



SmartQA

Masterclass for QA

Session #2

“Understanding needs & expectations”



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TOPICS

Clarity is key to great testing

Discussion - D1

What does good understanding entail?

User story & Entity granularity

Understanding an user story well

Discussion - D2

The different POVs

Connecting questions & Quality levels

Walkthrough User Story #1

Walkthrough User Story #2

Shift left-ing

Clarity is key to great testing

clarity of purpose, doing, and outcome

BIG PICTURE &
GOAL SETTING
Clarity of purpose

EVALUATING
Clarity of doing

ASSESSMENT
Clarity of outcome

BIG PICTURE &
GOAL SETTING
Clarity of purpose

EVALUATING
Clarity of doing

ASSESSMENT
Clarity of outcome

What do users expect of
story and of the system?

What-to-Test &
Test-for-What

BIG PICTURE &
GOAL SETTING
Clarity of purpose

EVALUATING
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ASSESSMENT
Clarity of outcome

What do users expect of
story and of the system?

What tests, scenarios/
cases?
How to validate?

What-to-Test &
Test-for-What

Testing Effectively &
Efficiently

BIG PICTURE &
GOAL SETTING
Clarity of purpose

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ASSESSMENT
Clarity of outcome

What do users expect of
story and of the system?

What tests, scenarios/
cases?
How to validate?

How clean is it?
What can I do better?

What-to-Test &
Test-for-What

Testing Effectively &
Efficiently

Objective assessment
of cleanliness

1

BIG PICTURE &
GOAL SETTING
Clarity of purpose

Entities

Cleanliness
Criteria

Potential
Defect Types

1

BIG PICTURE &
GOAL SETTING
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Defect Types

2

EVALUATING
Clarity of doing

Quality Levels

Test Types

Test Scenarios

← Strategy →

← Design →

1

BIG PICTURE &
GOAL SETTING
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UNDERSTAND. Question. **Do More.**

Identify situations. PREVENT. **Do Less.**

2

EVALUATING
Clarity of doing

Quality Levels

Test Types

Test Scenarios

← Strategy →

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Identify situations. PREVENT. **Do Less.**

2

EVALUATING
Clarity of doing

Quality Levels

Test Types

Test Scenarios

← Strategy →

← Design →

3

ASSESSMENT
Clarity of outcome

Execute

Assess

← Execution & Analysis →

Discussion #1

"on Specification Clarity "

How do you know that a spec is clear, complete?

How do you review a spec (PRD/User story)?

How do you discover the unstated?

Your comments/thoughts please.

What does good understanding entail?

Value of good understanding

Focus of lean thinking is to "reduce waste".

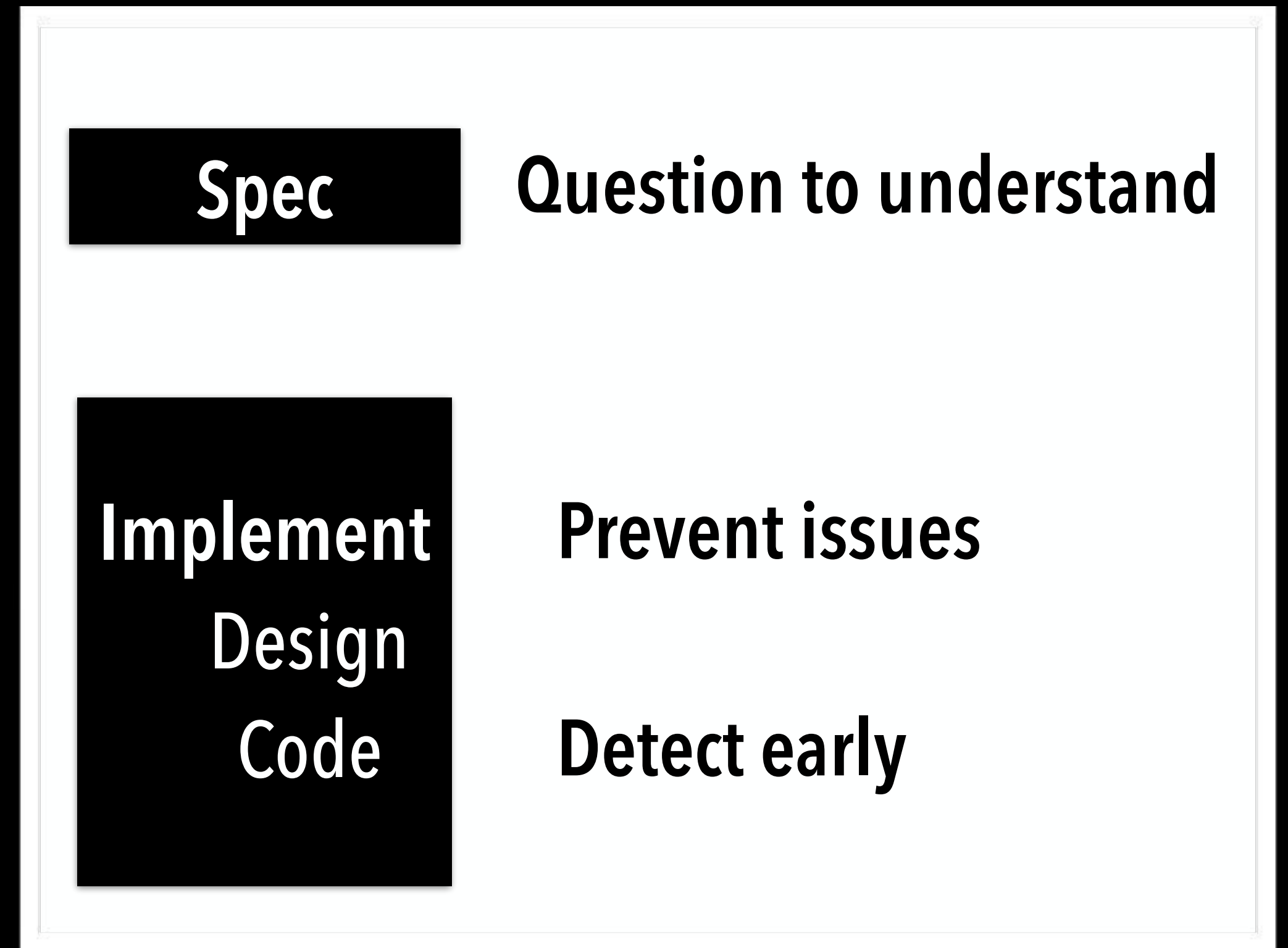
Spec

Question to understand

Value of good understanding

Focus of lean thinking is to "reduce waste".

Not about finding issues later by testing,
it is about not having them in the first place.



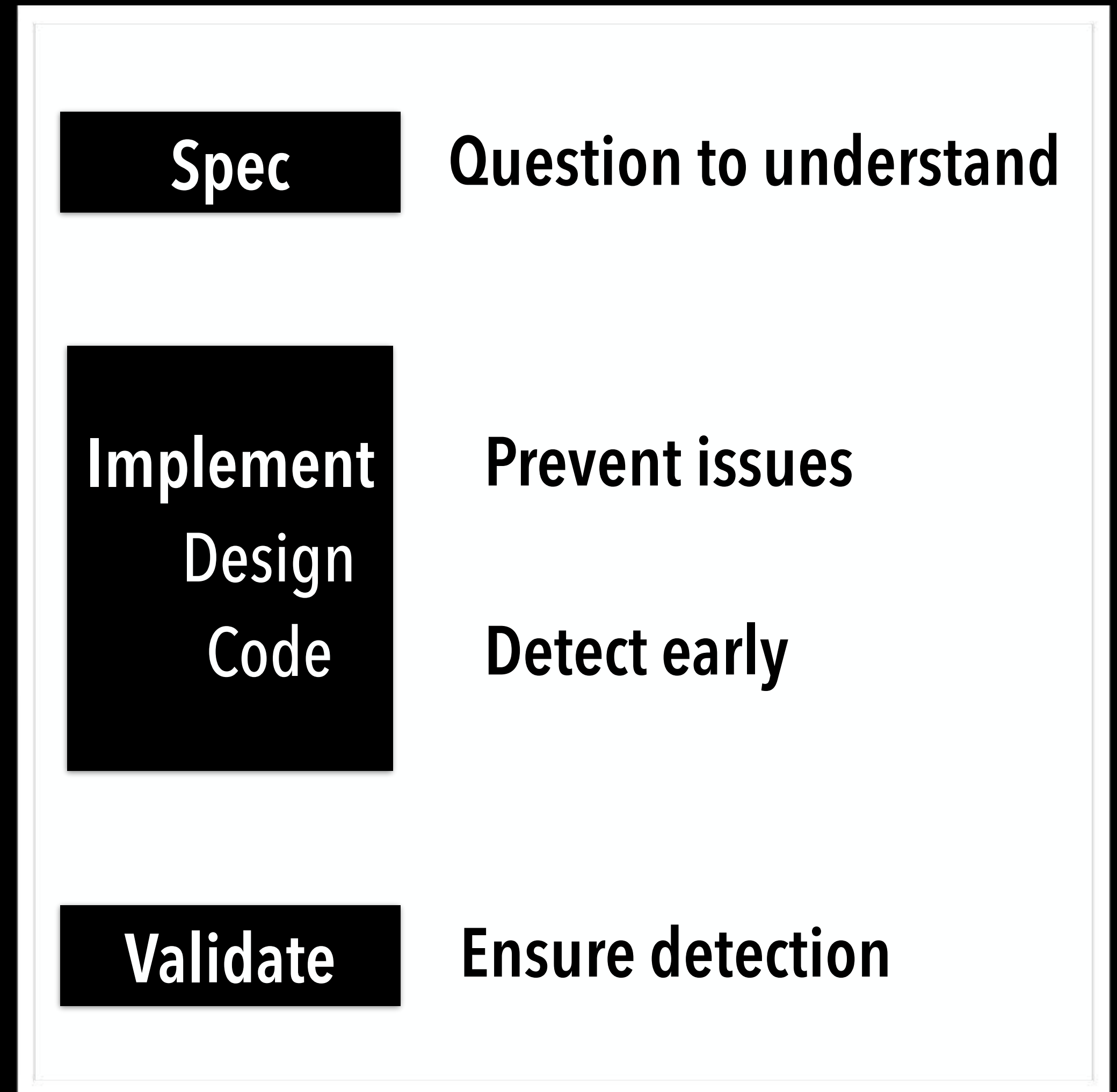
Value of good understanding

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Not about finding issues later by testing,
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Good questions enable clarity by:

- being clear of what you know
- discovering what you don't know



Information needed for good understanding

Success factors

Marketplace & Customer types

Deployment environment

Information needed for good understanding

Success factors

Marketplace & Customer types

Deployment environment

End users

Requirements, Features, Attributes

Ranking of features & Usage profile

Interactions

Information needed for good understanding

Success factors

Marketplace & Customer types

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Requirements, Features, Attributes

Ranking of features & Usage profile

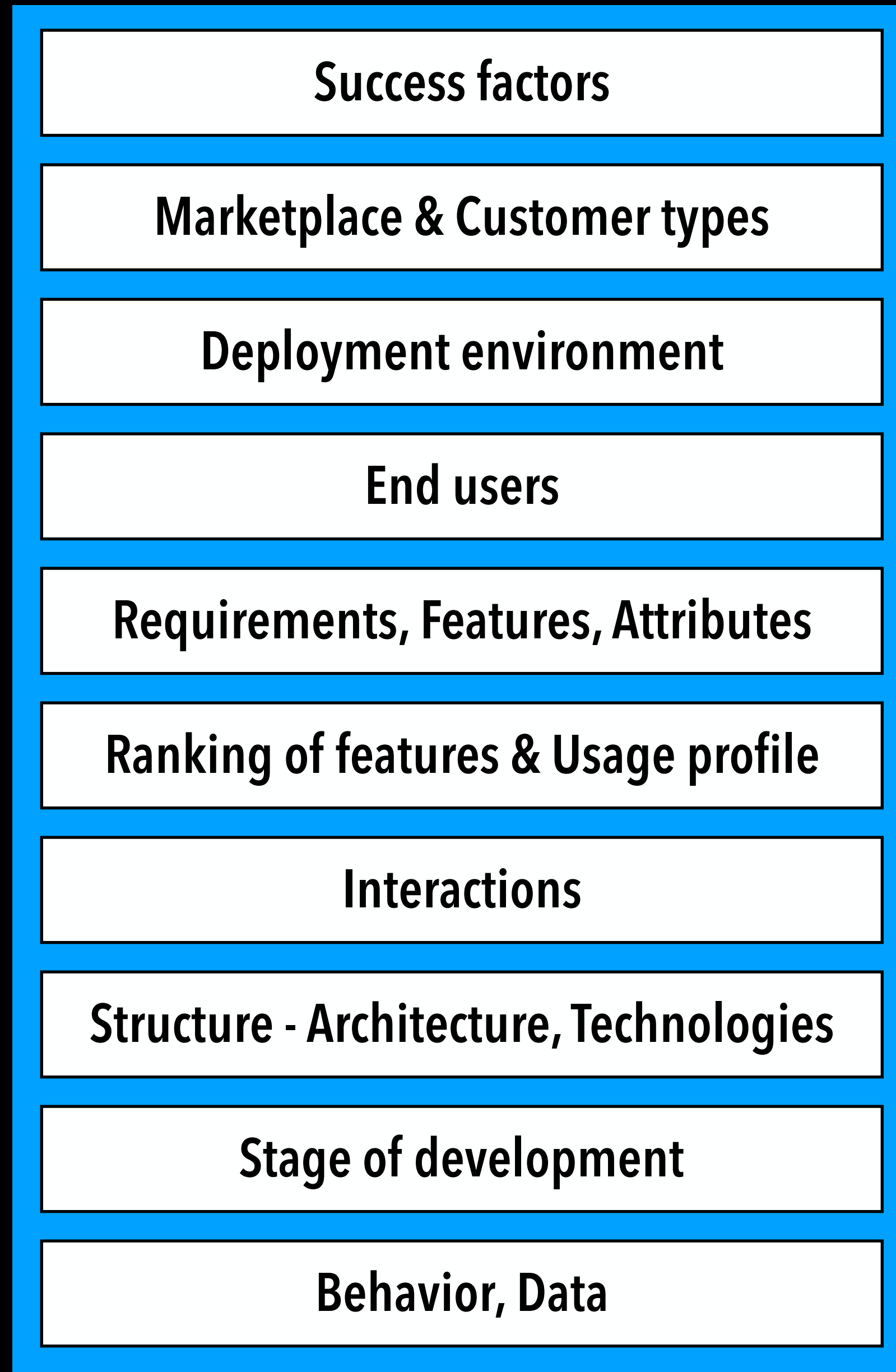
Interactions

Structure - Architecture, Technologies

Stage of development

Behavior, Data

Information needed for good understanding



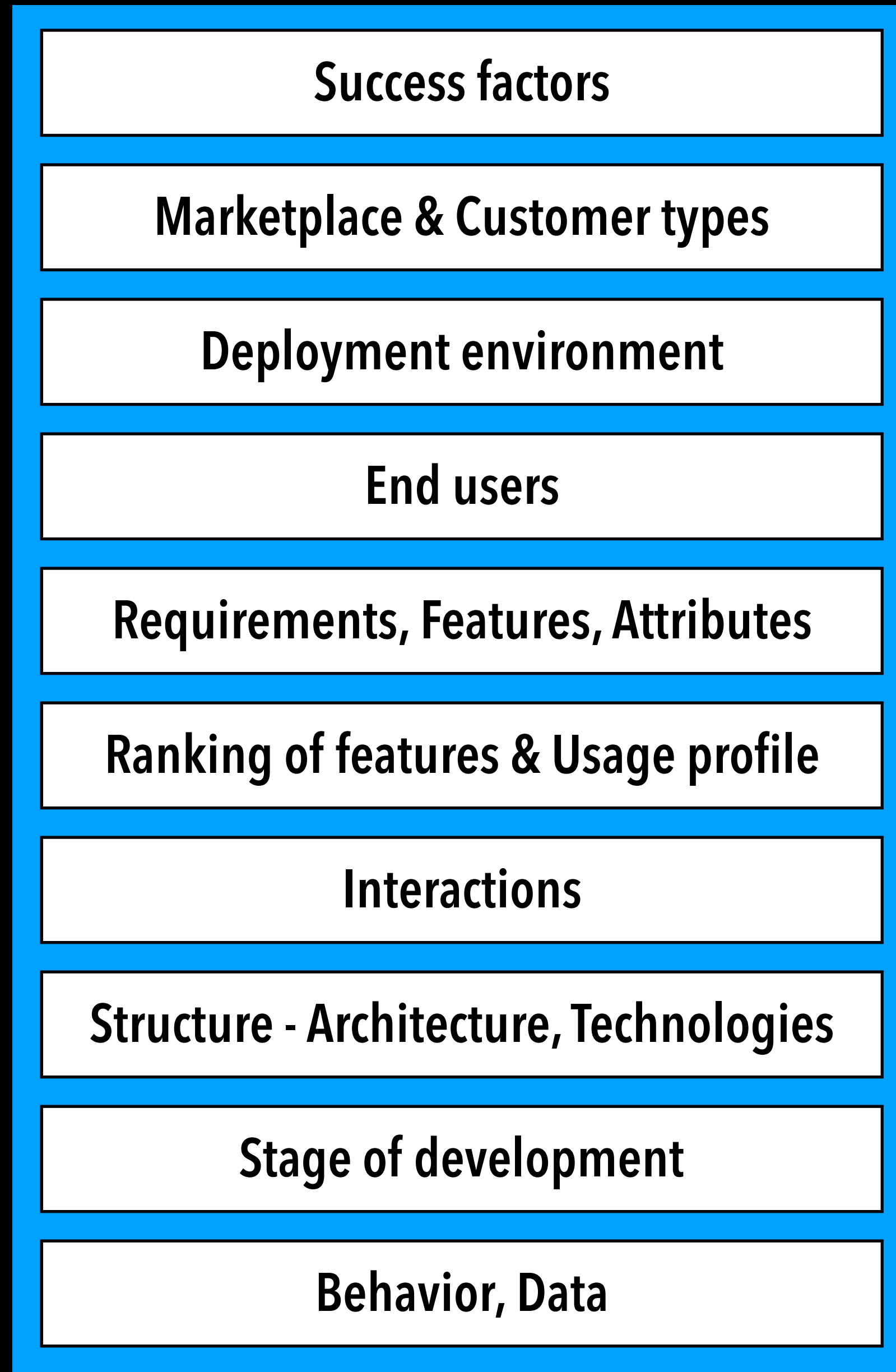
External information



to

Internal information

Do you see the correlation ?



External information



to

Internal information

L9 End user value

L8 Deployment correctness

L7 Attribute correctness

L6 Environment correctness

L5 Flow correctness

L4 Behaviour correctness

L3 Structural correctness

L2 Interface correctness

L1 Input correctness

View from outside to inside

Customers

Marketplace

Customer types

Success factors

Deployment environment

View from outside to inside

Customers

End users

Marketplace

Customer types

Success factors

Deployment environment

User types

Requirements

#Users

Usage profile

Features

Ranking of features

Attributes

View from outside to inside

Customers

End users

Product/App

Marketplace

Customer types

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Deployment environment

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Usage profile

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Ranking of features

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Structure - Architecture, Technologies

