GETTING FEEDBACK REALLY FAST WITH DESIGN THINKING AND AGILE SOFTWARE ENGINEERING

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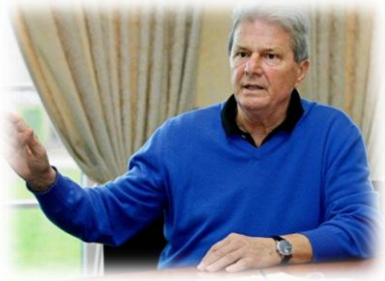
"Ich wollte Mitarbeiter so motivieren, dass sie mehr leisten als der Durchschnitt. Freie Entfaltung und Kreativität, ohne bürokratische Zwänge und Regeln. Dazu passt auch keine Stempeluhr, die mir immer zuwider war."

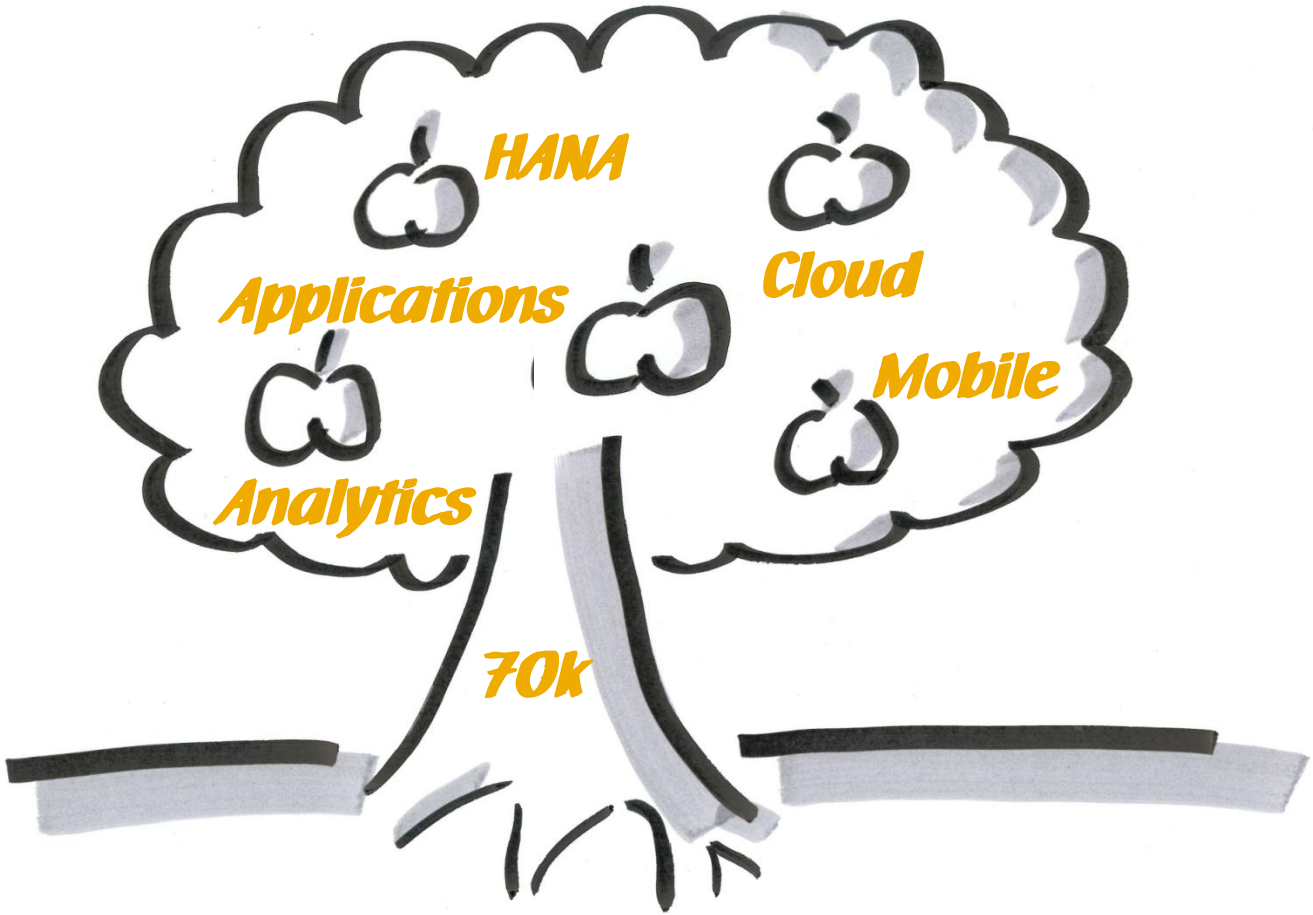


Dietmar Hopp (one of the founders of SAP)

