

The State of DevOps

Capabilities for Building High-performing
Technology Teams





bit.ly/sodr-does



STORY TIME



The story, all names, characters, and incidents portrayed in this production are fictitious. No identification with actual persons (living or deceased), places, buildings, and products is intended or should be inferred.

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No animals were harmed in the telling of this story

Log4Shell™

Timelines

*Where were you when you heard about
Log4Shell?*

*Where were you when you heard about
Log4Shell?*



DEC
10

- 9:00 - 10:00
Coffee Chats

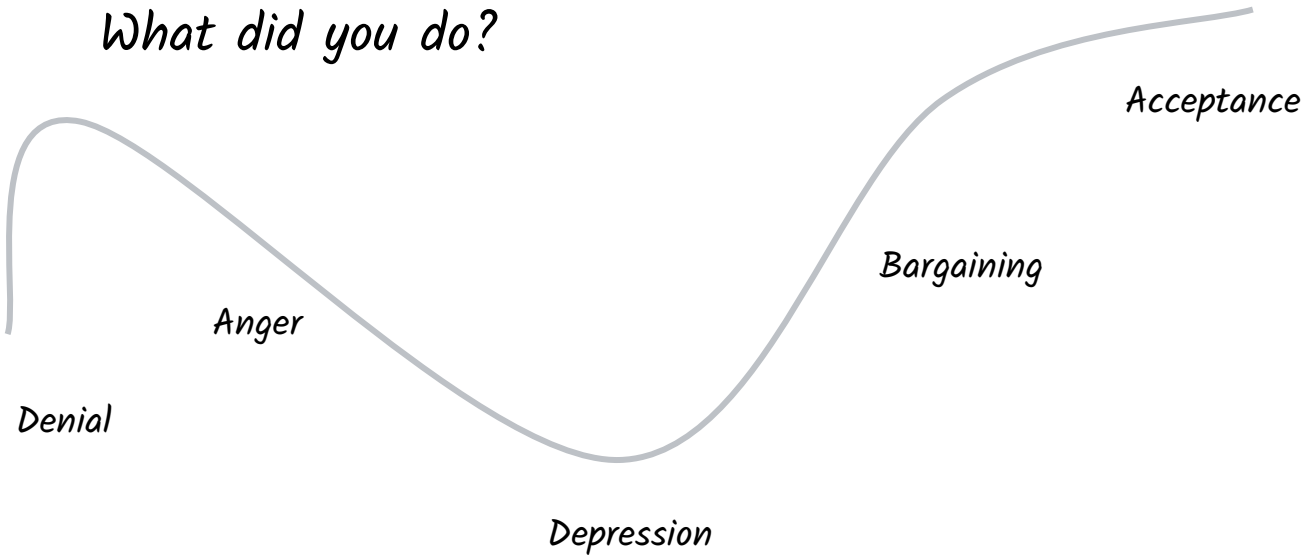
- 4:00 - 5:00
Holiday shopping

What did you do?

CVE



What did you do?



Denial

Anger

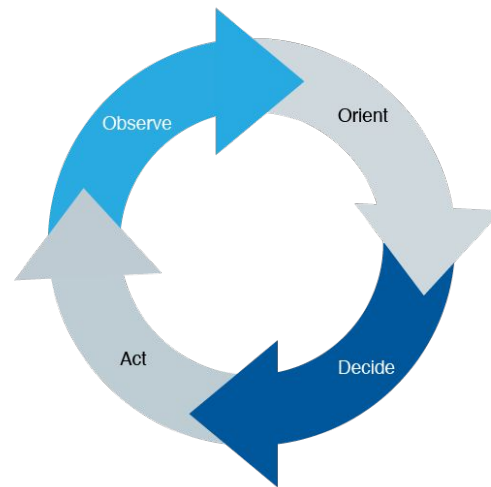
Depression

Bargaining

Acceptance

Getting started..

400 systems



Getting started..



E-commerce Website

E-commerce Website

- *Microservices*
- *27 repos*



→ *tightly coupled*

✗ *Vendor Built - no longer engaged*

✗ *little documentation*

E-commerce Website

- Microservices
- 27 repos



→ tightly coupled

#nodeployfridays

✘ Vendor Built - no longer engaged

✘ little documentation

✘ CAB

20+ Days

Lead Time

1-2 Months

Deployment Frequency

1-2x a year

Change fail rate

50%ish

TTR

???