Stage of development - New/Modified

View from outside to inside

Customers

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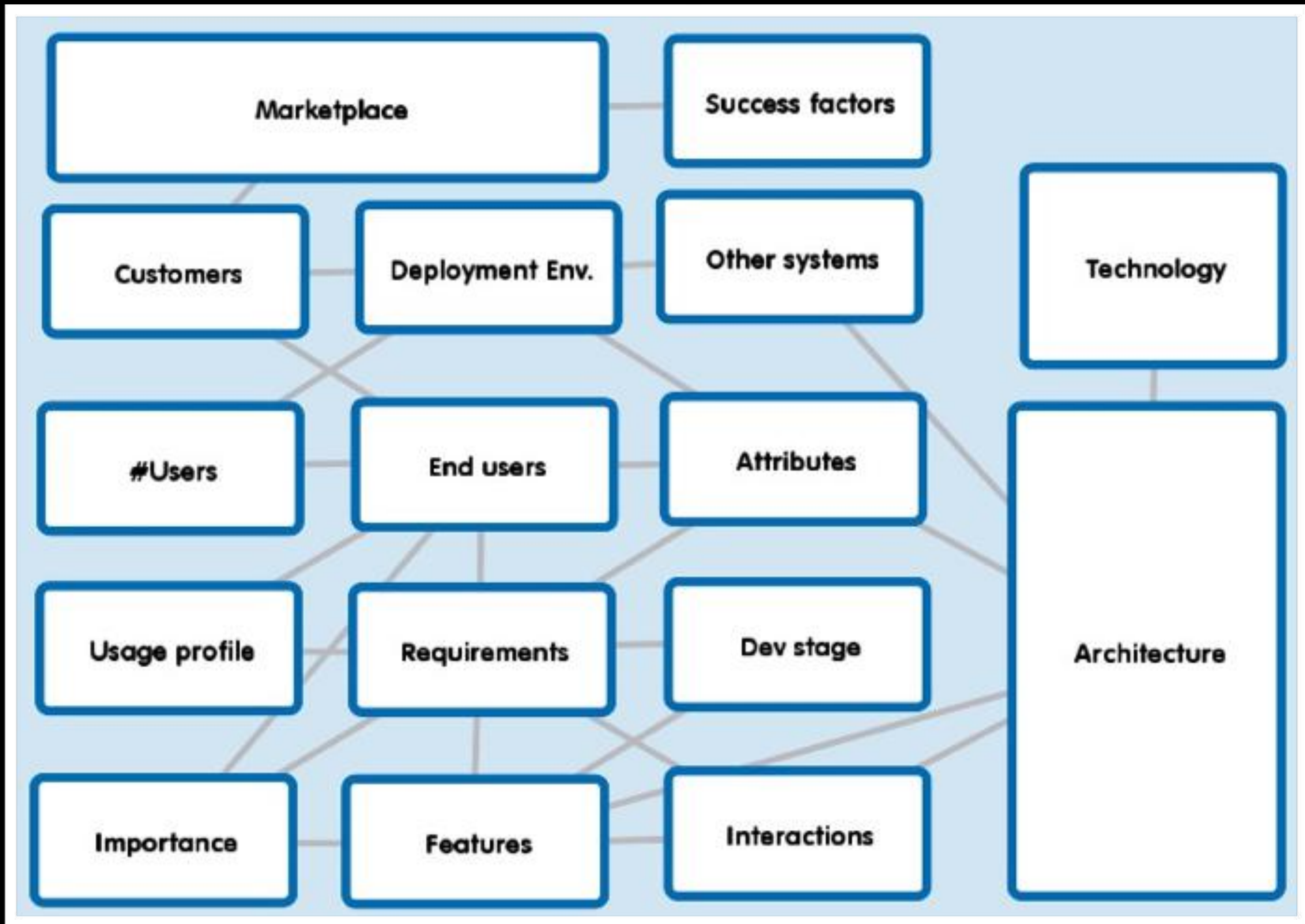
Structure - Architecture, Technologies

Stage of development - New/Modified

Behaviour

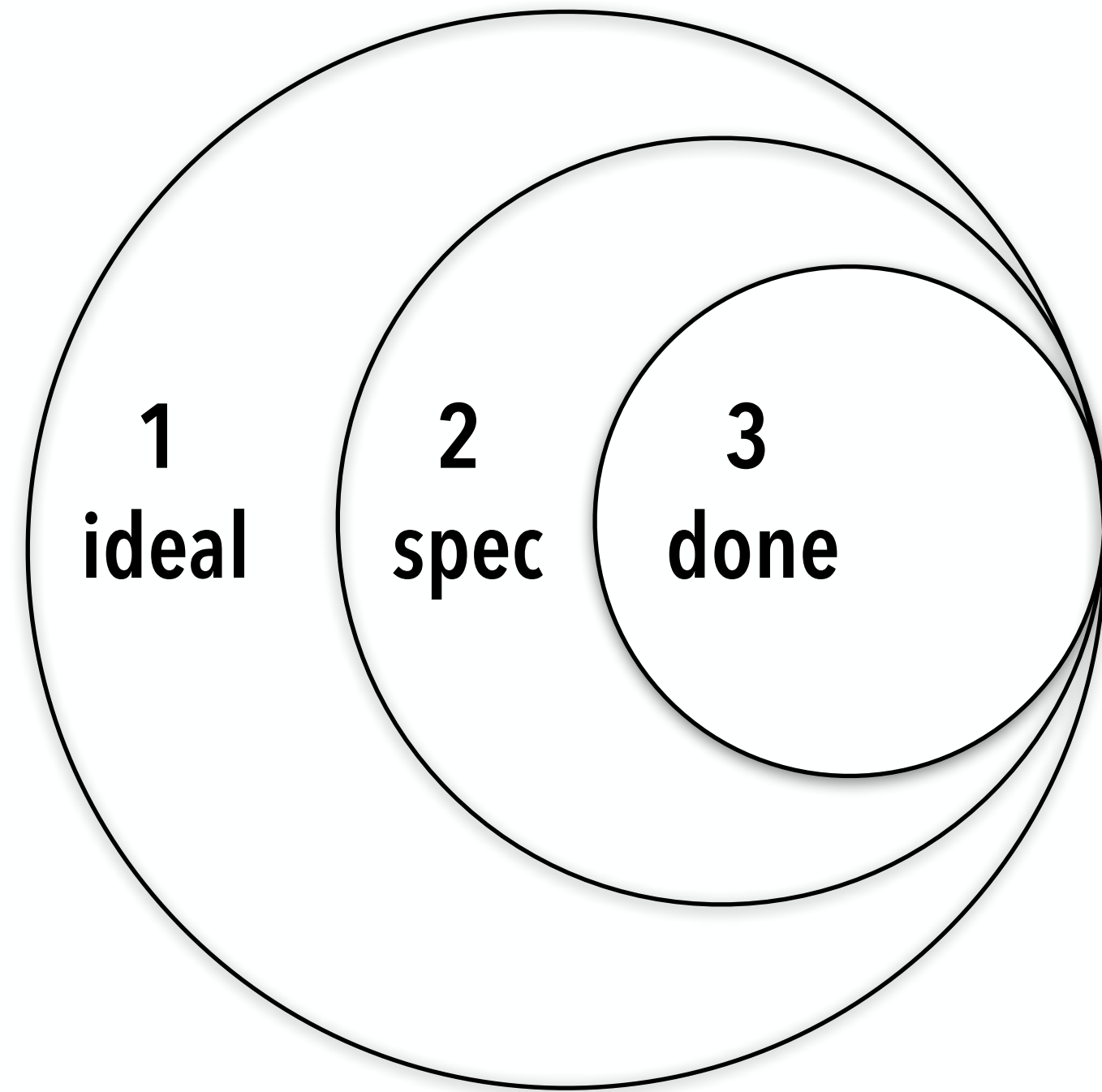
Data spec

Interactions



LANDSCAPING - Connecting different pieces

How issues happen.

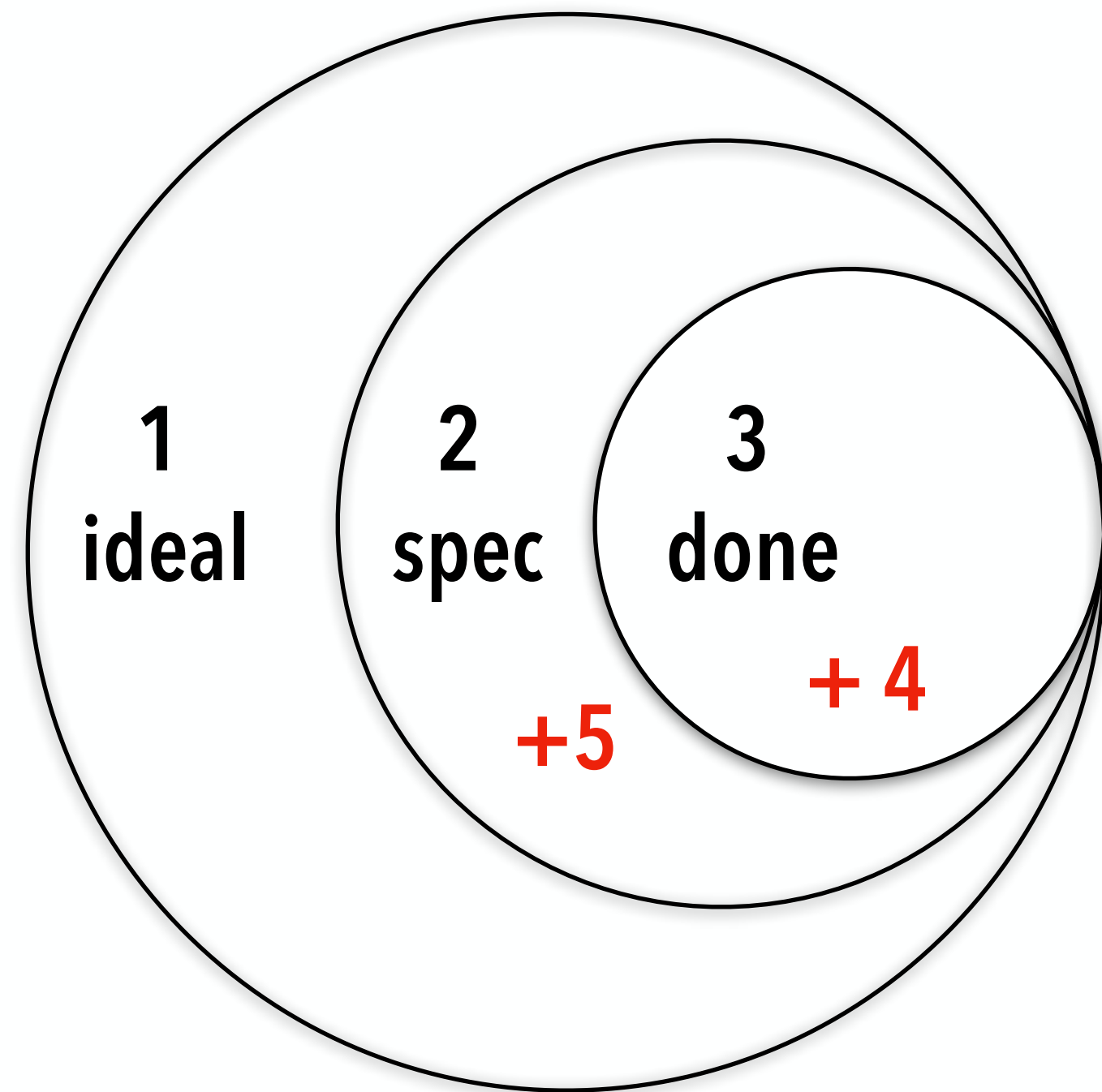


1 what is needed

2 what is stated

3 what is implemented

How issues happen.



