



Seeding and Growing Large Scale Cloud Transformation

Heiko Schüßler, SAP
Dirk Lehmann, SAP

PUBLIC



DevOpsCon

About us



**Dirk
Lehmann**

- Cloud Quality Coach
- With SAP since 2001
- Implemented first daily delivery at SAP
- DevOps Evangelist
- Does talks...just like this one
- Co-Organizer DevOpsDays Zurich

 @doergn



**Heiko
Schüßler**

- Head of Cloud Quality Coaching
- ~ 20 years of consulting experience
- Ambassador for Built-in Quality
- Grows Cloud Quality Coaching Model @ SAP

 @_heikoS

The times they are a changing



Mainframe & PCs



Client Server & Internet



Cloud, Mobile & Big Data



Intelligent Technologies

ENABLING TECHNOLOGIES

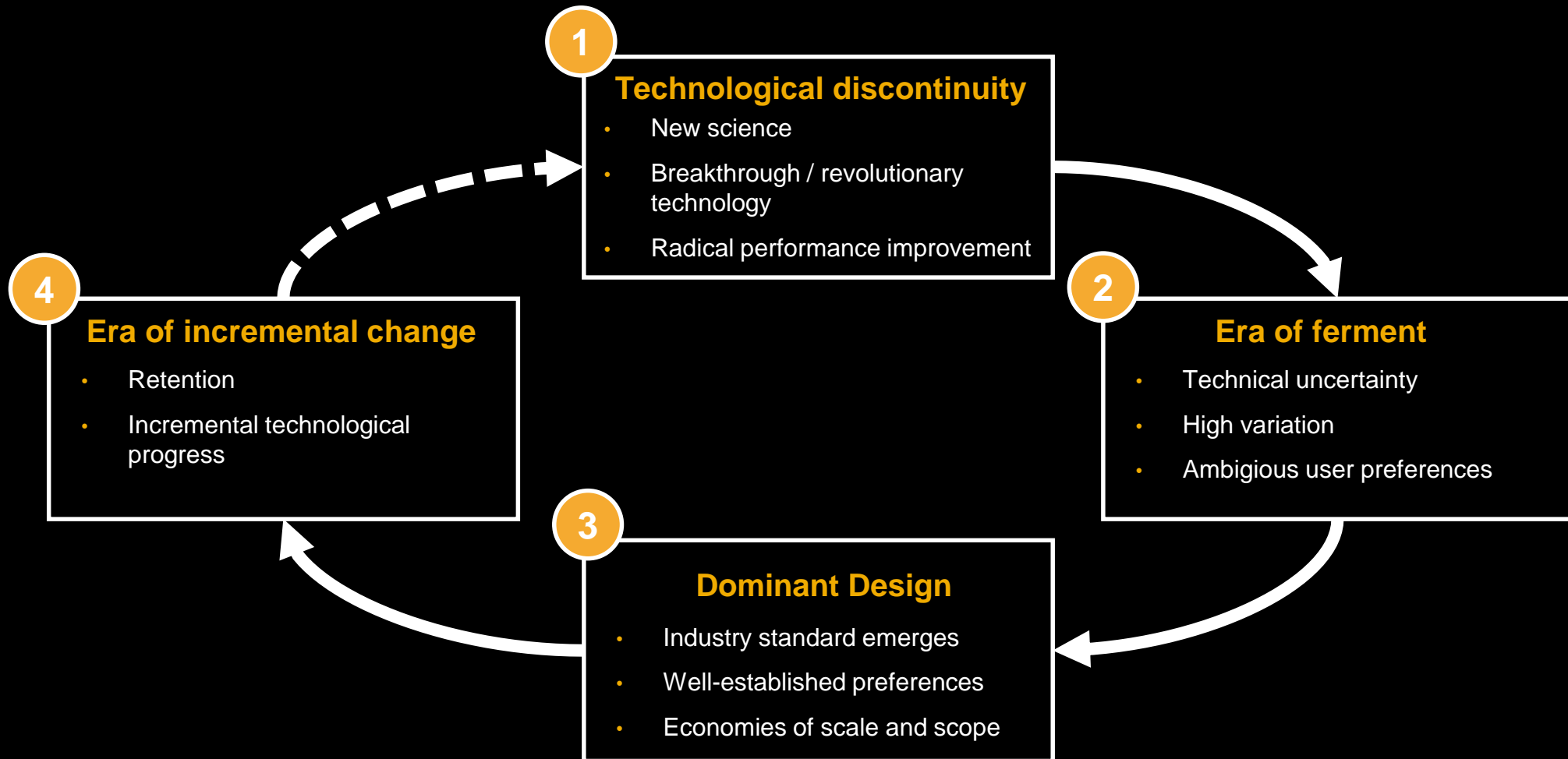
- Transistors & silicon revolution
- Large scale Mainframe Computing adoption
- Emergence of PC's
- Plant floor automation

- Widespread PC adoption
- Broadband Internet
- ERP and business process technologies

- Mobile & Smartphone ubiquity
- Cloud Computing
- Social Networks
- Big Data

- Machine Learning & Artificial Intelligence
- IoT & Distributed computing
- Blockchain