Source: SAP

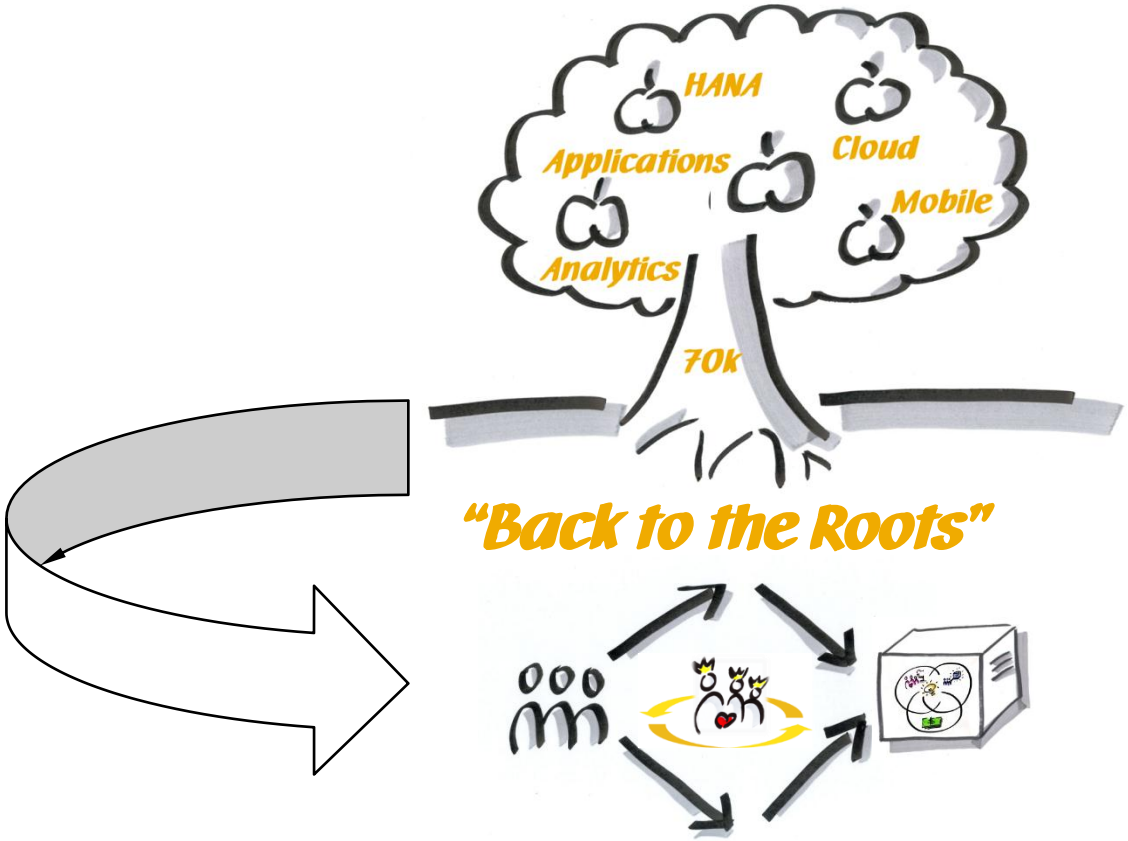
40 YEARS OF SAP, ALMOST 40 YEARS OF WATERFALL

WHAT DOES SAP DO?



…A LOT MORE THAN 40 YEARS AGO WHEN WE STARTED

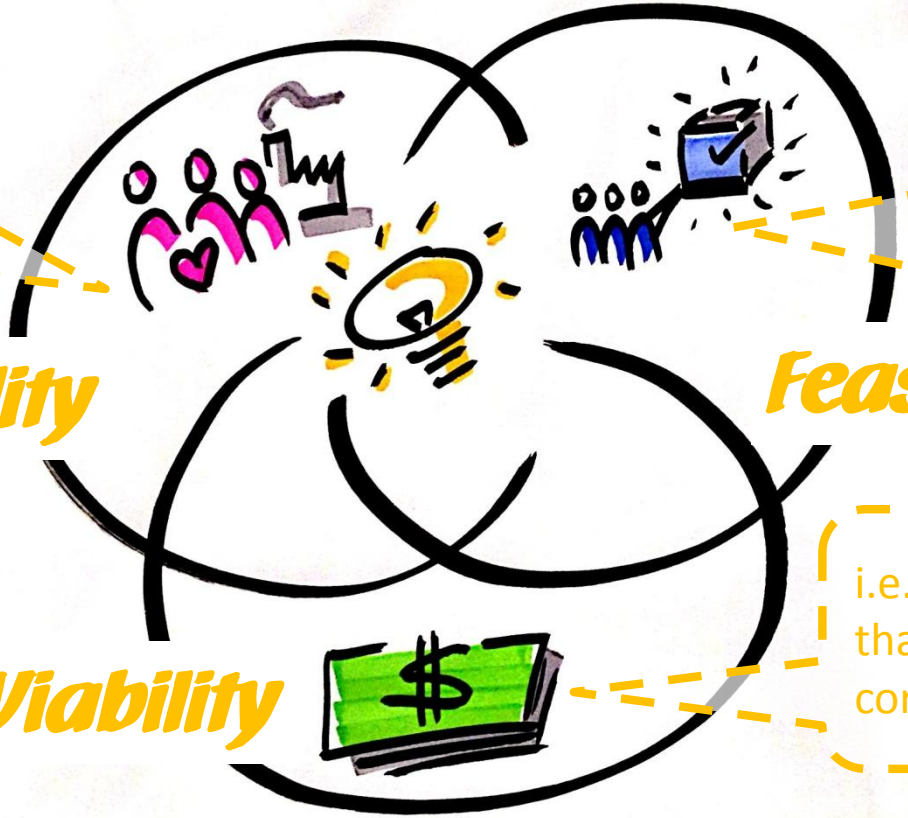
HOW TO BUILD RIGHT THINGS RIGHT AGAIN?



"CUSTOMER-CENTERED PRODUCT INNOVATION"

i.e. addressing end user needs and wanted by customers

i.e. being able to build a product with existing technologies and deliver it in time



