

Journey to the cloud- a Re-architecting Story



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74%

Of Organizations Fail to Complete Legacy
System Modernization Projects

WHERE WE COME FROM - BUSINESS LENS



Presenting

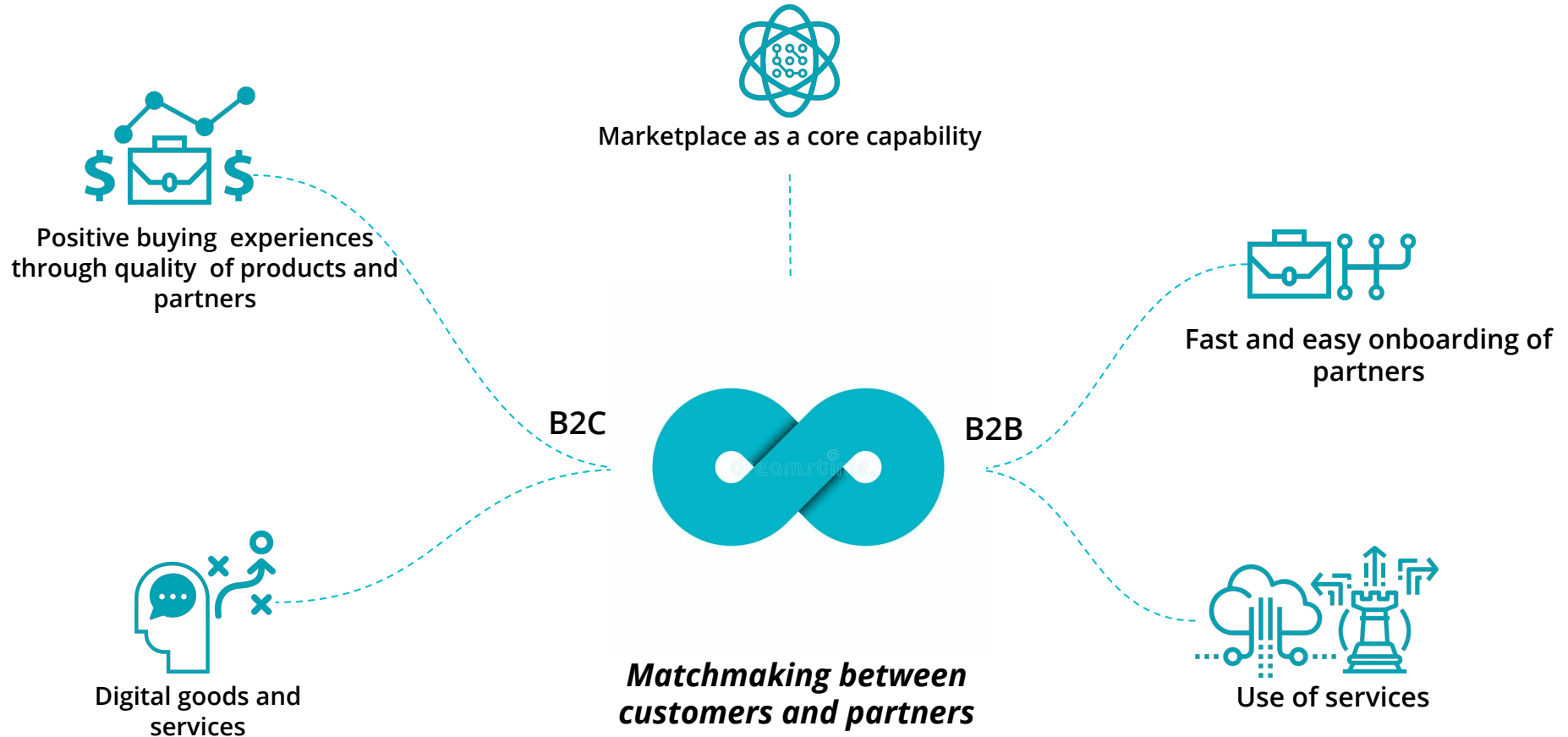
Payment
Handling

Logistics

Disposition

Purchasing

THE ASPIRATION - BUSINESS STRATEGY



WHERE WE COME FROM -TECHNICAL LENS

Modern microservices approach in AWS



www.otto.de webshop

15 teams -
~150 people

1 big J2EE
Monolith

2 month
release cycle

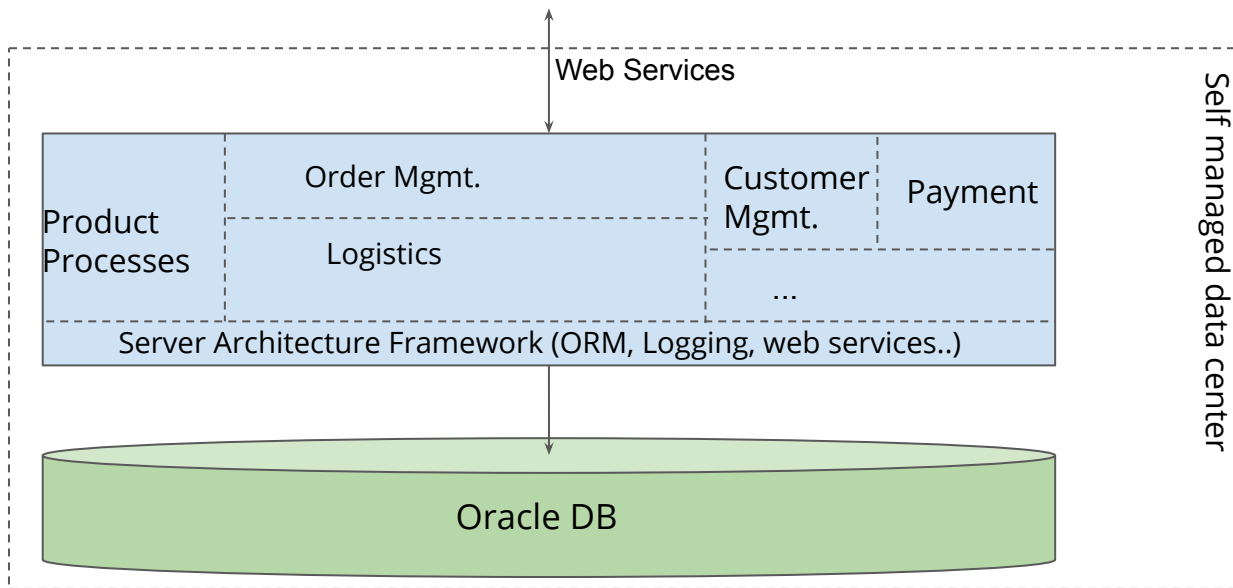
Extra Testing
team

Separated
operations

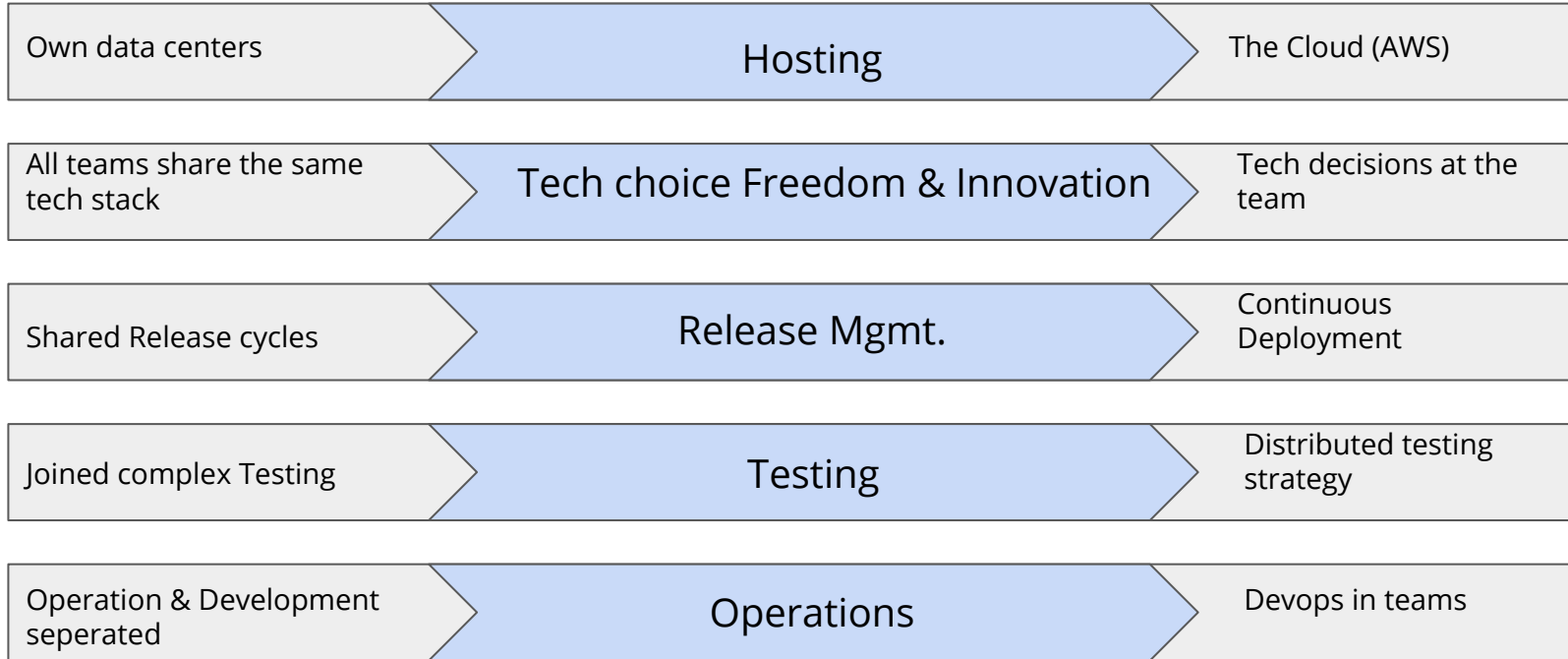