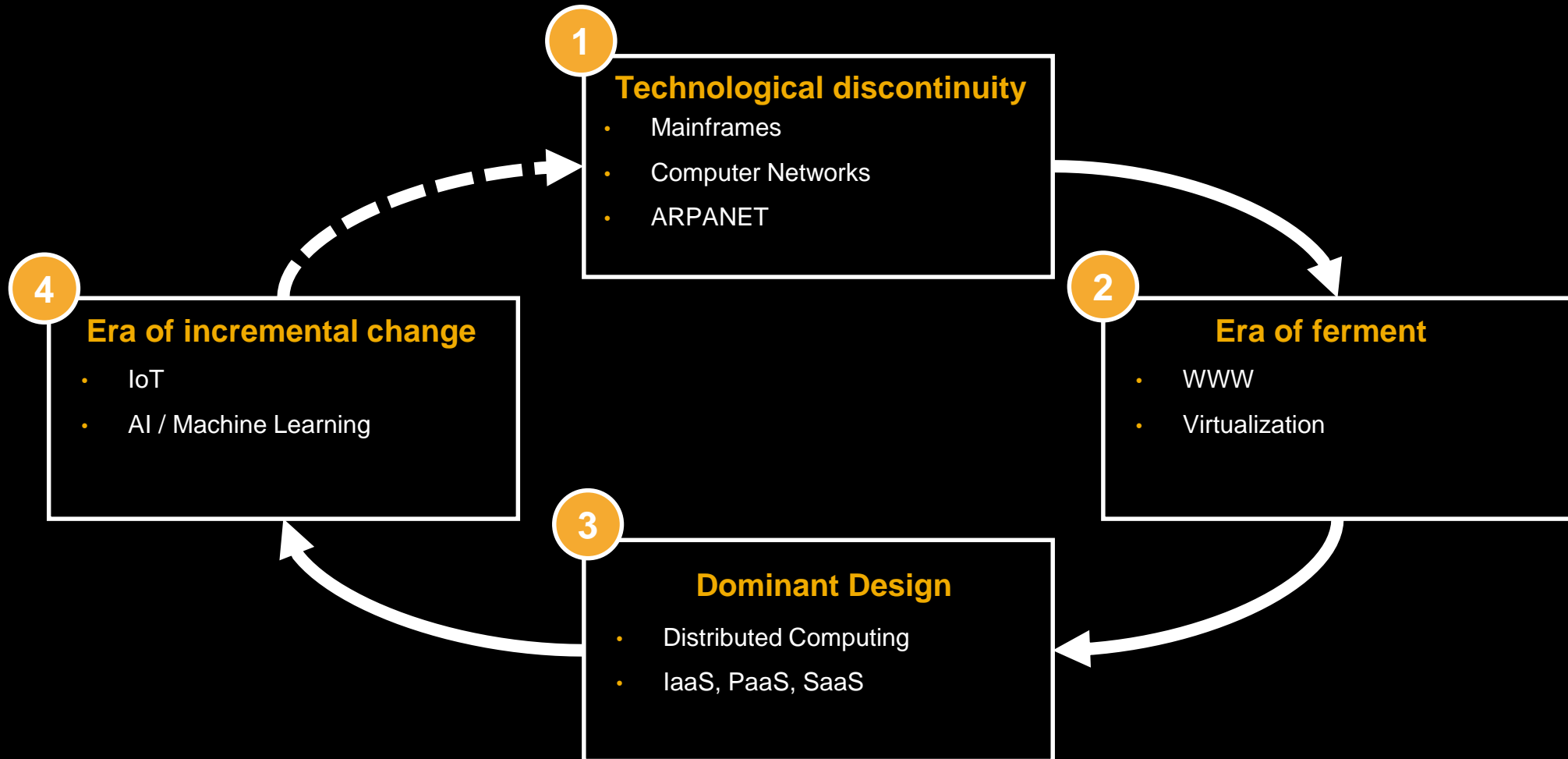
Disruption follows a plan



<https://www.teialehrbuch.de/Kostenlose-Kurse/Technologiemanagement/23044-Lebenszyklus-von-Technologien.html>

M Tushman, J Murmann, Dominant Designs, Technology Cycles, and Organization Outcomes; Academy of Management Proceedings 1998

Disruption follows a plan – Cloud Computing

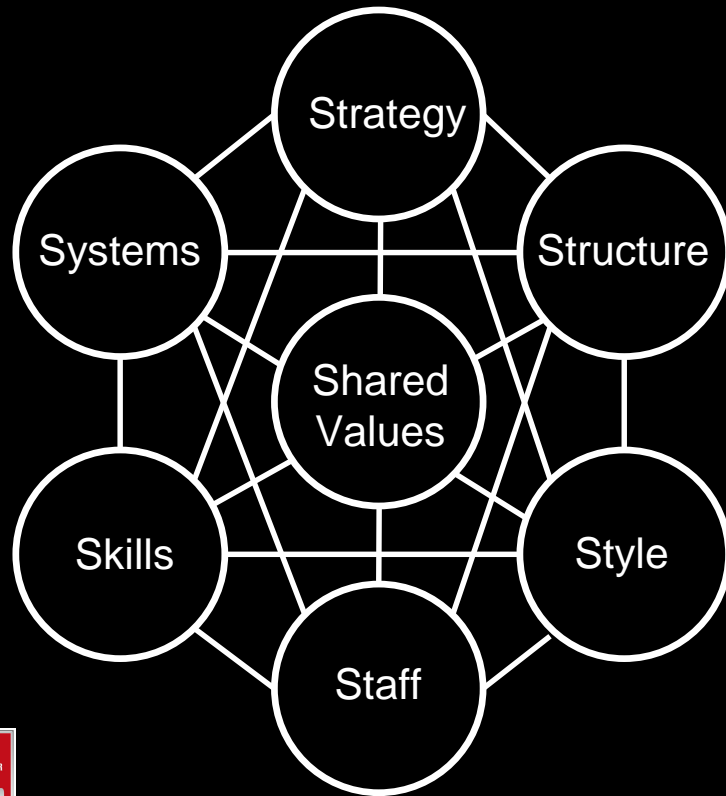


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Transformation

The 7-S Framework

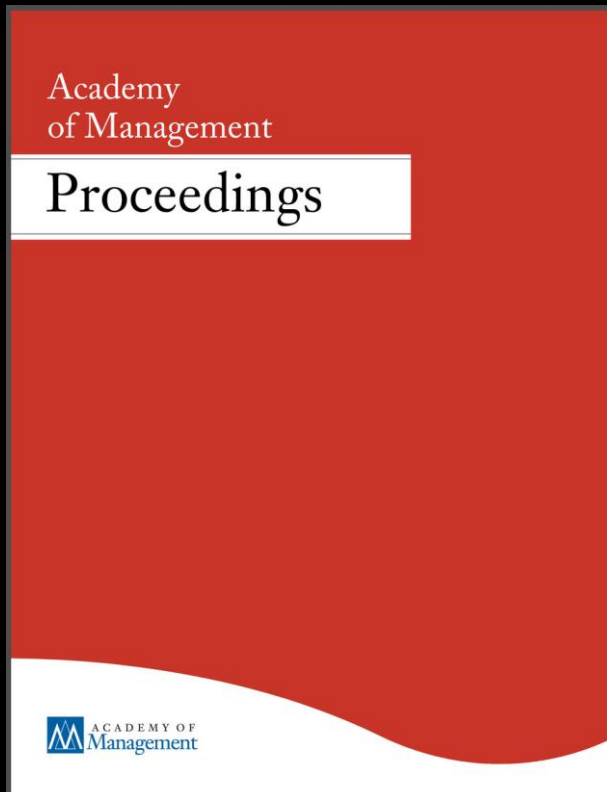


Source: McKinsey & Company. (2008). Enduring Ideas: The 7-S Framework.
[online] Available at: http://www.mckinsey.com/insights/strategy/enduring_ideas_the_7-s_framework [Accessed 04 Mar 2018].

