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The way to high performance teams

Carlos Barragan

Who am I?

Carlos Barragan
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Novatec Consulting GmbH

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Sectors

Automotive
Banking
Insurance
Logistics
Health

Roles

Developer
Architect
Consultant

+20 Years of experience

Methods

Waterfall
Scrum
Kanban

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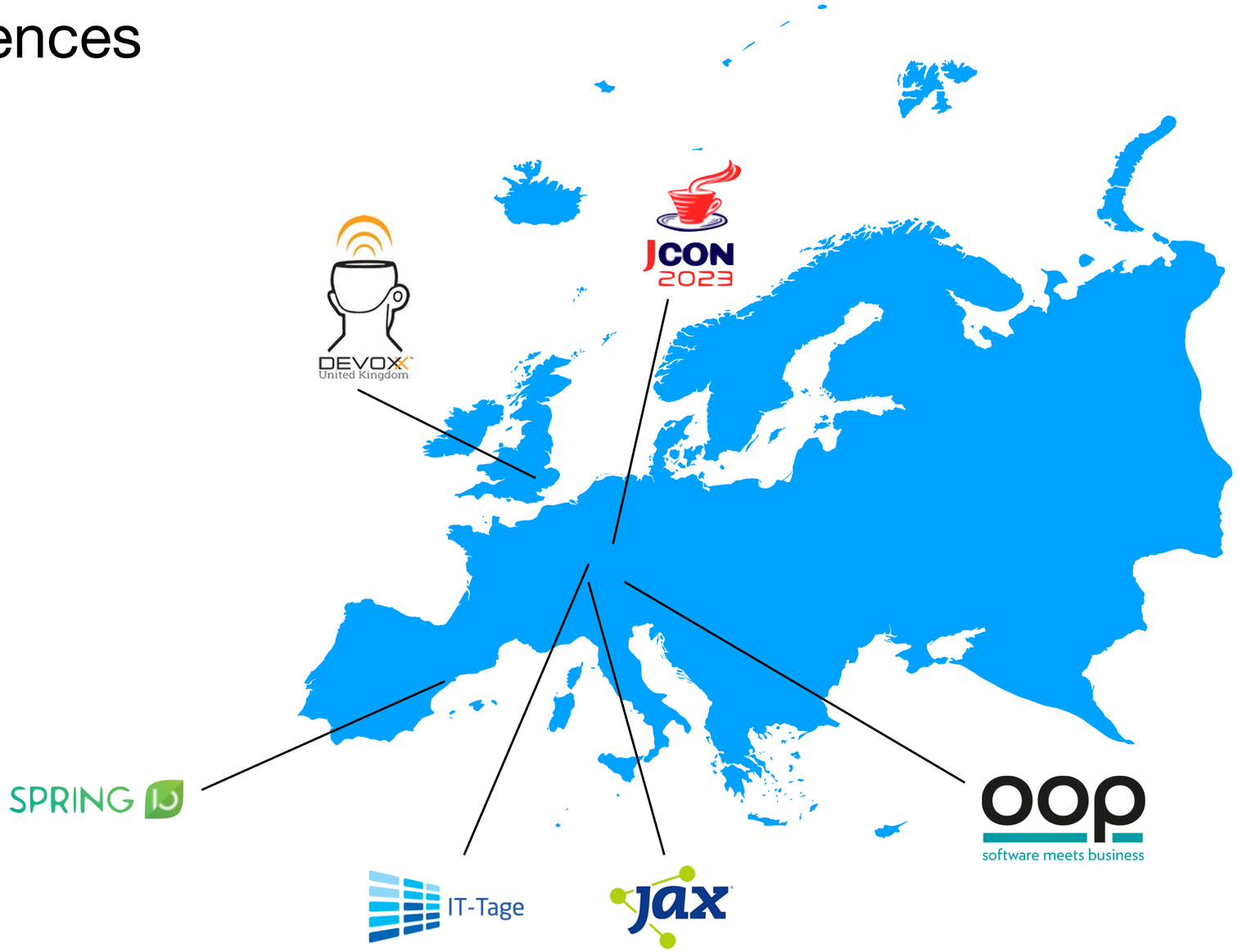
Conferences



Why am I talking about high-performance teams?

I worked in a high-performance team and that experience made me reflect on how we achieved that and why such teams don’t happen very often.

What is a high performance team?

Why do you want a high performance team?

What works and what doesn't

My own experience in a high performance team

What is a high performance team?

A high performance team collaborates effectively in delivering high quality results continuously.

What are the main characteristics of a high performance team?

Trust
The team can be trusted and its members trust each other.

Autonomy
The team manages itself with minimum supervision. It makes its own decisions regarding daily tasks and creation of work.

Technical skills
Team members have strong technical skills relevant to their role.

Clear communication
Team members communicate openly and effectively both within the team and with other teams.

Feedback
Team has a culture of feedback and continuous improvement.

Focus on quality
Quality is a top priority. The team follows best practice such as code reviews, automated testing, CD / CI…

