

# The Business Model Canvas Pattern: From Concept to Product Architecture in an Agile World

SATURN 2016

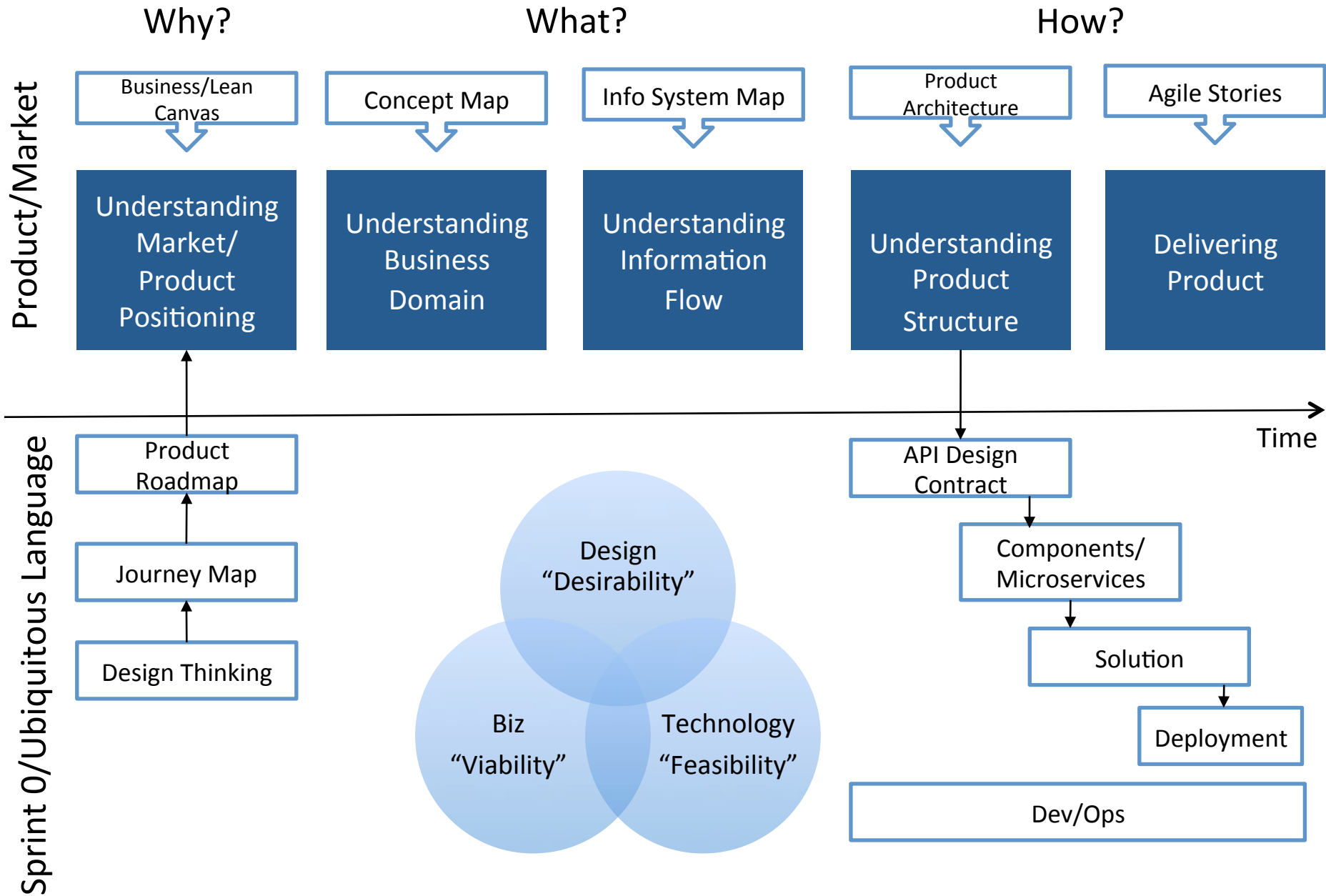
Ariela Barnes

# Challenges

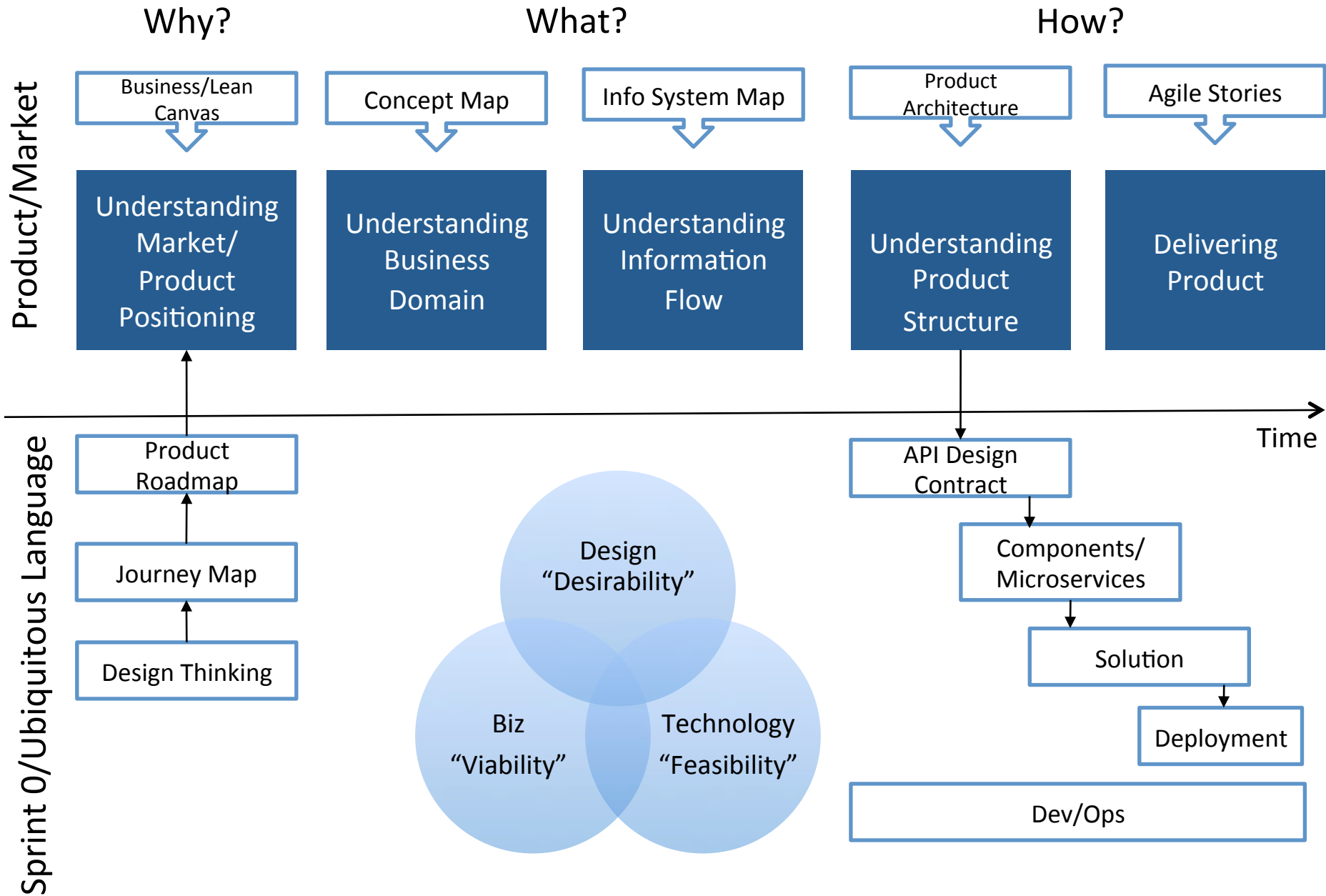
- How do we ensure that product architecture addresses real customer needs?
- How do we align a continuous DevOps mode of development with a consistent business model?
- How can an agile development team evolve product architecture iteratively?