1 what is needed

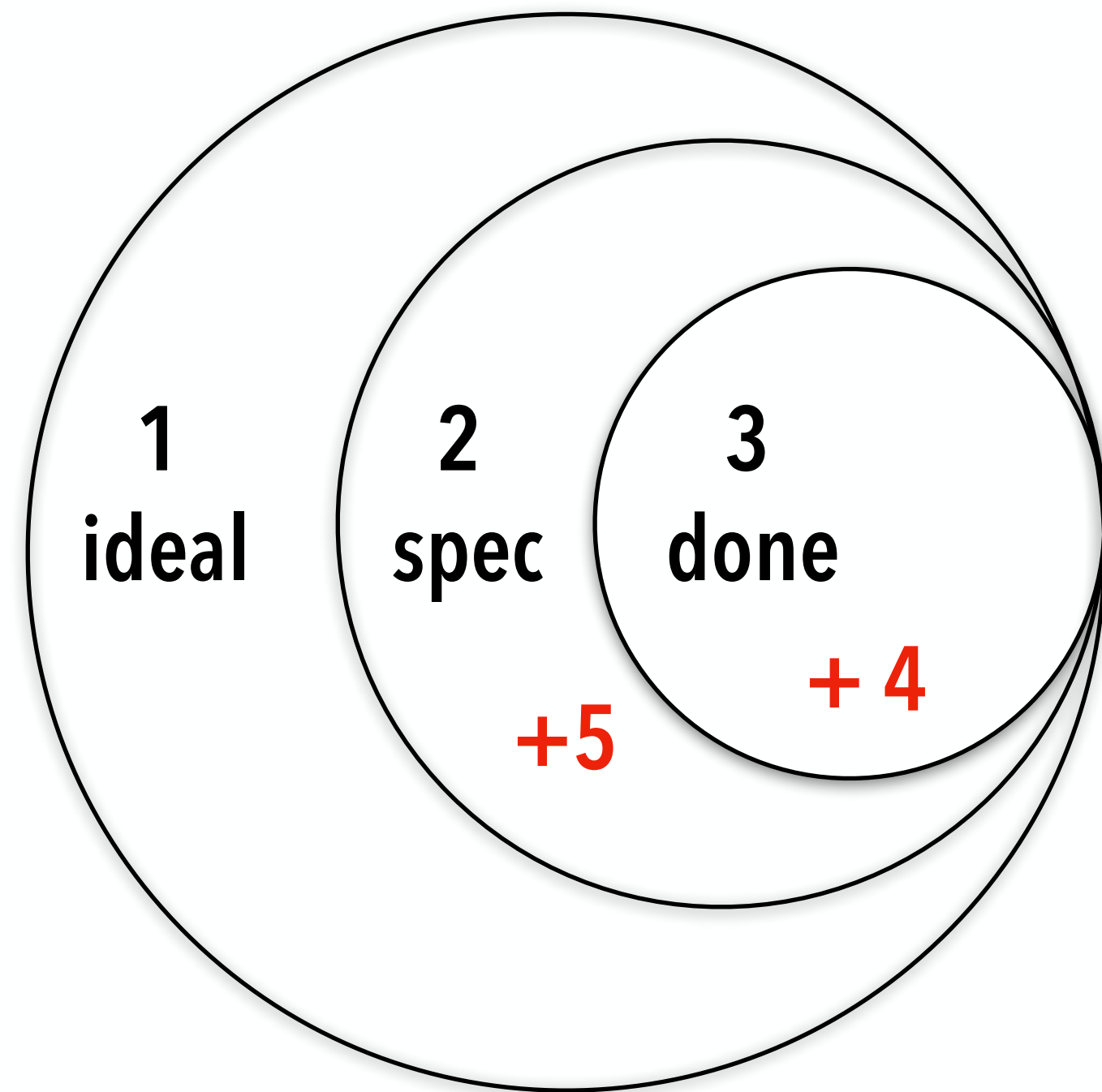
2 what is stated

3 what is implemented

4 issues in implementation

5 issues of incorrect spec

How issues happen.



1 what is needed

2 what is stated

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ISSUES arise due to

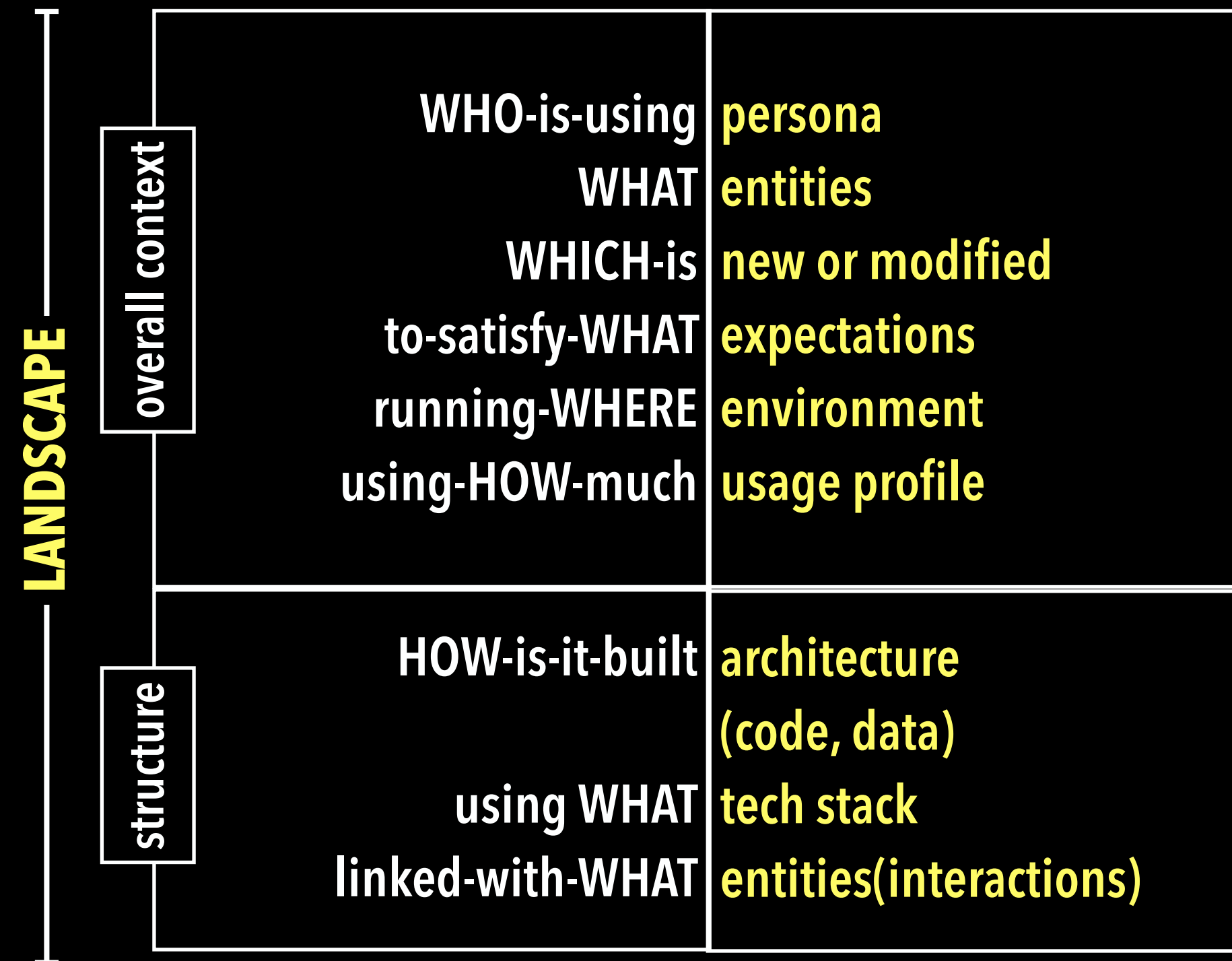
gaps between needing but not stating,
missing to implement though stated,
implemented incorrectly what is stated
& implementing incorrect stuff

So, Question well!

SMART UNDERSTANDING

(is Landscaping & Deep dive)

Scour the **landscape** to understand overall context and the static structure of how it is built



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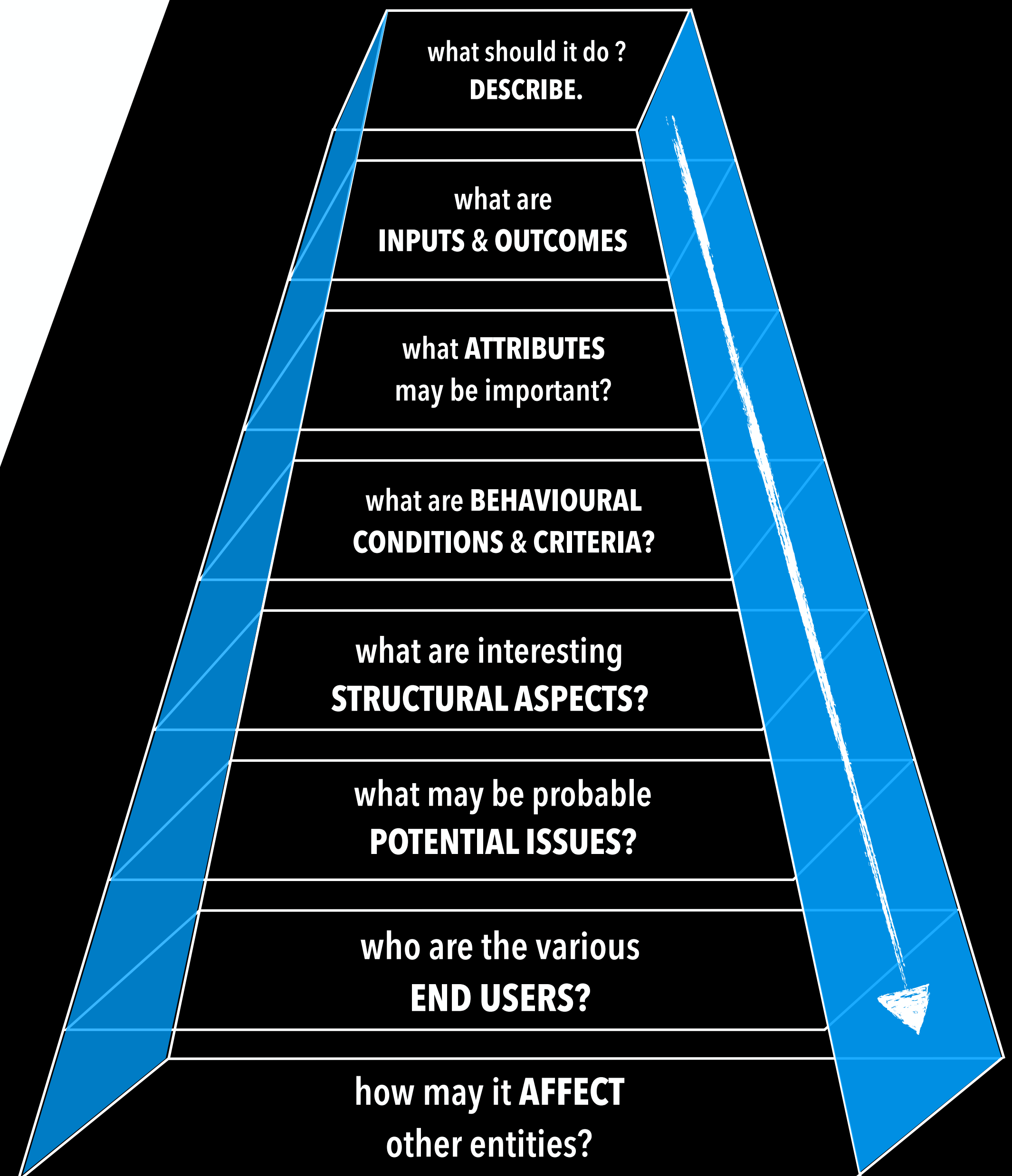
Do a **deep dive** to understand the intended dynamic behavior

