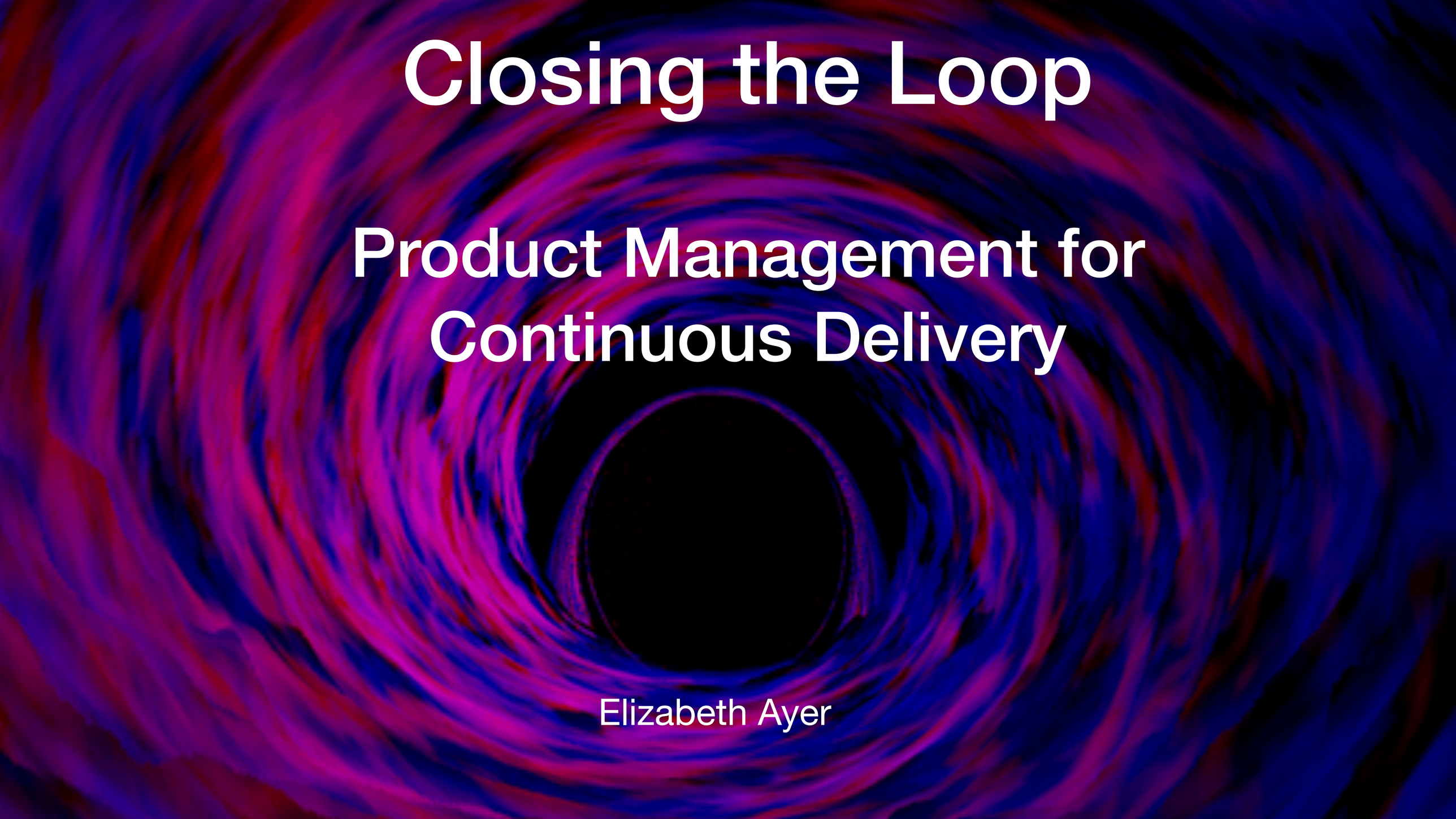

Closing the Loop
Product Management for Continuous Delivery
Elizabeth Ayer

Le Louvre?

FACTS
NOT OPINIONS

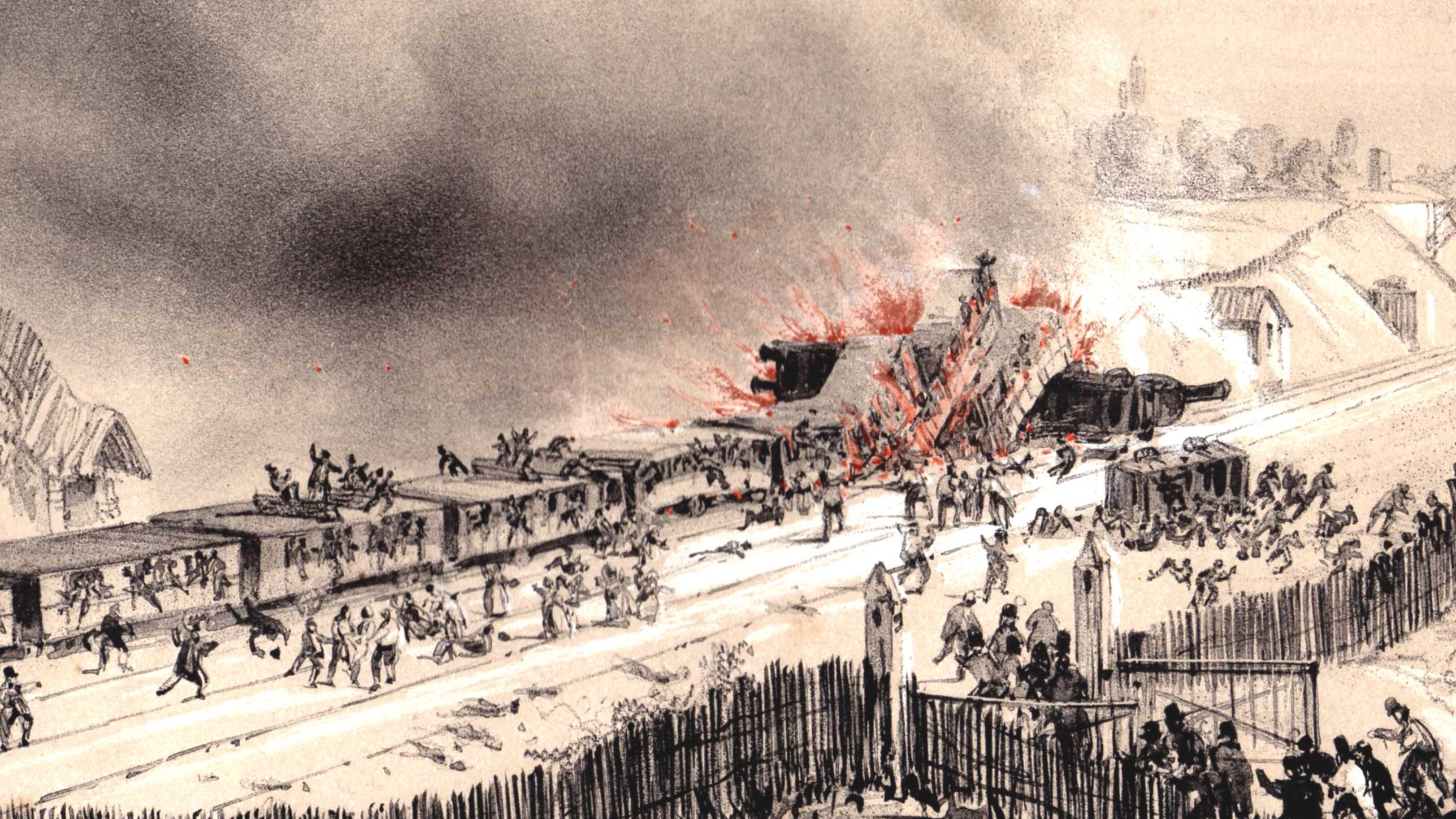
FACTS
NOT OPINIONS

David Kirkaldy

Kirkaldy stopped
bridges falling down

GREAT YARMOUTH MUSEUMS

Kirkaldy stopped
trains derailing



by testing materials
and components

FACTS
NOT OPINIONS

KIRKALDY'S UNIVERSAL TESTING MACHINE

DETAILS:

Designed by David Kirkaldy

Built by Greenwood and Batley of Leeds in 1865

Overall Length: 47 feet 6 inches Maximum Load: 300 tons

Hydraulic Ram: 149 square inches – Stroke: 3 feet

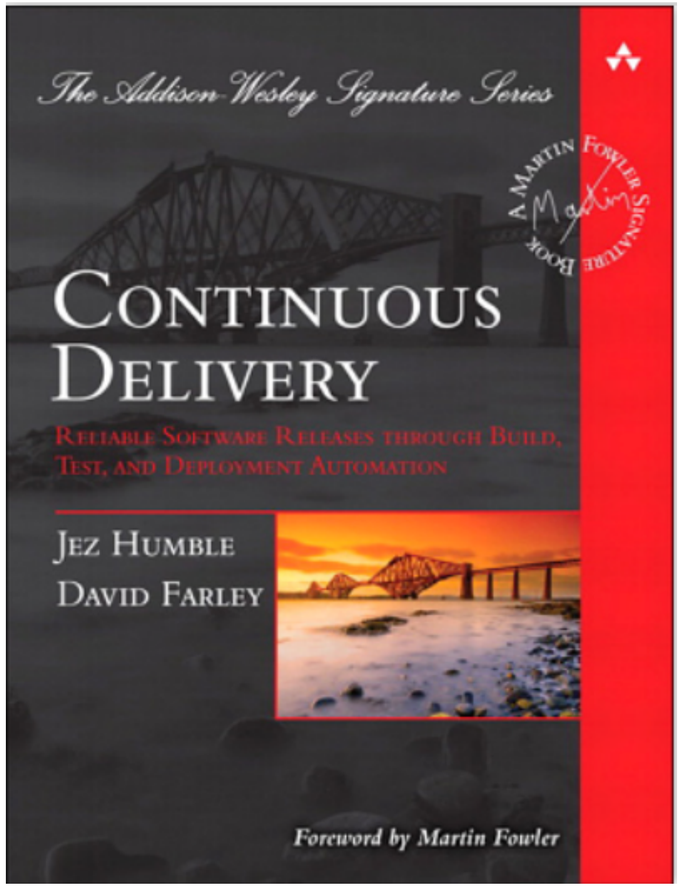
Tests can be carried out in: Tension, Compression, Bending, Shear, etc.