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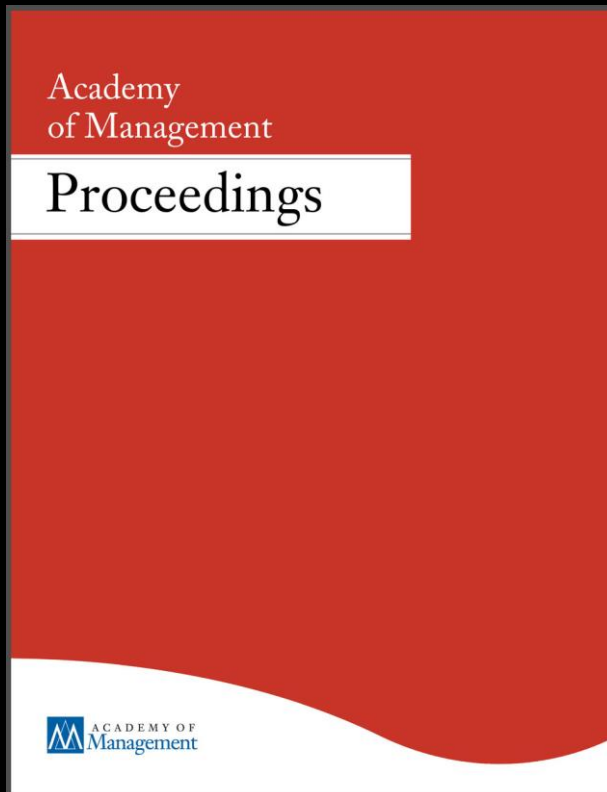
Short recap on management models used

Technology Cycles

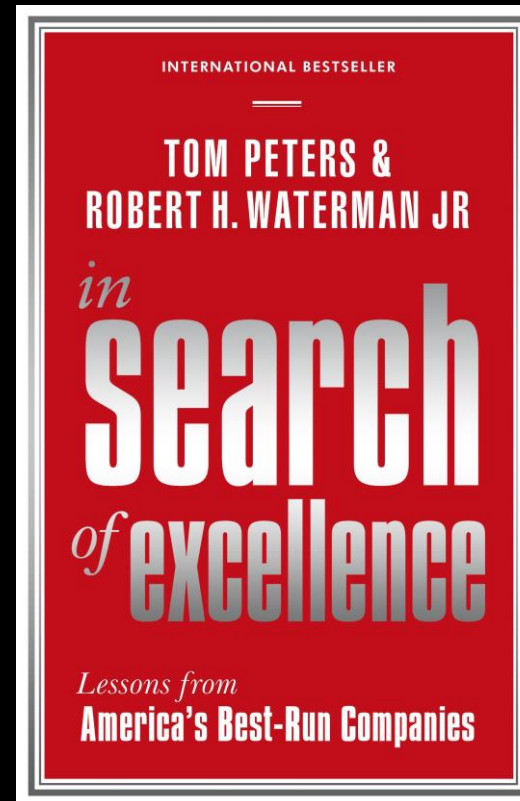


Short recap on management models used

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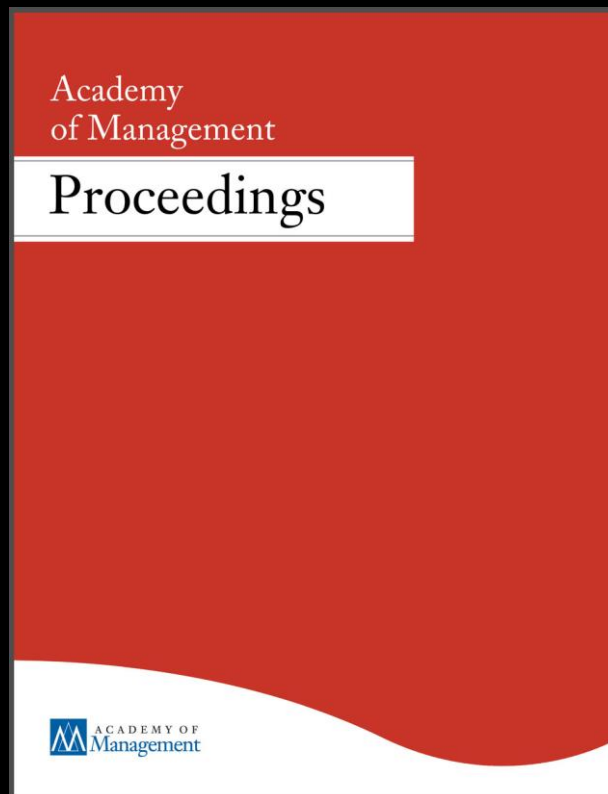