Reliability

Usually reliable

Did you burnout?



Order Management System:

Order Management System:

- *Active development*
- *Team has been focused on improving*
- *Loosely coupled components*



Automated testing



Automated builds

Order Management System:

- Active development
- Team has been focused on improving
- Loosely coupled components
- Prioritizing fixing broken builds 😊



Automated testing



Automated builds



CAB



Lead Time

1 week

Deployment Frequency

weekly

Change fail rate

15%

TTR

Less than a day

Reliability

Usually reliable



“How do we help the website team have the Order Management System team experience in the future?”







DESIGNATED OUTDOOR REFRESHMENT AREA



DESIGNATED OUTDOOR REFRESHMENT AREA

Bucyrus, Ohio



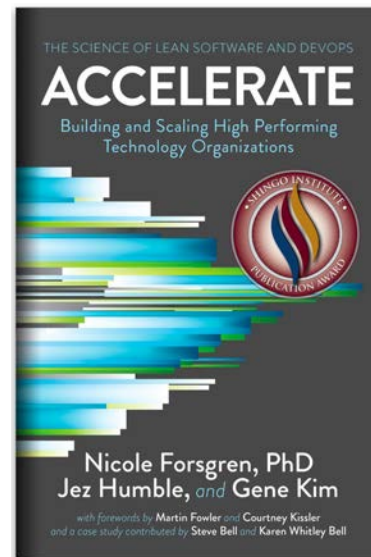
DESIGNATED OUTDOOR REFRESHMENT AREA

MINERVA, OHIO



DESIGNATED | OUTDOOR | REFRESHMENT | AREA

WOOSTER • OHIO





Capabilities

Technical

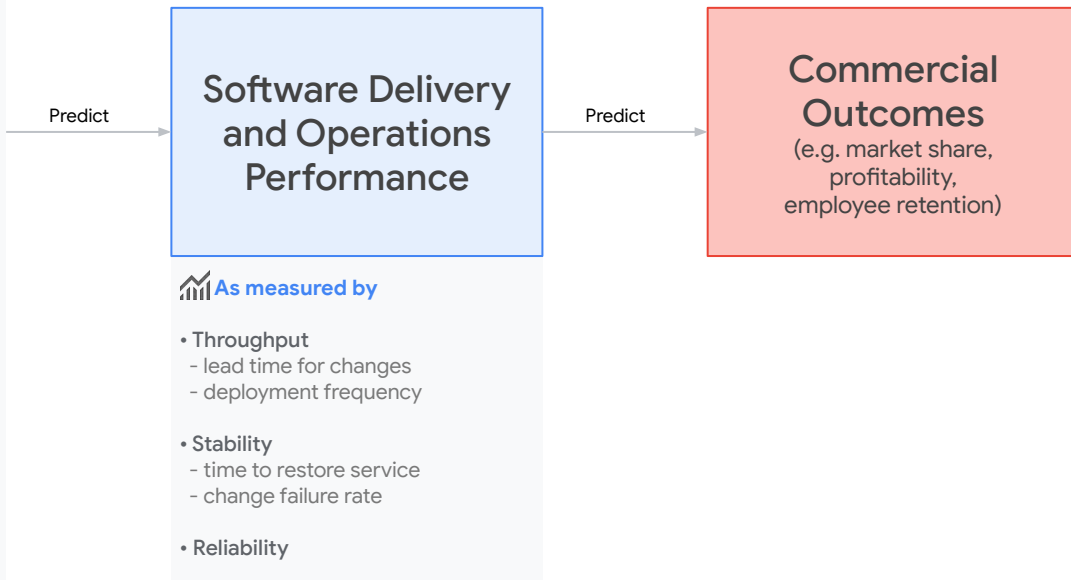
- Trunk-based development
- Cloud infrastructure
- Shifting left on security
- ...

Process

- Work in small batches
- Streamlined change approval
- Visibility of work in value stream
- ...

Cultural

- Generative, trust-based
- Learning culture
- Transformational leadership
- ...