Could tell whether something had flaws in weeks rather than years

This led to faster delivery, lower cost of maintenance, and safety

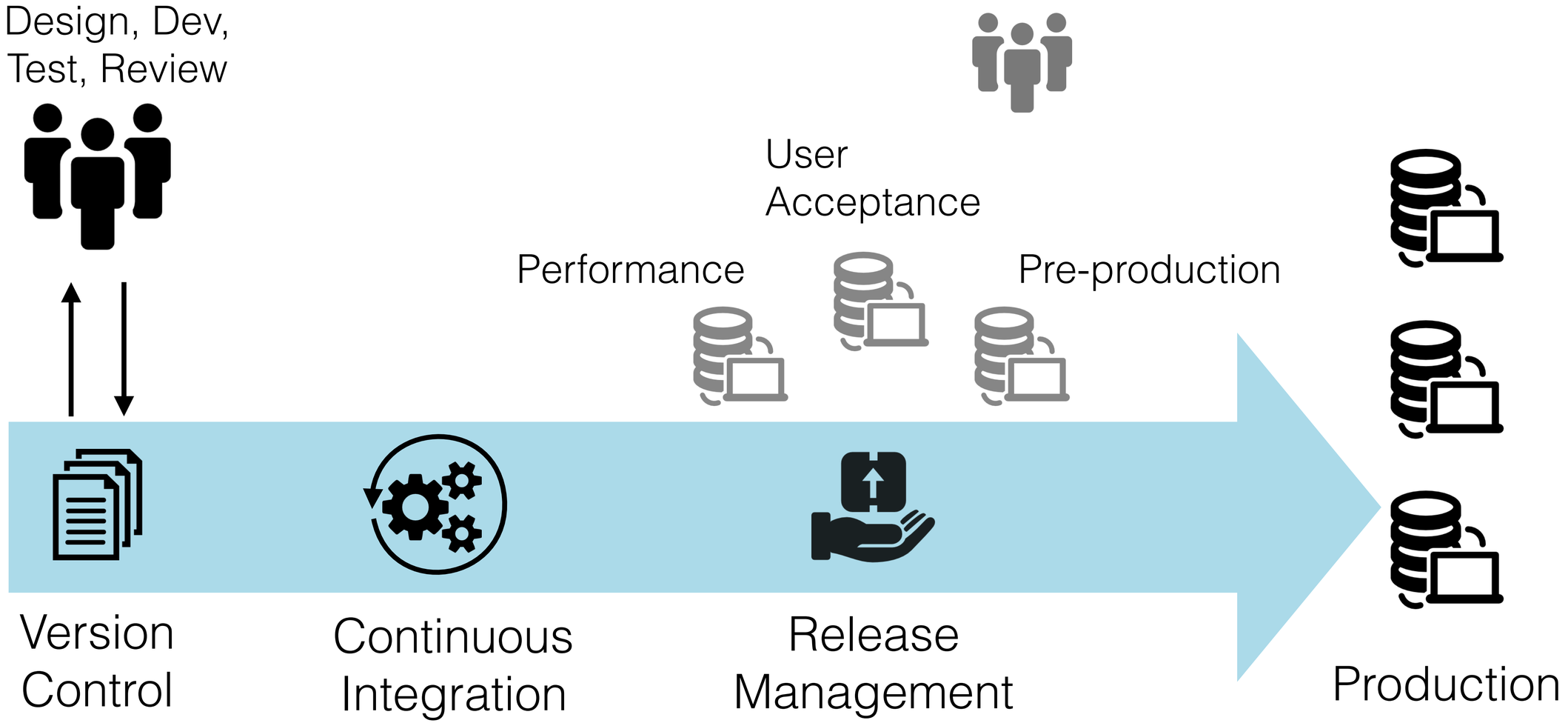
Continuous Delivery

This led to faster delivery, lower cost of maintenance, and safety



Continuous Delivery:

Get useful software to users quickly, safely, and sustainably


Design, Dev,
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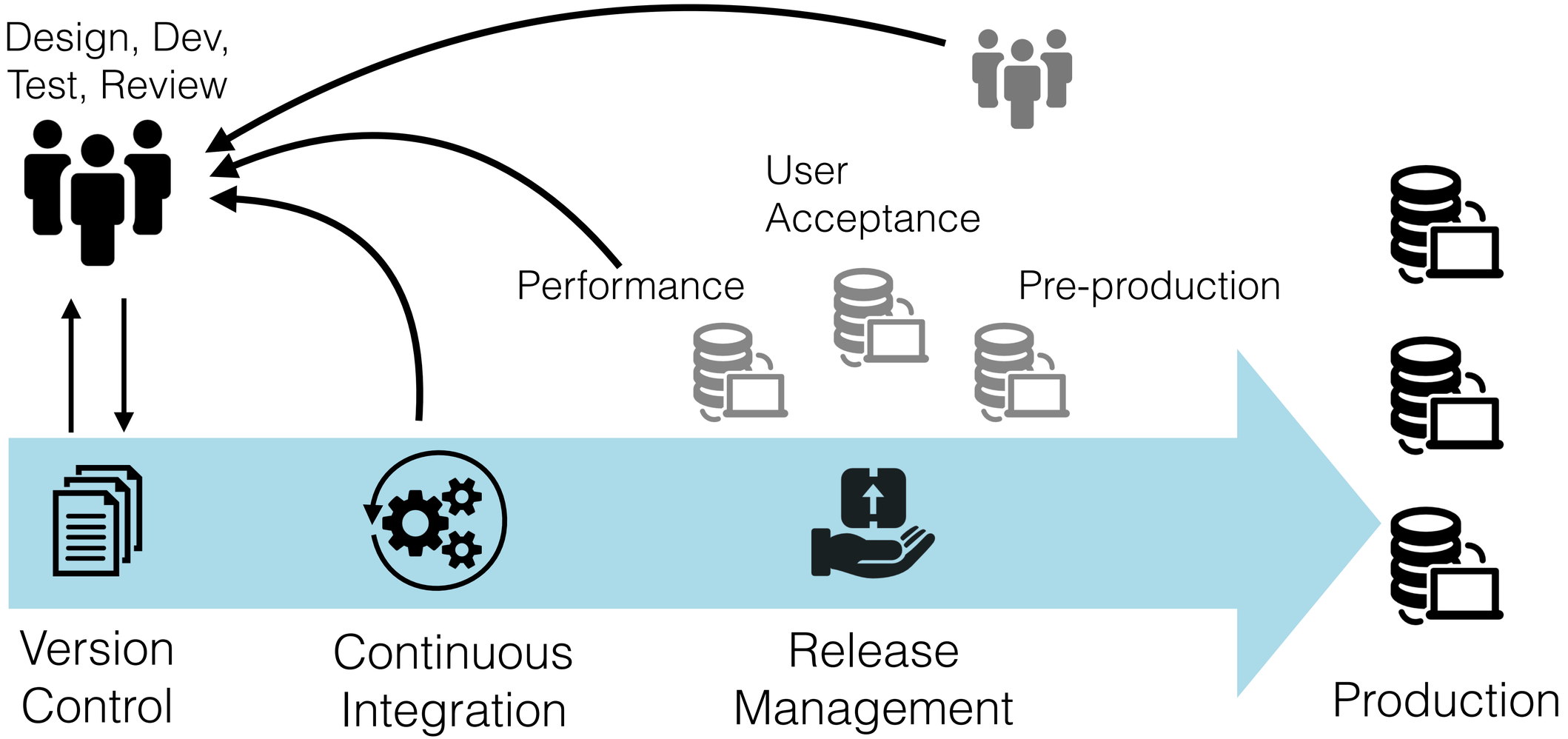
Design, Dev,
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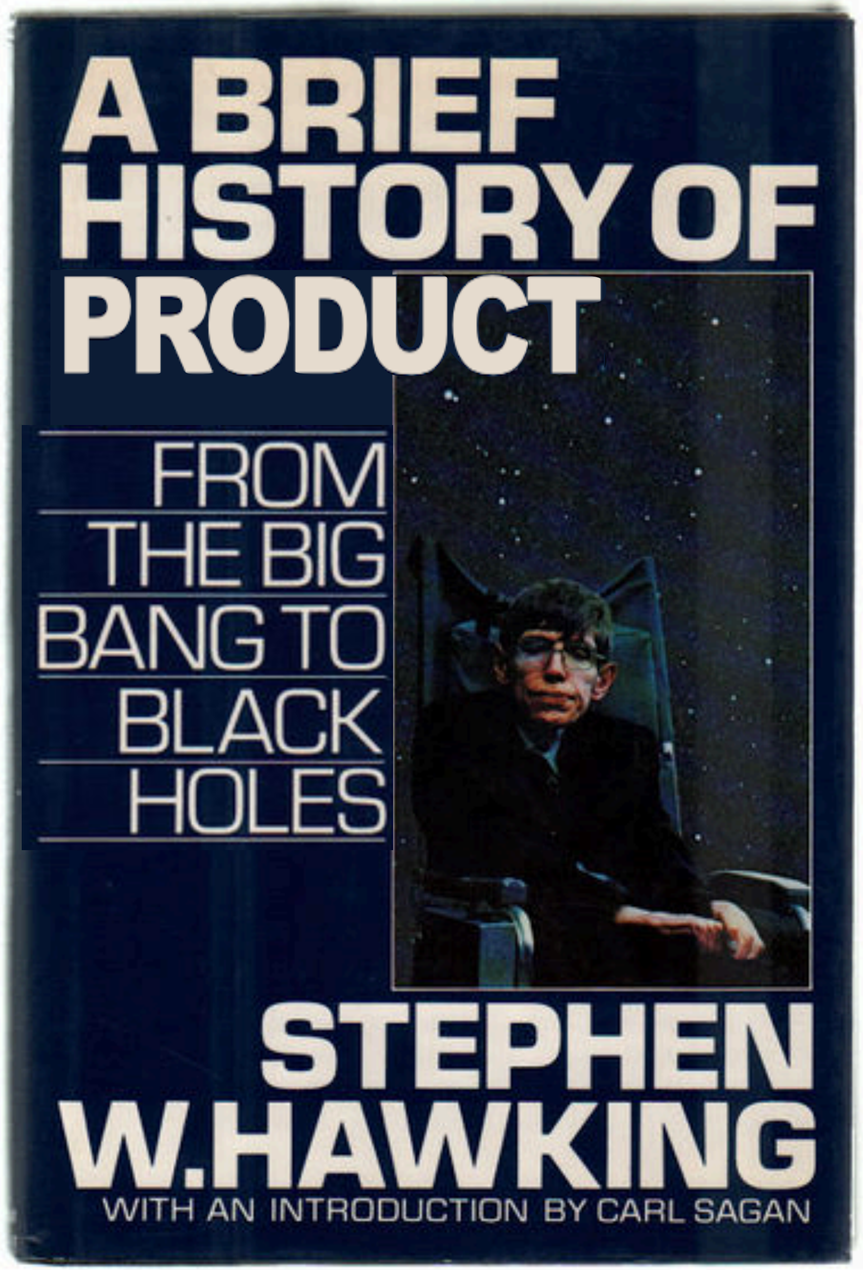
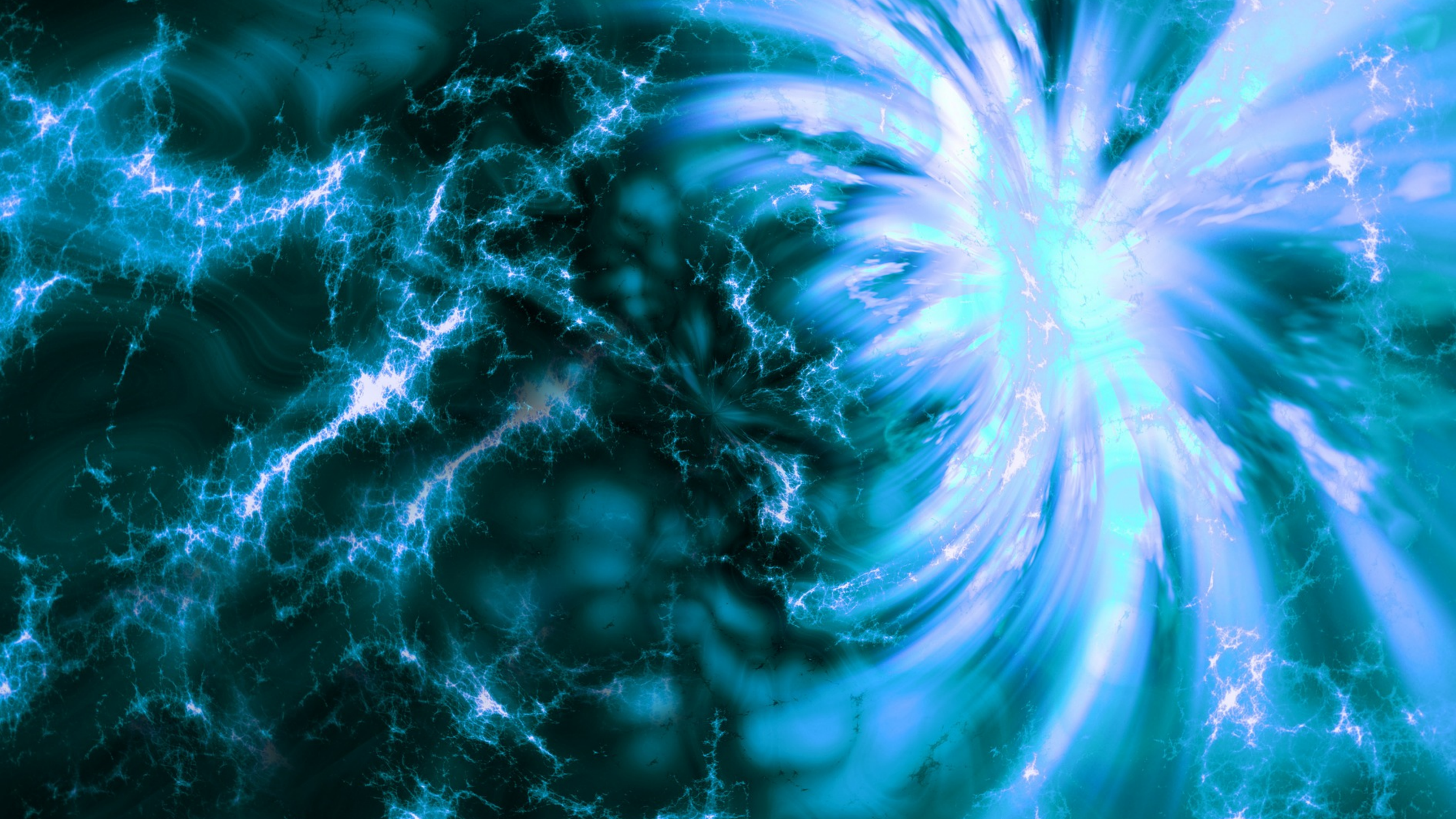
CD presents **opportunities** to Product Managers