7S - Operational Excellence

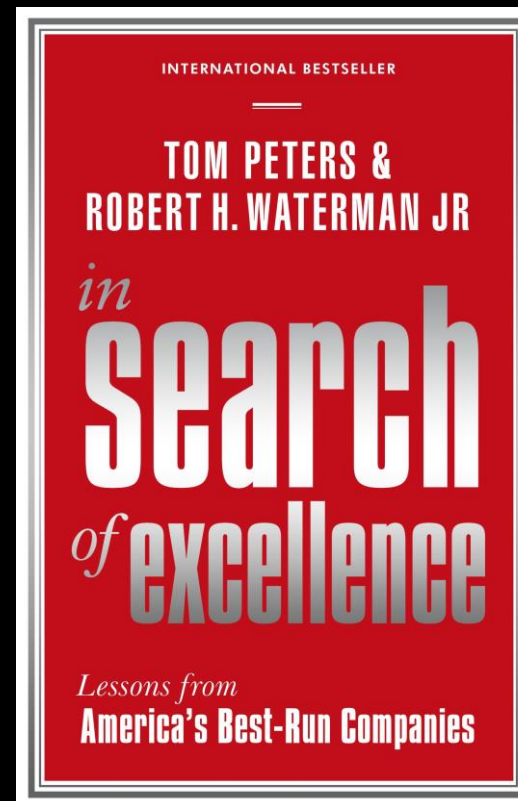


Short recap on management models used

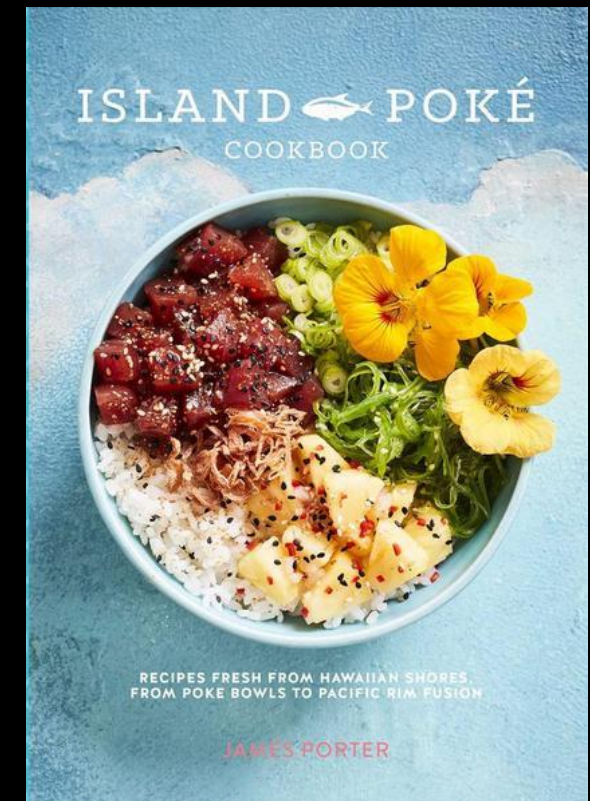
Technology Cycles



7S - Operational Excellence



Hawaiian Poke Recipes

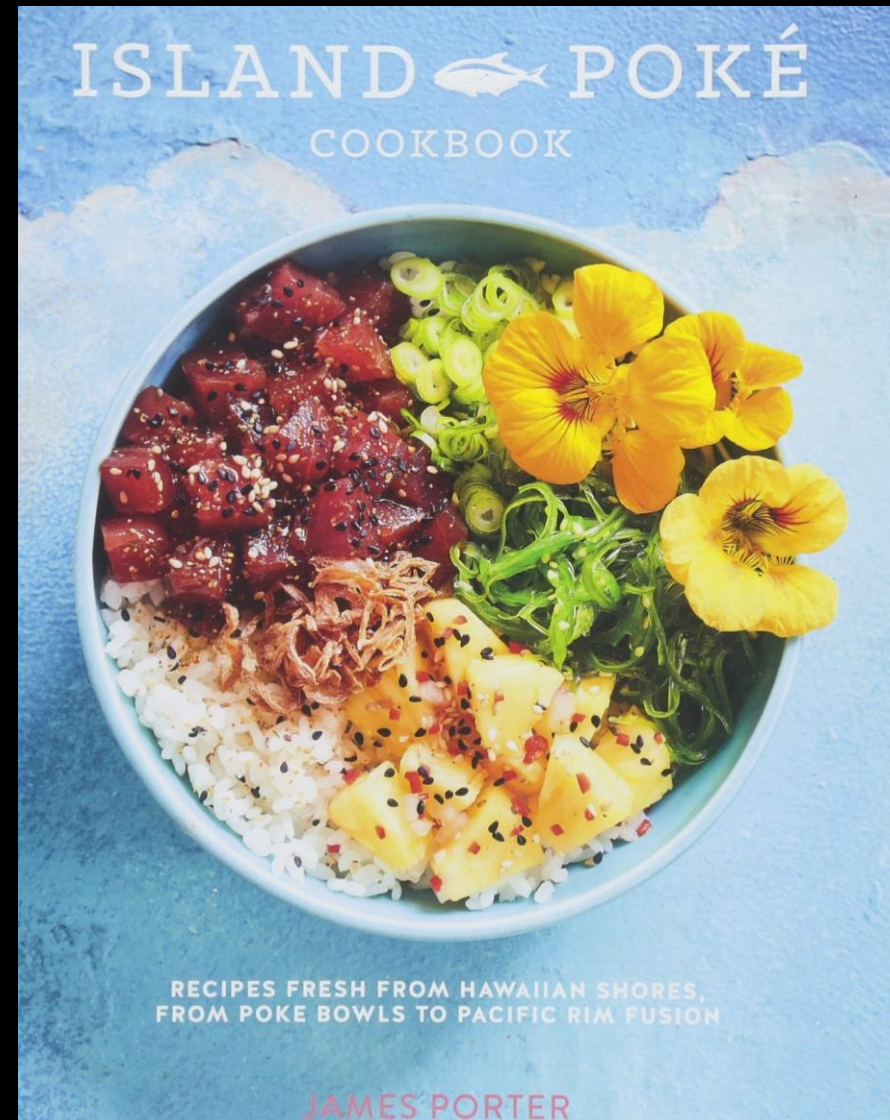


poke noun

po·ke | \,pō-'kā \

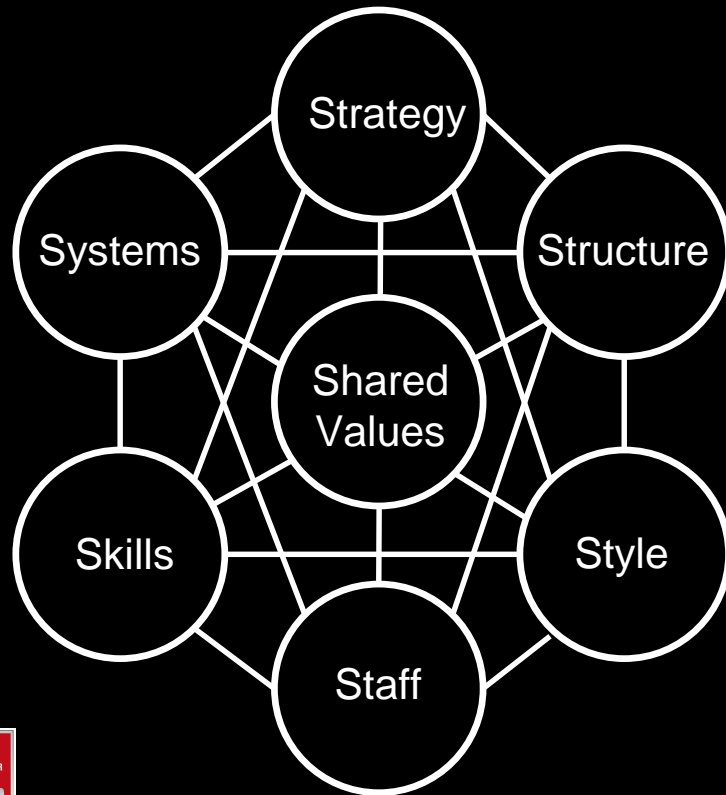
Definition of *poke*:

a Hawaiian salad made typically from cubed pieces of raw seafood (such as tuna) marinated with soy sauce and sesame oil and mixed with onions or other ingredients



