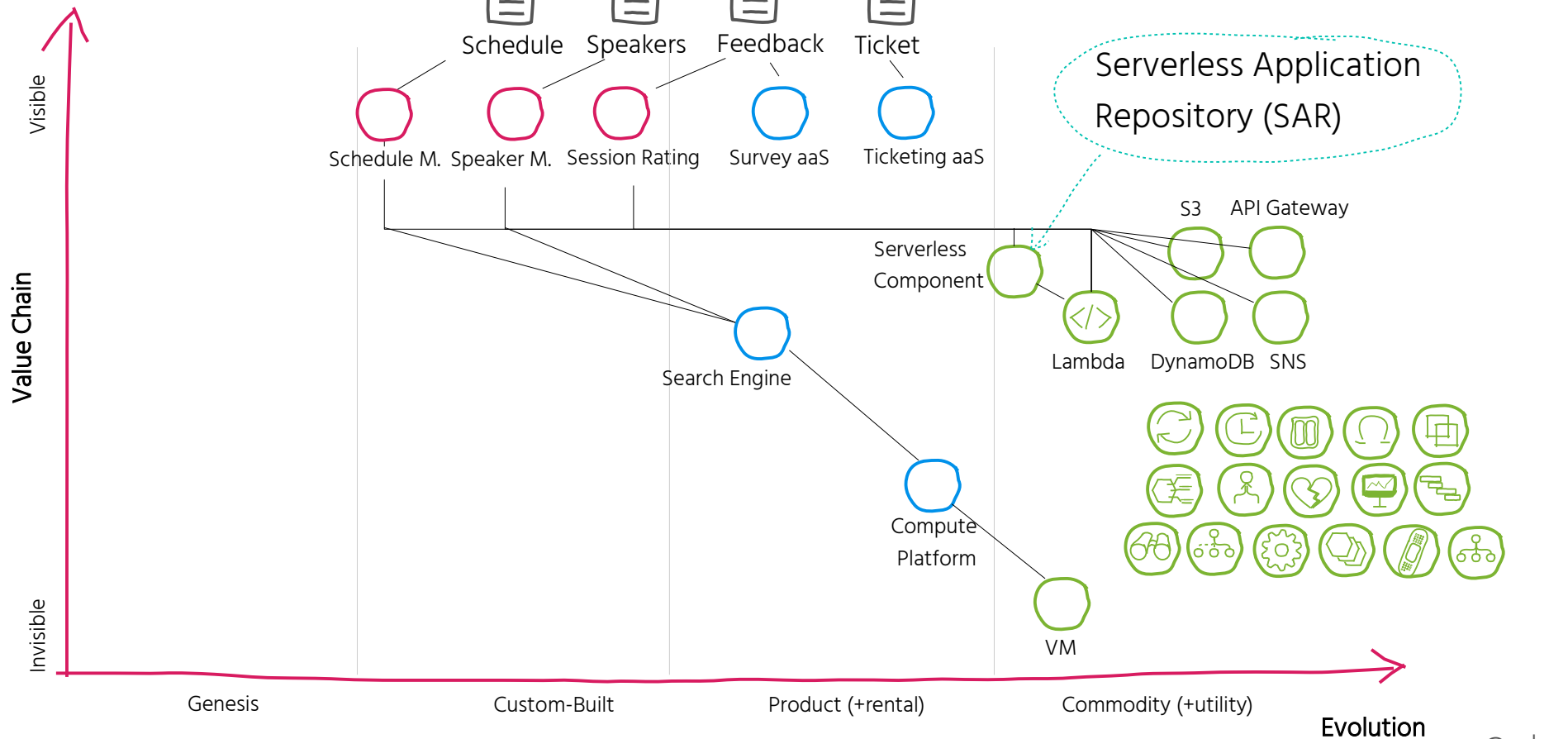
Wardley Maps

Example Conference Solution



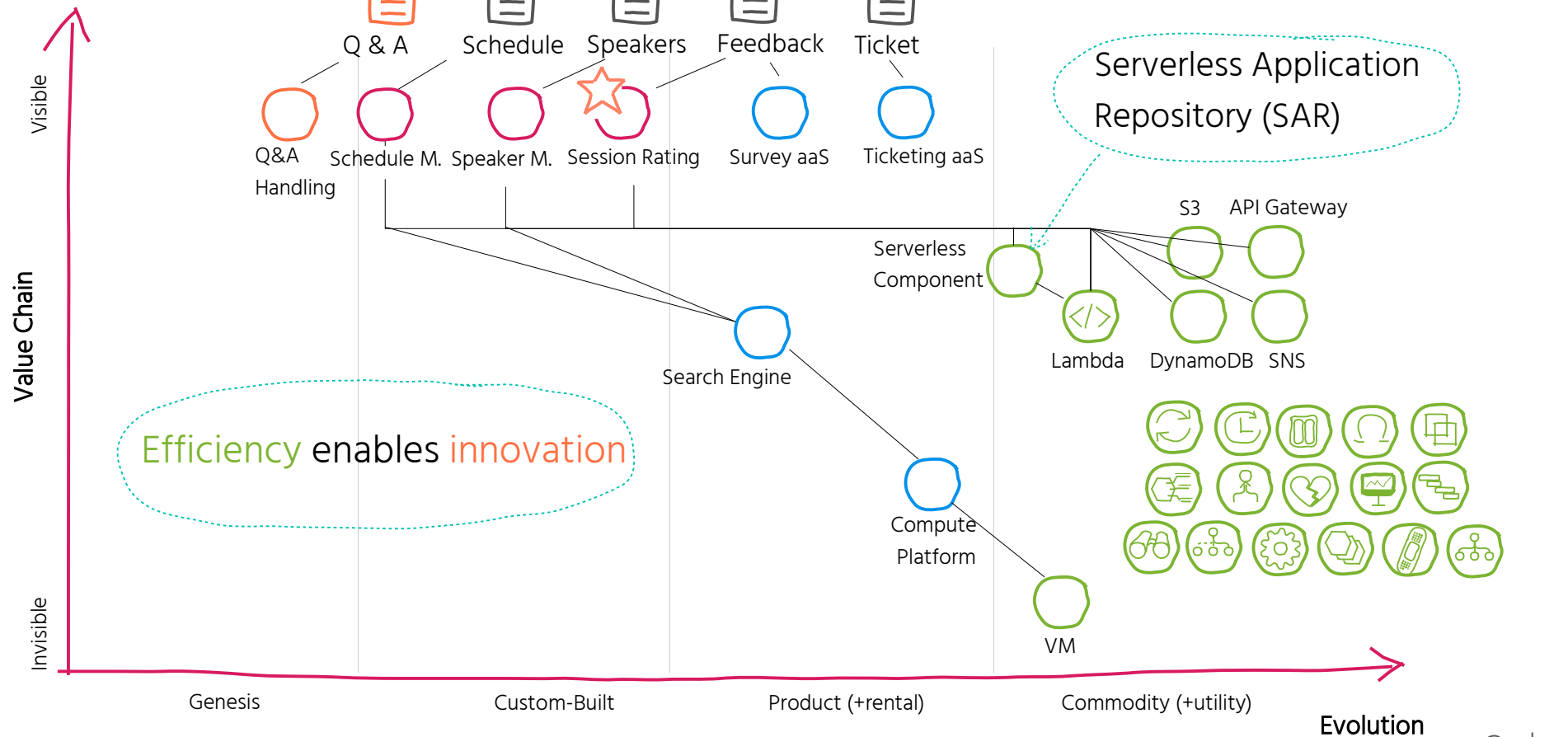
Wardley Maps

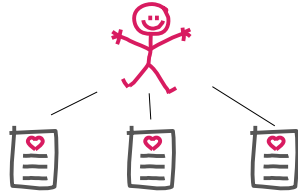
Example Conference Solution



Wardley Maps

Example Conference Solution