A BRIEF HISTORY OF PRODUCT
FROM THE BIG BANG TO BLACK HOLES
STEPHEN W.HAWKING
WITH AN INTRODUCTION BY CARL SAGAN

From the Big Bang...



The final field for operator input is the "Other Relevant Information" field. This field shall simply consist of one text field where the operator can input any other important or relevant information that pertains to this incident and the ambulance driver(s) who are dispatched. This is not a required field.

A button for processing the information shall be located near the bottom of the screen. The operator shall press this button once s/he has entered the necessary information.

6.1.3 Display

The nine types of operator input fields shall be positioned in the center of the "Log Calls" tab screen. Each type of field will be placed one right below the other. The "Process Claim" button shall be located near the bottom of the screen, under all of the input fields.

6.1.4 System Processing

The system is essentially idle while the operator is inputting the information that relates to an incident. Once the operator clicks the "Process Claim" button, the system determines if the operator has input the correct type of information. If the operator has not input the correct information as defined by the input section of this requirement description, the system shall alert the operator. The system shall display which information must be corrected, and the operator shall be able to correct the input data. Once the information is accepted by the system, the information is encrypted and sent over the TCP/IP network to the server. This server places the data into its proper table in the database. The system shall then proceed to the next part of the dispatch process: prioritizing the calls, determine the uniqueness of the calls, and locating the nearest three ambulances. These processes are described in the subsequent requirement descriptions.

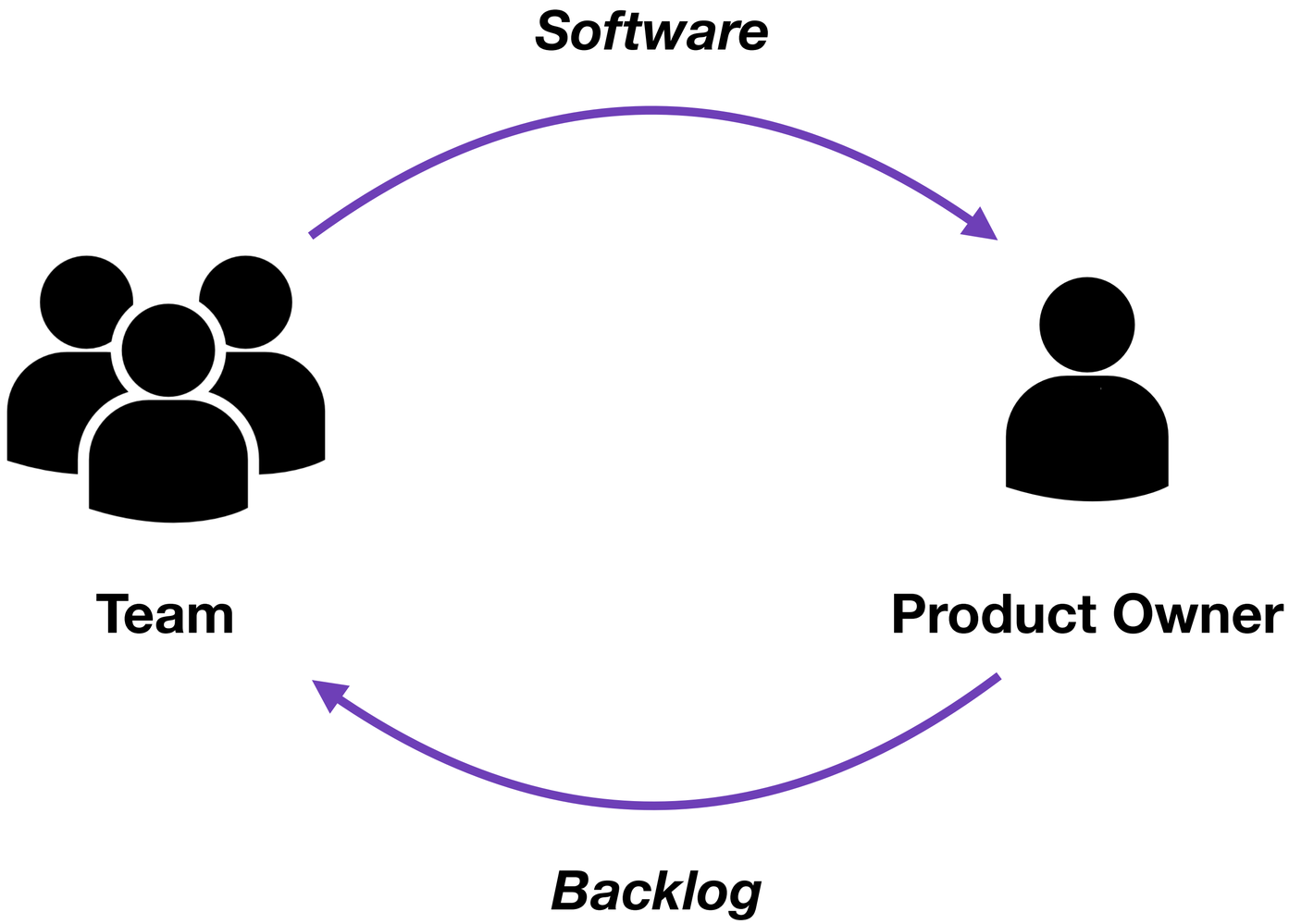
6.1.5 System Output

The system shall display an error message if any of the information that the operator has entered is incorrect as defined by the input section of this requirement description. In the "Log Calls" tab where the operator inputs the information, the system shall alert the operator of incorrect information by displaying a red arrow by the type of information that is incorrect. The text color of the type of information that is incorrect shall also change to red from black.

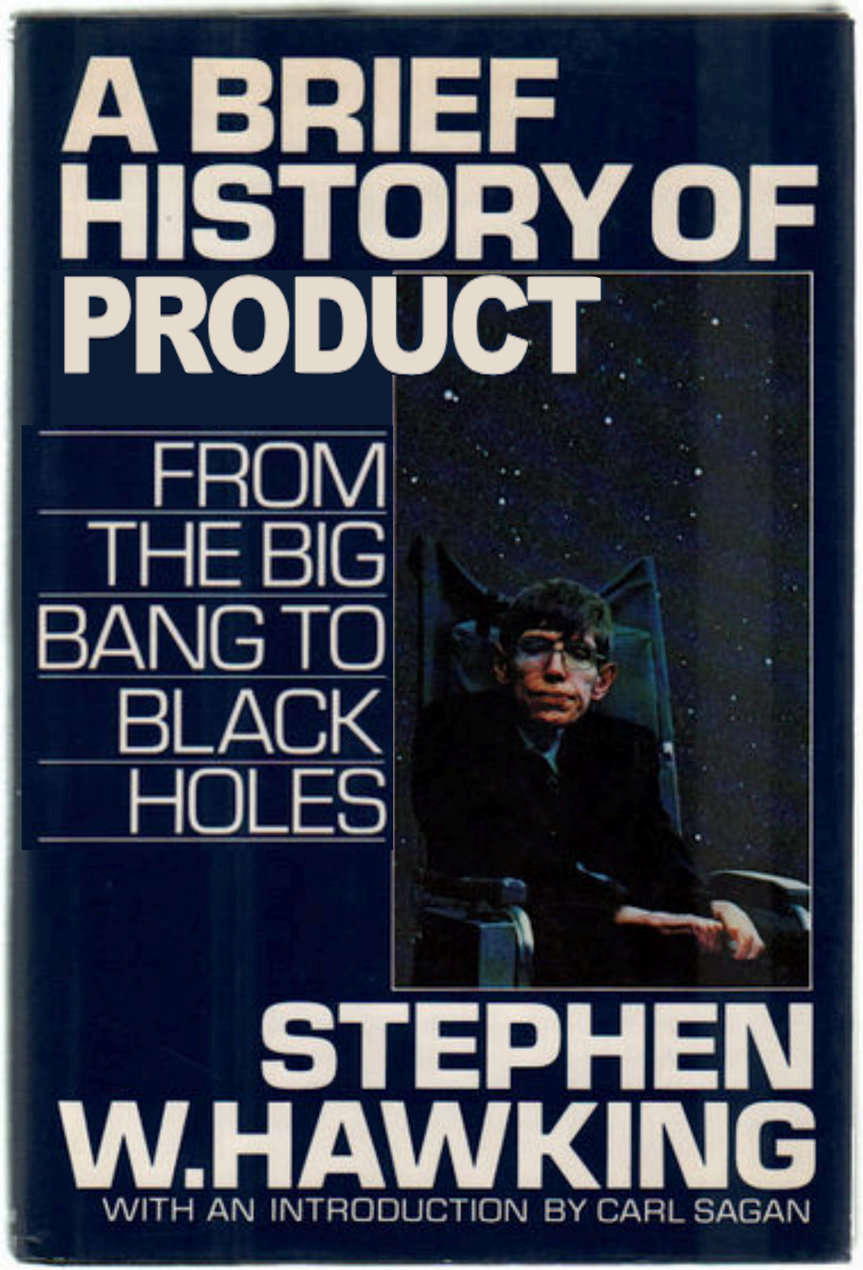
Once the operator has clicked the "Process Claim" button and the information entered is correct, the system shall advance to a screen to allow the operator to continue or cease the dispatch process based on whether the call is unique. This screen and process is described in "REQ 2: Uniqueness of Call." (The advancement to this screen will also let the operator know that the system accept the input information.) All information the operator inputs shall be stored in the database on the server.