Commercial Outcomes

(e.g. market share, profitability, employee retention)

Context Matters

There is no well-paved, one-size-fits-all roadmap to follow

Delivery performance **drives** organizational performance only when operational performance is **also** high

Teams must **mature reliability practices** to meet reliability targets which then impact organizational performance

2022 ACCELERATE
State of DevOps Report



Reliability practices

Regular reliability **reviews**

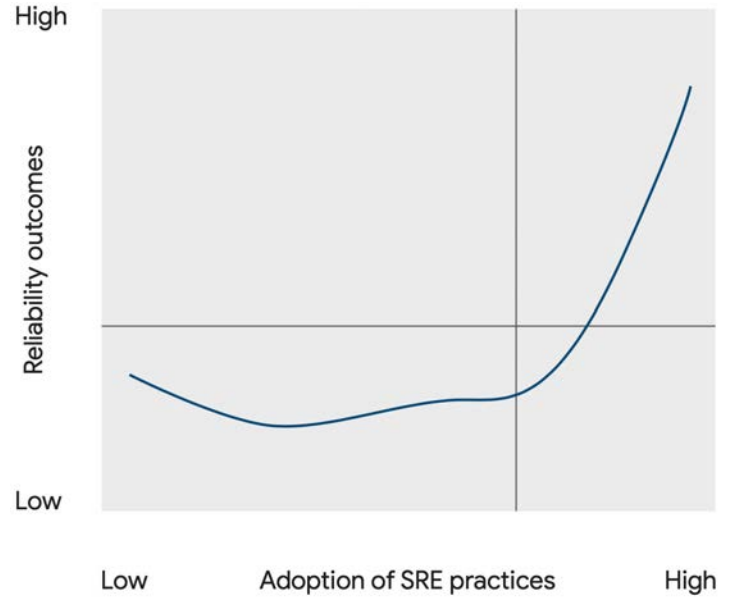
Well defined **reliability targets**

Reduce **toil**

Re-prioritize work when
reliability targets are missed

Reliability

Investment yields improvements to reliability, but only once a **threshold of adoption** has been reached



Context Matters

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Technical capabilities **build on one another**

Technical Capabilities

Drivers of organizational performance

Version control

Continuous Delivery

Continuous Integration

Loosely-coupled architecture

3.8x higher organizational performance



Context Matters

There is no well-paved, one-size-fits-all roadmap to follow

Delivery performance **drives** organizational performance only when operational performance is **also** high

Teams must **mature reliability practices** to meet reliability targets which then impact organizational performance

Technical capabilities **build on one another**

Security controls have a positive effect when continuous integration is in place

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State of DevOps Report



Security

- 01 Adoption has already begun
- 02 Healthier cultures have a head start

Incorporating security processes into existing workflows help reduce security risks and increase developer joy