Desirability

Feasibility

Viability

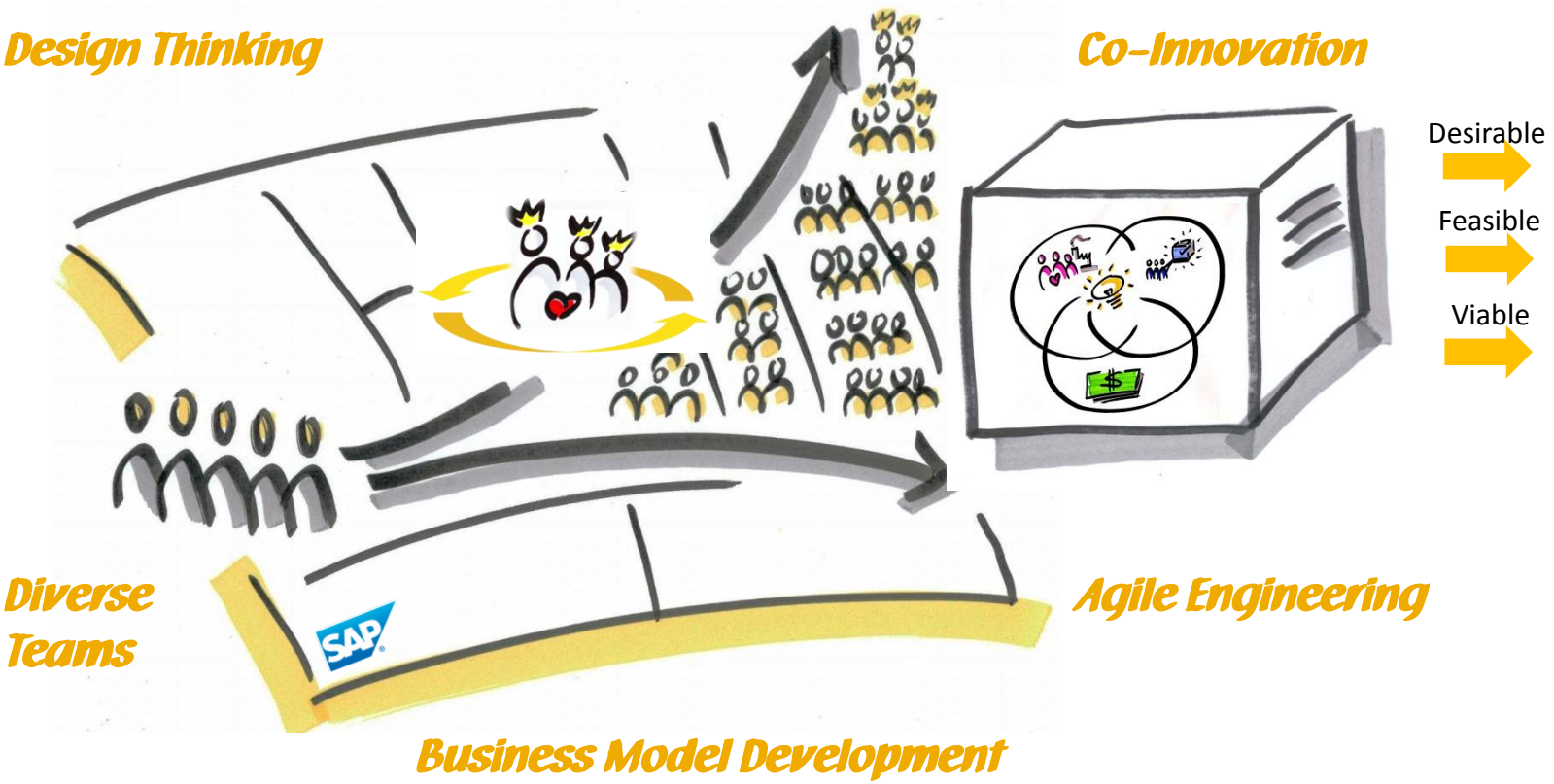
i.e. there is a market that justifies the corporate investment

WHAT IS PRODUCT INNOVATION?

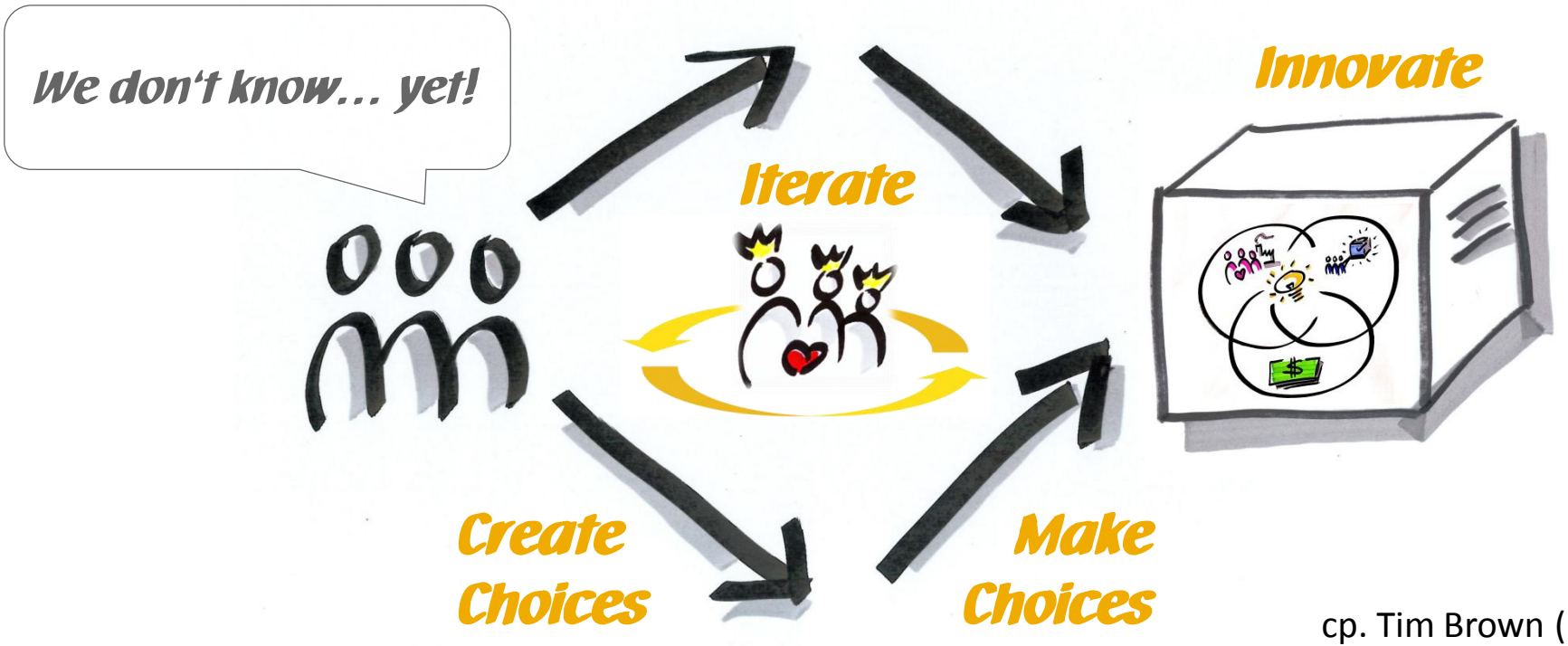
Co-Innovate continuously with Customers & End Users

- Learn about Customer Problems & User Needs
- Design, Develop and Test continuously
- Validate Sprint Results regularly

WHAT IS IN IT FOR SAP DEVELOPMENT?