LANDSCAPE	overall context	WHO-is-using WHAT WHICH-is to-satisfy-WHAT running-WHERE using-HOW-much	persona entities new or modified expectations environment usage profile
	structure	HOW-is-it-built using WHAT linked-with-WHAT	architecture (code, data) tech stack entities(interactions)
	DEEP DIVE	behaviour	using-WHAT producing-WHAT according-to-HOW

What does it take to understand an ENTITY smartly?

...a DEEP DIVE

an ENTITY can be a small COMPONENT, FEATURE or a big REQUIREMENT, FLOW



User story & Entity granularity

An user story is seen as a modern way of communicating the end user's needs and expectations in a sweet and simple format that can be easily modified.



This brevity/simplicity hides information leading to understanding in the small and potentially missing the big picture.

**"As a <specific user/persona/role>"
I want <desired feature/issue that needs to be solved>,
so that <benefit from the feature>"**

+ Acceptance Criteria

(www.scrumalliance.org)

User Story

is

Independent
Negotiable
Value adding
Estimable
Small
Testable

5W1H - Aid to EFFECTIVE understanding

ASK EVERYTIME

WHO *are the end users?*

WHY *do they need this?*

WHEN *will they use this?*

HOW *will they use this?*

WHAT *is intended behaviour?*

WHERE *will this be used?*

Start with WHO and proceed with the rest , to get an good understanding of needs & expectations

User story & Entity

user
REQUIREMENT

Most often user story is this

User story & Entity

**business
FLOW**

String user stories to see a business flow

**user
REQUIREMENT**

Most often user story is this

User story & Entity

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String user stories to see a business flow

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REQUIREMENT**

Most often user story is this

**technical
FEATURE**

One can spot feature(s) in a user story

Sometimes extension user stories may look like this.

User story & Entity

**business
FLOW**

String user stories to see a business flow

**user
REQUIREMENT**

Most often user story is this

**technical
FEATURE**

One can spot feature(s) in a user story
Sometimes extension user stories may look like this.

**structural
COMPONENT**

User story is never this

Understanding an user story well

User Story - What do we need to understand?

"As a <specific user/persona/role>" I want <desired feature/issue that needs to be solved>, so that <benefit from the feature>"

+ Acceptance Criteria

(www.scrumalliance.org)

WHY

Issue/benefit

What are we solving?

What is the expected benefit to the user?



User Story

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WHO

User/Persona

Who is this meant for?

The background of user & usage



User Story

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User Story

HOW

Behaviour conditions, Implementation

Business logic & implementation details

User Story - What do we need to understand?

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Interactions/Collaborations

...with other stories

... other systems

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User Story

WHAT FOR?

Acceptance criteria

Functional & Non-functional

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...with other stories

... other systems

HOW MUCH

Usage profile

Volume, frequency concurrency

Perception of importance

WHO

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User Story

WHERE

Environment

User's situation/ constraints,

Deployment environment, Data sets

HOW

Behaviour conditions, Implementation

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WHEN

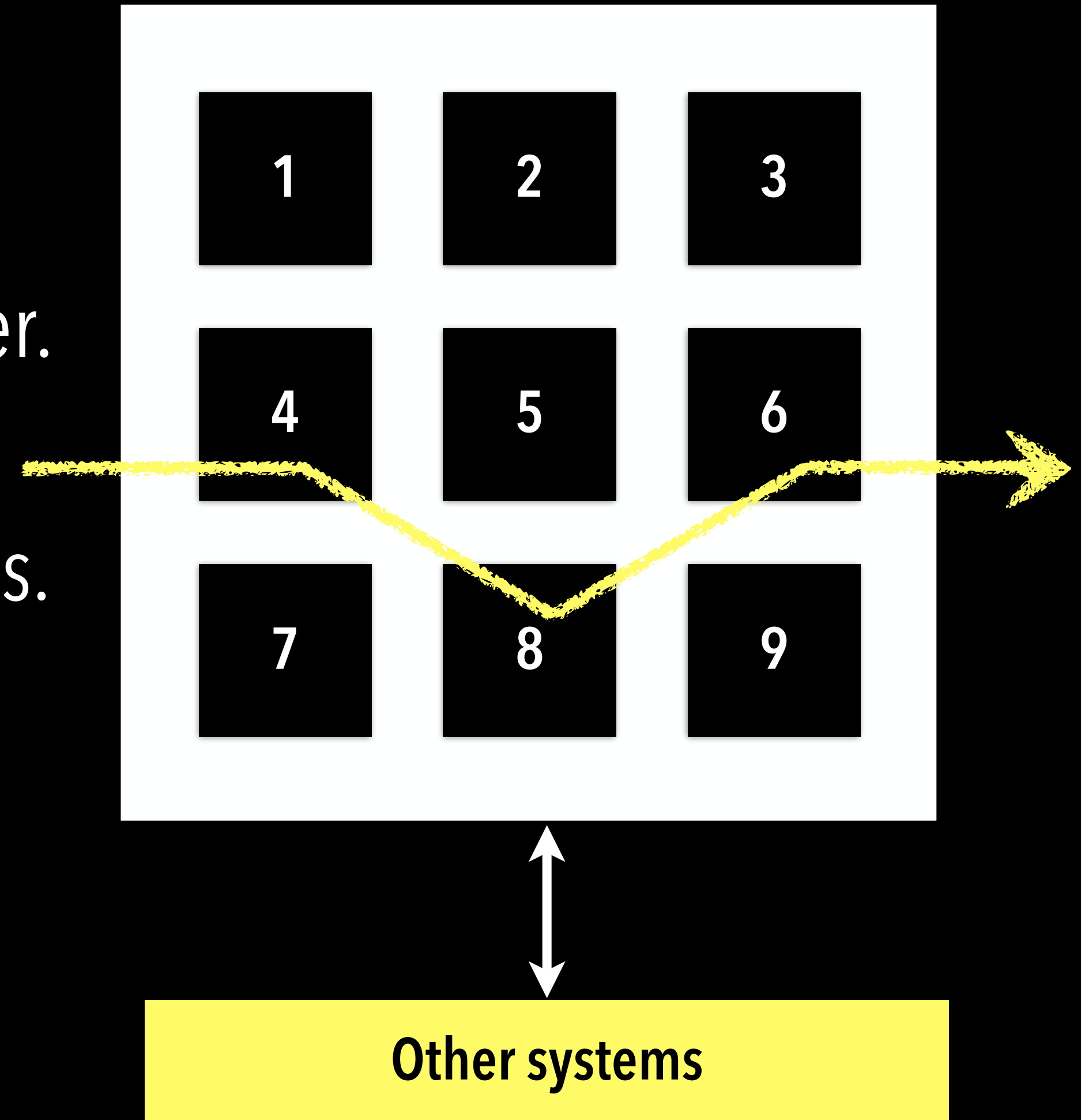
Pre-conditions

System states, prerequisites

Real life usage

... is a collection of user stories strung together.

Ultimately we need to validate the various flows.



Discussion #2

“on Multiple POVs to understand well”

To understand the larger context we need to view the (intended) system from multiple angles.