Entangled
architecture

Misaligned
Horizontal
teams

Unresponsiv
e & hard to
change



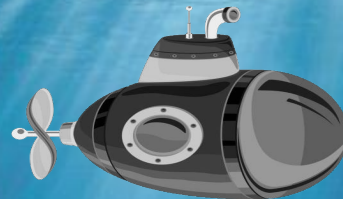
THE VISION



THE TRANSFORMATION JOURNEY

**Pre
Project**

Mar 18
-
Jun 18



1 team
9 people

MVP

Jul 18
-
Feb 19



3/6 teams
~ 24 / 52
people

**Ready
To Scale**

Mar 19
-
Dec 19



~ 10 teams
~ 90 people

**Growing
Bigger**

Jan 20
-
Dec 20



~ 25 teams
~ 220 people

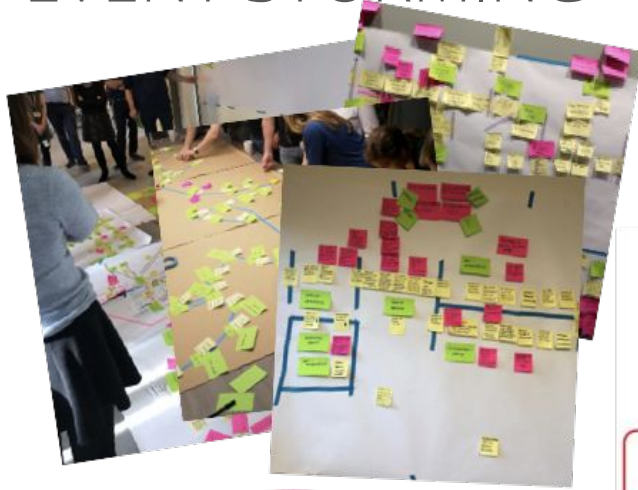
PRE PROJECT

- ⚓ Know thy business, know thy goals
- ⚓ Guard rails for “Tech Governance”
- ⚓ Cross functional team capability & ways of working blueprint
- ⚓ Transformation strategy - First Key decisions