https://www.slideshare.net/indrisrozas/example-requirements-specification

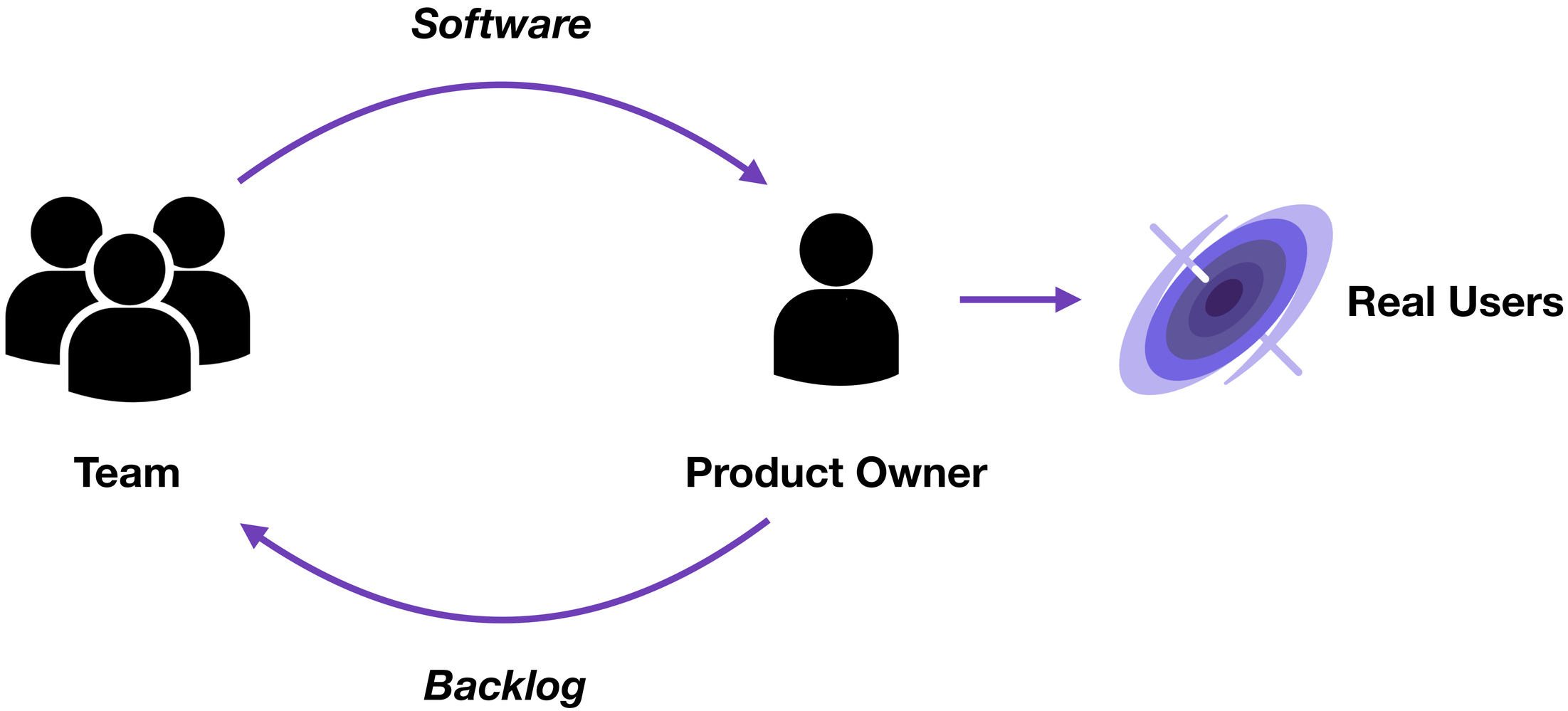
Then we got Agile!



Icons by freepik at flaticon.com


A BRIEF HISTORY OF PRODUCT
FROM THE BIG BANG TO BLACK HOLES
STEPHEN W.HAWKING
WITH AN INTRODUCTION BY CARL SAGAN

… to Black Holes?



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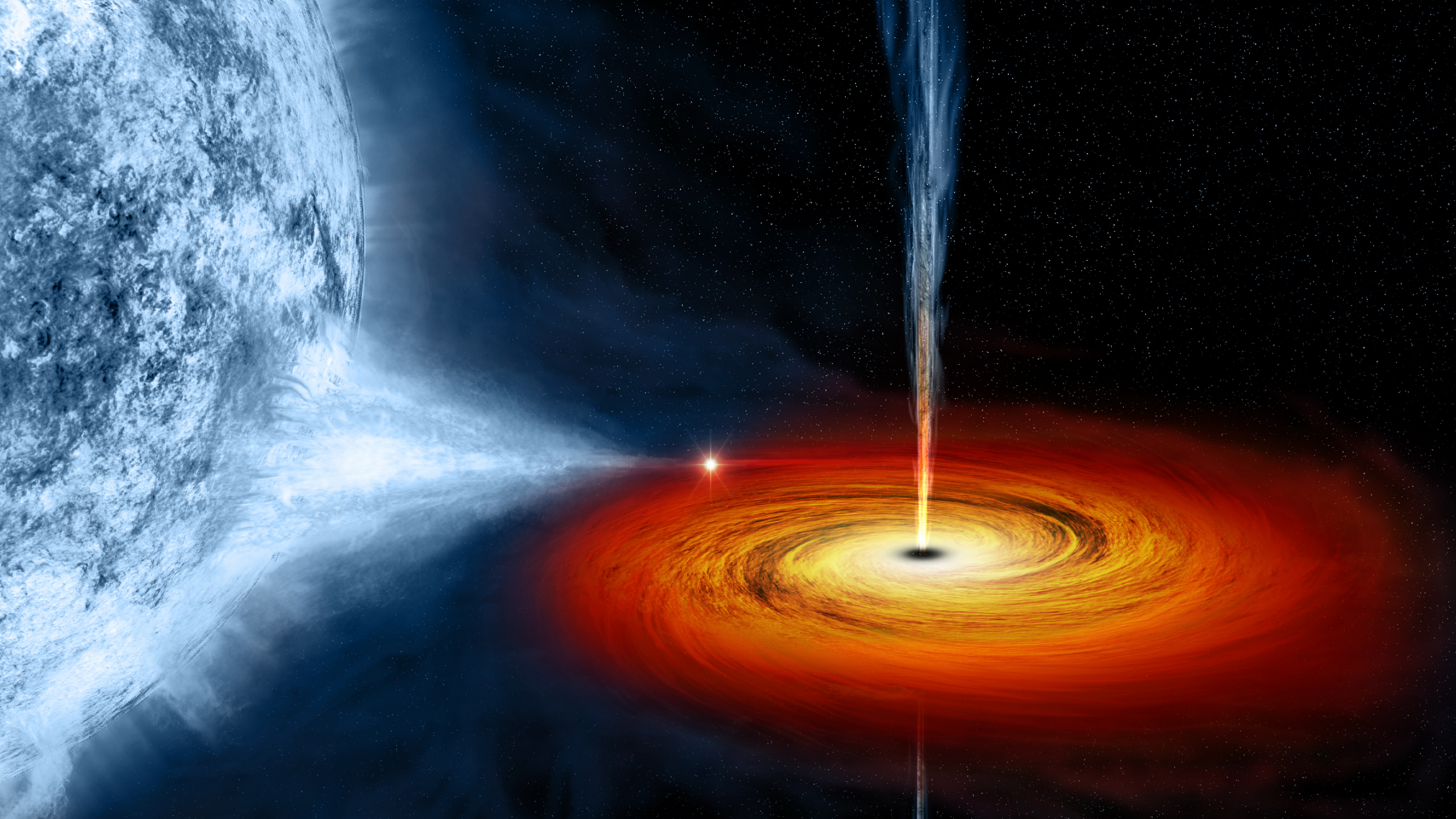
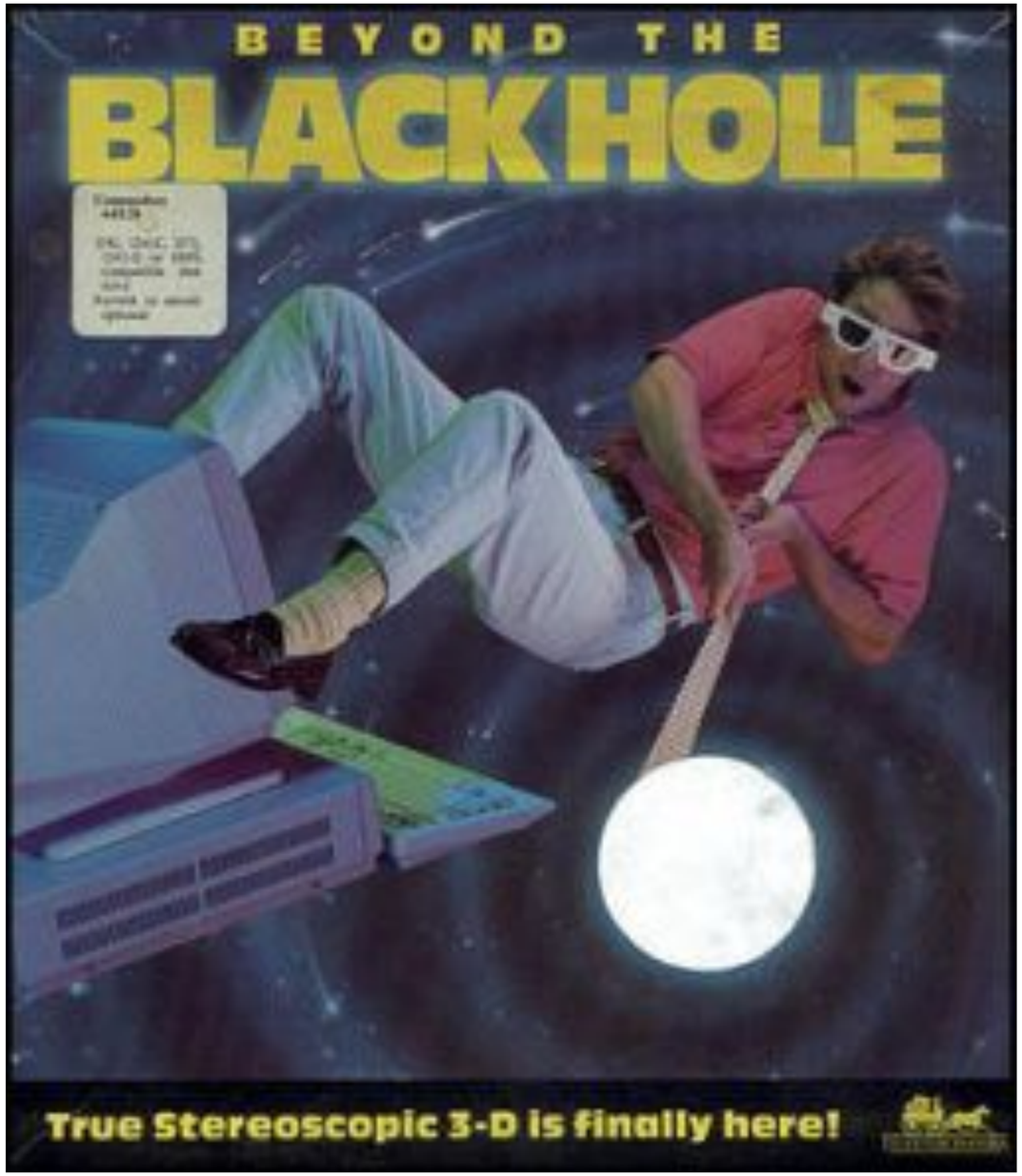