# Context



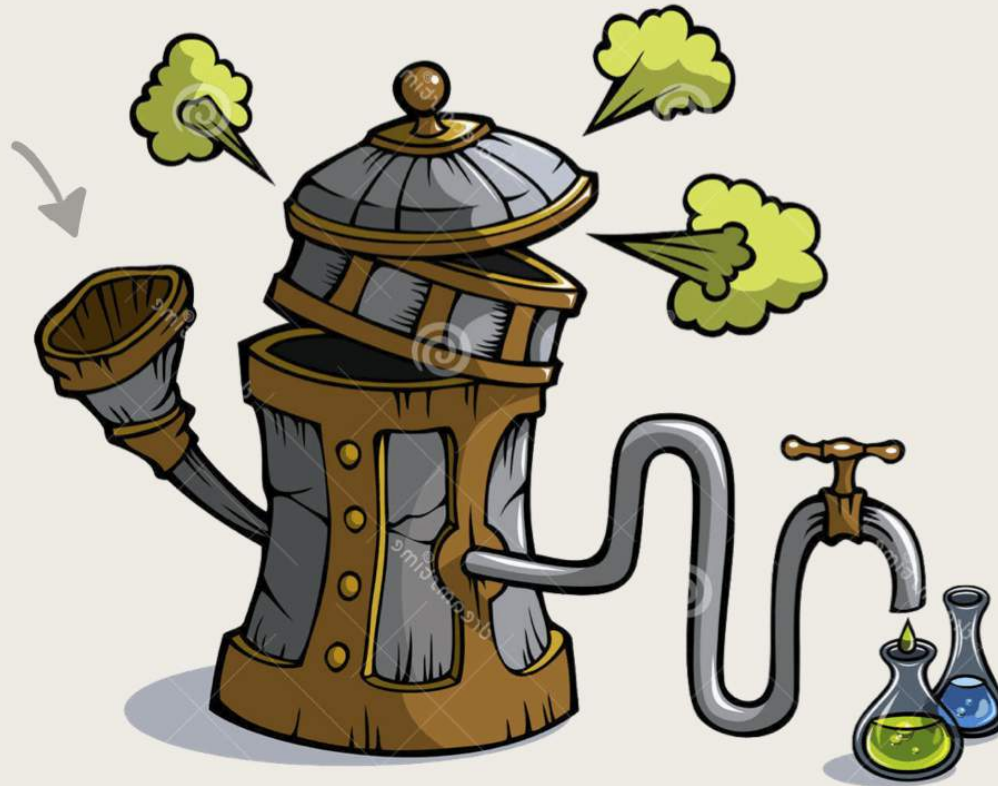


<p><b>PROBLEM</b> <i>List 1-3 top problems</i></p>	<p><b>SOLUTION</b> <i>Outline solution of each problem</i></p> <p style="text-align: right;">✓</p>	<p><b>Unique Value Proposition</b> <i>Simple, clear, compelling message that states why you are different and worth paying attention</i></p> <p style="text-align: right;">✓</p>	<p><b>UNFAIR ADVANTAGE</b> <i>Something that cannot easily be bought or copied</i></p> <p style="text-align: right;">✓</p>	<p><b>Customer Segments</b> <i>List your target customers and users</i></p>
<p><b>EXISTING ALTERNATIVES</b> <i>List how this problems are solved today</i></p>	<p><b>KEY METRICS</b> <i>List the key numbers that tell you how your business is doing</i></p> <p style="text-align: right;">✓</p>		<p><b>Channels</b> <i>List your path to customers (inbound and outbound)</i></p>	<p><b>EARLY ADOPTERS</b> <i>List the characteristics of your ideal customers</i></p>
<p><b>Cost Structure</b> <i>List your fixed and variable cost</i></p> <p style="text-align: right;">✓</p>	<p><b>Revenue Stream</b> <i>List your source of revenue</i></p>			