But there is one key aspect

Psychological Safety

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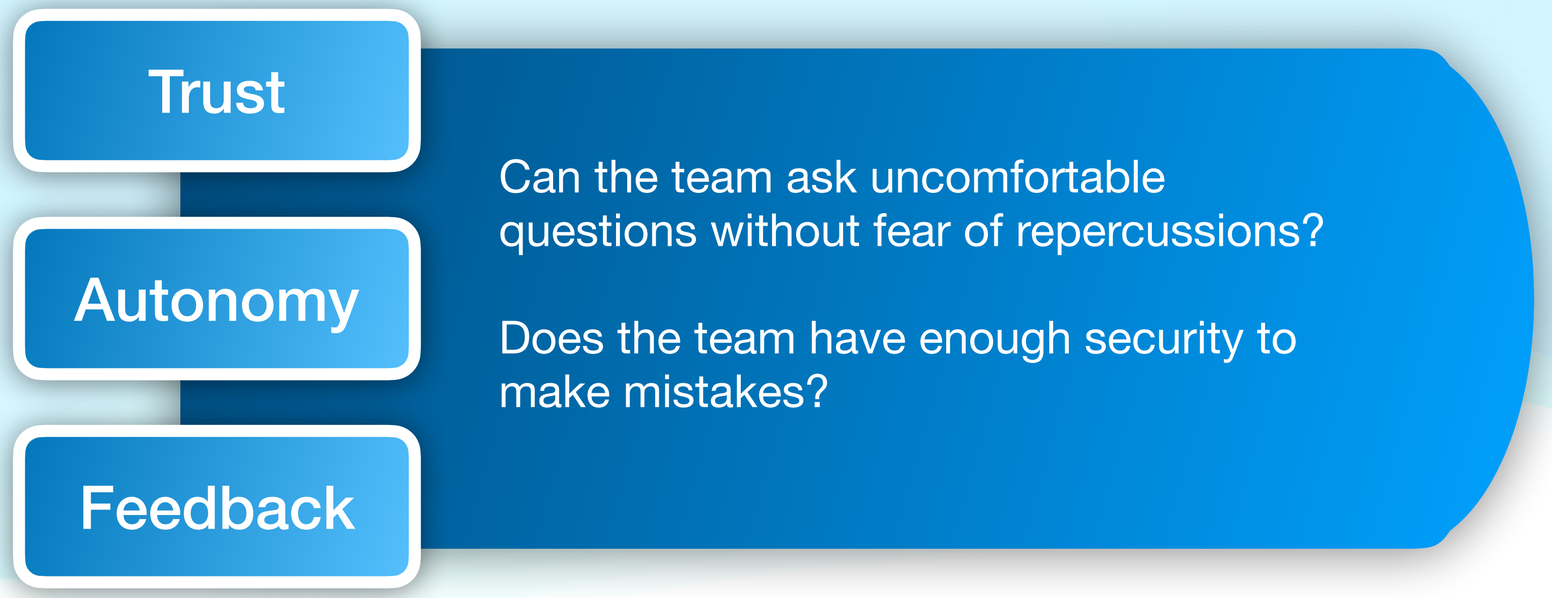
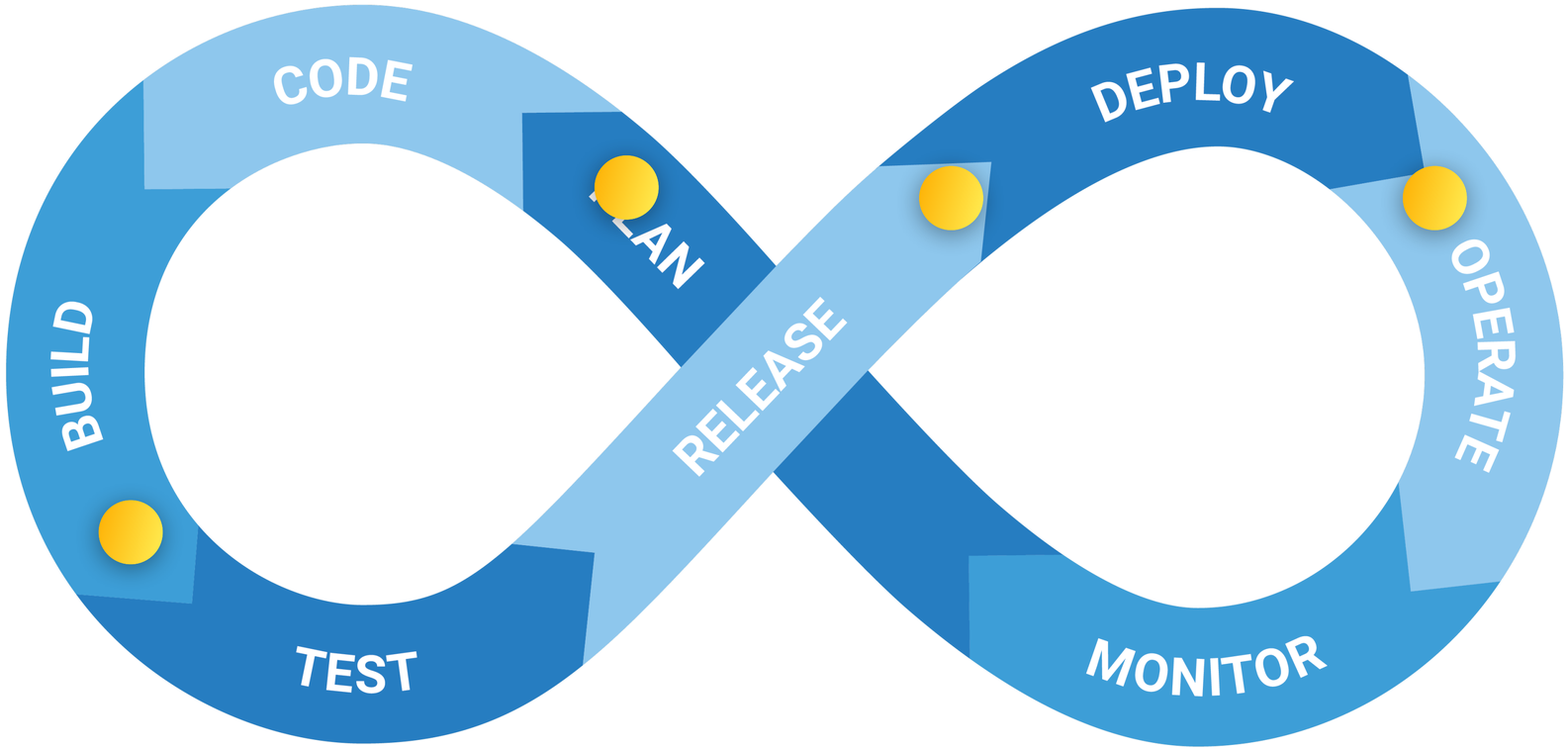
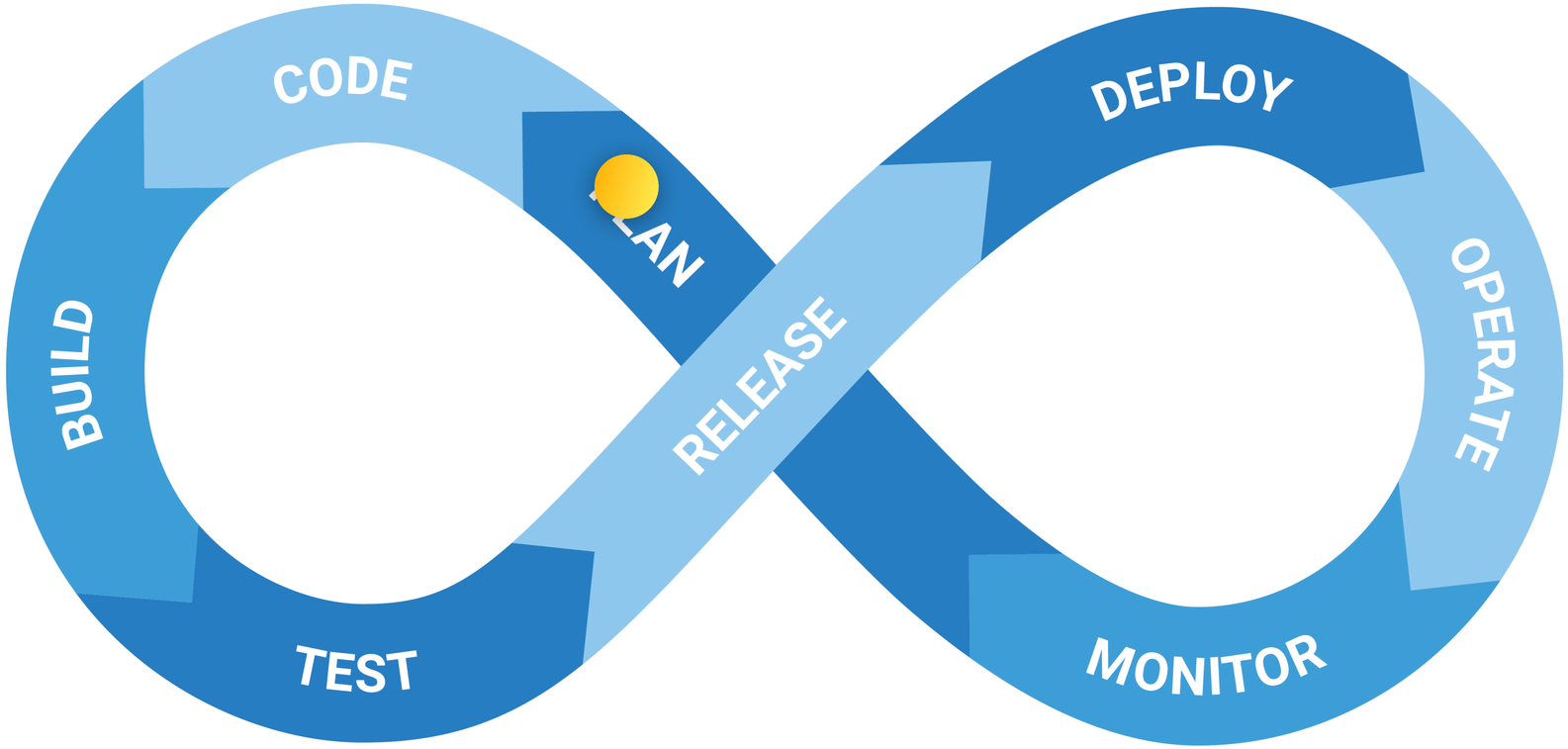