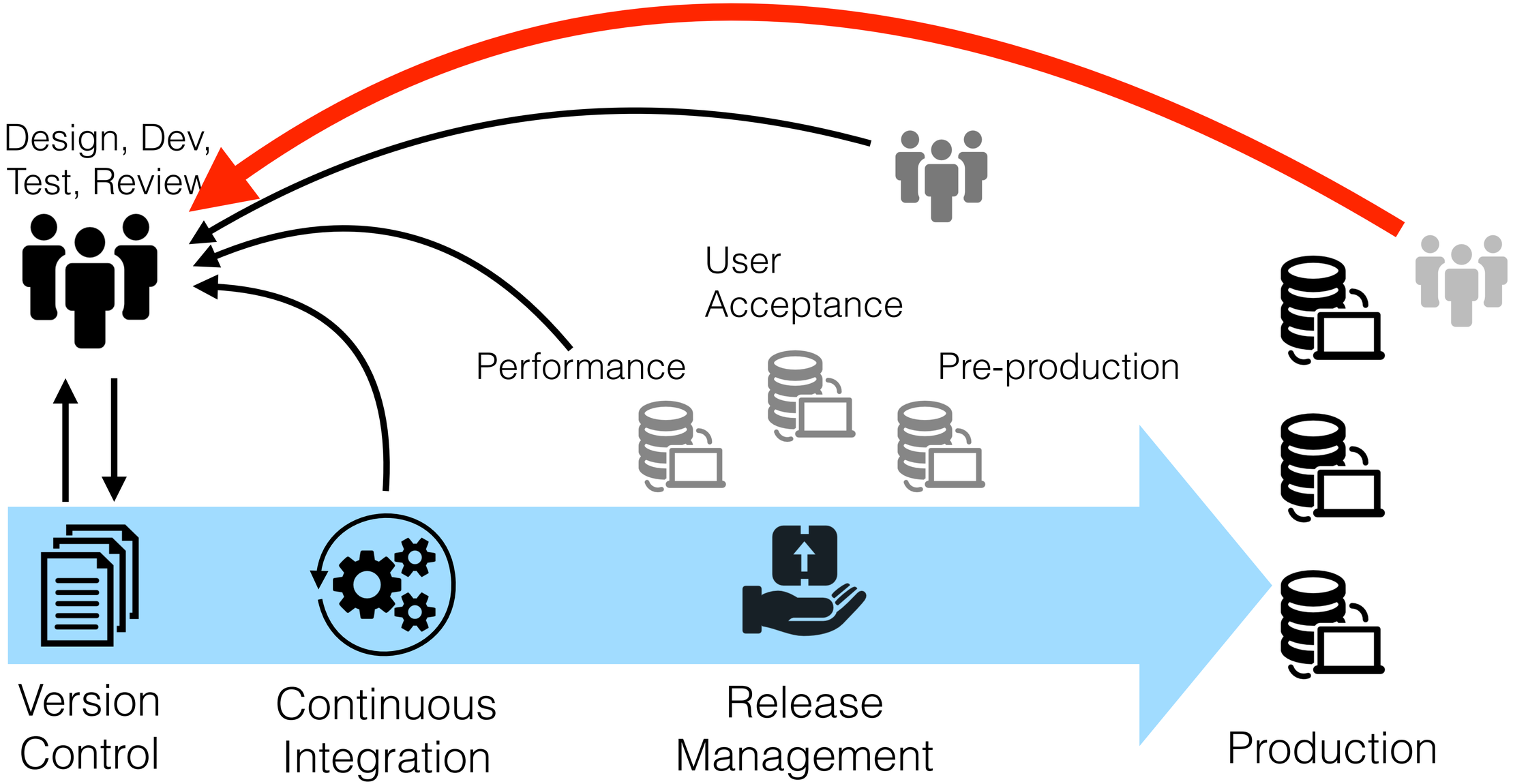
Signs of Black Hole Agile

- Done means coded/tested/released (not validated)
- Releases celebrated more than user success
- No feature ever fails
- Planning starts with feature ideas

What lies beyond the black hole?



Closing the Loop


Design, Dev,
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Production

Closing the loop is easy

1. Describe the outcome
2. Ship software
3. Measure

nicole forsgren PHD IN COMPUTERING THINGS @nicolefv · 5h

Measuring things is super important to understand our work and get better. But most teams and organizations have almost no metrics and are TERRIBLE at it because it's hard and we suck at it and we try to over simply it.

> **myk prefers interdependence to eternal war** @mykola · Nov 24
>
> Please quote this tweet with a thing that everyone in your field knows and nobody in your industry talks about because it would lead to general chaos.
>
> Show this thread

6 8 52

Objective-setting frameworks

Objectives and Key Results (OKRs)

Also, 4 Disciplines of Execution (4DX), Key Performance Indicators (KPIs), SMART goals, Performance Measurement Process (PuMP), Big Small Quick (BSQ), North Star Framework…

OKR example: Conference

From previous years, they've established categories that they believe correlate with attendee satisfaction, and hence drive recommendation and repeat attendance: Registration, Speaker Quality, and Lunch

Objective Keep user satisfaction with registration high

Key result 1 Get more than 90% of registrants into the hall before first session.

Product Managing for CD
#1

Align at the level of intent

Product Managing for CD
#1

Align at the level of intent,
check and change course

But it’s probably OK if
we don’t measure, right?

But it’s probably OK if
we don’t measure, right?

NO

Online Experimentation at Microsoft

Ronny Kohavi
ronnyk@microsoft.com

Thomas Crook
tcrook@microsoft.com

Roger Longbotham
rogerlon@microsoft.com

Brian Frasca
brianfra@microsoft.com

Randy Henne
rhenne@microsoft.com

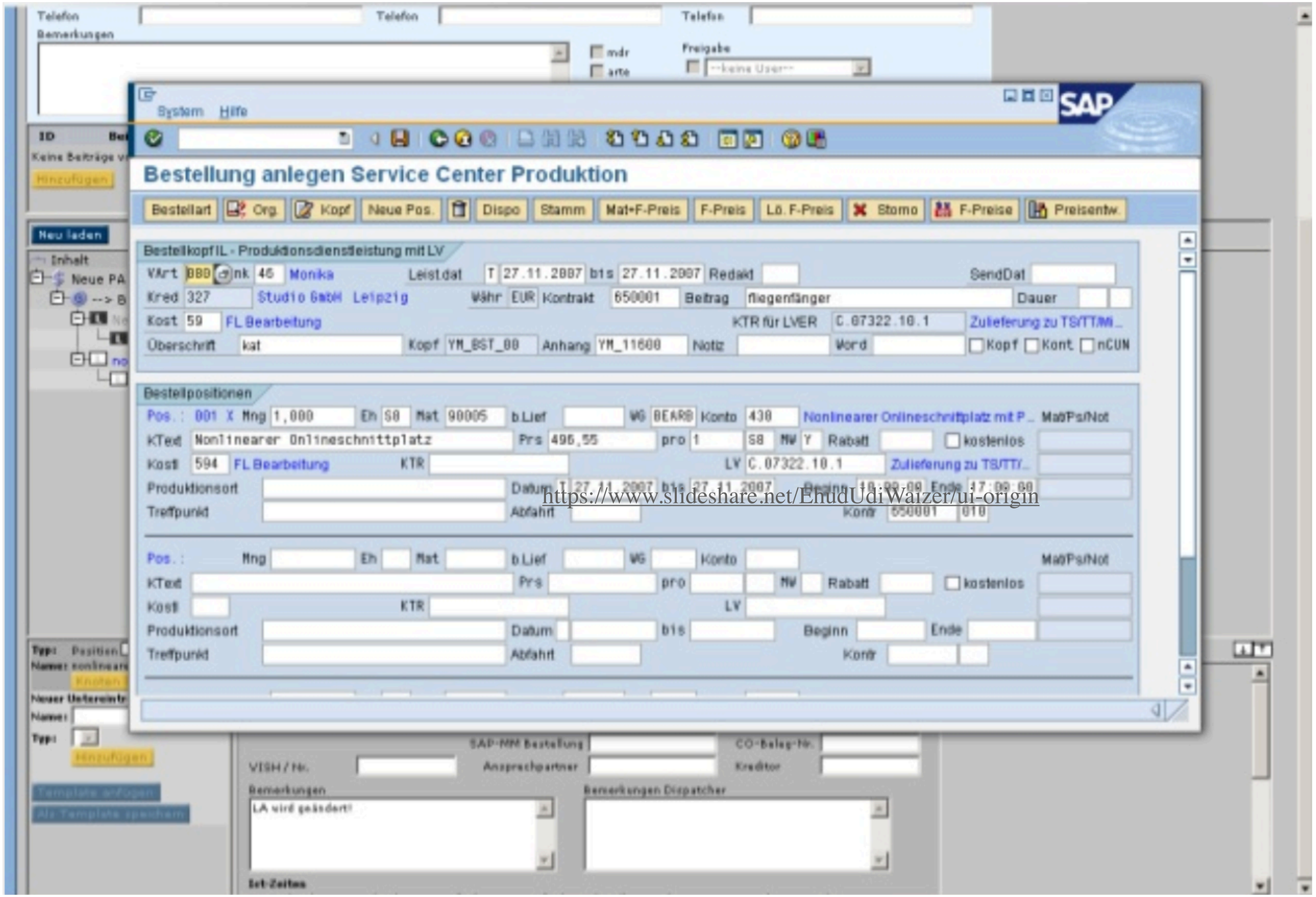
Juan Lavista Ferres
jlavista@microsoft.com

Tamir Melamed
tamirme@microsoft.com

Controlled experiments, also called randomized experiments and A/B tests, have had a profound influence on multiple fields, including medicine, agriculture, manufacturing, and advertising. Through randomization and proper design, experiments allow establishing causality scientifically, which is why they are the gold standard in drug tests. In software development, multiple techniques are used to define product requirements; controlled experiments provide a valuable way to assess the impact of new features on customer behavior. At Microsoft, we have built the capability for running controlled experiments on web sites and services, thus enabling a more scientific approach to evaluating ideas at different stages of the planning process. In our previous papers, we did not have good examples of controlled experiments at Microsoft; now we do! The humbling results we share bring to question whether a-priori prioritization is as good as most people believe it is. The Experimentation Platform (ExP) was built to accelerate innovation through trustworthy experimentation. Along the way, we had to tackle both technical and cultural challenges and we provided software developers, program managers, and designers the benefit of an unbiased ear to listen to their customers and make data-driven decisions. A technical survey of the literature on controlled experiments was recently published by us in a journal (Kohavi, Longbotham, Sommerfield, & Henne, 2009). The goal of this paper is to share lessons and challenges focused more on the cultural aspects and the value of controlled experiments.

http://ai.stanford.edu/~ronnyk/ExPThinkWeek2009Public.pdf

Obviously value can go down as well as up when a “feature” is added



https://www.slideshare.net/EhudUdiWaizer/ui-origin

“We have a lot of metrics, but it isn’t changing anything.”