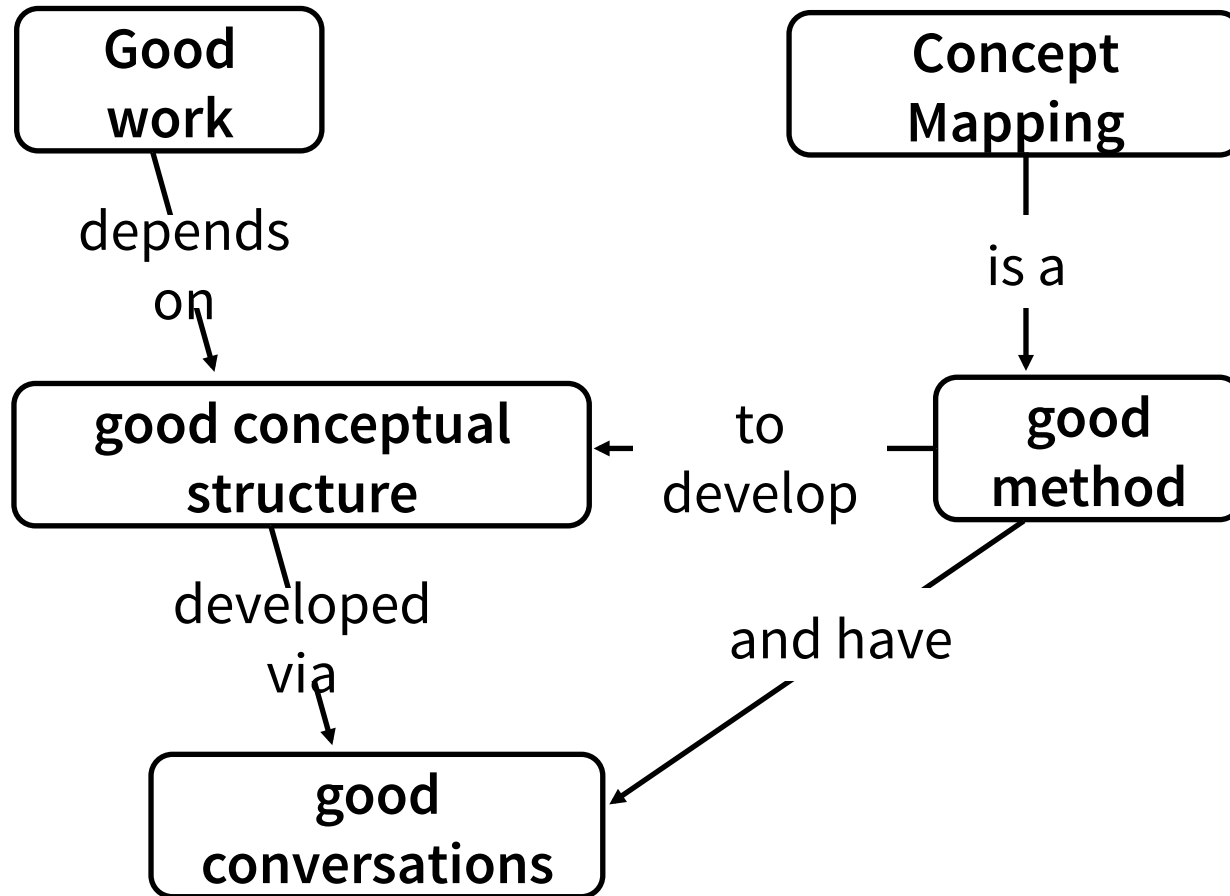
# Distillation

Loads of  
Information



Bare  
Essence

# Why is Concept Mapping a valuable process?





# How to Identify Business Concepts

Perspective:

What?

Where?

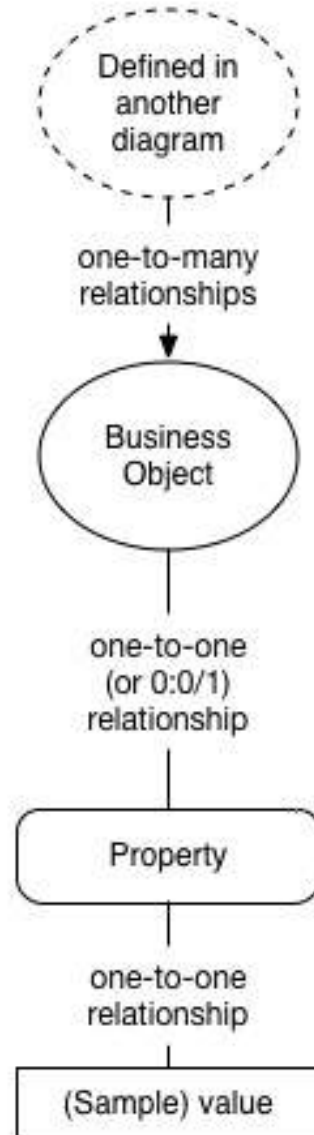
When?