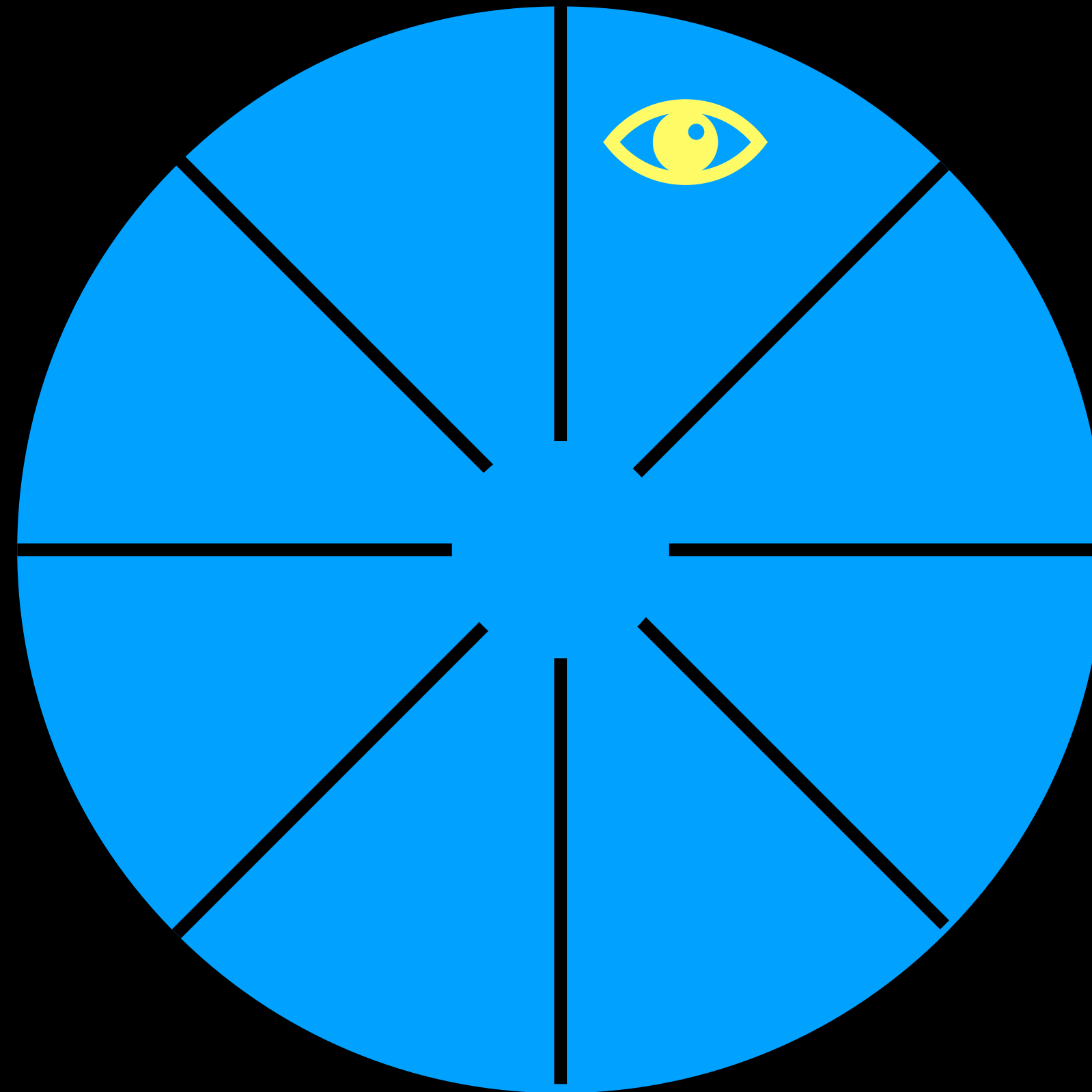
What POVs do you look from, to seek information and get a good handle on the larger picture, and then dig deeper to know the details?

Your comments/thoughts please.