The difference is culture

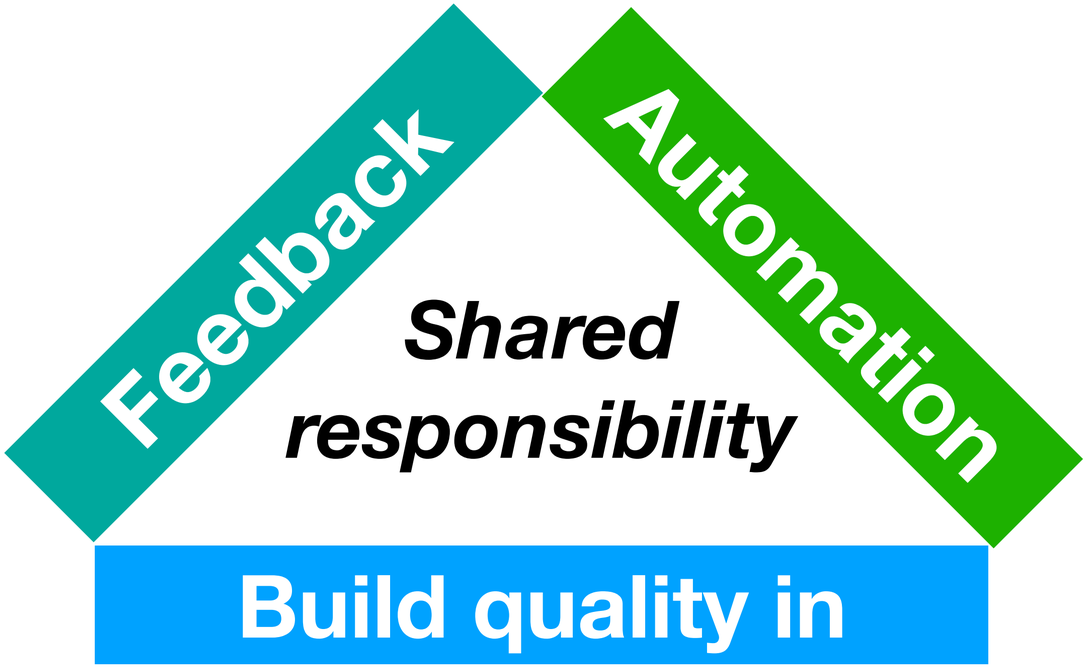
CULTURE is “a **pattern of shared basic assumptions** that the group learned … that **has worked well enough** to be considered valid and, therefore, to be taught to new members as the correct way”

Edgar Schein
Organizational Culture and Leadership

But it’s probably OK if
we don’t measure, right?

Product wins when we extend the CD (DevOps) culture

DevOps Culture



Team Culture

Organizational Culture

https://www.martinfowler.com/bliki/DevOpsCulture.html

DevOps Culture

Team Culture

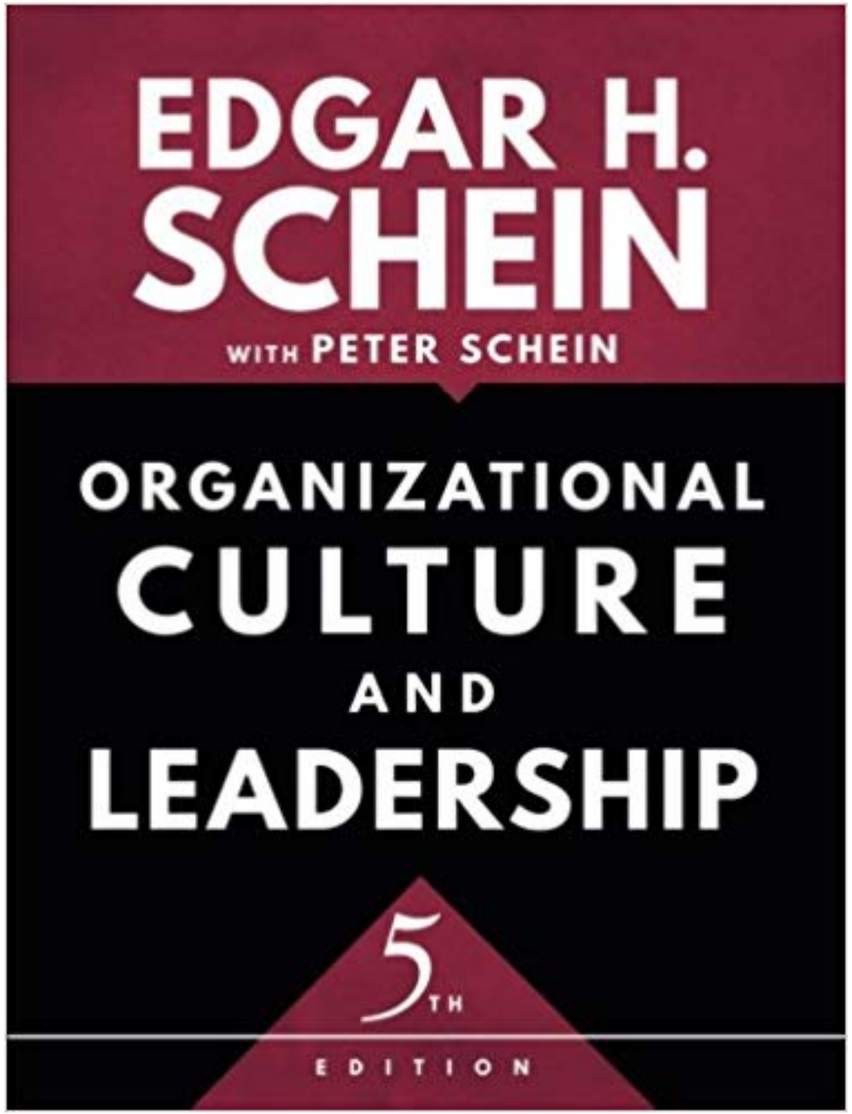
Validation

Product Culture

No silos

Autonomous teams

Organizational Culture


EDGAR H.
SCHEIN
WITH PETER SCHEIN
ORGANIZATIONAL
CULTURE
AND
LEADERSHIP
5TH
EDITION

Primary mechanisms to embed culture (Schein)

- Attention
- Reactions to big events
- Resource & reward allocation
- Role modelling, teaching, coaching

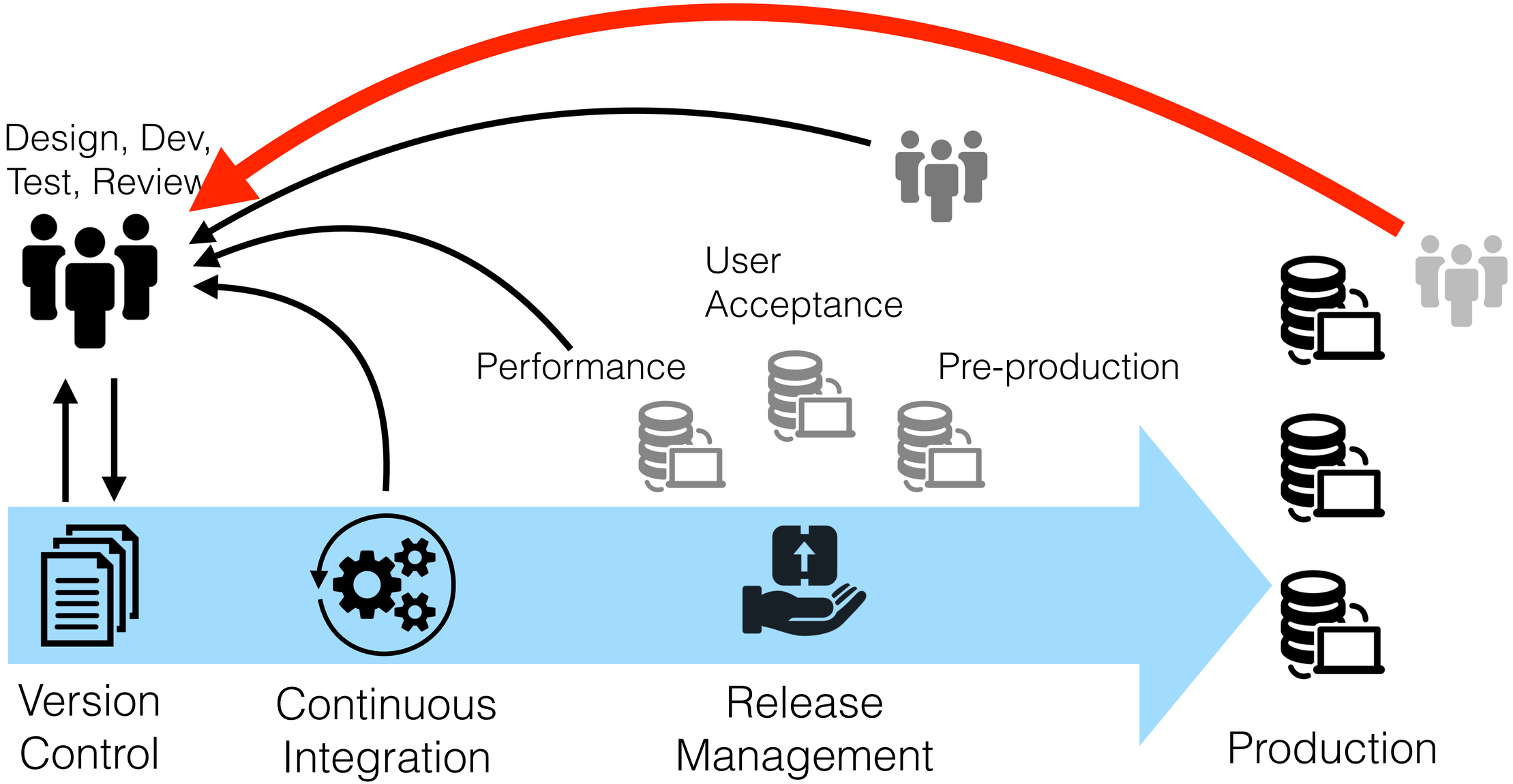
GOAL: KEEP THE GOAL IN MIND

In Progress
Done
Cambridge - Internet Usage
Pasadena - Internet Usage
Austin - Internet Usage
Parked
BAU / CI
Up next
Today
Done
Risk Log
Probability
very High
High
Medium
Low
Very Low
Very Low
Low
Down Tools
Weekend W

Promoting a close-the-loop culture

- Make objective and current results visible
- Normalise working in small batches
- Make time to collect and analyse results
- Act on what you learn