Psychological Safety

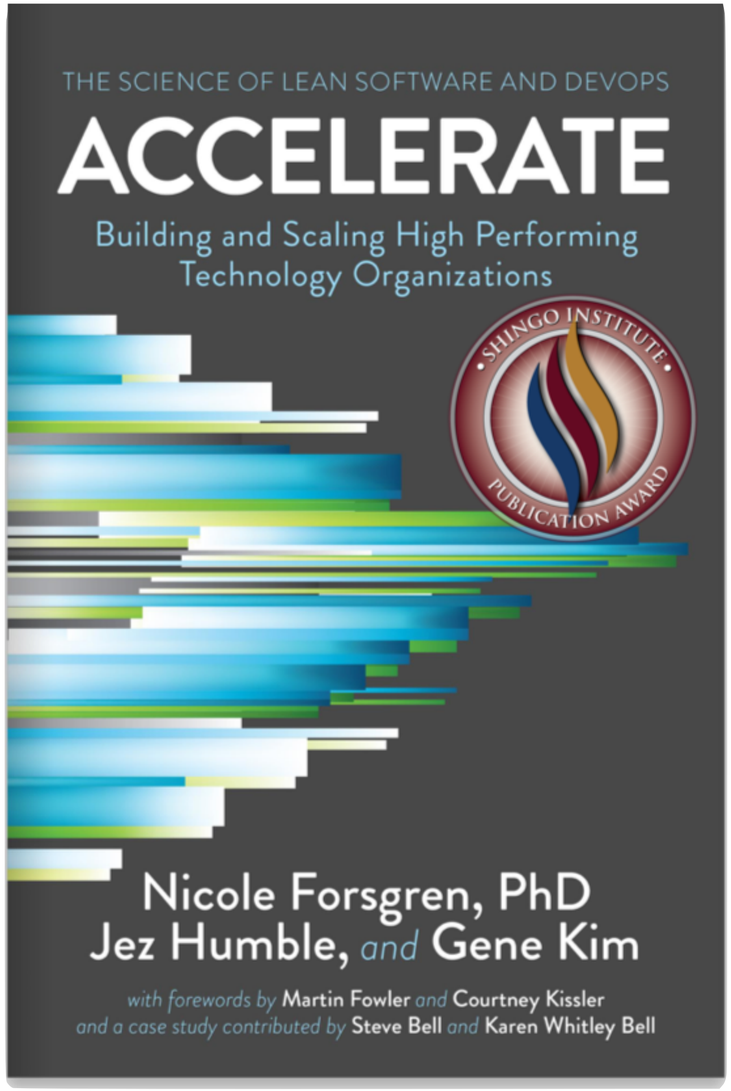
Typical team flow



High performance team flow



Why do
you
want a high
performance
team?



Dr. Nicole Forsgren

Partner at Microsoft (GitHub) research.
Co-founder of DevOps Research and Assessment (DORA).