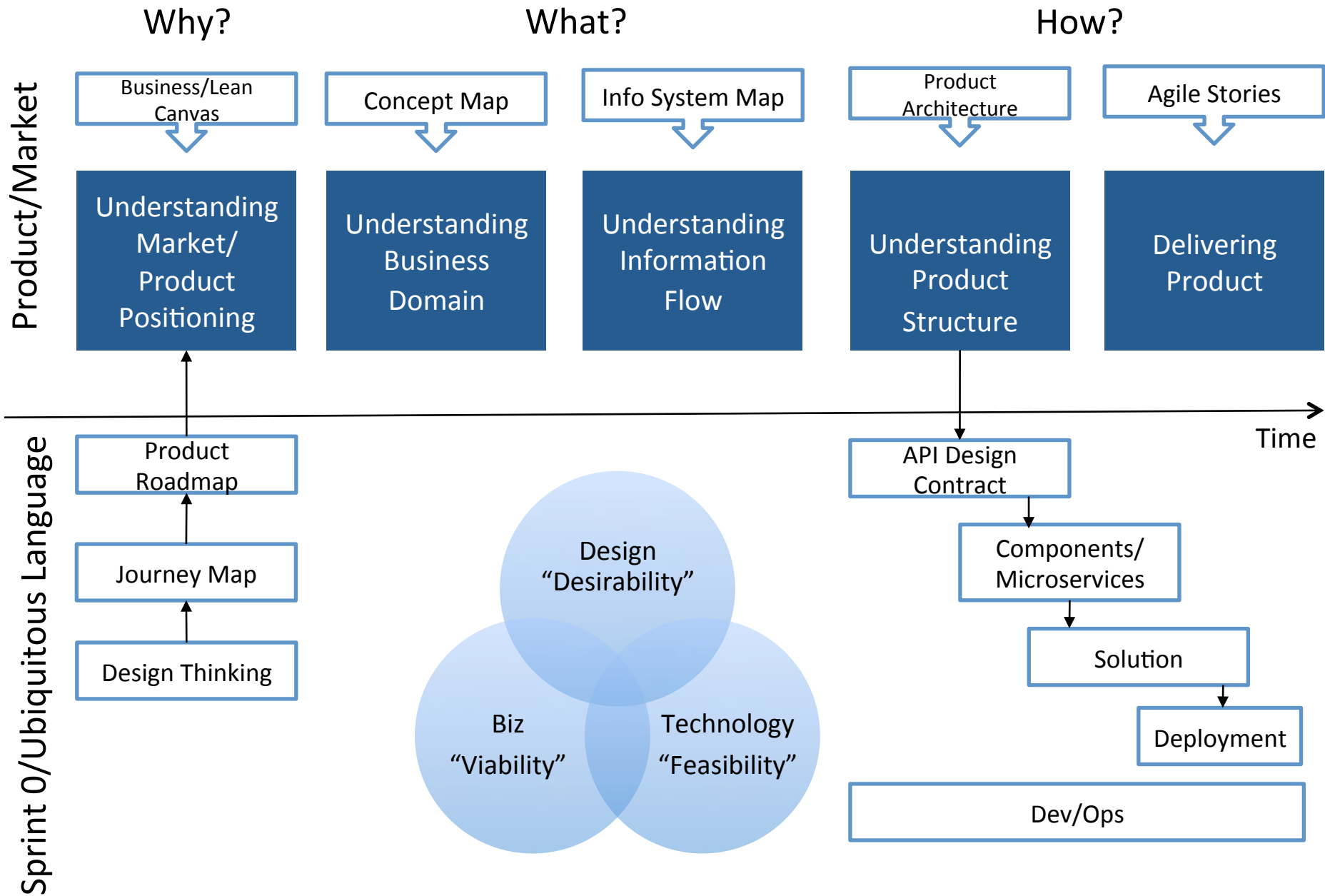
Who?