CD presents challenges to Product Managers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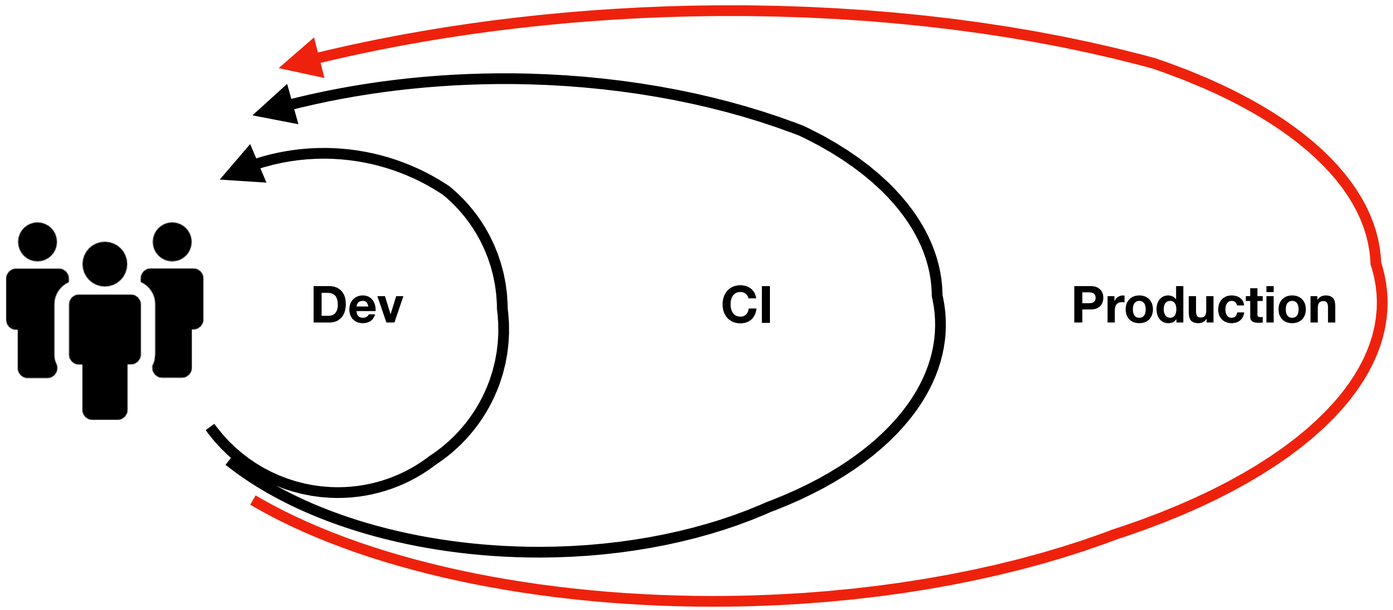
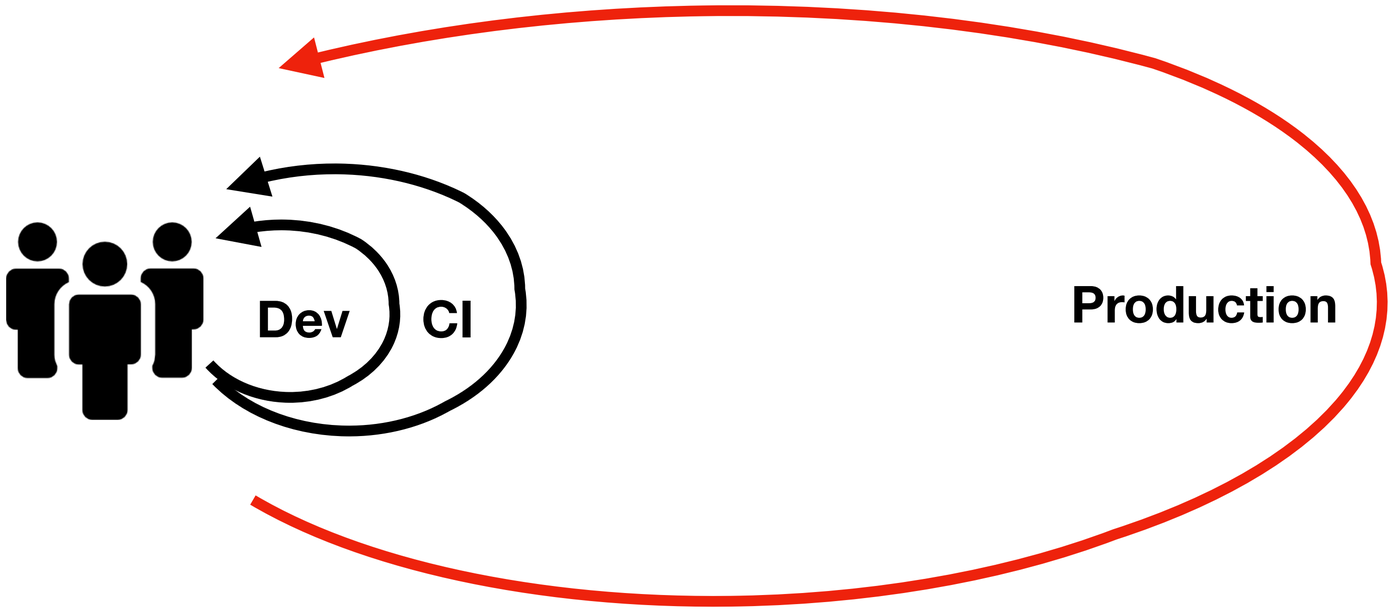
Continuous Delivery feedback cycles



Dave Farley, Private Communication

Continuous Delivery feedback cycles

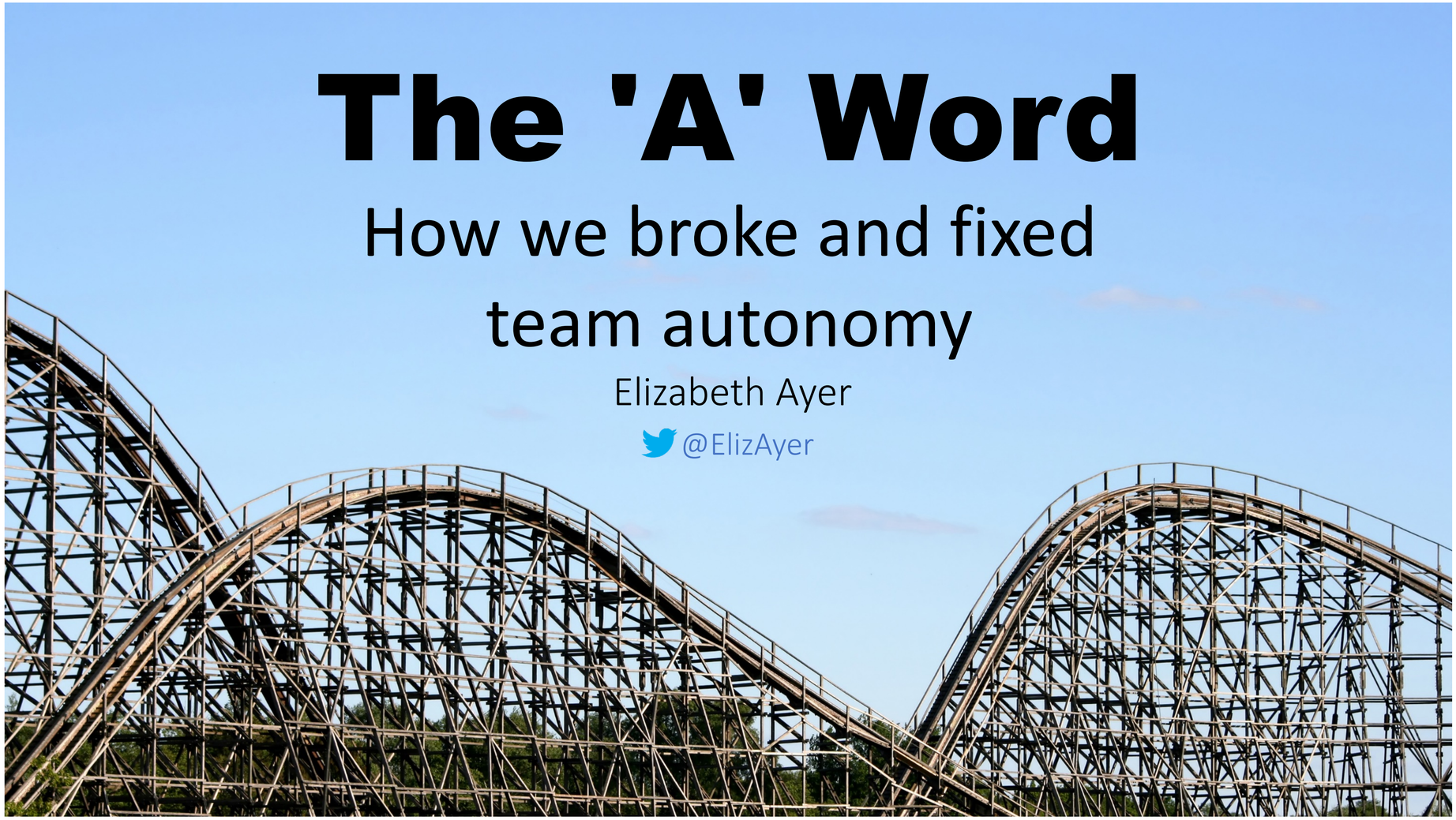


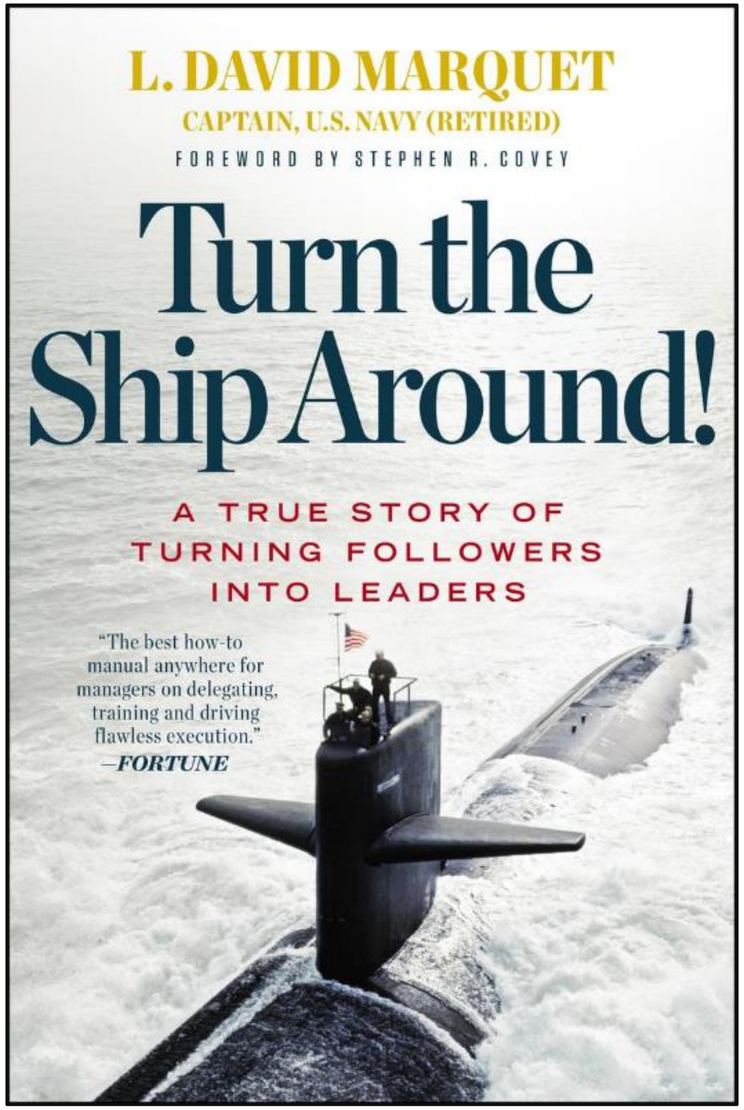
redgate

Despite better dev practices,
teams were feeling disengaged,
and decision-making was slow.