KNOW THY BUSINESS, KNOW THY GOALS

EVENT STORMING

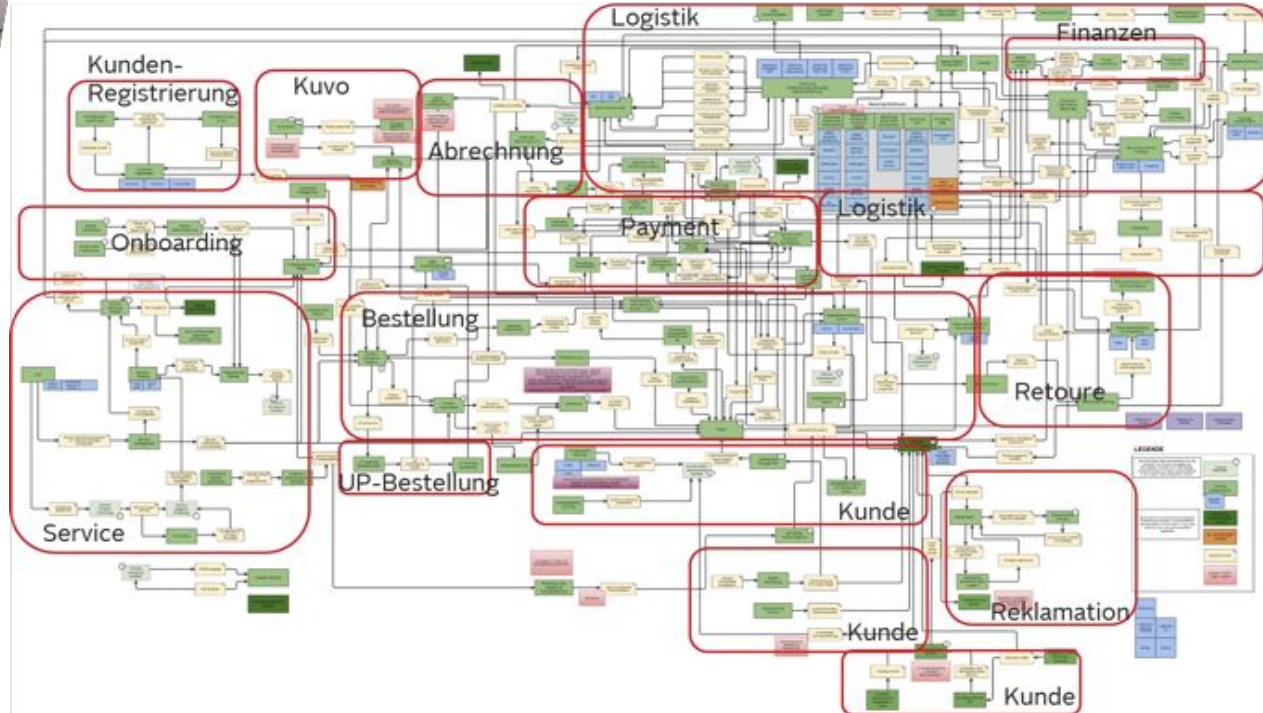


~ 30
colleagues in
three teams

3 days

1 Scenario:
Order 2 Cash

2 days
consolidation



FOUNDATION OF TECH GOVERNANCE - TECHNICAL MANIFEST

THE TECHNICAL MANIFEST

Values

Tech follows Business

Move fast, Fail fast

Low Technical Barriers

Coverage of non functional aspects

Full ownership and clear responsibility

Principles

Bounded Contexts & Vertical Systems