Westrum Topology of Organizational Cultures

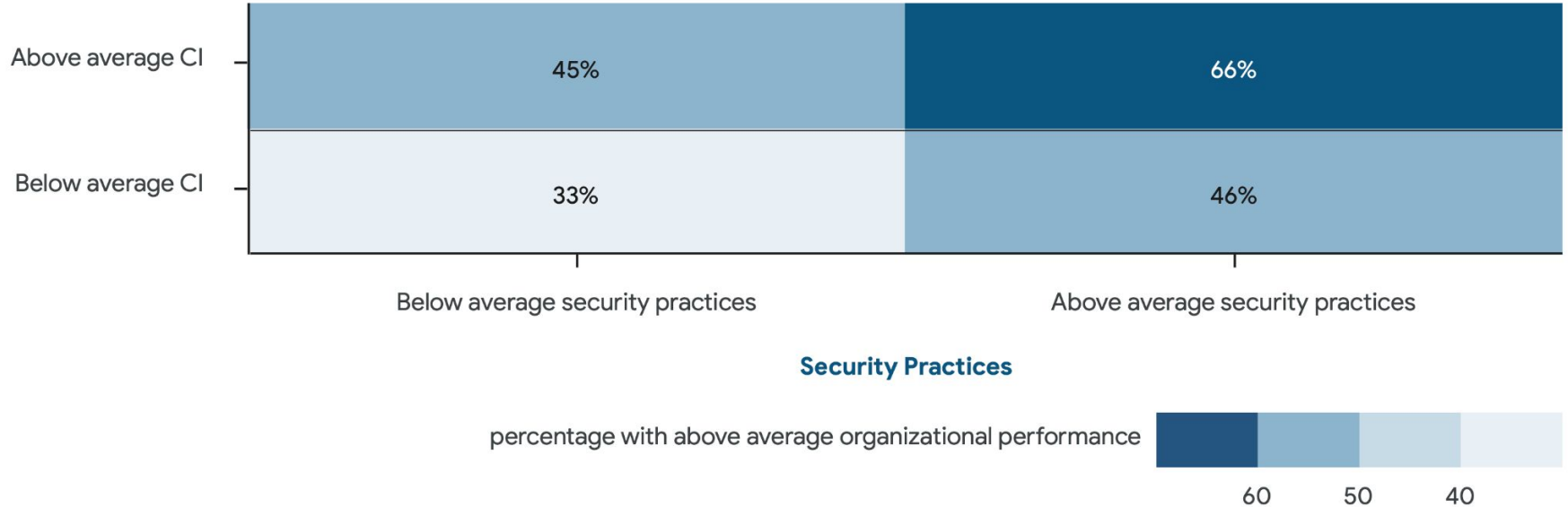
Pathological <i>Power-oriented</i>	Bureaucratic <i>Rule-oriented</i>	Generative <i>Performance-oriented</i>
Low cooperation	Modest cooperation	High cooperation
Messengers shot	Messengers neglected	Messengers trained
Responsibilities shirked	Narrow responsibilities	Risks are shared
Bridging discouraged	Bridging tolerated	Bridging encouraged
Failure leads to scapegoating	Failure leads to justice	Failure leads to enquiry
Novelty crushed	Novelty leads to problems	Novelty implemented

Security

- 01 Adoption has already begun
- 02 Healthier cultures have a head start
- 03 It provides unexpected benefits
- 04 There's a key integration point

Incorporating security processes into existing workflows help reduce security risks and increase developer joy