INCREASED LIKELIHOOD OF PRODUCT SUCCESS



cp. Tim Brown (2009)
and Ozgur Eris (2004)

DON'T ASSUME YOU KNOW THE FINAL SOLUTION YET

Focus on Customer Value

Short Iterations

Incremental Delivery

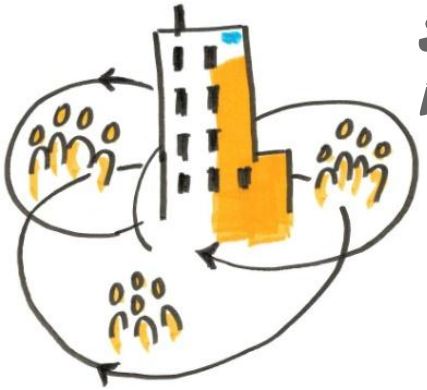
Fast Feedback

Continuous Improvement

Small Cross-Functional Teams

DESIGN THINKING & AGILE DEVELOPMENT SHARE VALUES

WHERE ARE WE TODAY?



Split organization into teams

Split work

Split time

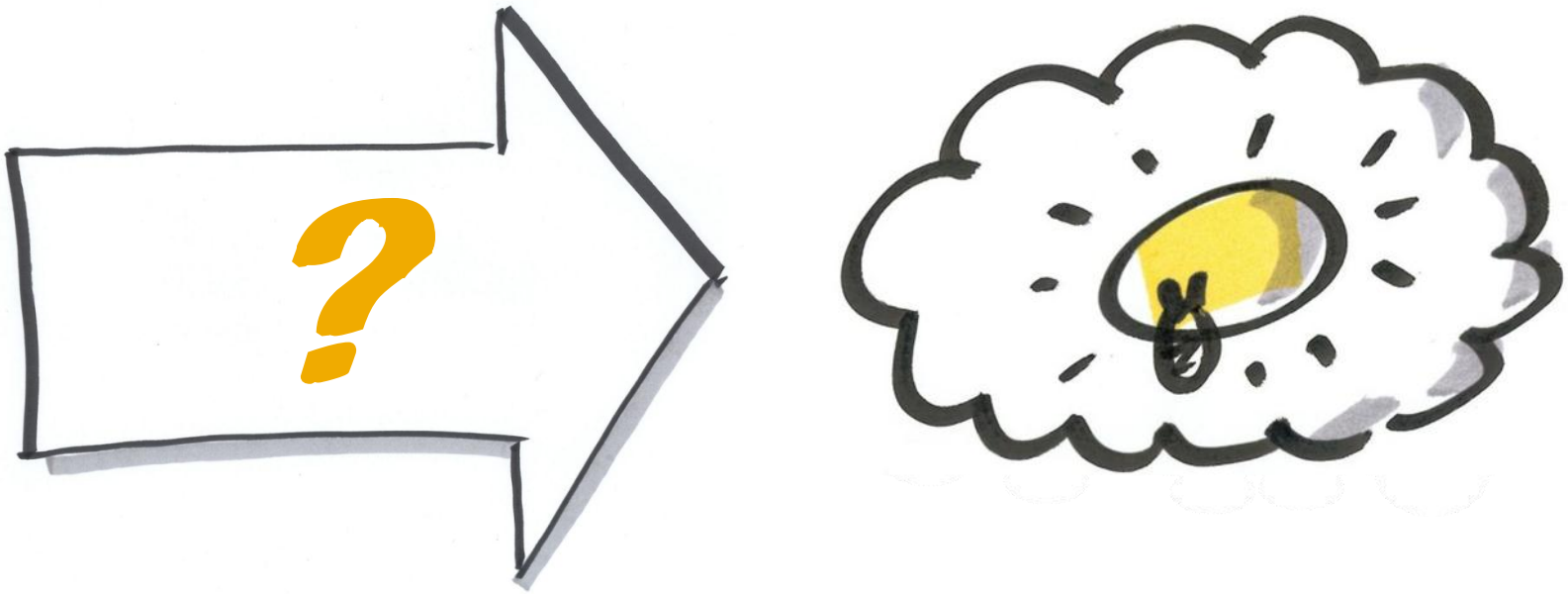
Deliver more frequently

Risk

Risk

Conduct regular Retrospectives

SCRUM REDUCES PRODUCT RISKS DRAMATICALLY



WHERE DOES THE PRODUCT VISION COME FROM?

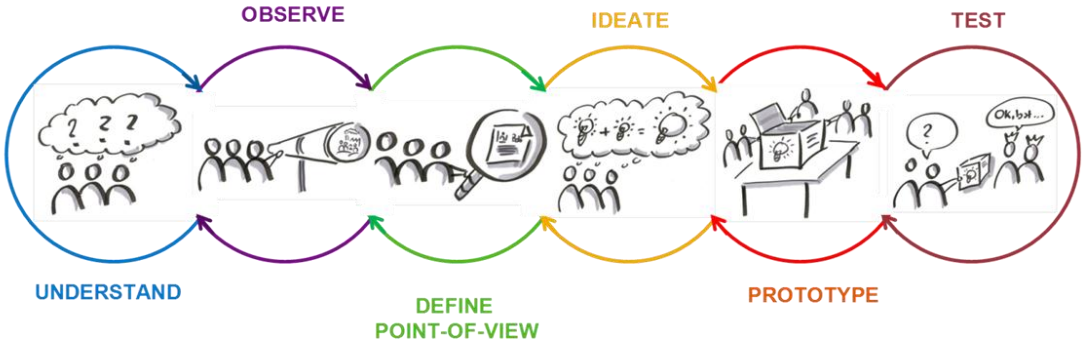
"A DEVELOPER NEEDS TO BE CURIOUS AND ALSO DEVELOP EMPATHY FOR END USERS"

Source: interview with SAP co-founder Hasso Plattner (2012)

A Diverse Team...