Non Blocking Communication

Cloud Native

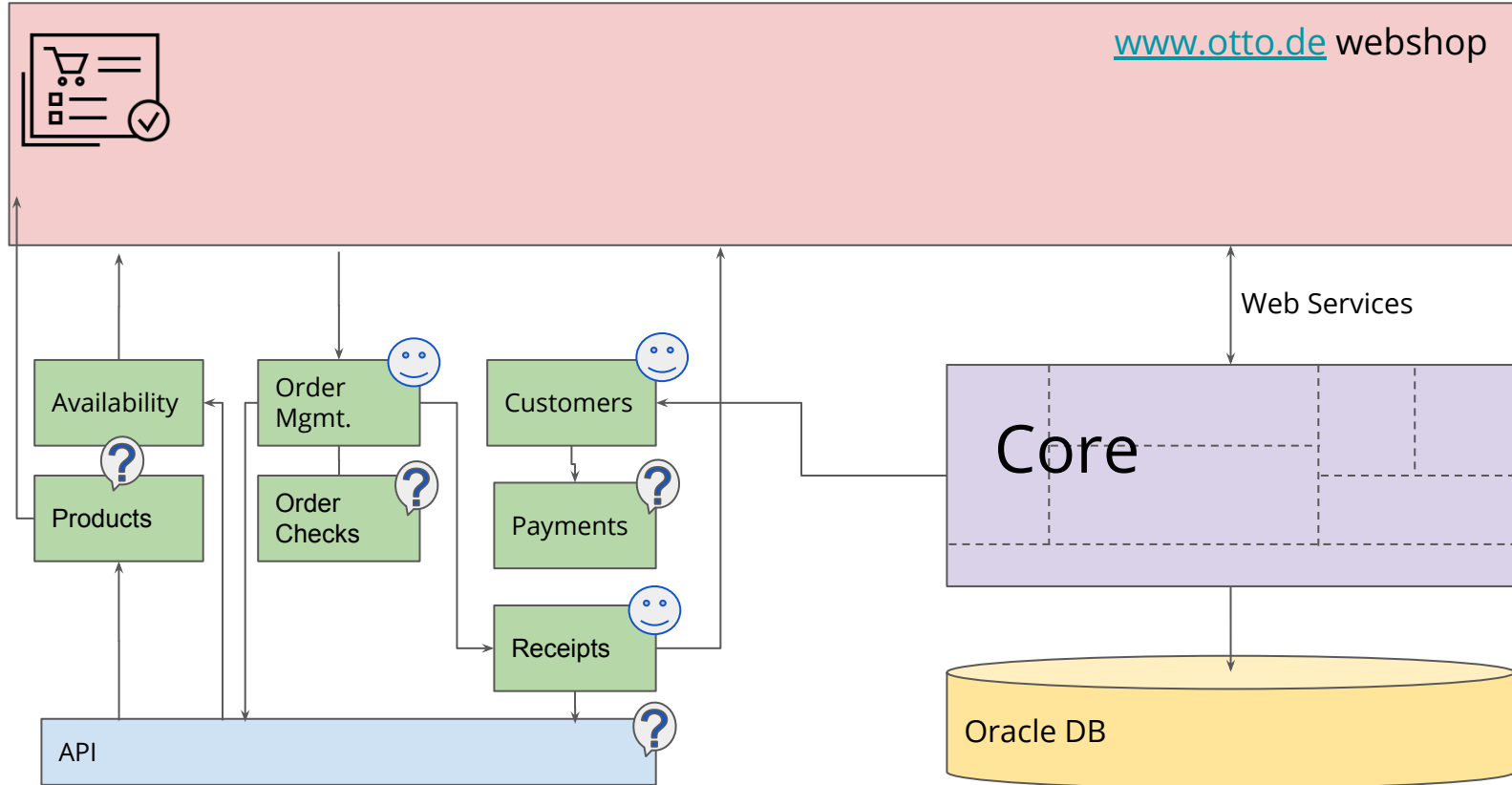
Scale Horizontally

Continuous Delivery and Deployment

Security First

BOOTSTRAPPING TRANSFORMATION STRATEGY WITH UNKNOWNNS

TRANSFORMATION STRATEGY - FIRST KEY DECISIONS



MVP

- ⚓ Thin slice of business value
- ⚓ Autonomous team composition & Aligned ways of working
- ⚓ Scaling with more teams
- ⚓ Operationalising Platform strategy
- ⚓ Bootstrap “Communities of Practice”