Jez Humble

SRE at Google Cloud.
Lecturer at UC Berkeley.
Author of several other books about DevOps and Lean Enterprise.

Gene Kim

Researcher on high-performing technology organisations.
Founder and CTO of Tripwire.
Author of other books like “The unicorn project”, “the DevOps handbook” among others.

IT Performance

“affects an organisation’s ability to achieve broader organisational goals.”

IT Performance

"High performance organisations are consistently twice as likely to exceed their goals as low performers."

Goals

- Productivity
- Operational efficiency
- Market Share
- Quality of products & services
- Customer satisfaction

Why do you want to be a high performance organisation?

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What could happen if you are not one?


NOKIA


BlackBerry

TESLA

VS

NOVATEC

Mobilität

Volkswagen: Software-Sparte bekommt mehr Einfluss auf neue Autos

Von Oliver Schwuchow

03.02.23 | 8:00 Uhr | 5 Kommentare

Cariad bestimmt die Volkswagen-Roadmap

In einem Beitrag von Autocar heißt es, dass das bald 7.000 Personen starke Team die kommende Roadmap der Volkswagen AG beeinflusst. Was allerdings auch in der Übergangsphase nicht so leicht ist, denn bisher herrschte hier viel Chaos.

https://www.mobiflip.de/shortnews/volkswagen-software-sparte-entscheidet-wann-neue-autos-kommen/

VW Group's Software Unit Delaying EVs From Audi, Porsche And Bentley

Problems at the Cariad division may delay Audi's Artemis flagship EV to 2027; Porsche Macan EV and Audi Q6 e-tron under threat as well.

According to *Automobilwoche*, which cites unnamed sources, Audi's new flagship—developed under the Artemis project—will not launch until 2027, three years later than initially planned.

https://insideevs.com/news/597624/vw-group-software-unit-delaying-key-evs-audi-porsche-bentley/

The problem is not software development

The problem is software delivery

What works and what doesn’t


NETFLIX


amazon

How “Big Tech” implement Scrum?
They don’t.

Gergely Orosz

Author of “The pragmatic Engineer”

Worked at Skyscanner and Skype.
Worked 4 years at Uber building large distributed systems at scale.

How Big Tech Runs Tech Projects and the Curious Absence of Scrum

https://blog.pragmaticengineer.com/project-management-at-big-tech/

How Big Tech Runs Tech Projects and the Curious Absence of Scrum

Unlike Skype, Whatsapp never bothered with a framework like Scrum. Early employees shared how they never even muttered the word and deliberately ignored all heavyweight processes. Whatsapp out-executed Skype, built a more reliable messaging experience than Skype, and ultimately won the battle of messaging and communication apps.

How Big Tech Runs Tech Projects and the Curious Absence of Scrum

Company	Is There a “Central” Methodology?	What Project Management “Methodology” Is Typically* Used for Engineering Projects?	Who Typically Leads Engineering Projects?
Amazon	No, teams can choose	Plan (6-pager)->Build (iterate)->Ship	Tech lead
Apple	No, teams can choose	Plan->Build (iterate)->Ship	Tech lead
Datadog	No, teams can choose	Plan (RFC)->Build (iterate)->Ship	Tech lead or an engineer
Facebook	No, teams can choose	Plan->Build (iterate)->Ship	Tech lead or an engineer
Google	No, teams can choose	Plan (Design Doc)->Build (iterate)->Ship	Tech lead or an engineer
Netflix	No, teams can choose	Plan->Build (iterate)->Ship	Tech lead or an engineer
Shopify	No, teams can choose	GSD (Get Shit Done, 6-week cycles)	Tech lead or an engineer
Spotify	No, teams can choose	Plan->Build (iterate)->Ship	Tech lead or an engineer
Uber	No, teams can choose	Plan (ERD)->Build (iterate)->Ship	Tech lead or an engineer

newsletter.pragmaticengineer.com

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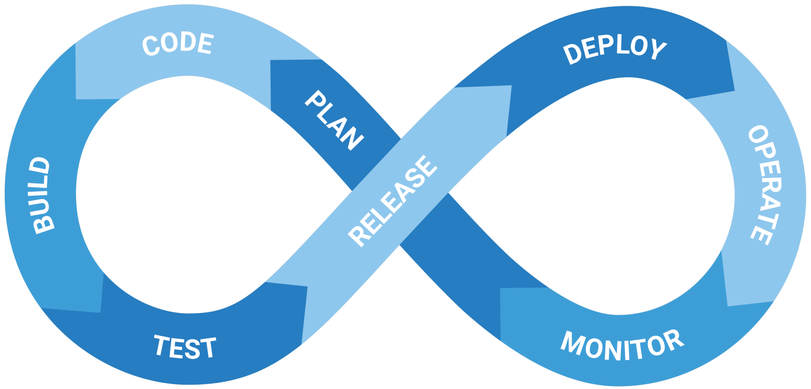