How Much?

*Concept map = business concepts and their relationships*

# How to do Concept Mapping





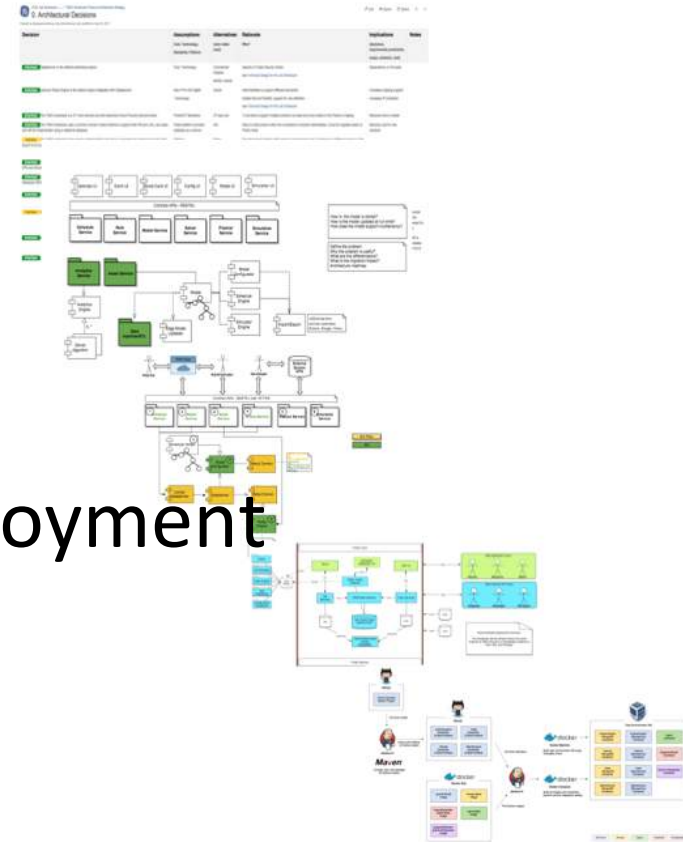
# Large Scale Structure



# Product Architecture Approach

## Risks, Variability, Scale

- Architectural Decisions
- Target Architecture
- API Design
- Components
- Continuous Integration/Deployment
- Roadmap
- Documentation



# Architecture Decisions

Decision	Assumptions Cost, Technology, Standards, Patterns	Alternatives (only viable ones)	Rationale Why?	Implications (decisions, requirements,constraints, scope, schedule, cost)	Notes	Metrics
<div style="display: flex; align-items: center;"> <div style="background-color: #28a745; color: white; padding: 2px 5px; margin-right: 5px;"><b>STRATEGIC</b></div> <div style="background-color: #ffc107; color: black; padding: 2px 5px; margin-right: 5px;"><b>TACTICAL</b></div> <div style="font-size: small;">&lt;Capture decision and type of decision ;tactical or strategic&gt;</div> </div> <div style="font-size: small;">&lt;If tactical, note a migration path&gt;</div>	<div style="font-size: small;">&lt;context for the decision&gt;</div>	<div style="font-size: small;">&lt;describe alternatives considered, link to details&gt;</div>	<div style="font-size: small;">&lt;justification for the decision&gt;</div>	<div style="font-size: small;">&lt;who/what are the benefits&gt;</div>		<div style="font-size: small;">&lt;how is it executed&gt;, validating for:  desirability, viability, and feasibility</div>

# API Design



Version v1

Versioning: Migration,  
Compatibility

Filter operations by a tag:

Jobs

Assignments

Resources

Schedule

Paths

/assignments

Conventions and  
Standards

Documentation  
using [http://  
editor.swagger.io/](http://editor.swagger.io/)

Authorization: Security

Error Handling,  
System Health

Extensibility:  
meta{}  
Domain Model:  
data []