ALWAYS RATIONALISE THE TRADEOFFS

Most negotiable

Least negotiable

Cost

Developer Experience

Time to market

Reusability

Feature Scope

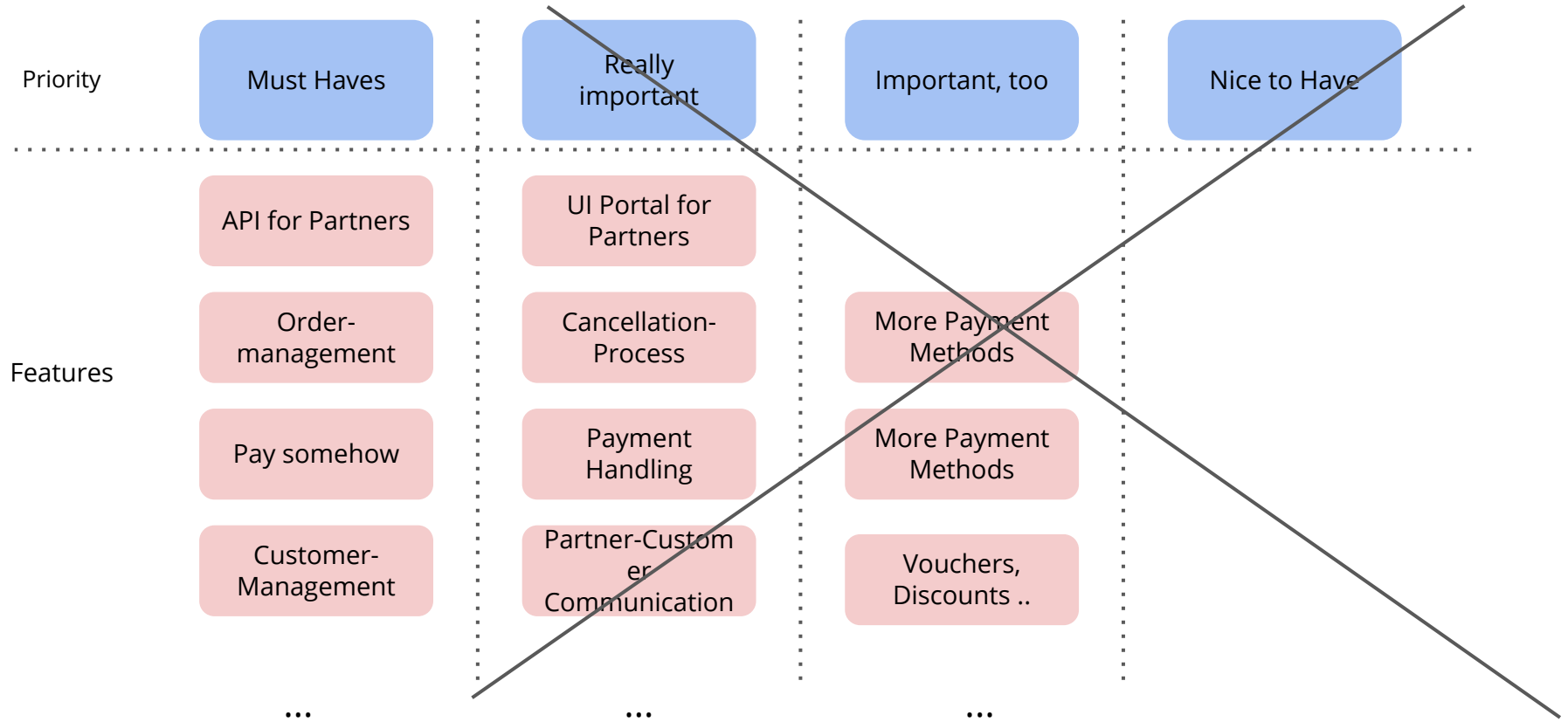


BUILD TRUST FAST WITH THIN SLICE APPROACH

HOW TO ARRIVE AT THIN SLICE ?

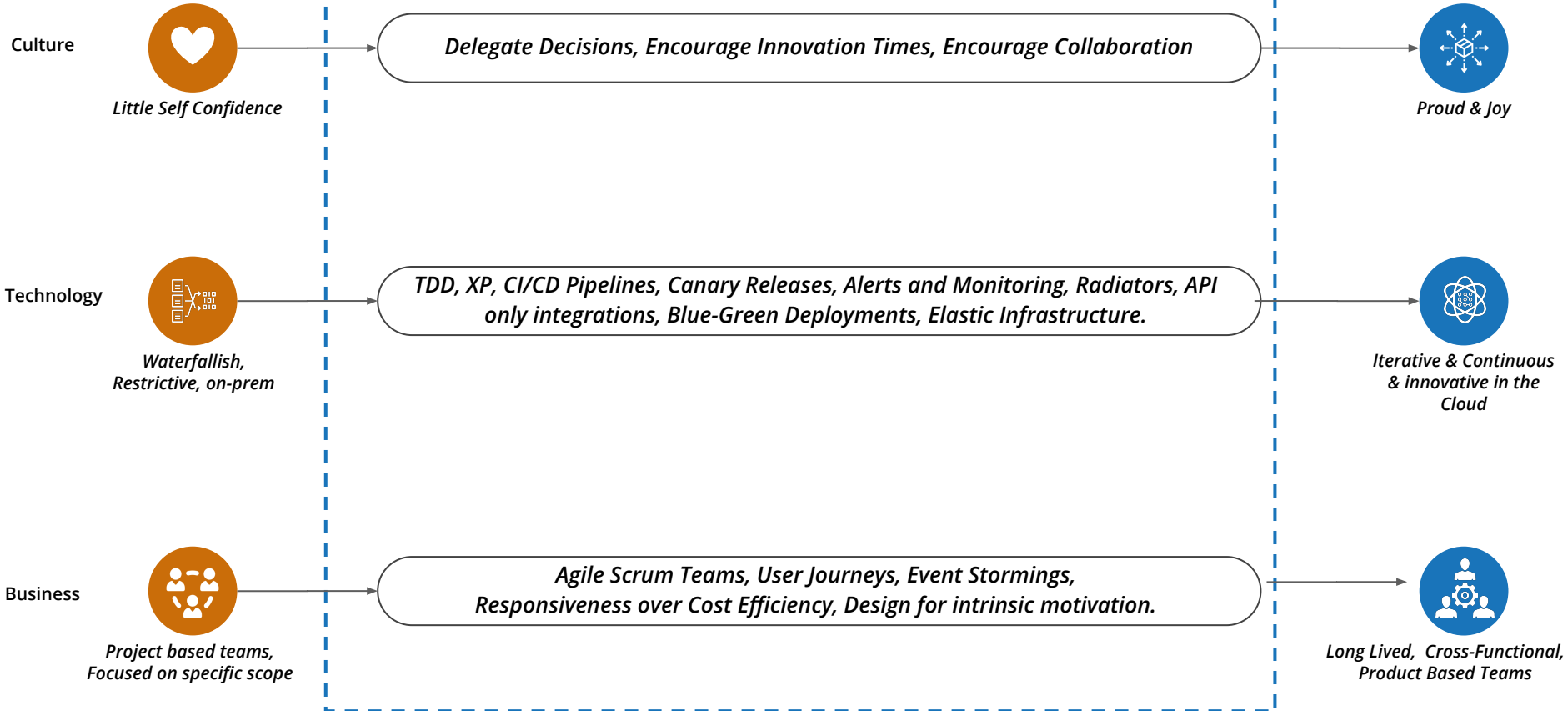
Priority	Must Haves	Really important	Important, too	Nice to Have
Features	API for Partners	UI Portal for Partners		
	Order-management	Cancellation-Process	More Payment Methods	
	Pay somehow	Payment Handling	More Payment Methods	
	Customer-Management	Partner-Customer Communication	Vouchers, Discounts ..	
	

HOW TO ARRIVE AT THIN SLICE ?