A Creative Space...

An Iterative Approach...



DESIGN THINKING TO DEVELOP EMPATHY & IDEAS

BUT ARE WE ABLE TO LEARN FAST ENOUGH?

RESEARCH QUESTION 1:

ARE AGILE SOFTWARE ENGINEERING PRACTICES AN ENABLER FOR DT?

RESEARCH QUESTION 2:

WHAT IS THE IMPACT OF DT ON TEAM PERFORMANCE IN AN AGILE ENVIRONMENT?

Problem finding
Doing the right thing

Problem solving
Doing the thing right

How the customer explained it

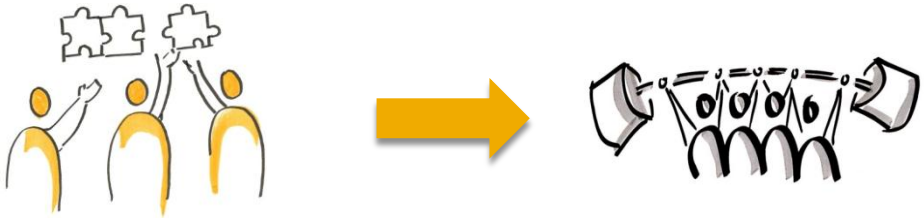
How the team understood it

How the team developed it

What the customer needed

WHERE IS THE ISSUE?

How does team creativity affect team performance?

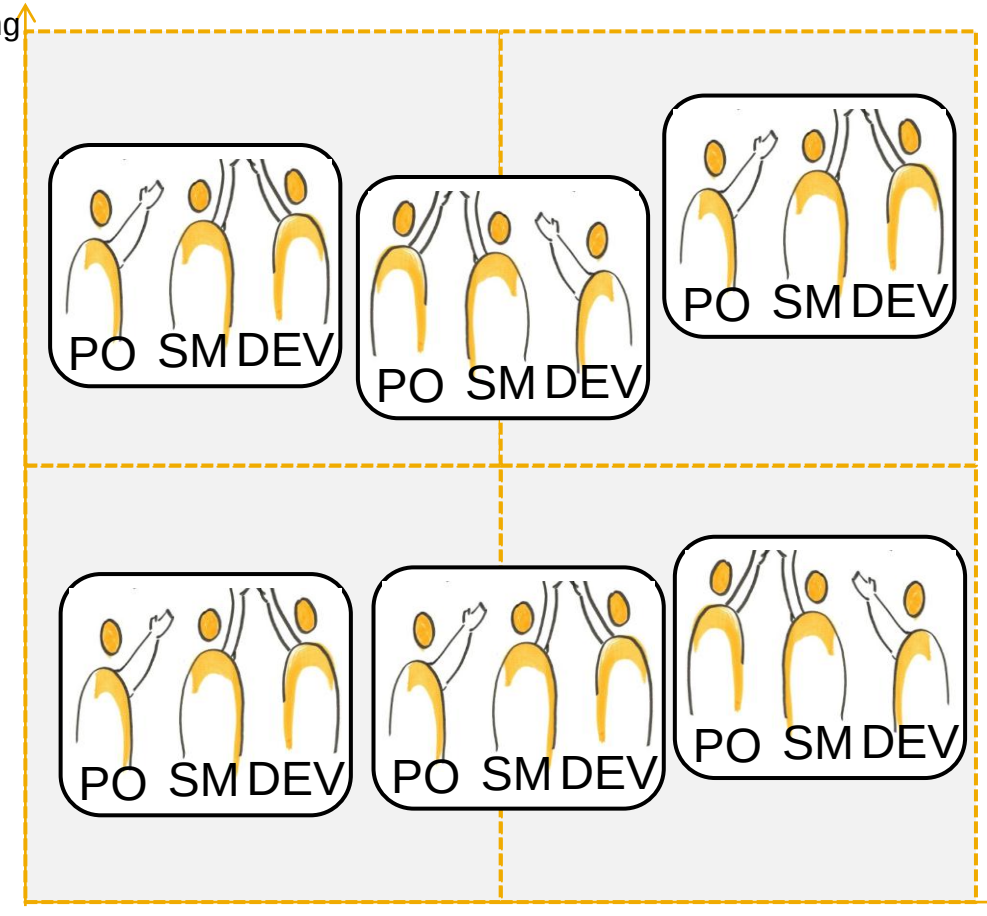


How does team agility complement team creativity?

HOW TO APPROACH THE RESEARCH PROBLEM?

Agile Software Engineering

Experience & Usage



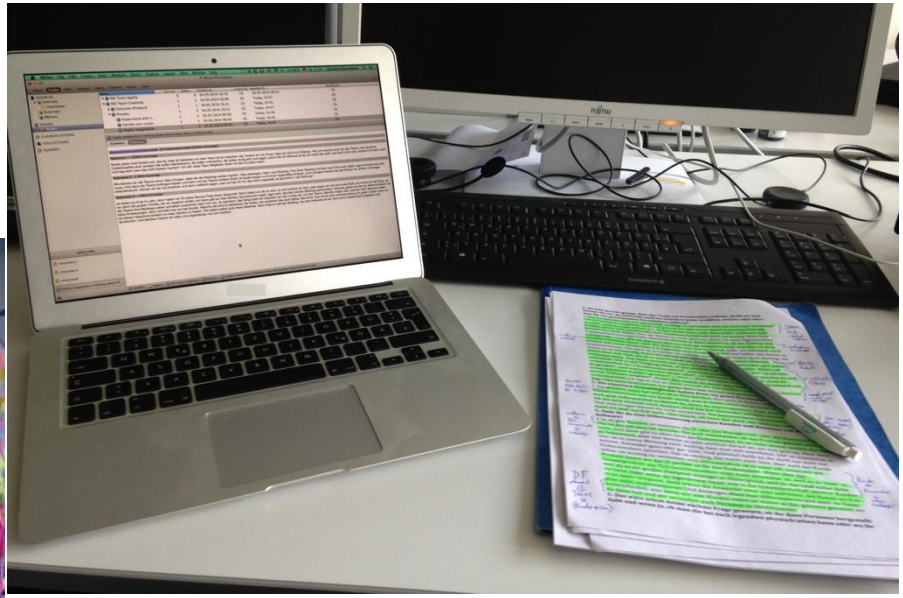
PO: Product Owner
SM: Scrum Master
DEV: Developer