Transformation and the Mapping to the Organization

The 7-S Framework



Fields of Transformation



Source: McKinsey & Company. (2008). Enduring Ideas: The 7-S Framework.
[online] Available at: http://www.mckinsey.com/insights/strategy/enduring_ideas_the_7-s_framework [Accessed 04 Mar 2018].

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Quality Management Systems



Quality

- Rigorous, **stage-gated** activities that emphasize quality, security, compliance, etc.
- System needs to adhere to **initial specification**
- Strong focus on **Verification and Validation**
- Evidence to standards through **reviews & audits**
- Sign-offs by **accountable** (often centralized)

Quality Management Systems



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change and variability
=
risk and uncertainty

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=
risk and uncertainty

meets

Agile Software Engineering



- Achieve the ultimate system by **iterations**
- Environment of **continuous learning**
- Building systems in frequent and small batches to confirm or reject the **design hypothesis**
- Strong focus on **customer collaboration**
- Strong **ownership of product teams** and decentralized decision making

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Quality

Three Archetypes of Companies that have Achieved QM Excellence

Quality

Quality management archetype

Quality or bust



... policed for
better quality

Coach driven



...coached for
better quality

System of honor



... self-committed
to quality

Source: The Boston Consulting Group - Quest For Quality Study, 2016

Companies in all Archetypes Follow Certain Best Practices Consistently

Quality

Quality management archetype

	<u>Quality or bust</u>	<u>Coach driven</u>	<u>System of honor</u>
Governance	Test Driven Dev, max. automation, broad "Done" definition, strict check-in process		
Team roles	Agile teams with strong overlap between Development and QA roles		
Specialized QA	Dedicated teams to test for security, compliance, etc. (central or embedded)		
Site Ops	Highly skilled teams with automated alerts and rapid escalation process		
Employee practices	Unique quality-focused cultural practices		

Source: The Boston Consulting Group - Quest For Quality Study, 2016

Pursue the “Coach-Driven” Approach for Quality Excellence



Quality

- **Development teams own quality:** “build it – test it – run it”
- A groups of leading practitioners **(Coaches) support** development teams
 - Provide lean governance and guidance
 - Operate specialized services
 - Identify and drive best practices across the company
 - Perform Hands-on coaching for Development teams

Coaching

**Tell
Train
Instructor**

 Sports
Coach

 Systemic
Coach

**Listen
Facilitate
Peer**

Quality

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Quality

Quality Coaching Stances

Quality



SAP Cloud Quality Coaching

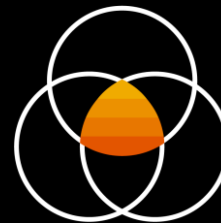
Quality



We enable the adoption of **quality related** engineering practices and processes



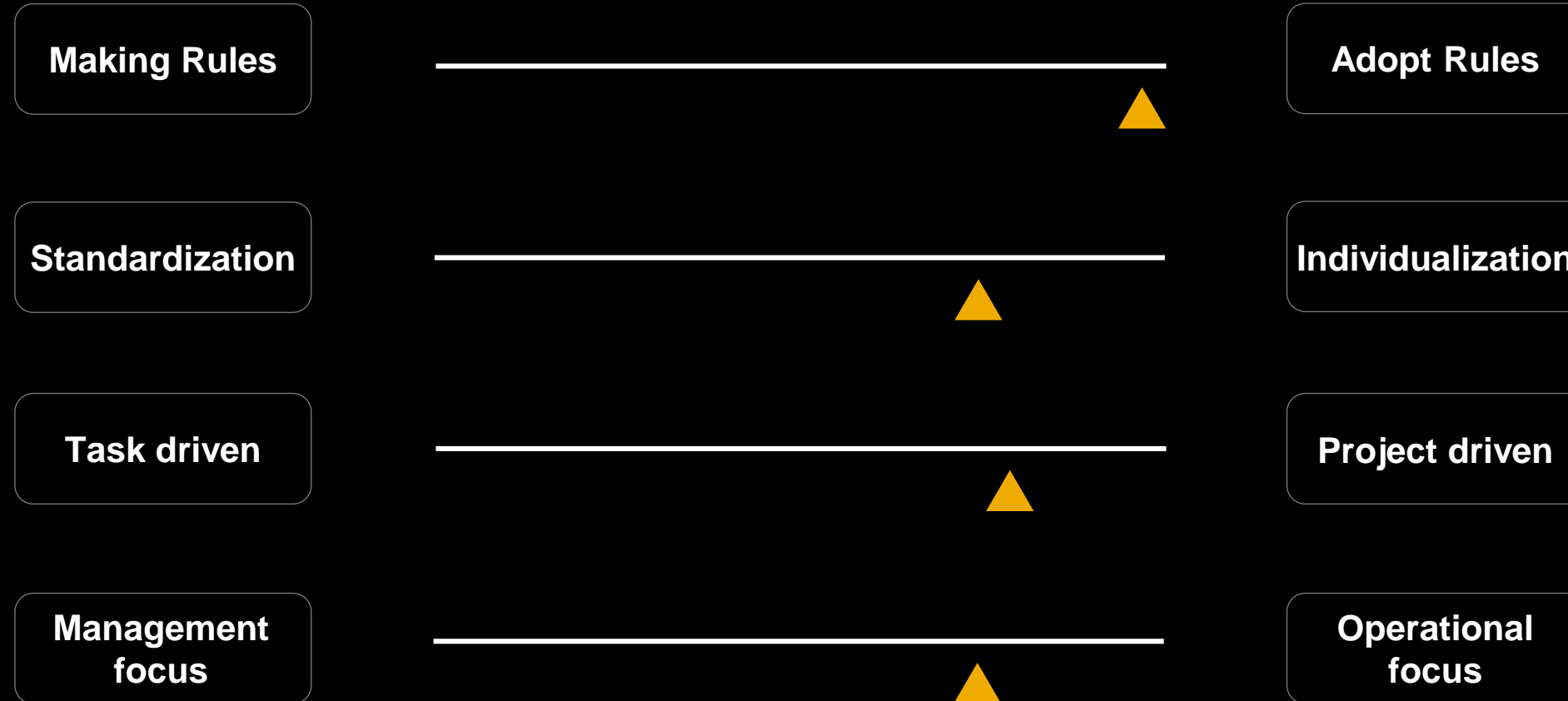
Jointly work with the client to strengthen the **built-in quality** capabilities and mindset