Continuous Integration & Security Practices



OMS team

Loosely
Coupled
Architecture

Deployment
Automation

Continuous
Integration

CAB

Website team

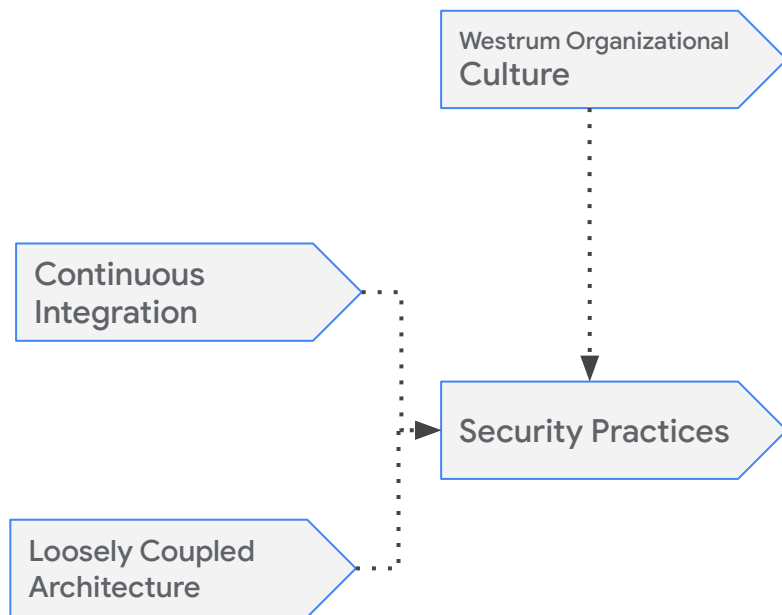
Documentation

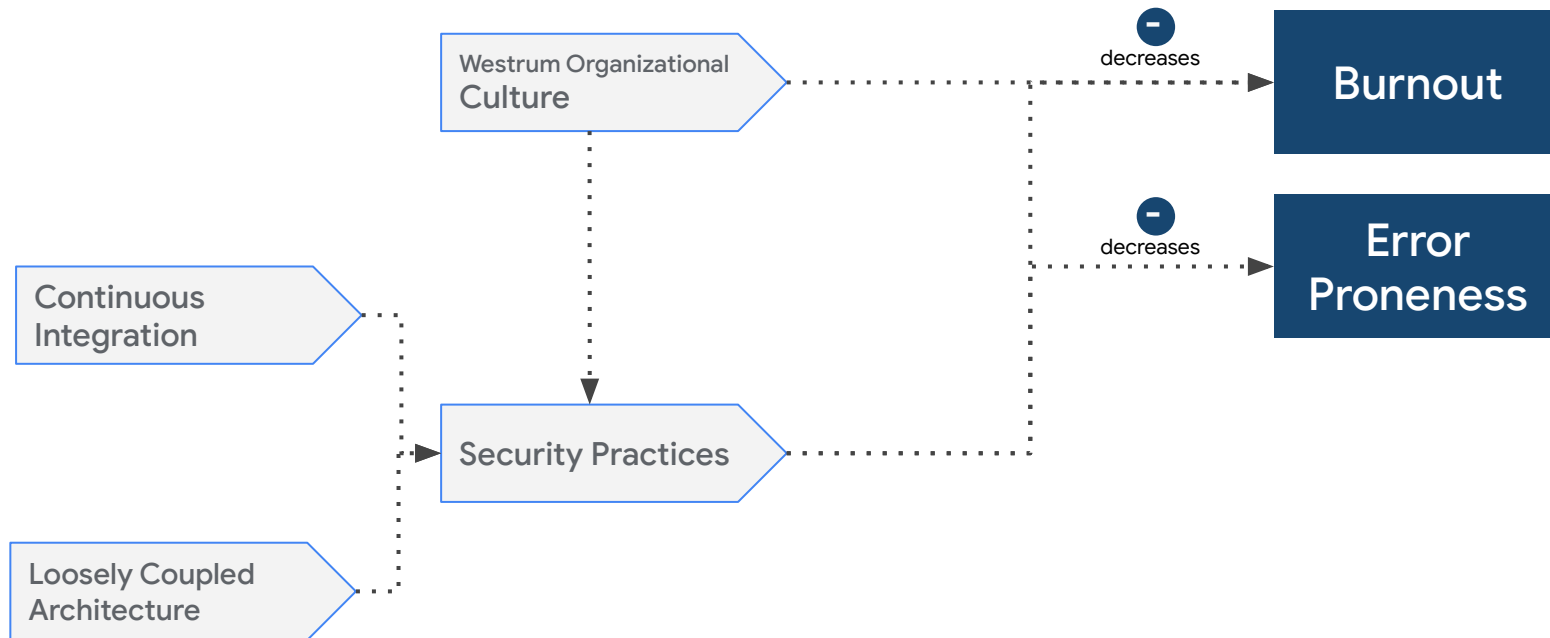
Manual
Builds

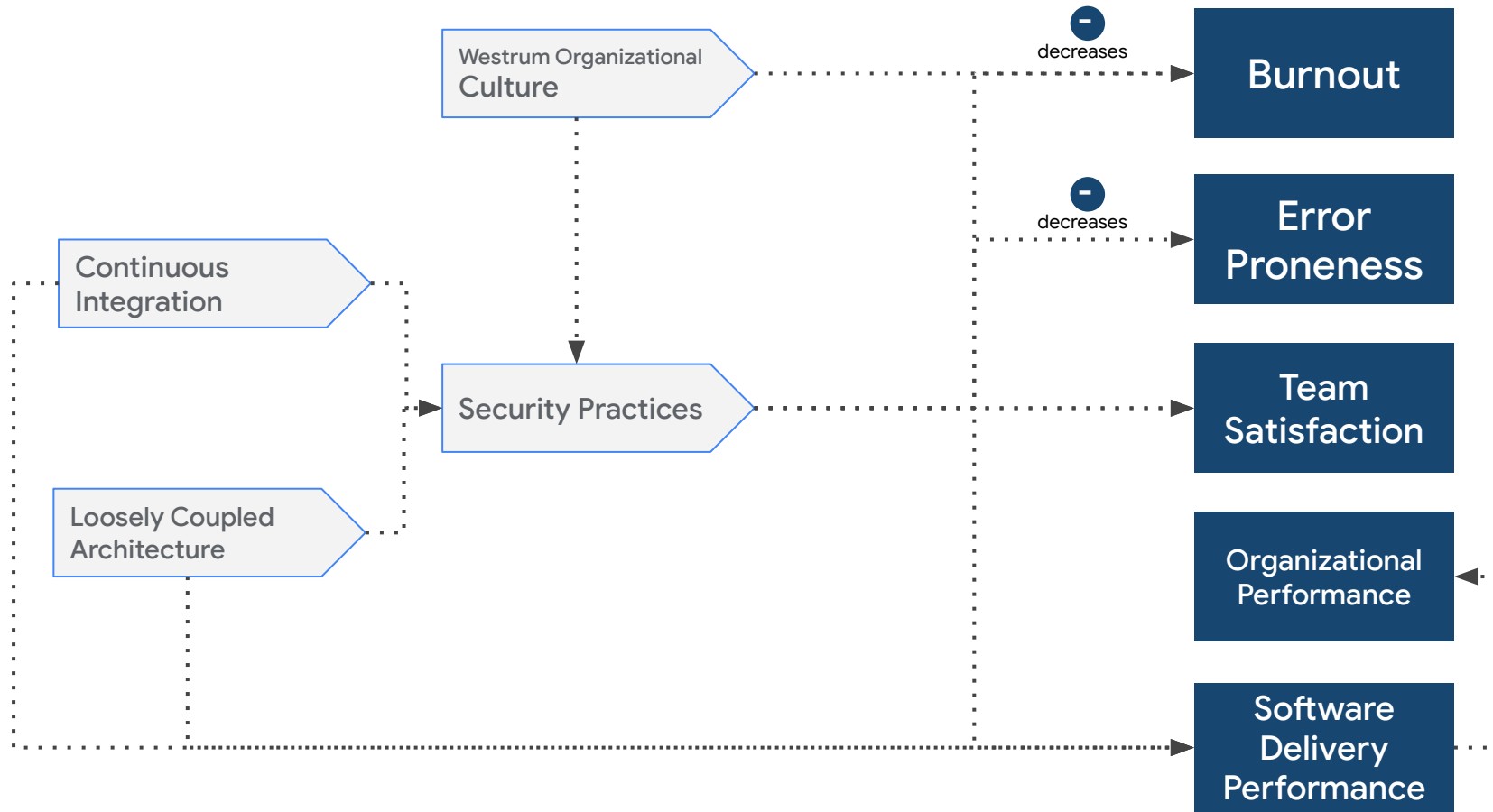
Manual
Testing