Design Thinking

Experience & Usage

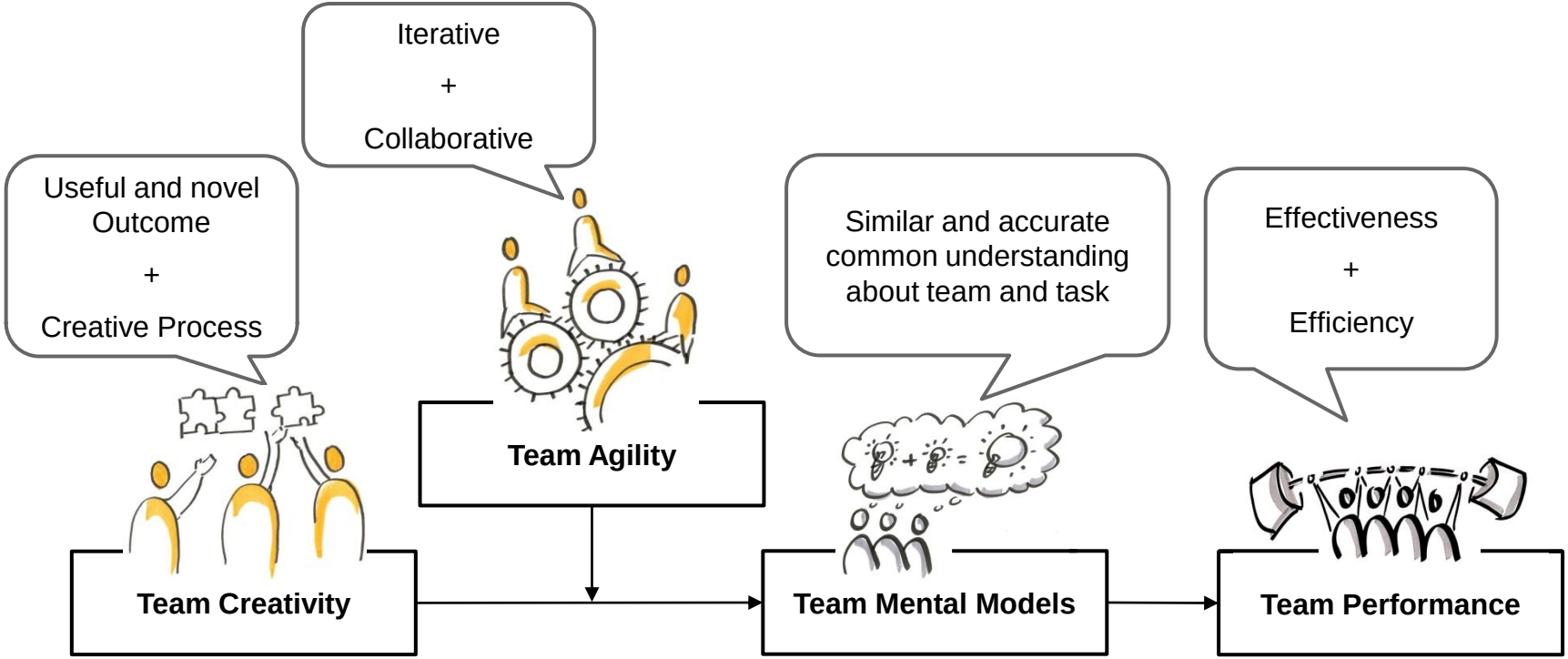
CASE STUDY-BASED APPROACH

Observations & Interviews



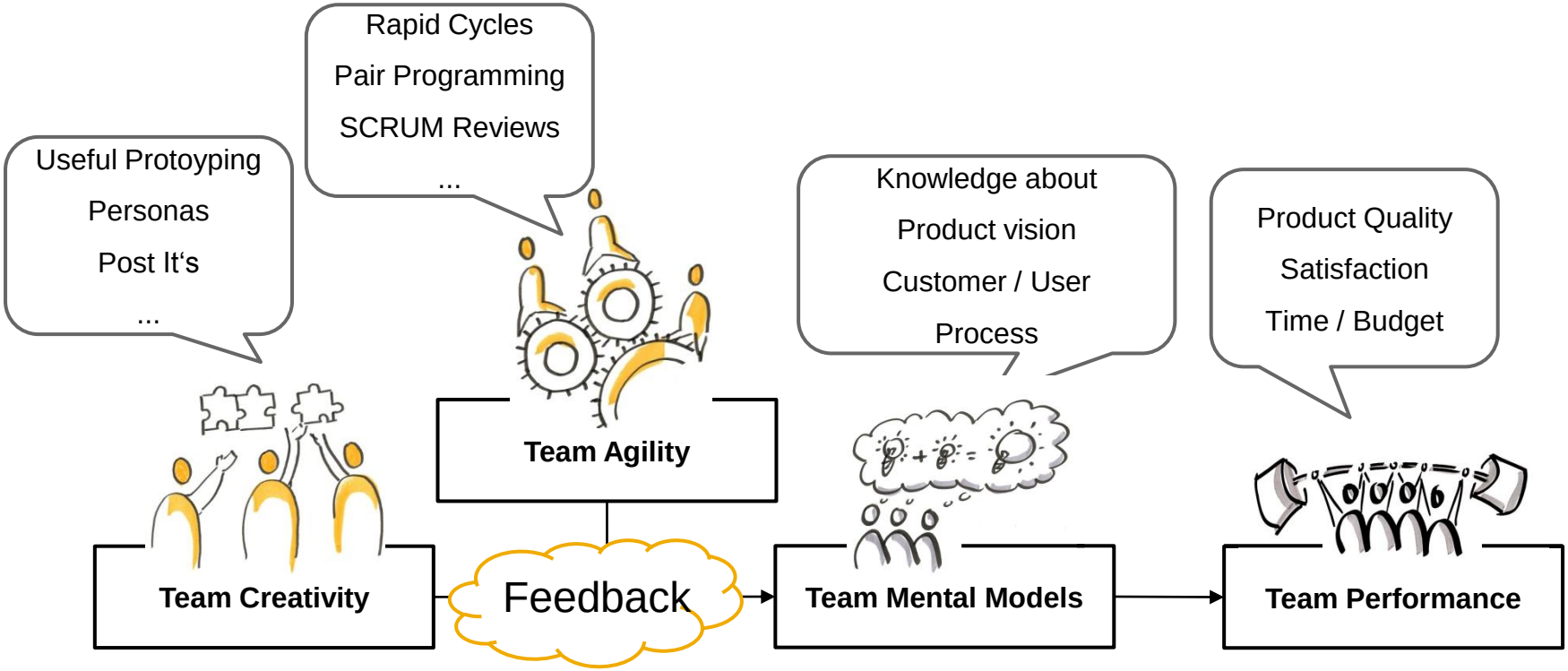
Qualitative Content Analysis

DATA COLLECTION AND ANALYSIS



RESEARCH MODEL

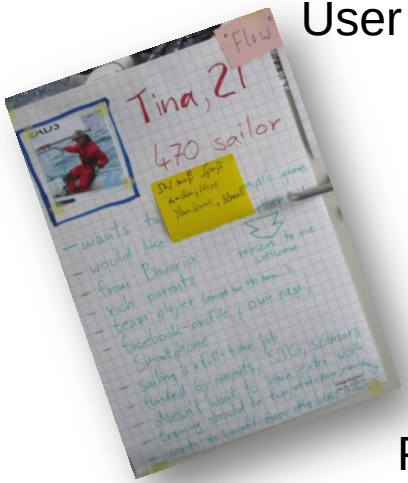
WHAT ARE THE RESEARCH FINDINGS SO FAR?

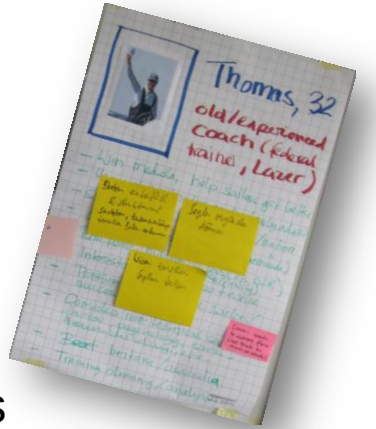


RESEARCH MODEL WITH EXAMPLES