Coach on a **holistic, customer specific** model that reflects the **complete software development lifecycle**

SAP Cloud Quality Coaching – The way we work

Quality



SAP Cloud Quality Coaching Focus Topics

Quality



**Testing Strategy
& Automation**

+



**Continuous Delivery
& DevOps**

+



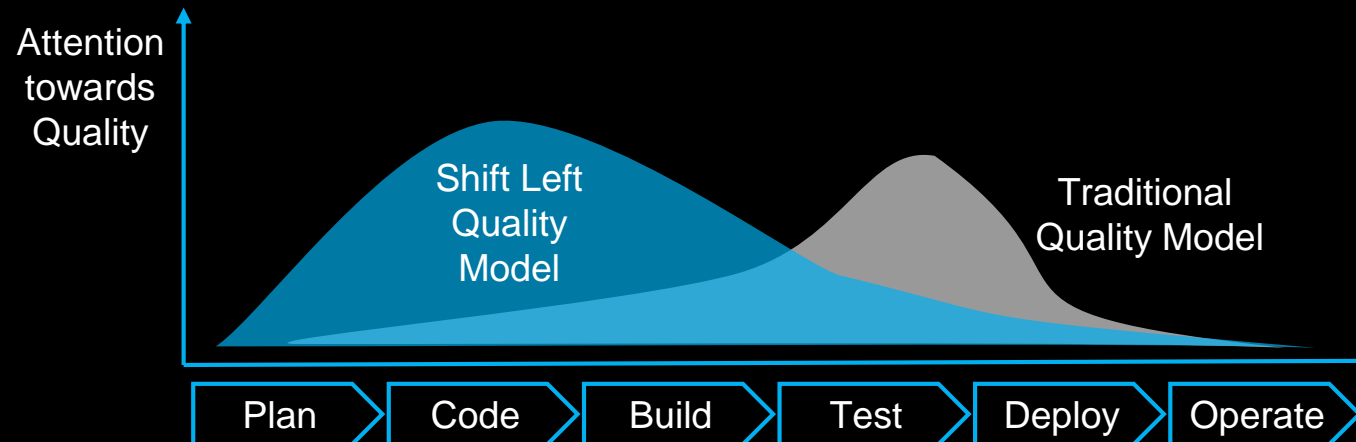
Process & Delivery

Focus Topic: Testing Strategy & Automation

- What to test?
- How to test?
- How much to automate?
- When to test?



**Testing Strategy
& Automation**



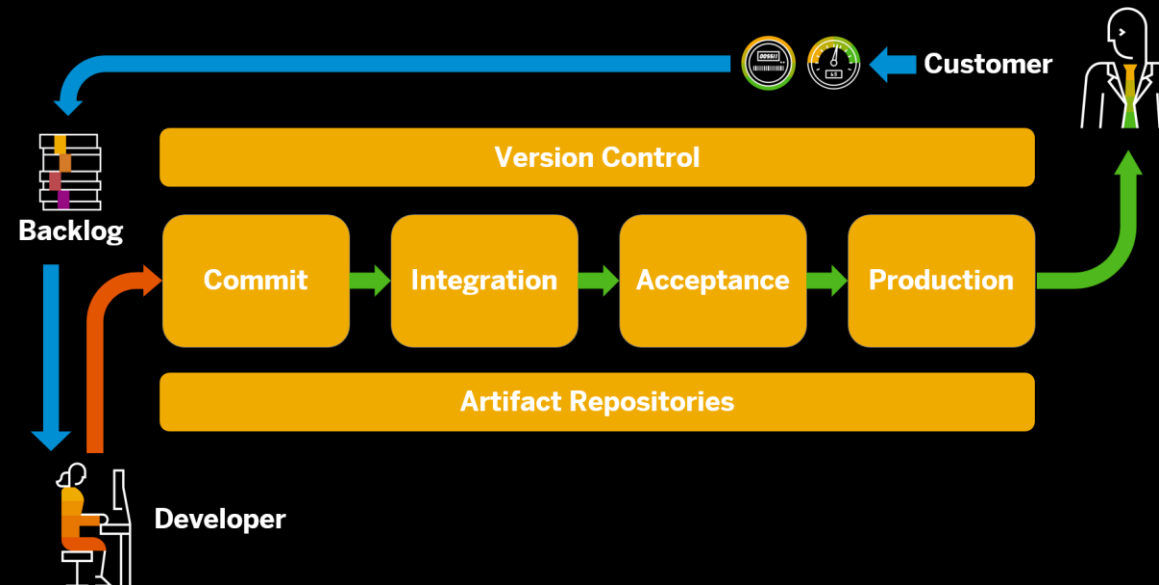
Focus Topic: Continuous Delivery & DevOps

- How does the deployment pipeline look like?
- What else to automate?
- How to operate the system?
- How to close the feedback loop?



Quality

Continuous Delivery & DevOps



Focus Topic: Process and Delivery

- Is the product ready to ship and software in small batches and frequent deliveries?
- Is the product in compliance with any legal requirements and certification requirement?
- Is the product fulfilling SAPs quality requirements?