Scrum

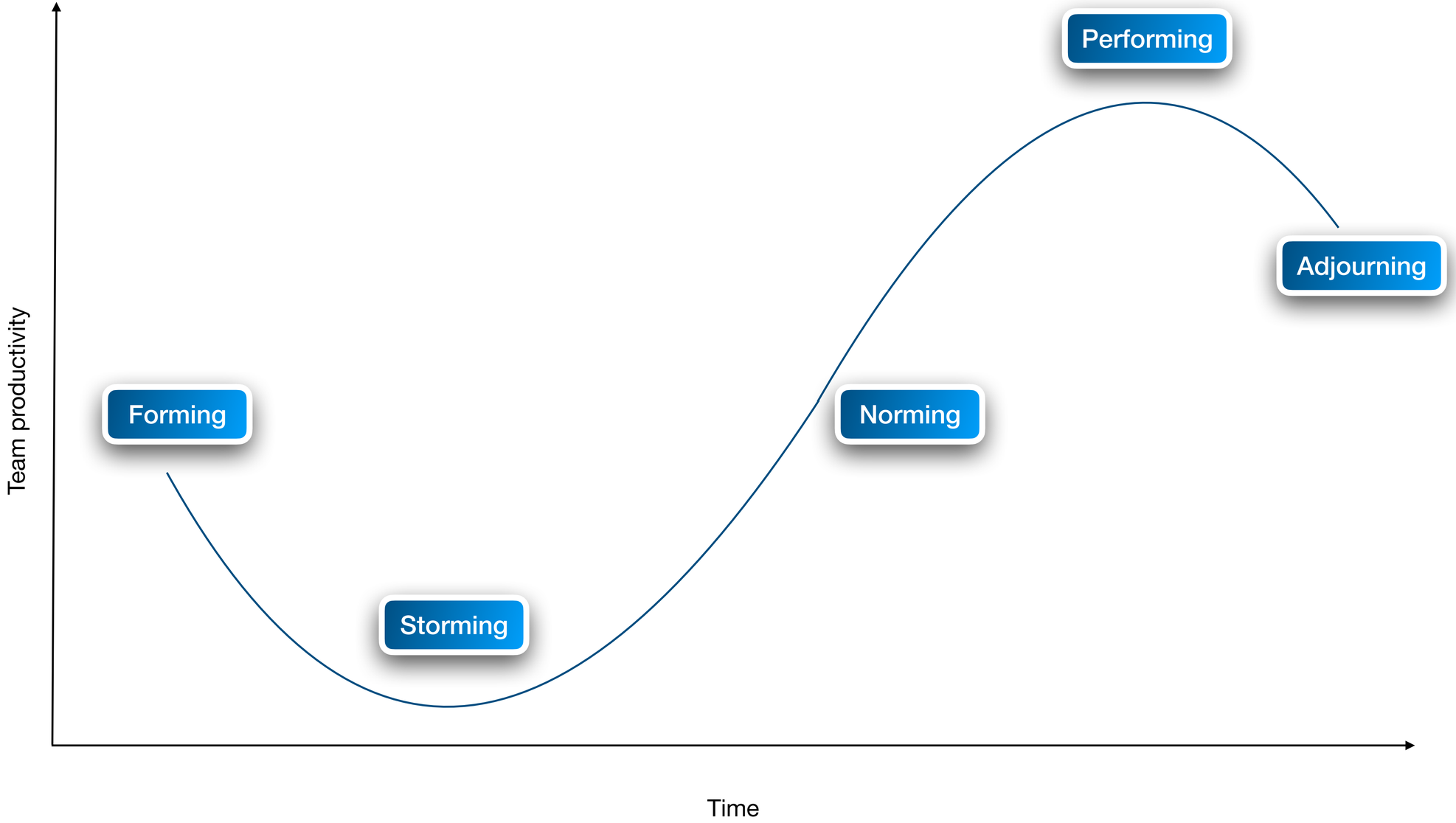
does not fit high performance teams

Scrum adds unnecessary overhead to high-performance teams through ceremonies

- Retrospectives
- Dailies
- Sprint Reviews

The goal of Scrum should be to not be needed in a later project phase

Tuckman Model



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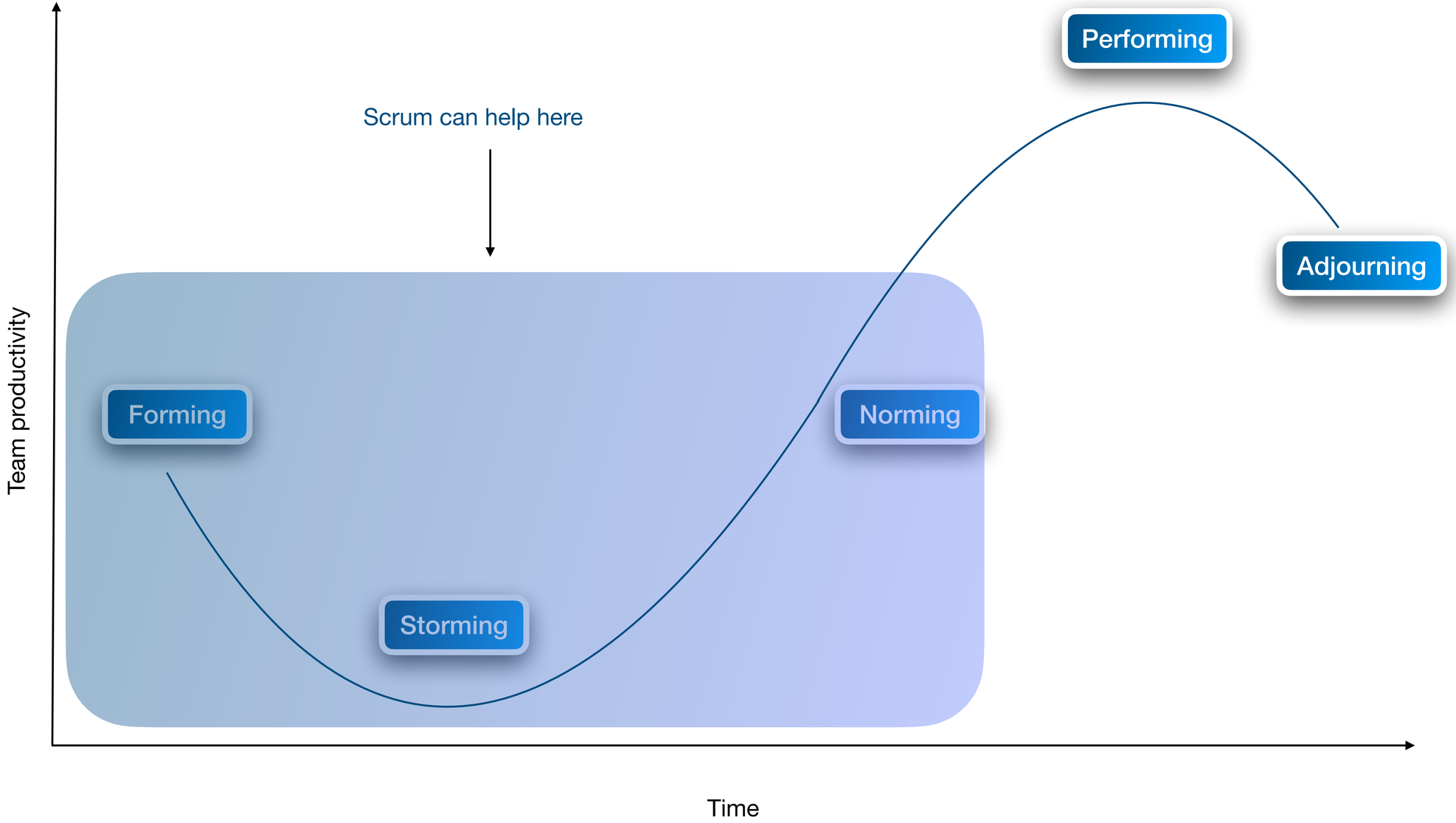