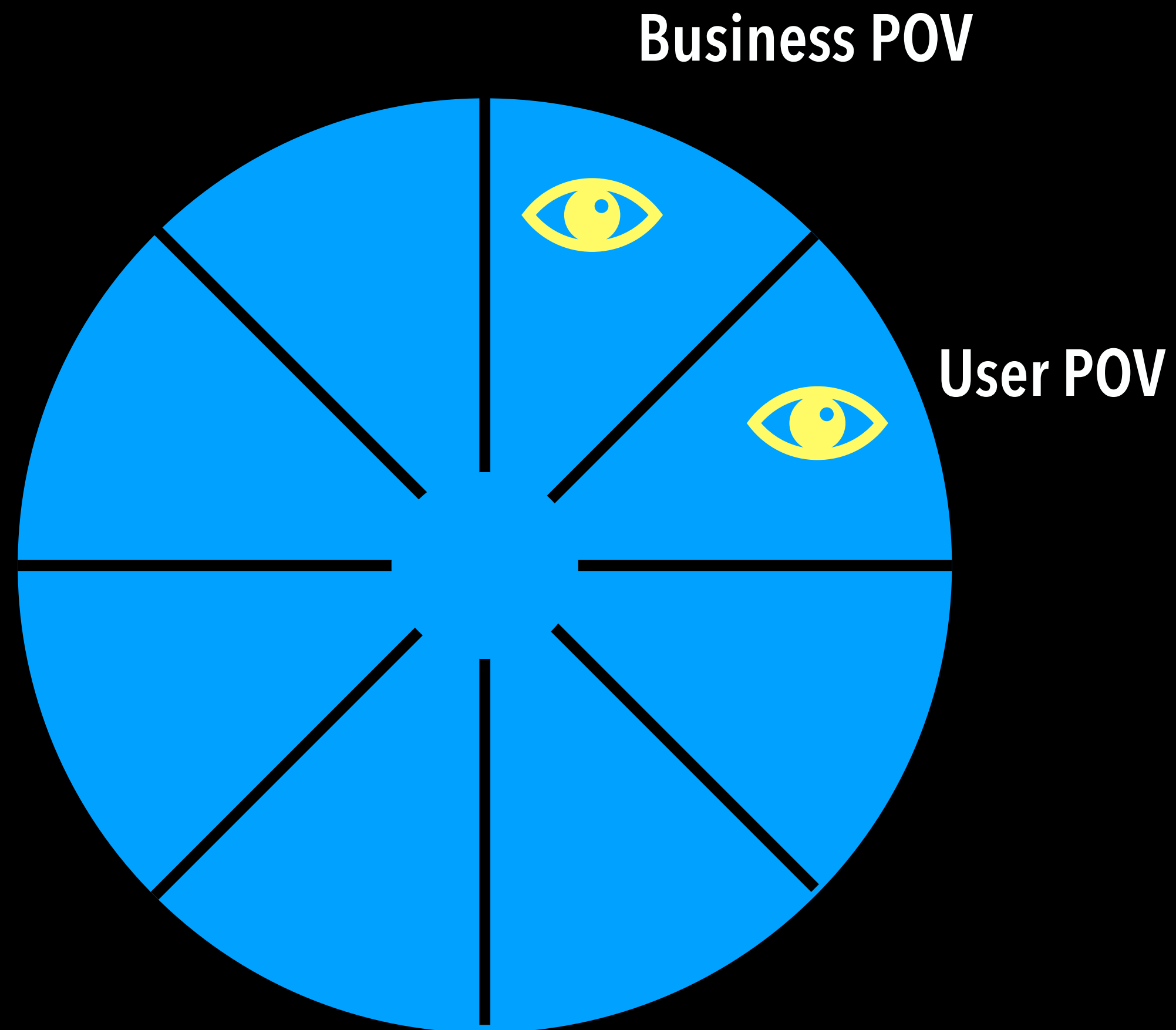
The different POVs

Points of View - POV

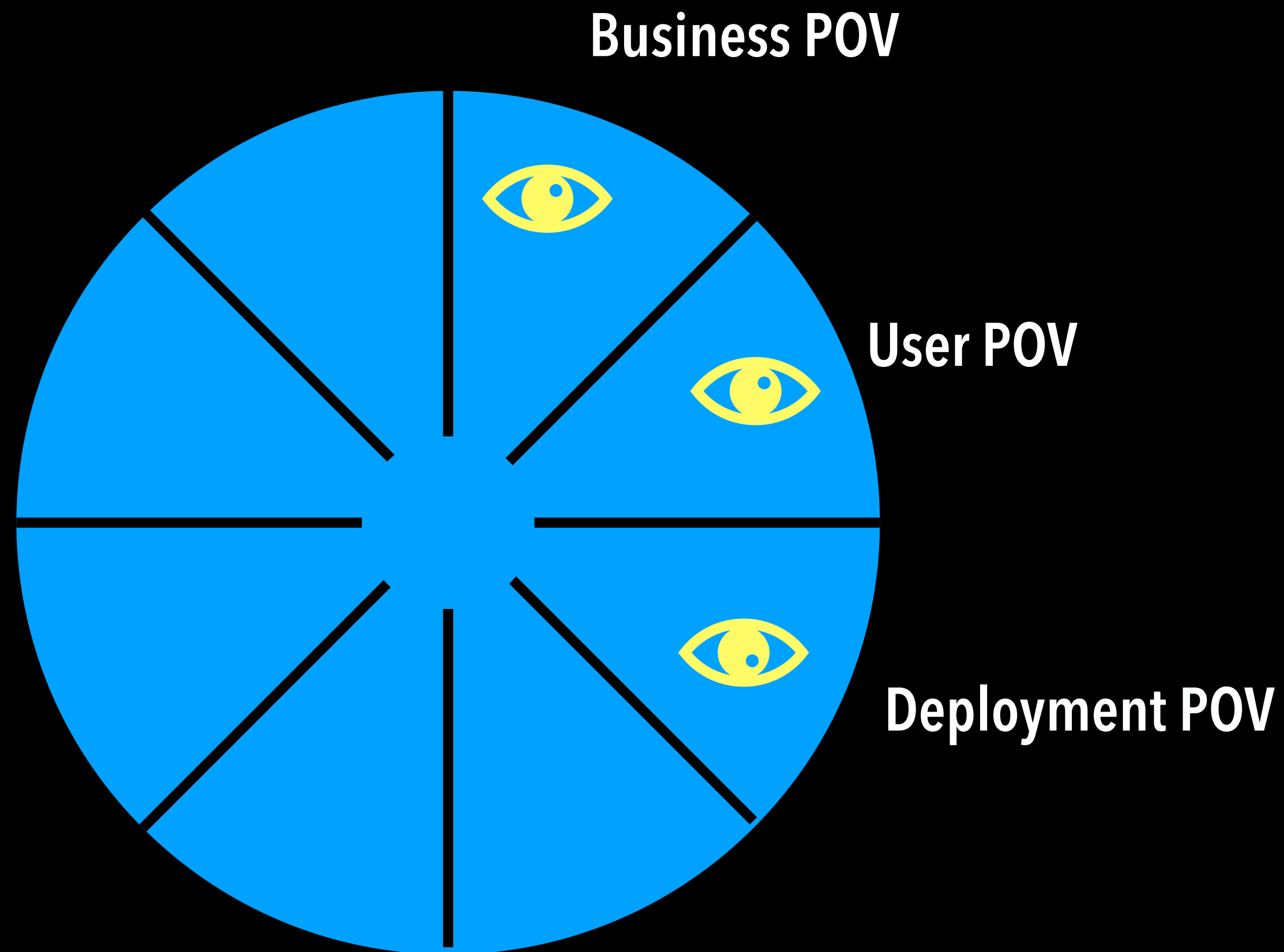
Business POV



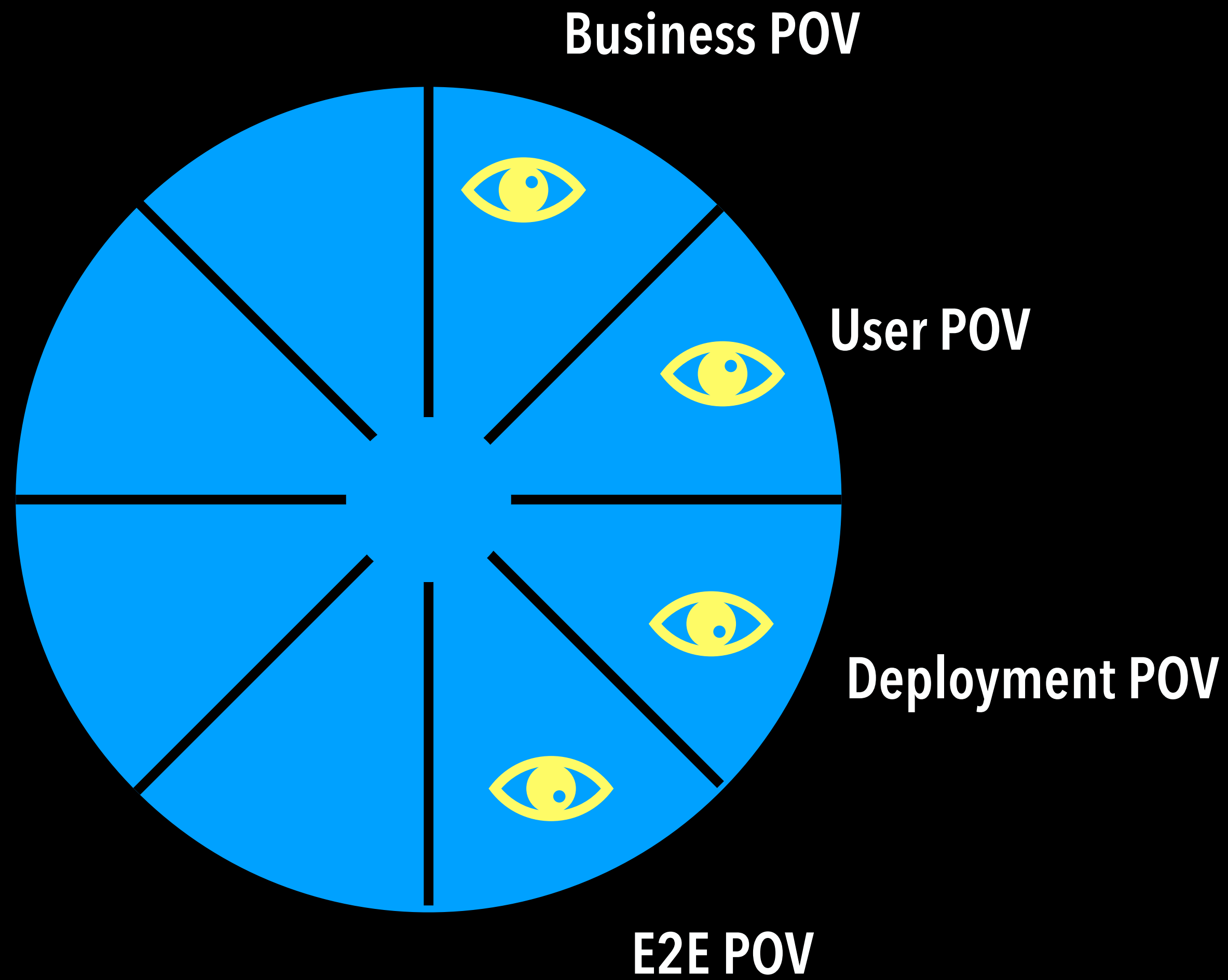
Points of View - POV



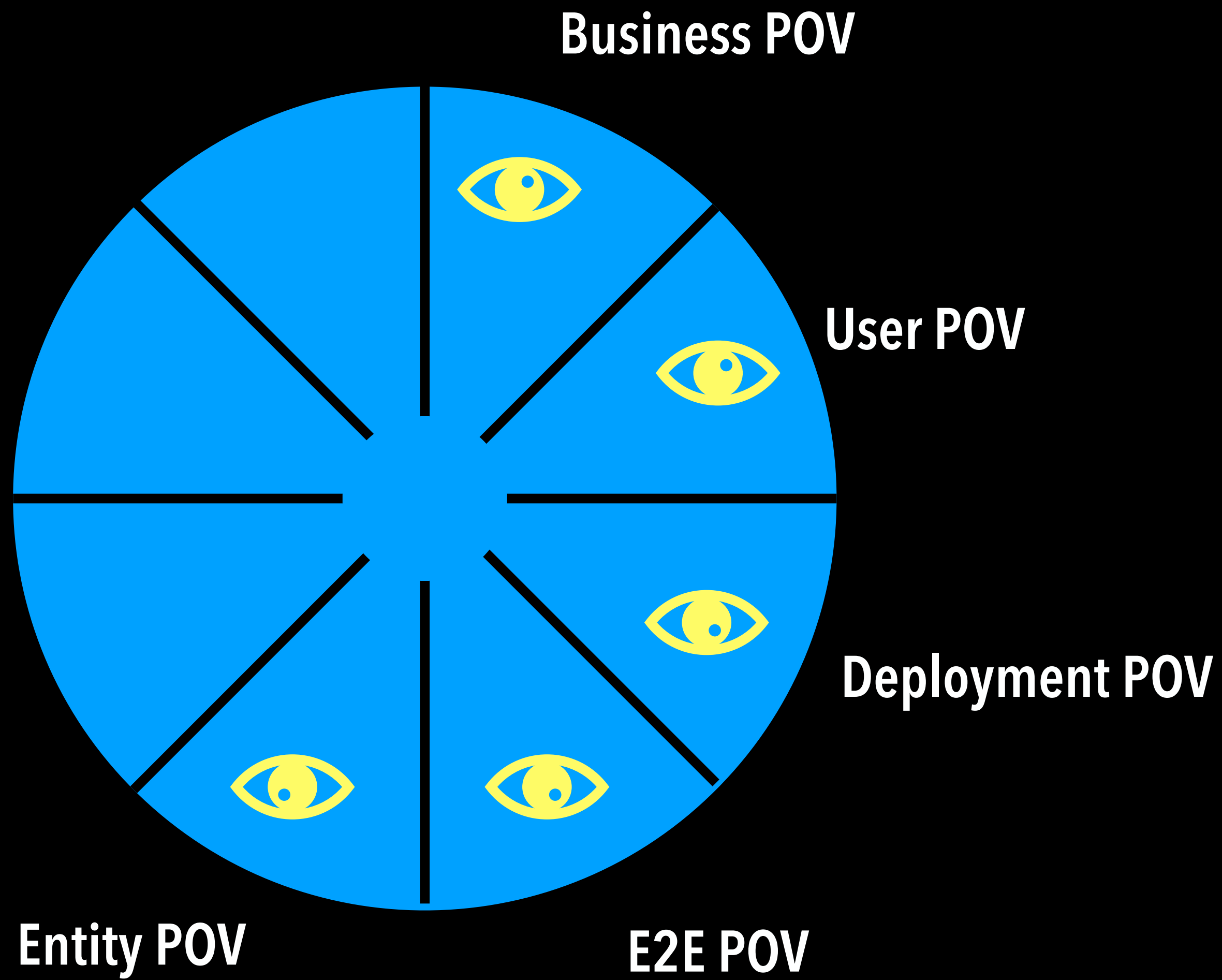
Points of View - POV



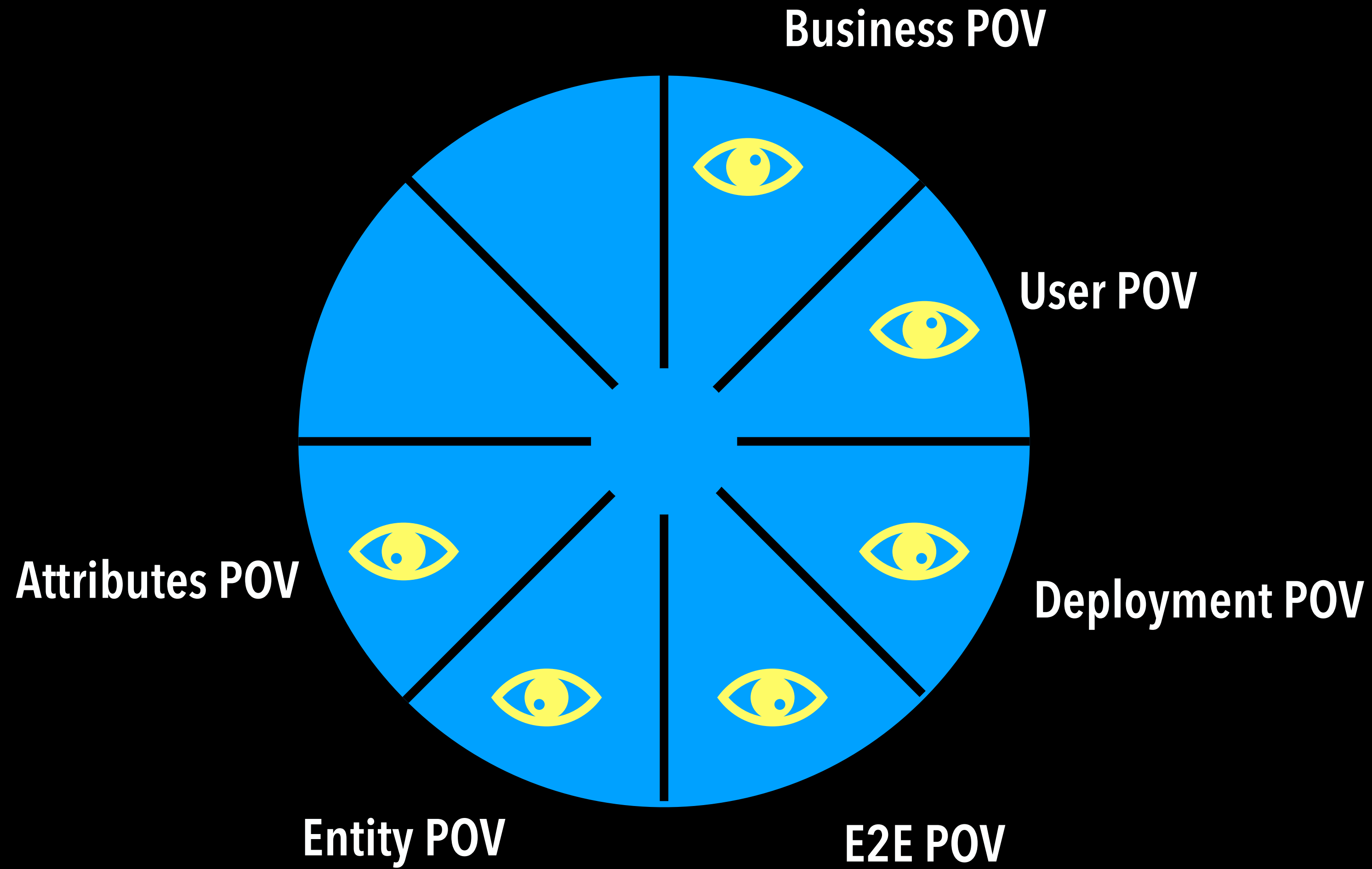
Points of View - POV



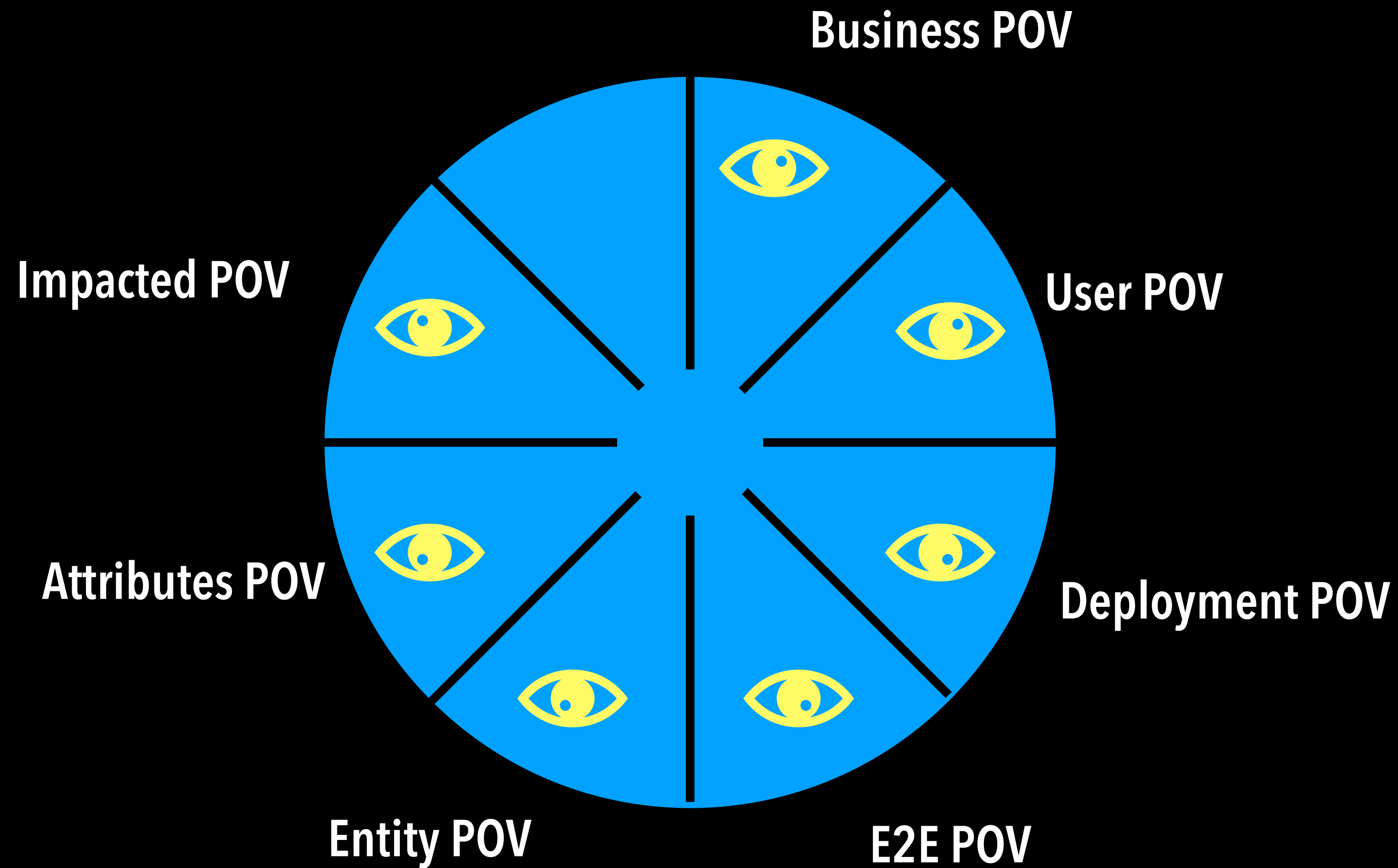
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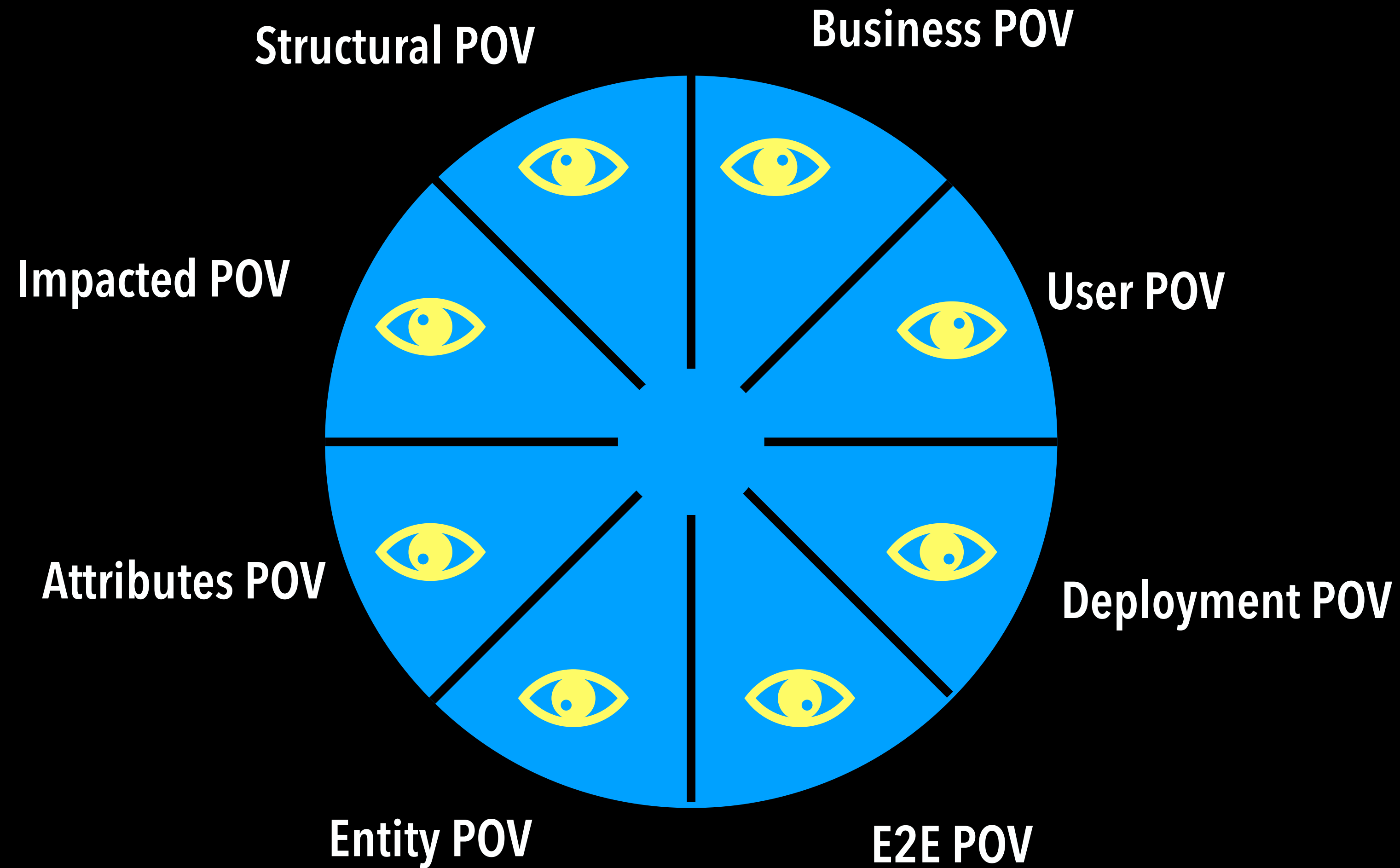
Points of View - POV



Points of View - POV



Points of View - POV



Connecting questions & Quality levels

L9 End user value

What is the business benefit expected? Different marketplaces different different value?
Value comparison with our competitors?

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Upgrades from what previous version(s)? Deployment modes (e.g. cloud-on-prem, public)

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What attributes are key? Clear about what to meet? Understand tradeoffs? Benchmark with competition?
What is the usage profile? How will usage grow over time? Multilingual? ..

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How is all bolted together? How are exceptions/errors handled?

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L2 Interface correctness

What are various types of interface? What are various data formats? Any specific data ordering/relationships?

Connecting questions & Quality levels