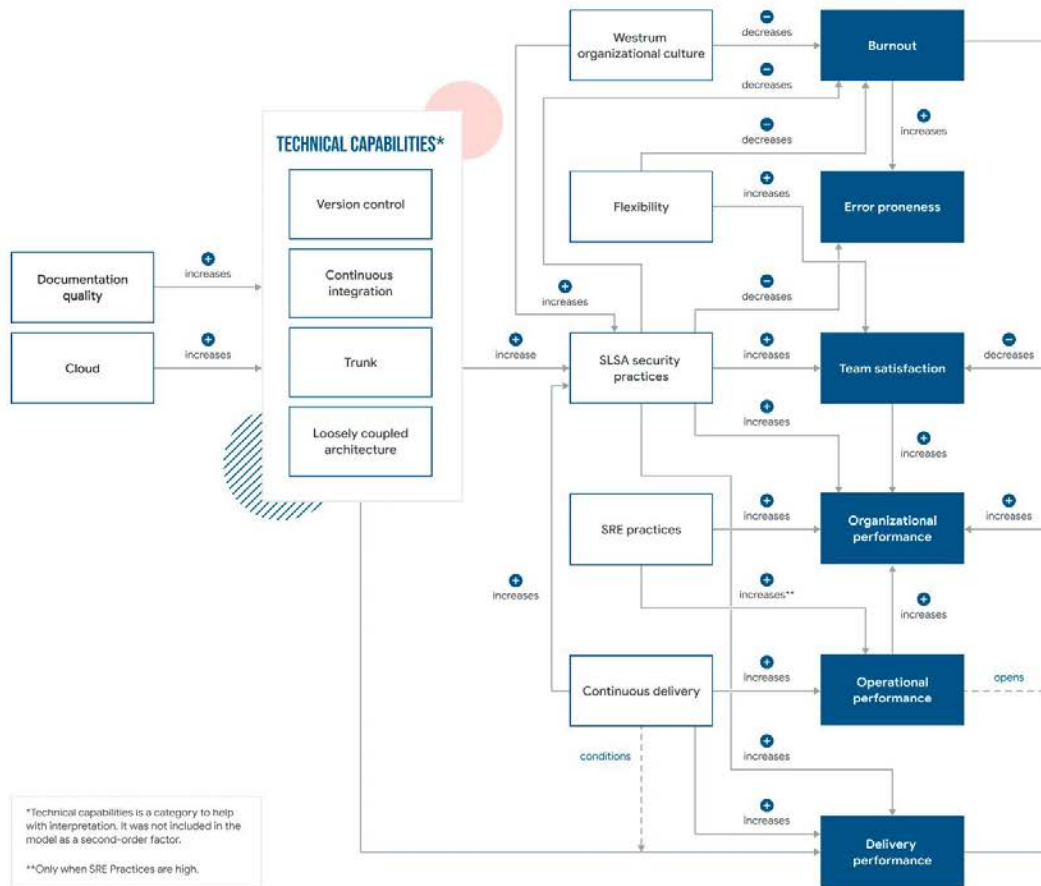
CAB











*Technical capabilities is a category to help with interpretation. It was not included in the model as a second-order factor.

**Only when SRE Practices are high.

Nathen Harvey
Developer Advocate
he/him
@nathenharvey



Amanda Lewis
Developer Advocate
she/her
@swansama



Just love it