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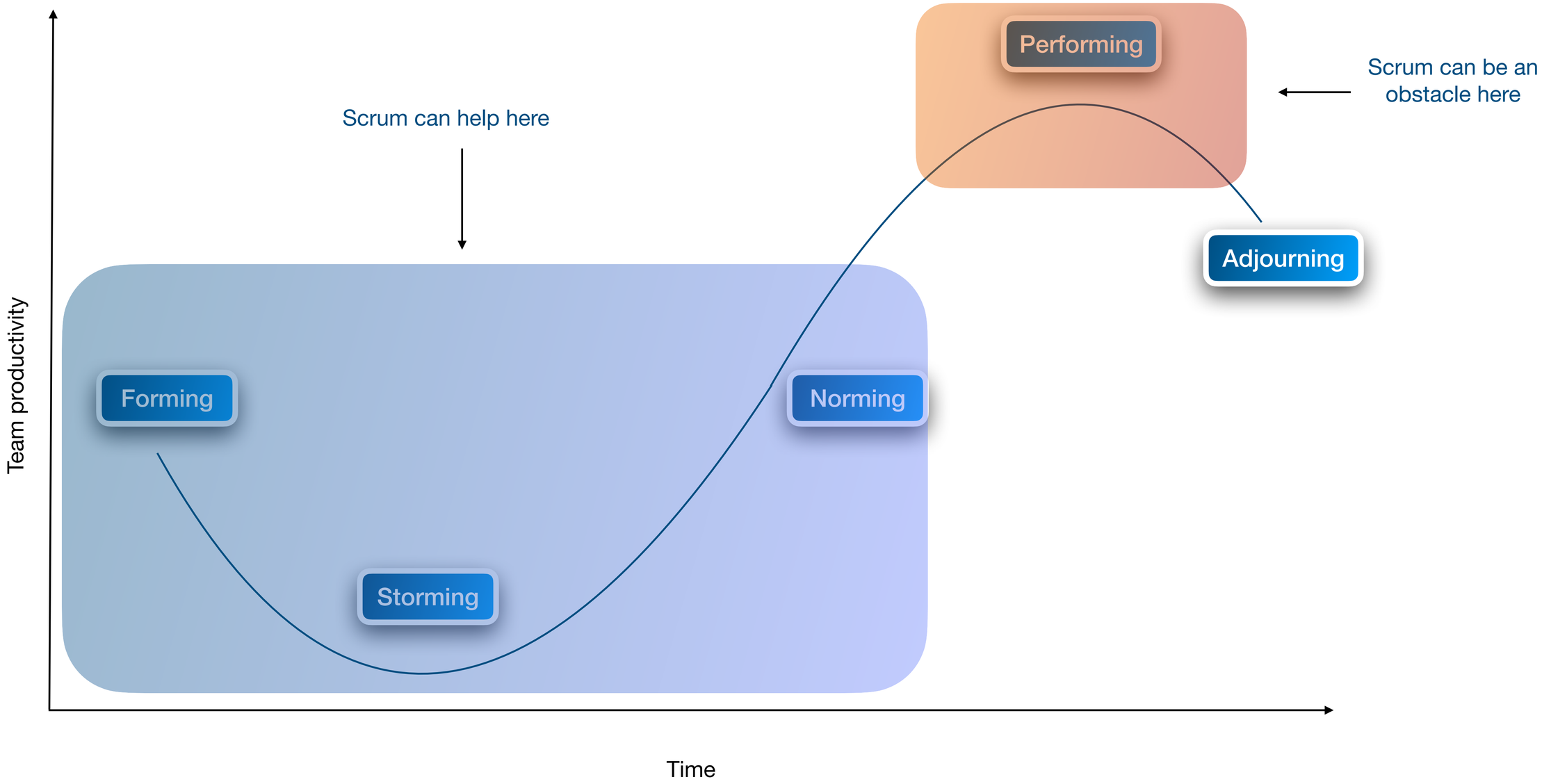

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Beginning team forming phases

Performing team phase

Scrum


SAFe

A process or framework that imposes how teams should work, is not agile.