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L1 Input correctness

What types of data? What limits/boundaries?

Shift left-ing

Shift left-ing

REQ	DEV				TEST(QA)				
	L1	L2	L3	L4	L5	L6	L7	L8	L9



SHIFT left to question and know better
SHIFT left to prevent
SHIFT left to ideate easier evaluation
SHIFT left to detect early

Shift left-ing

REQ	DEV				TEST(QA)				
	L1	L2	L3	L4	L5	L6	L7	L8	L9

QUESTION to ensure clarity
Who, What, Where, How-much
Which, How much, How
QUESTION to ideate risk/issues

Clear about attributes?
Clear about behaviour conditions?
Clear about acceptance criteria?
Dig into impact of interactions



SHIFT left to question and know better
SHIFT left to prevent
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Shift left-ing

REQ	DEV				TEST(QA)				
	L1	L2	L3	L4	L5	L6	L7	L8	L9

QUESTION to ensure clarity
 Who, What, Where, How-much
 Which, How much, How
 QUESTION to ideate risk/issues

DIG into IMPLEMENTATION
 to identify interesting issues
 IDEATE on testability

Clear about attributes?
 Clear about behaviour conditions?
 Clear about acceptance criteria?
 Dig into impact of interactions

Be sensitive to attributes
 Do easy tests to check for

- performance, load, volume
- scaling, migration, compatibility



SHIFT left to question and know better
 SHIFT left to prevent
 SHIFT left to ideate easier evaluation
 SHIFT left to detect early

Thank you.



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SmartQA