User Story Maps

Prototypes





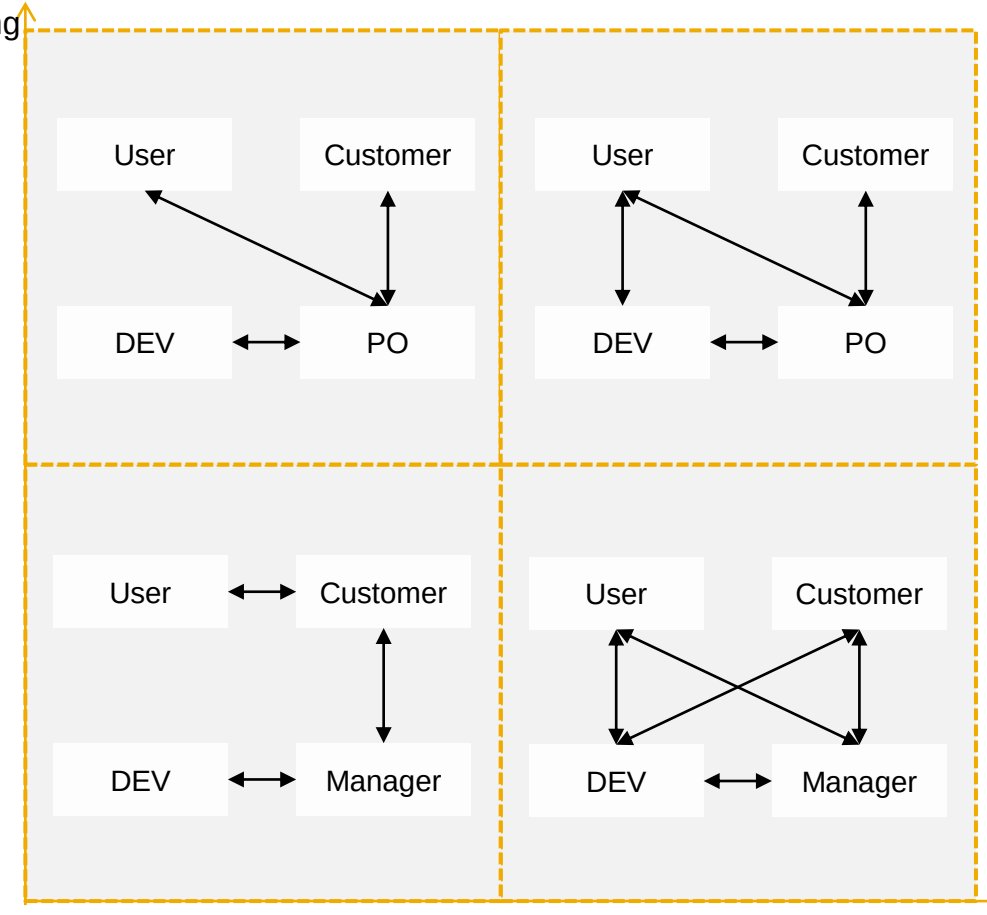
Personas

Product Vision

ARTIFACTS SUPPORTING TEAM MENTAL MODEL

Agile Software Engineering

Experience & Usage

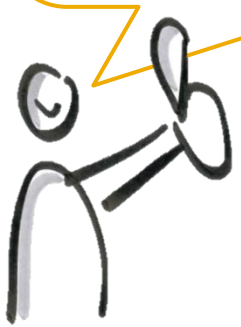


Design Thinking

Experience & Usage

GETTING FAST FEEDBACK

„Papierprototypen erstellt und einen Feedbackloop intern und extern, aber auch um dem Kunden frühzeitig Feedback zu geben“