GET /assignments

Assignments

## Description

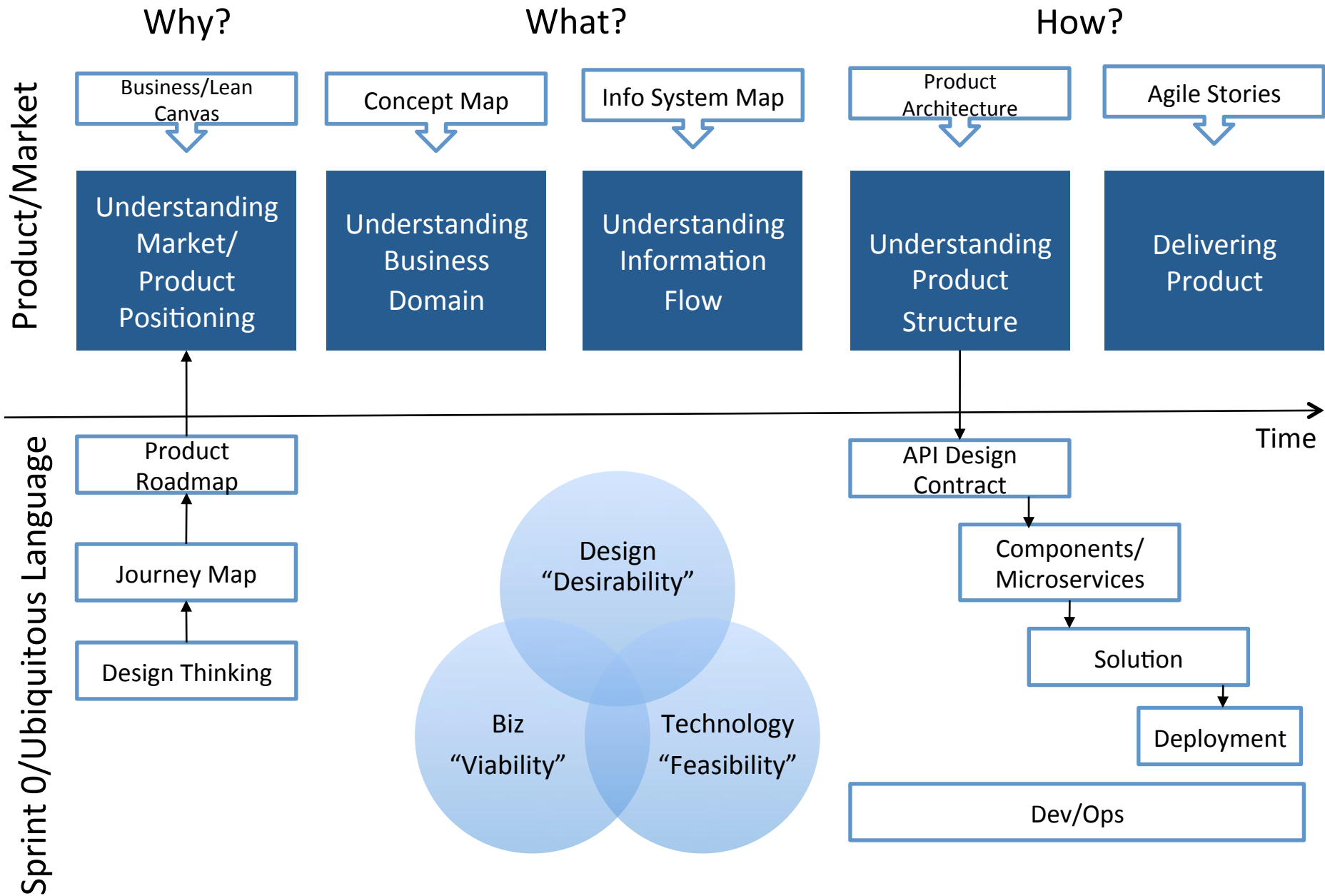
Returns a list of all current assignments persisted in the system for all jobs. Use GET /schedule, with scheduleType=SUGGESTED to get all current assignments.