Fulfil user & business needs



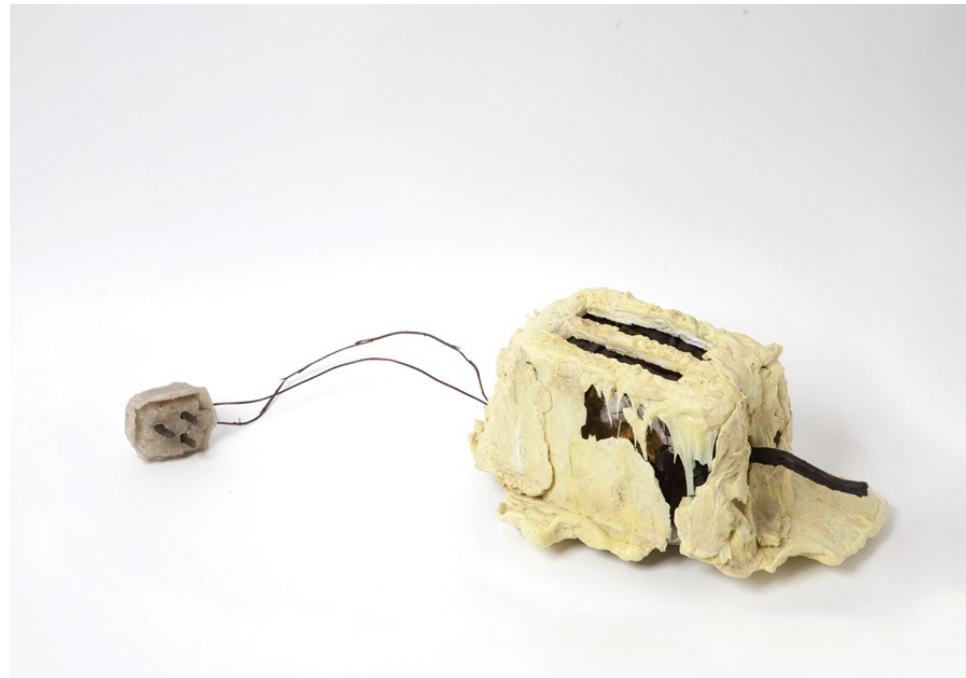
Focus on core domain & build in-house



Identify & outsource commodities



Continuously adapt



THANK YOU

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