TECH TRANSFORMATION AS AN ENABLER FOR ORG TRANSFORMATION

LEGACY TRANSFORMATION



BALANCING BOTH THE WORLDS

Optimal Team setup -
domain knowledge & Tech
excellence



Right people for the right
job

Business continuity

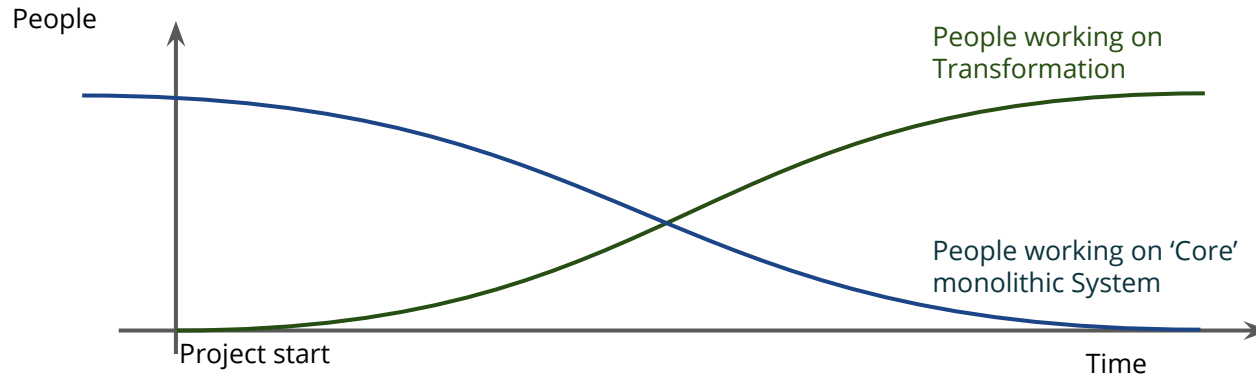


Don't treat it as an IT
Project

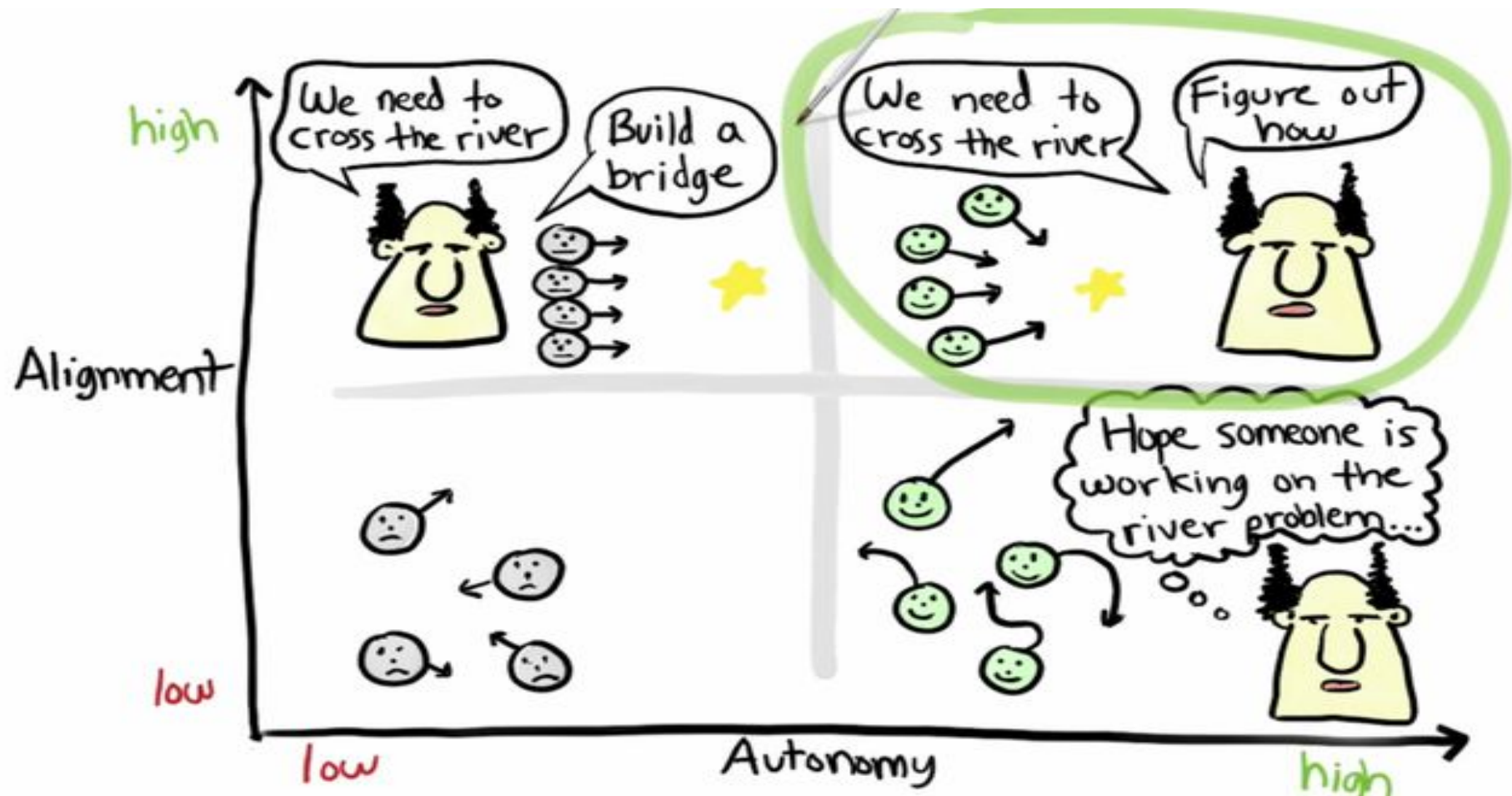
People Aspiration &
Motivation



Communication is key

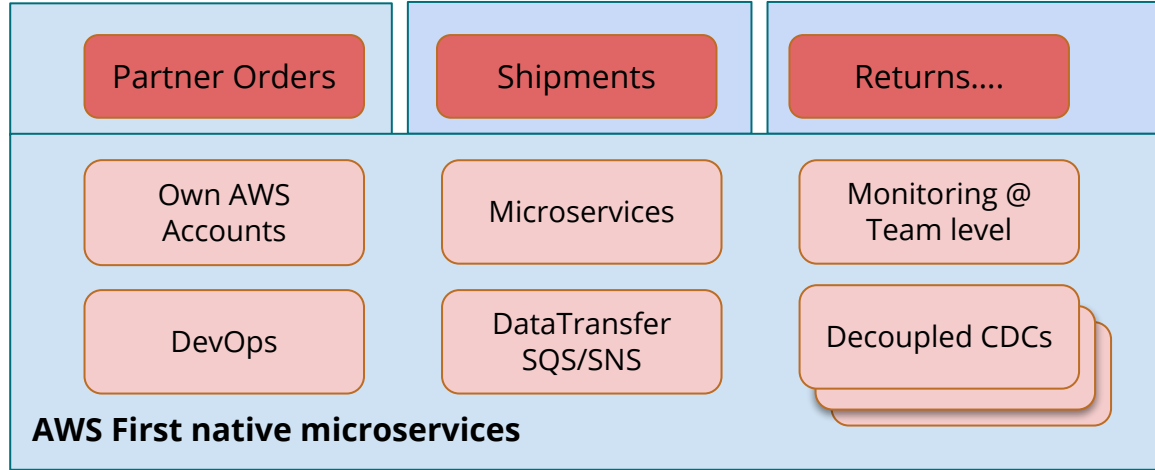


A DECENTRALIZED TECH STRATEGY!
AKA NO STRATEGY?



OTTO MARKETPLACE GOVERNANCE & TECH OVERVIEW

Product Team Responsibilities