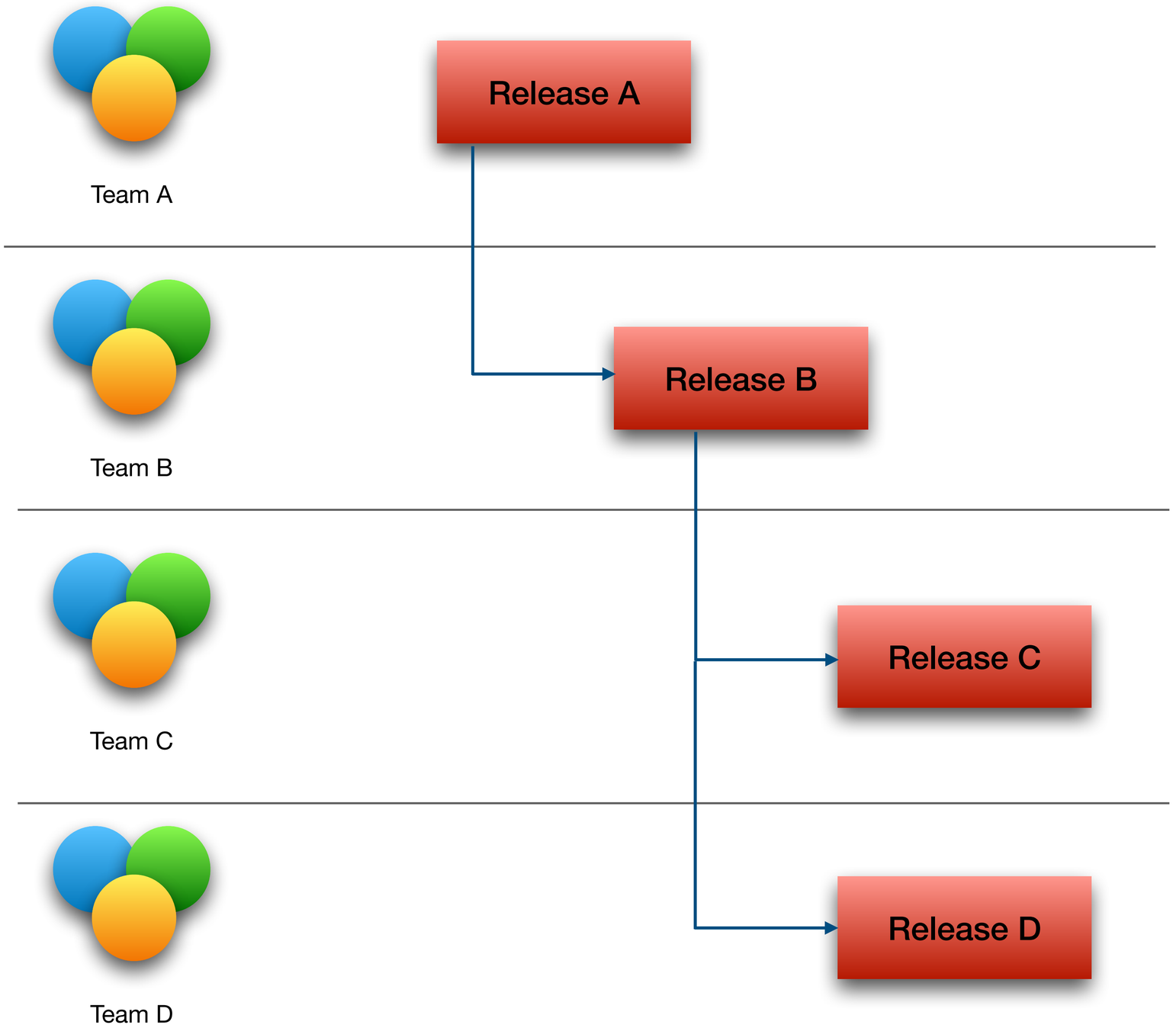
The best architectures, requirements and designs emerge from self-organising teams.

Agile Manifesto Principle

The people who do the work are in the best place to know how it should be done

A counter example

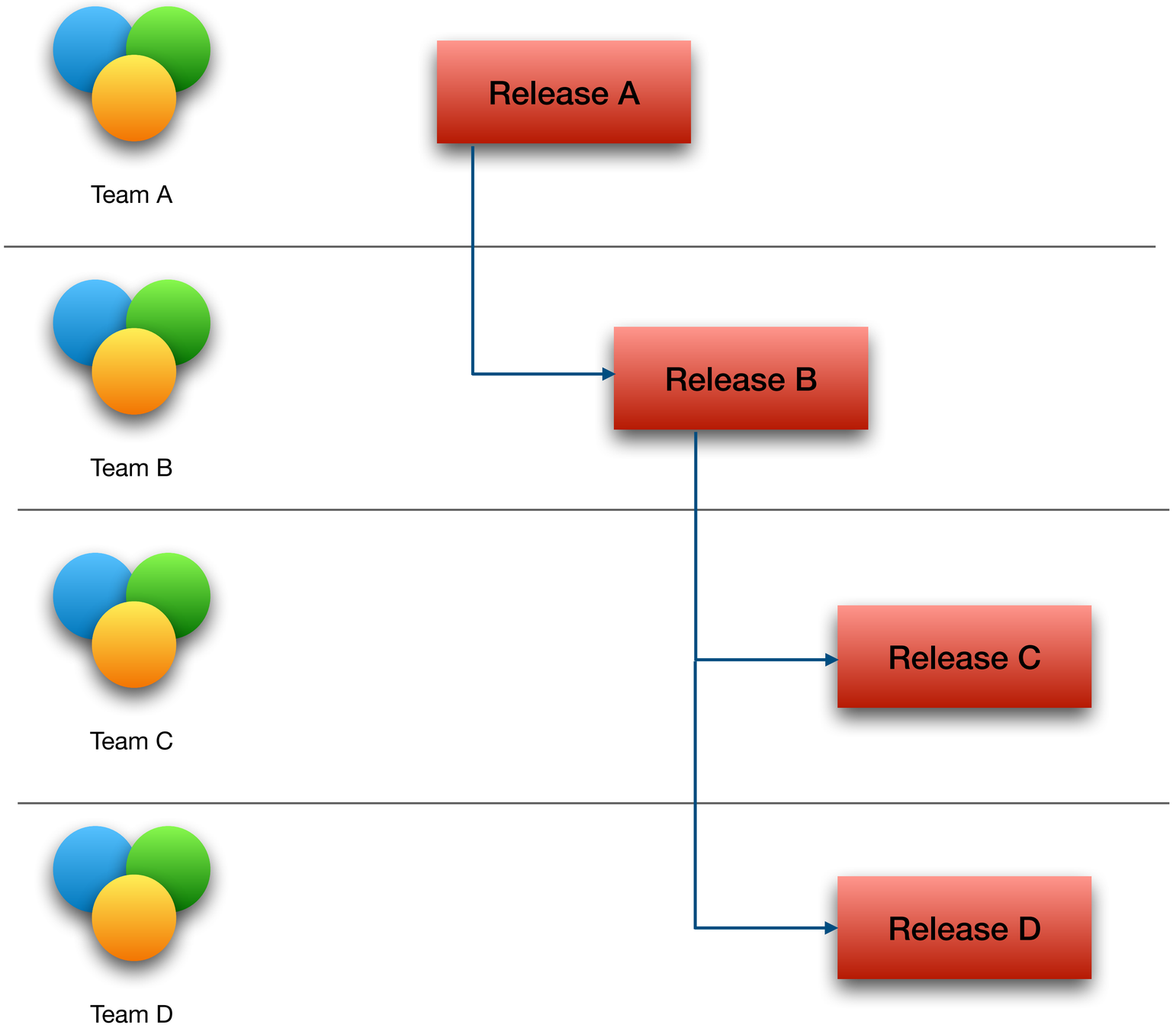
The Release Train Engineer


Release A
Release B
Release C
Release D
Team A
Team B
Team C
Team D

“Every organisation that designs a system, will produce a design whose structure is a copy of the organisation’s communication structure”