## Parameters

Name	Located in	Description
Authorization	header	BEARER token returned by Predix UAA Service

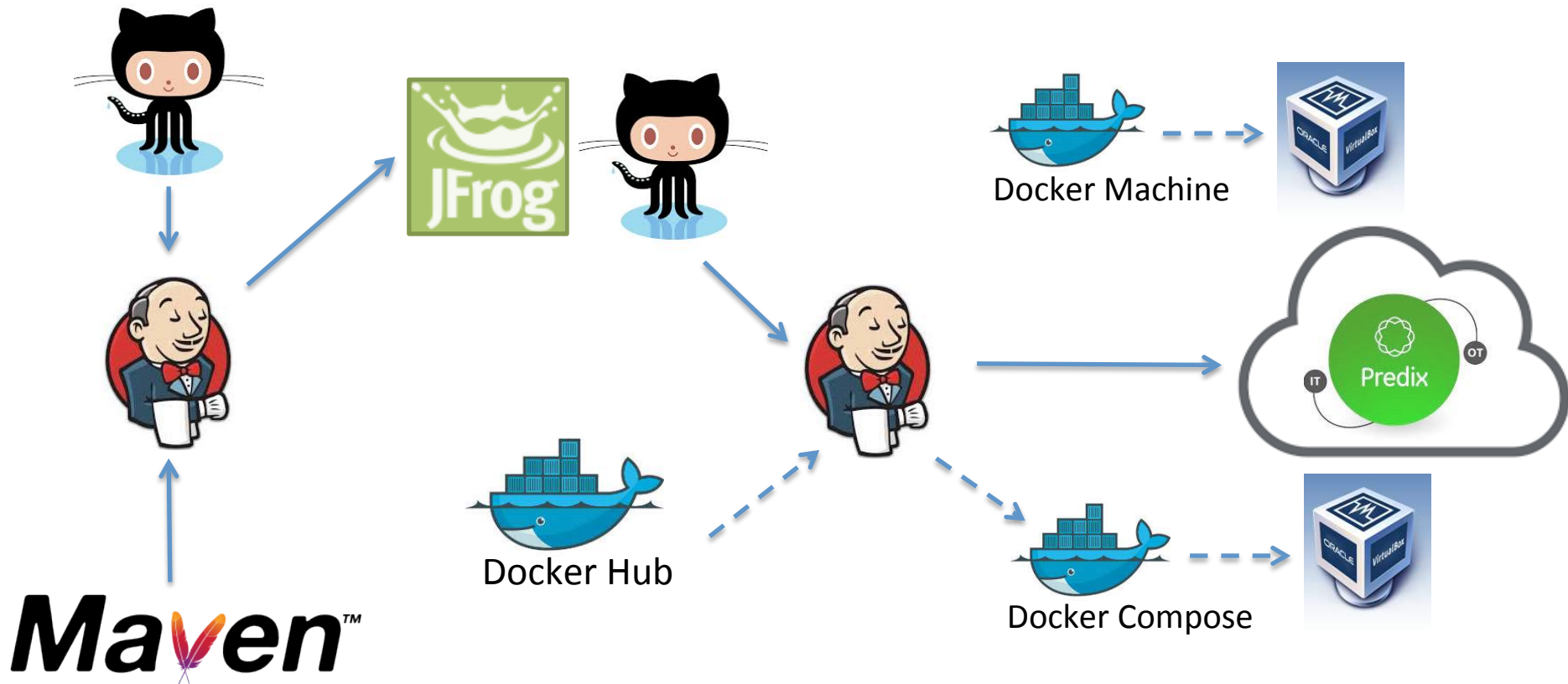
## Responses

Code	Description	Schema
200	OK	<pre>{   data: []   meta: {} }</pre>
401	Unauthorized	<pre>{   meta: {} }</pre>
429	Too many requests	<pre>{   meta: {} }</pre>





# Continuous Integration



# Documentation

- Use the Business Model Canvas or Lean Canvas to capture requirements from different stakeholders – Canvanizer
- Map the business model to business concepts using Design Thinking and Concept Mapping – Cmaps Cloud
- Rapidly design micro-service APIs that reflect business needs before launching into detailed implementations
  - Swagger Editor, [start.spring.io](http://start.spring.io)
- “Code” the documentation - Wiki, annotations, Structurizr, Swagger UI

Q&A

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