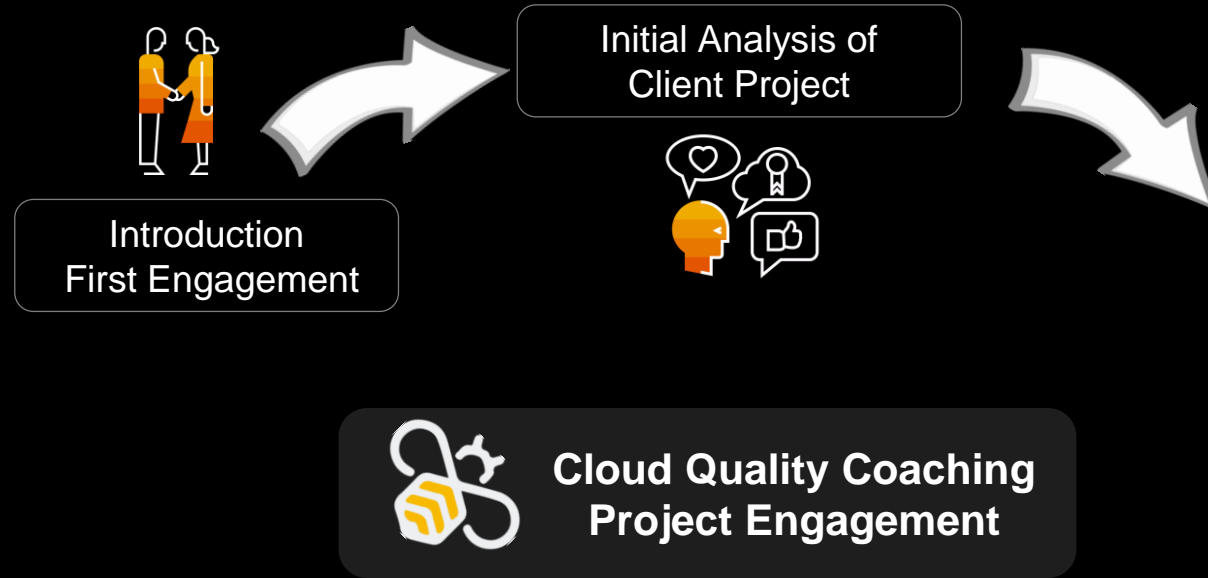


Process and Delivery



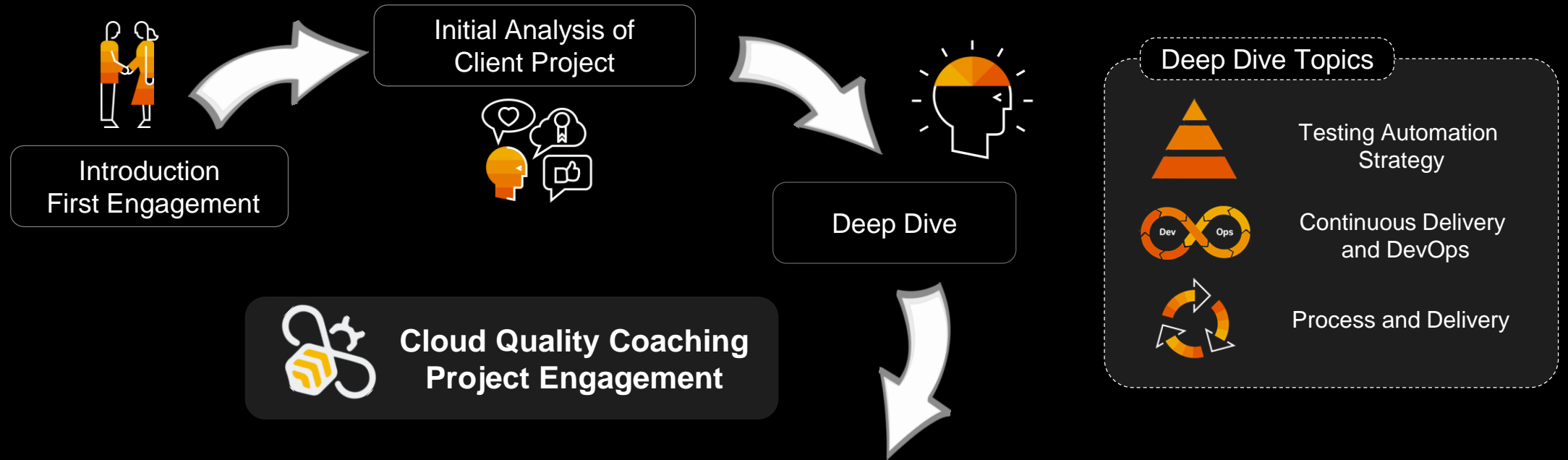
SAP Cloud Quality Coaching - Project Engagement

Quality



SAP Cloud Quality Coaching - Project Engagement

Quality



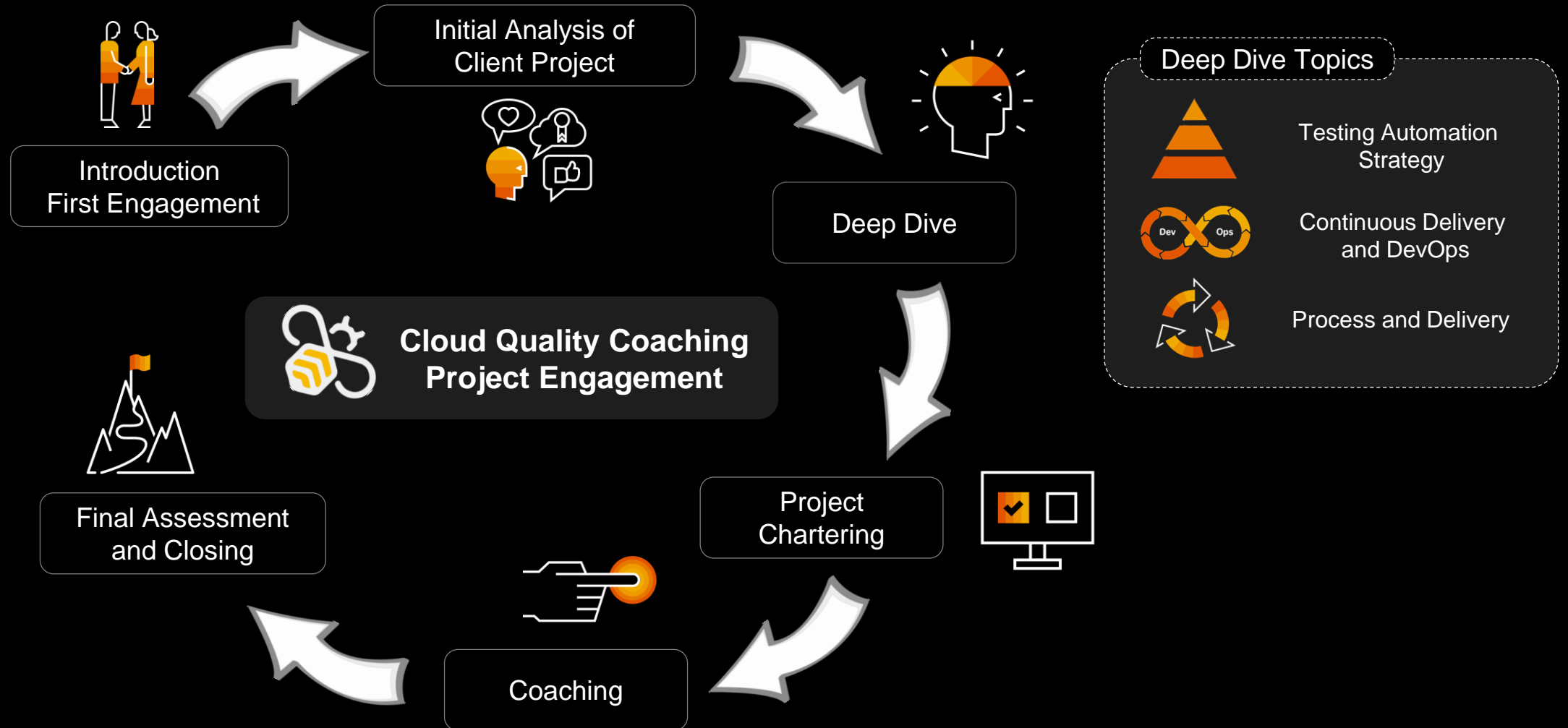
SAP Cloud Quality Coaching - Project Engagement