Security Belt

Go-live checklists

Peer reviews

Tech Manifest for governance

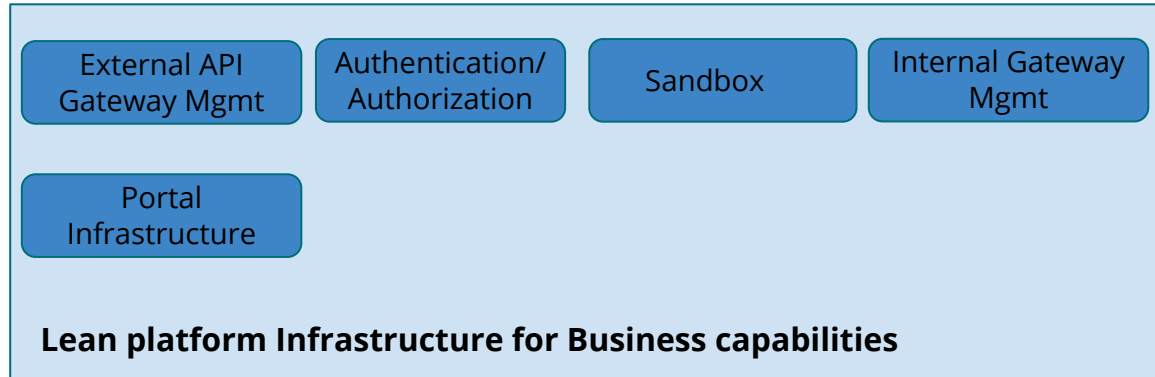
Aligned Test strategy

API Guidelines

Guilds for cross pollination

Disaster Recovery drills

Lean platform Team



READY TO SCALE

- ⚓ Evolving Domains and course correction
- ⚓ Establish DeepSea TechRadar & sensible defaults
- ⚓ Establishing Cloud governance
- ⚓ Establishing architecture governance board
- ⚓ Team view to Overarching Observability
- ⚓ Establishing overarching Non functional requirements
- ⚓ Scaling with right talent