—Melvin Conway

The goal is not to manage dependencies but to remove them


Release A
Release B
Release C
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Team A
Team B
Team C
Team D

Team A

Release A

Team B

Release B

Team C

Release C

Team D

Release D

Feature Toggles

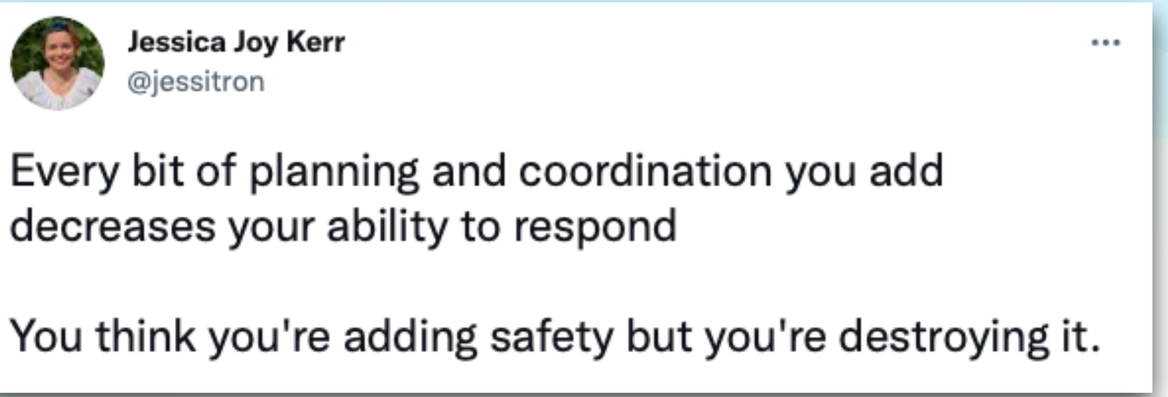
Domain Driven Design

Inverse Conway Maneuver

Organisations should evolve their teams and organisational structures to achieve the desired architecture

“Your architecture should support the ability of teams to get their work done - from design to deployment - without requiring high-bandwidth communication between teams”

—Nicole Forsgren


Jessica Joy Kerr
@jessitron
Every bit of planning and coordination you add decreases your ability to respond
You think you're adding safety but you're destroying it.

Let’s focus on what works

I had the chance to work in a high-performance team

and it was amazing!

What was different?

Trust!

“You are the experts. I won’t tell you what to do”

Total team autonomy

“Deploy as frequent as necessary”

Outstanding collaboration

Very few meetings. No dailies, no retros, no sprint reviews. No SCRUM

Super fast feedback

From commit to prod in around 8 minutes with ZERO downtime.

No fear of making mistakes

Our recovery was about 20 minutes

Developer Satisfaction

No better feeling than to see you are delivering value in minutes

“Without data, you’re just another person with an opinion”

- Edward Deming, founding father of Total Quality Management

Be careful with metrics

Metrics can be used as a door to micro-management

These were our metrics

Lead Time

Time from code committed to running in production.

Deployment Frequency

How often deploys happen on production

Mean Time to Recovery (MTTR)

How quickly can teams restore service after production outages

Change Fail Rate

What % of deploys result in service impairment or outage

These were our results

		High-performance team
Lead Time	8 mins	Less than 1 hour
Deployment Frequency	Many per day	Many per day
MTTR	~20 mins	Less than 1 hour
Change Fail Rate	~3%	0 - 15%

- Lead Time
- Deployment Frequency
- MTTR
- Change Fail Rate

Dora Metrics

DevOps Research and Assessment team.

Google research group analyzed DevOps practices and capabilities and has been able to identify four key metrics to measure software development and delivery performance.


Throughput
=
Lead Time
+
Deployment Frequency
Stability
=
Change Fail Rate
+
MTTR

Westrum Generative Culture

Pathological	Bureaucratic	Generative
Power oriented	**Rule oriented**	**Performance oriented**
Low cooperation	Modest cooperation	High cooperation
Messengers "shot"	Messengers neglected	Messengers trained
Responsibilities shirked	Narrow responsibilities	Risks are shared
Bridging discouraged	Bridging tolerated	Bridging encouraged
Failure leads to scapegoating	Failure leads to justice	Failure leads to inquiry
Novelty crushed	Novelty leads to problems	Novelty implemented

An organisational culture that is high-trust and emphasises information flow is predictive of software delivery performance and organisational performance in technology

https://cloud.google.com/architecture/devops/devops-culture-westrum-organizational-culture

And the good news is…

You don’t need to reinvent the wheel to achieve good performance.

Every capability / technic is already out there

Continuous Delivery

Version Control
Deployment automation
Continuous Integration
Trunk-based development
Test automation
Test data management
Shift left security

Product and Process

Gather and implement customer feedback
Make work visible through value streams
Work in small batches
Forster and enable team experimentation

Architecture

Loosely coupled architecture
Architect for empowering teams

Lean Management and Monitoring

Lightweight change approval process
Monitor across application and infrastructure to inform business decision
Check system health proactively

Cultural

Generative Westrum culture
Encourage and support learning
Support and facilitate collaboration among teams

What actions can I take now?

Ask your teams about

Trust and autonomy

Can you deploy to production whenever you want?

How often do you deploy to production? Why not more often?

Can the team make decision about the technologies used in the project?

Feedback

Do we have metrics about how a feature is used by our customers ?

How long does it take to deploy to production?

Quality

What is the percentage of failed deployments?

Psychological Safety

Are you afraid of doing mistakes in production?

Do you feel free and have the tools to do experiments?

Adrian Cockcroft

VP at Amazon
Cloud Architect at Netflix
Distinguished Engineer at Sun Microsystems
Distinguished Engineer at eBay

“We hired them from you and got out of their way”

Thank you!

barraganc

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