Quality



SAP Cloud Quality Coaching - Project Engagement

Quality



Retrospective: **Key Benefits** of the Quality Coaching Model

Quality



1 Increase
Team
Productivity



2 Harden
Product
Quality



3 Reduce
Deployment
Pain



4 Foster
Quality
Culture

Challenges & Outlook



**Virtual
Coaching**



**Quick wins vs.
long term outcome**



**Pre-defined
Solution Space**



**Scale-out
Challenges**

Quality

Outlook



**Community of
Practice**

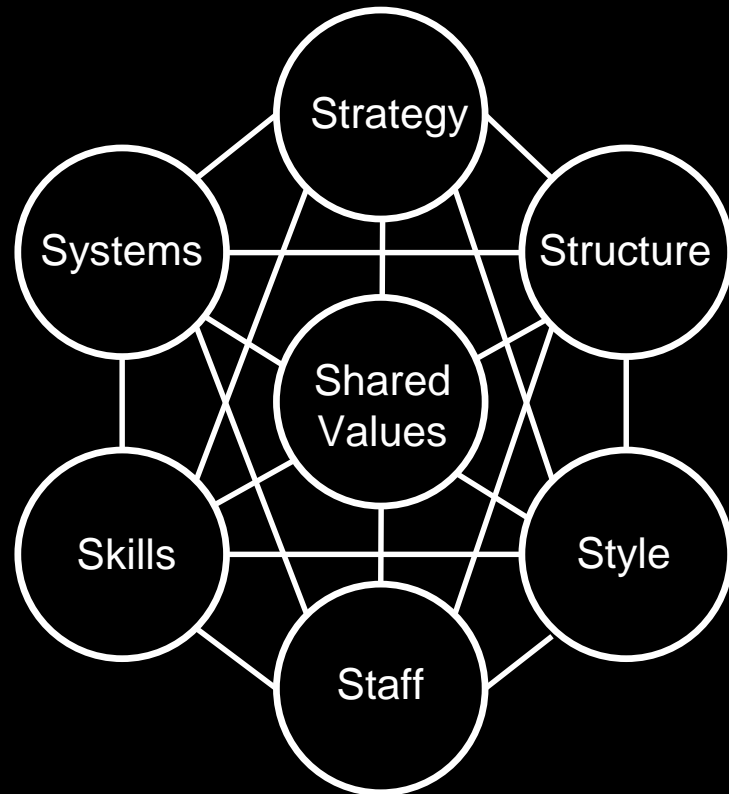


**Multiplier and
Franchise**



**Expand
Toolset**

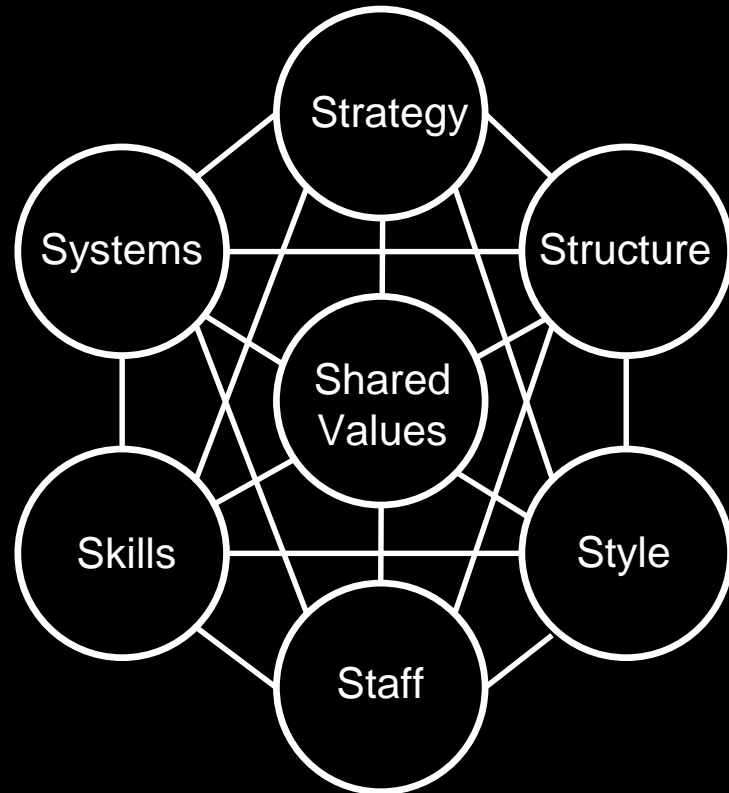
Transformation and the Mapping to the Organization



Fields of Transformation



Transformation and the Mapping to the Organization



There is the need to orchestrate all transformation activities!

Thank you.

Contact information:

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Dirk Lehmann

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