Scrum Master

„Weg von Codierknechten hin zu agilen und kreativen Entwicklern. Die Entwickler sollten so etwas wie Mini-POs werden.“

Product Owner

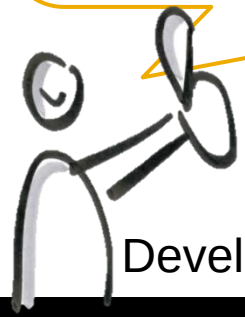
PRELIMINARY INSIGHTS FROM DATA ANALYSIS

„ASSUME makes an ASS out of U and ME“

„Nur weil wir glauben, dass das Produkt schön ist, heißt das noch lange nicht, dass wir es wissen“

Developer

„Ich habe am Ende des Sprints keine Bauchschmerzen mehr, ob das, was ich entwickelt habe, das ist, was der Kunde will und ob es rund läuft und tut was spezifiziert wurde“



Developer

PRELIMINARY INSIGHTS FROM ANALYSIS

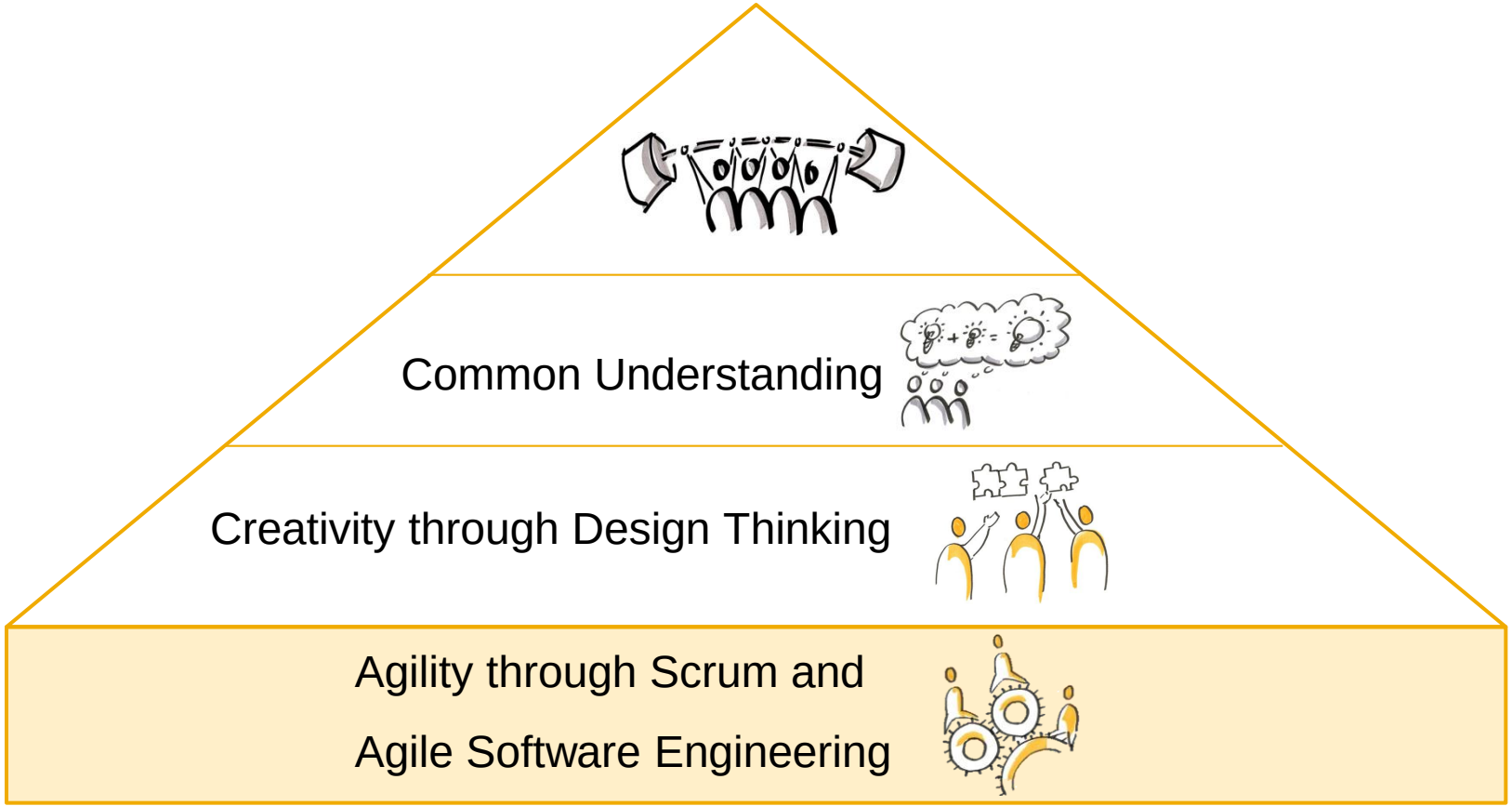
(1) Quality is the key – Know how to make your life easier

(2) Getting feedback is difficult – Know how to get it fast

(3) DT and ASE require time – Know how it improves the product

SUMMARY OF CURRENT RESEARCH FINDINGS

SO, CAN AGILE SOFTWARE ENGINEERING BE AN ACCELERATOR FOR DT?



AGILE AS ENABLER FOR DESIGN THINKING

Thank You

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