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Bigger**

Jan 20
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Dec 20

~~ALWAYS RATIONALISE THE~~ TRADEOFFS ARE EVOLVING

Most negotiable

Least negotiable

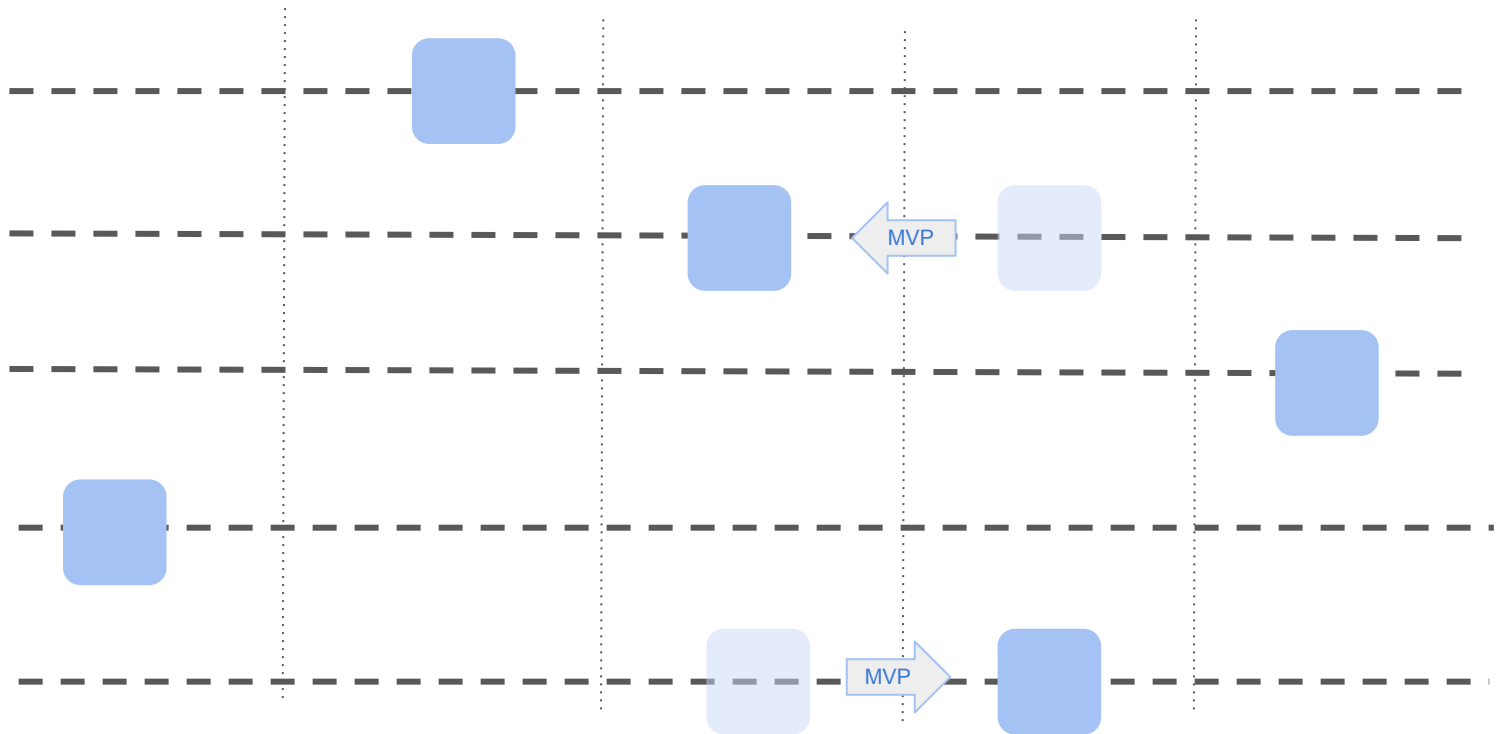
Cost

Developer Experience

Time to market

Reusability

Consistency &
Maintainability



EVOLUTION OF TECH GOVERNANCE

OTTO SENSIBLE DEFAULTS & TECH RADAR

BUILD YOUR OWN RADAR

Techniques

Tools

Platforms

**Languages &
Frameworks**

OTTO ARCHITECTURE GOVERNANCE BOARD

Architecture Principles & Values	Tech Radar & sensible defaults	Decentralised Task force oriented workgroups for cross cutting issues
Decentralised cross department representation	Lightweight RFC based approach to decision making	A place where Tech and business stakeholders align - Monthly cadence

MANAGE CLOUD GOVERNANCE AT SCALE



Team Monitored cost
& Consolidated Billing

Org Config Rules

Org IAM Roles +
Single Sign On

Cloudtrail

REACTIVE SYSTEMS ALSO NEED OVERARCHING
OBSERVABILITY

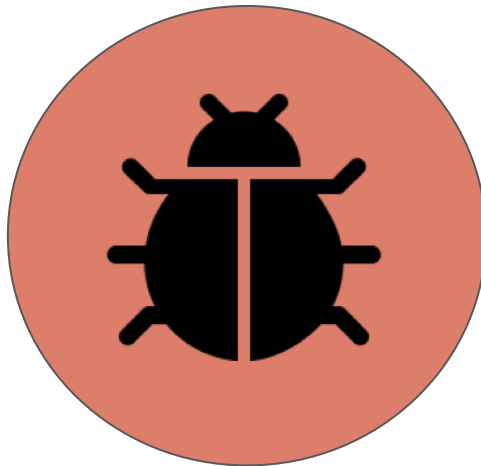
Network Failures

Failures are inevitable

False sense of “Eventual
consistency”



AUDITABILITY



DEBUGGABILITY

Open Tracing

Business monitoring
with Splunk

DEFINE & SOCIALIZE OVERARCHING CROSS FUNCTIONAL
REQUIREMENTS

CROSS FUNCTIONAL REQS. ONE PAGER

X-Team Non-Functional-Requirements for OTTO Marketplace



Scalability

Requirement	12/19	12/20	12/22
Partners	100	2000	9000
Partner Products	10.000	5.000.000	15.000.000
Partner Orders	1.000	10.000	100.000
Users	7.4 M	7.8 M	10 M



Performance

Requirement	12/19	12/20	12/22
Event Propagation*	5 min	3min	3min
API latency (90th percentile)*	50ms	40ms	40ms



Resilience

Requirement	Goal
Single Service Outage	No Customer/Partner Impact
Data Loss	Recovery within 2 hours
Major Outage	Recovery within 4 hours
Availability*	99.9%
DDoS (Partner API/Apps)	Service remains available



Security

Requirement	Goal
All Services fulfil requirements	Cloud Security Badge Cloud Ready Badge (see Security Dojo)

Socialize in
community forums

Teams derive their
own targets

Teams project
metrics with
dashboards

PEOPLE ENABLEMENT CAN BE A DEAL BREAKER

TOP INITIATIVES



EXPANDING BEYOND A SINGLE DEPARTMENT

- ⚓ Diversifying cloud strategy (AWS + GCP)
- ⚓ Aligning transformation strategy across departments
- ⚓ Establishing Business goals & shooters across departments

*A Transformation Journey is a long road to walk.
More Information about that next time!*



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The background is an underwater scene with a deep blue color palette. Sunlight rays are visible, streaming down from the surface in the upper right quadrant, creating a sense of depth and light. The water surface is visible at the top, with ripples and light reflecting off it.

THANKS
Q&A