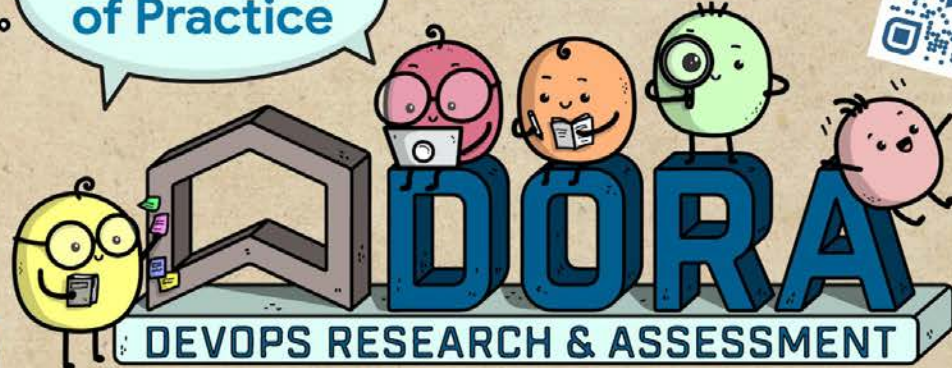
curious

want to learn more

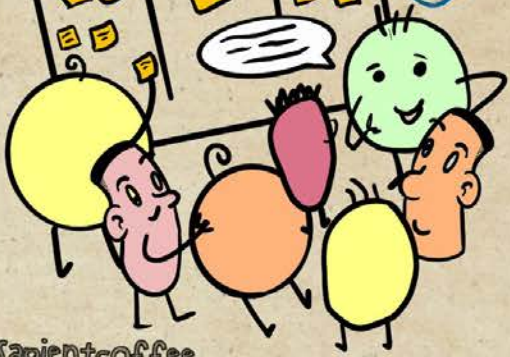
want to share experiences

Community of Practice

Join dora.community



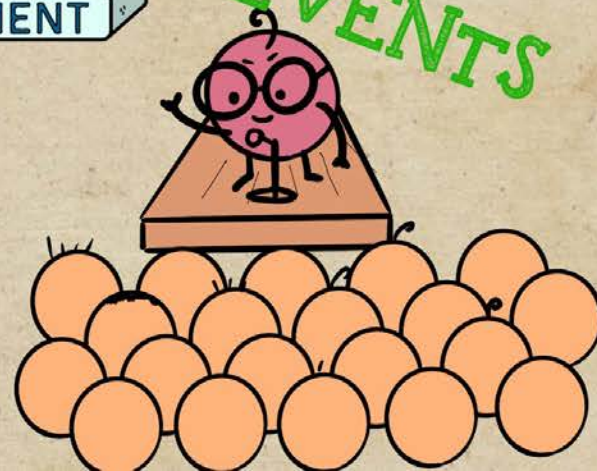
LEAN COFFEE



MAIL LIST



EVENTS



Thank you.



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