Product Managing for CD
#2

Empower your teams to avoid being bottlenecked on product decisions


The 'A' Word
How we broke and fixed team autonomy
Elizabeth Ayer
@ElizAyer


L. DAVID MARQUET
CAPTAIN, U.S. NAVY (RETIRED)
FOREWORD BY STEPHEN R. COVEY
Turn the Ship Around!
A TRUE STORY OF TURNING FOLLOWERS INTO LEADERS
"The best how-to manual anywhere for managers on delegating, training and driving flawless execution."
—FORTUNE

Train in product: scope, ordering, timing, thinking commercially

https://www.youtube.com/watch?v=OqmdLcyES_Q

DevOps Culture

Team Culture

Validation

Empowerment

Product Culture

No silos

Autonomous teams

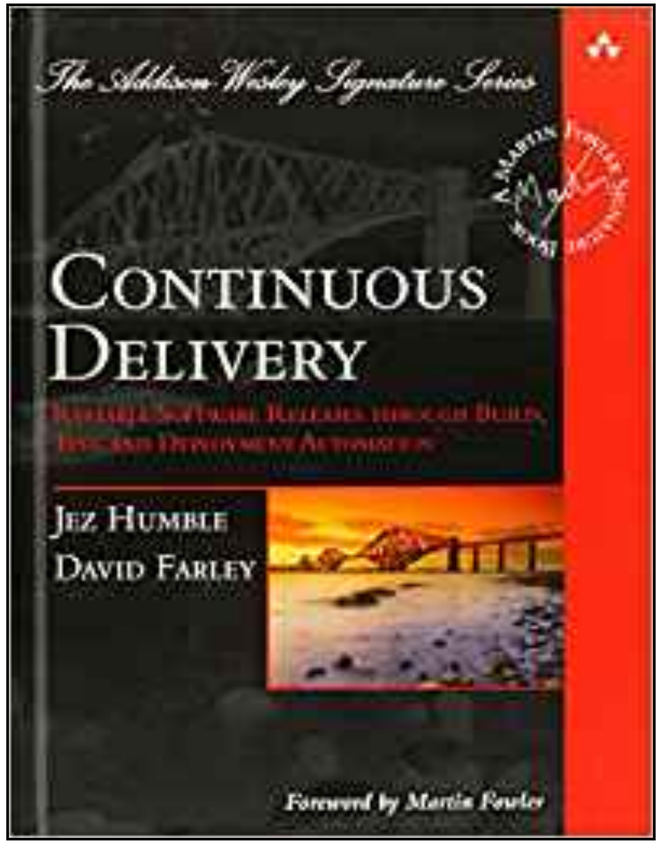
Organizational Culture

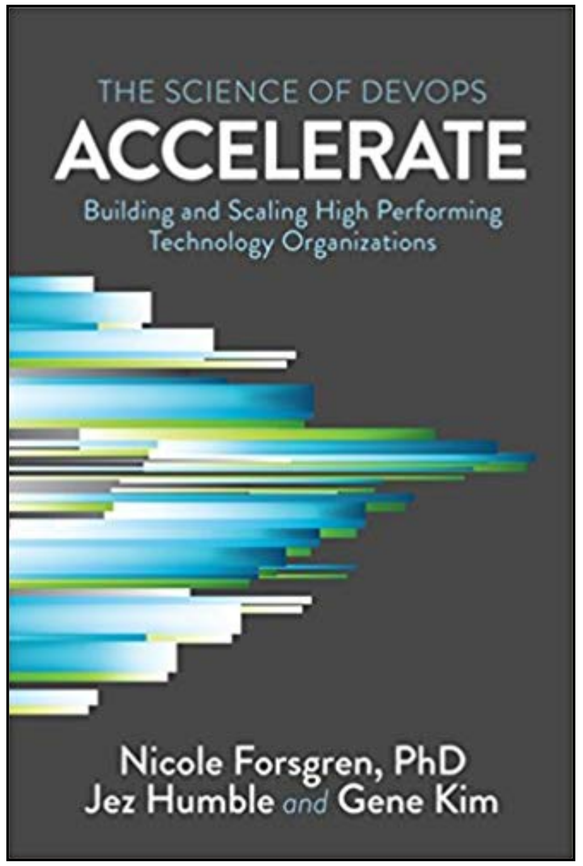
Validation culture and empowerment are not easy

… but we can recognise the challenges for what they are and make progress together!

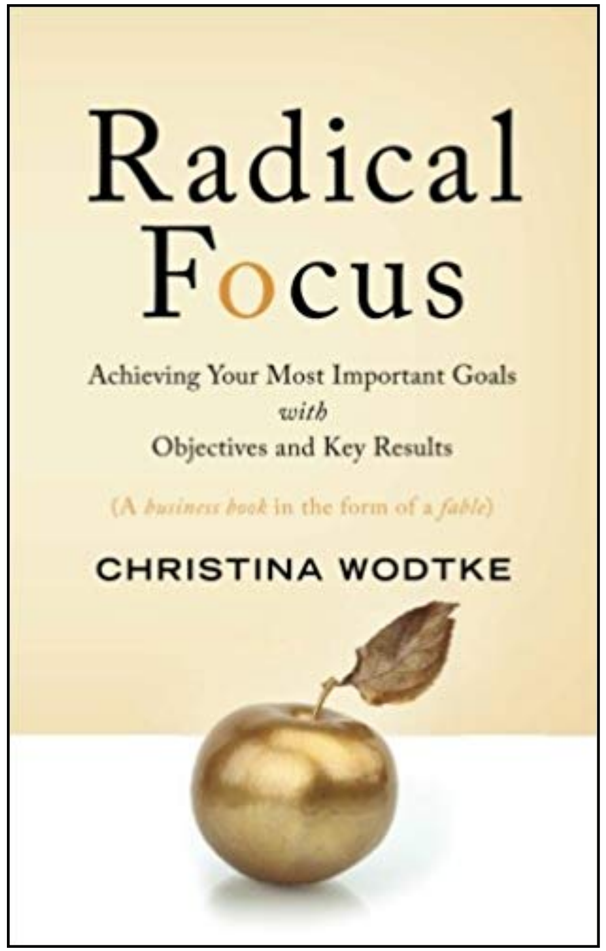
FACTS
NOT OPINIONS

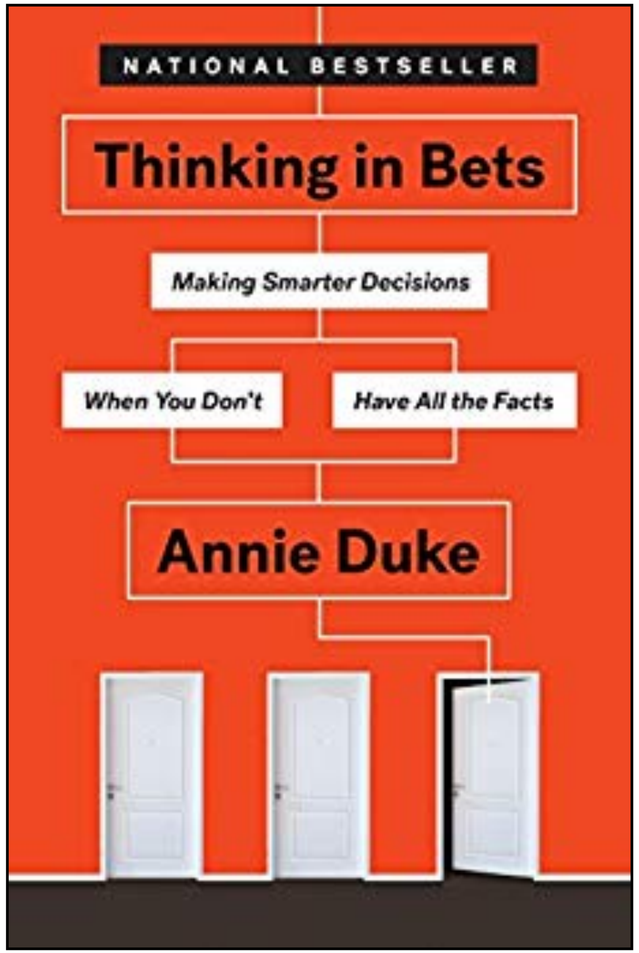
Continuous Delivery



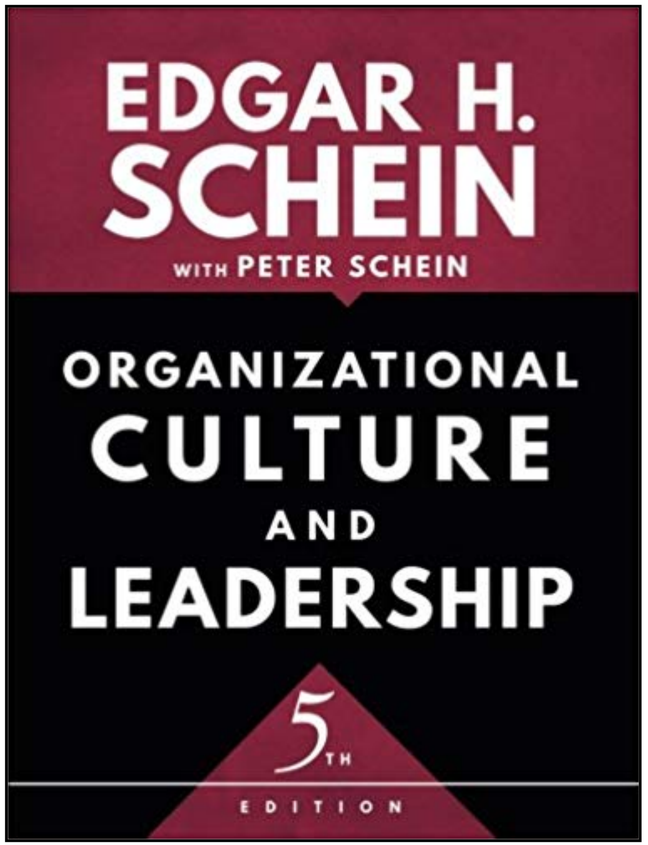


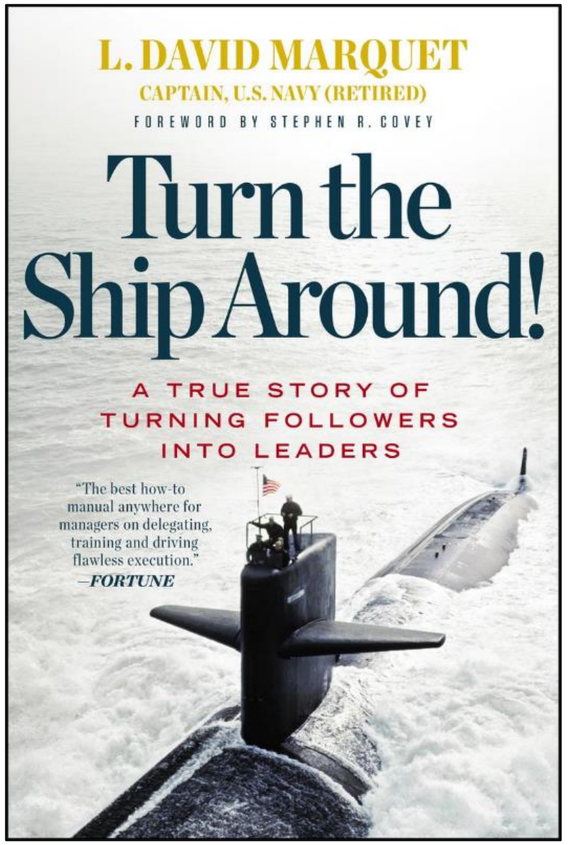
Goal-setting





Culture and Empowerment





Flowcon

Agile Tribu

aSpark

OUTPERFORMING THEORY, IGNITING RESULTS

meritis

CA CIB

Merci
Thank you

inspearit

VISEO

DIGITAL MAKERS

GROUPE NEXEO

PARIS | GENÈVE | BRUXELLES | MONTRÉAL

wemanity

benext

ap agilepartner

Thank you!