DevOps for Defense

October 2020

It's the Economy Stupid!

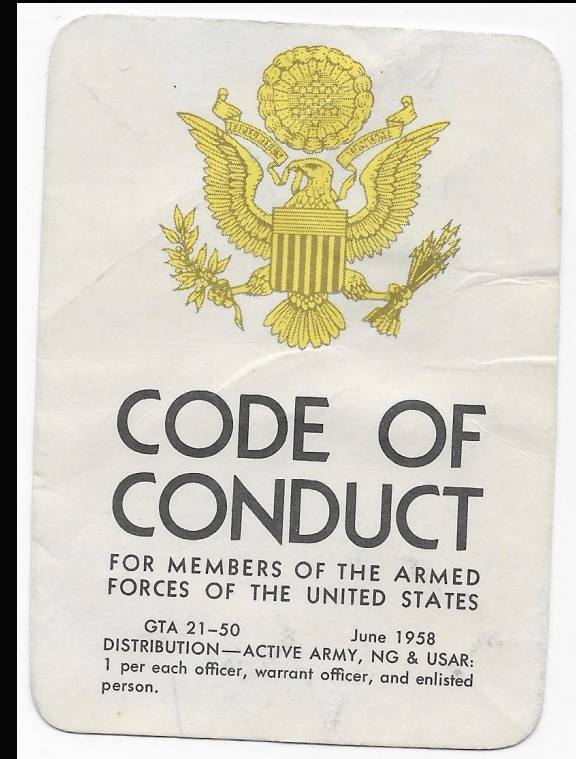JD Black

Sponsored by: TEKsystems
Own change

DevOps for Defense Meetup: Code of Conduct

➤ UNCLASSIFIED ONLY!!!!
➤ Treat each other with respect and professionalism.
➤ Do not talk about private, sensitive, or proprietary work.
➤ Do talk about your experiences, needs, desires to improve work in our domain.
➤ Do share your thoughts.
➤ Do learn from others.
➤ Do mute yourself while others are speaking!

CODE OF CONDUCT

FOR MEMBERS OF THE ARMED
FORCES OF THE UNITED STATES

GTA 21-50   June 1958
DISTRIBUTION—ACTIVE ARMY, NG & USAR:
1 per each officer, warrant officer, and enlisted
person.

GET
TOGETHER
GO
FASTER

DEVOPS ENTERPRISE SUMMIT
LAS VEGAS - VIRTUAL | OCTOBER 13 - 15, 2020

Email me for a 50% off code
devopsfordefense@gmail.com

DevOps Enterprise Summit
Las Vegas - Virtual

October 13-15, 2020

Why all the fuss about DevOps?

1. DevOps is an economic force, not a "software thing".
2. DevOps originated in industrial engineering and manufacturing, finding ways to produce high quality products cheaper and quicker.
3. DevOps is perceived as a "software thing" because software has embraced and tailored the principles and become a driving force in the current economy.
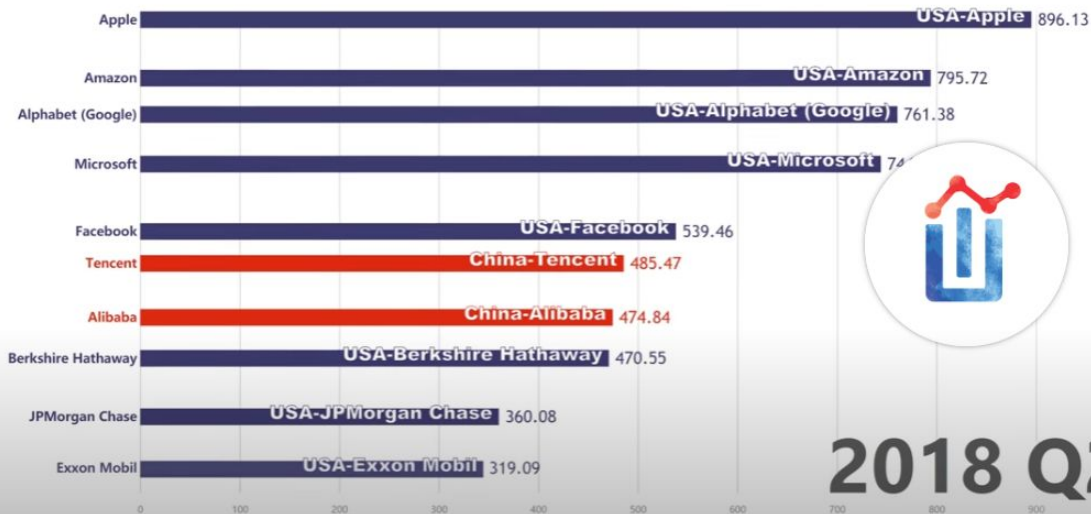
The Global Economic Landscape has Changed

1998

Market Capitalization in Billions USD

Company		
Microsoft	USA-Microsoft	271.85
General Electric	USA-General Electric	258.87
Exxon Mobil	USA-Exxon Mobil	172.21
Royal Dutch Shell	Netherlands-Royal Dutch Shell	164.16
Merck	USA-Merck	154.75
Pfizer	USA-Pfizer	148.07
Intel	USA-Intel	144.06
Coca-Cola	USA-Coca-Cola	142.16
Walmart	USA-Walmart	123.06
IBM	USA-IBM	121.18

Market Capitalization in Billions USD

Company		
Apple	USA-Apple	896.13
Amazon	USA-Amazon	795.72
Alphabet (Google)	USA-Alphabet (Google)	761.38
Microsoft	USA-Microsoft	74_
Facebook	USA-Facebook	539.46
Tencent	China-Tencent	485.47
Alibaba	China-Alibaba	474.84
Berkshire Hathaway	USA-Berkshire Hathaway	470.55
JPMorgan Chase	USA-JPMorgan Chase	360.08
Exxon Mobil	USA-Exxon Mobil	319.09

2018 Q2

Source: Wawamu Stats
https://youtu.be/fobx4wIS6W0

Stock Price Change 2006-2016

amazon
1,910%

50% of S&P 500 projected to be replaced in 10 years

Walmart
2%

-95%
sears

-83%
JCPenney

-59%
KOHL'S

-49%
BEST BUY

-46%
★macy's

-21%
NORDSTROM

-15%
⊙ TARGET

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Mawdud Choudhury "Brick & Mortar US Retailer Market Value" ExecTech

TASKTOP

The Turning Point

Figure: Adapted from Carlota Perez

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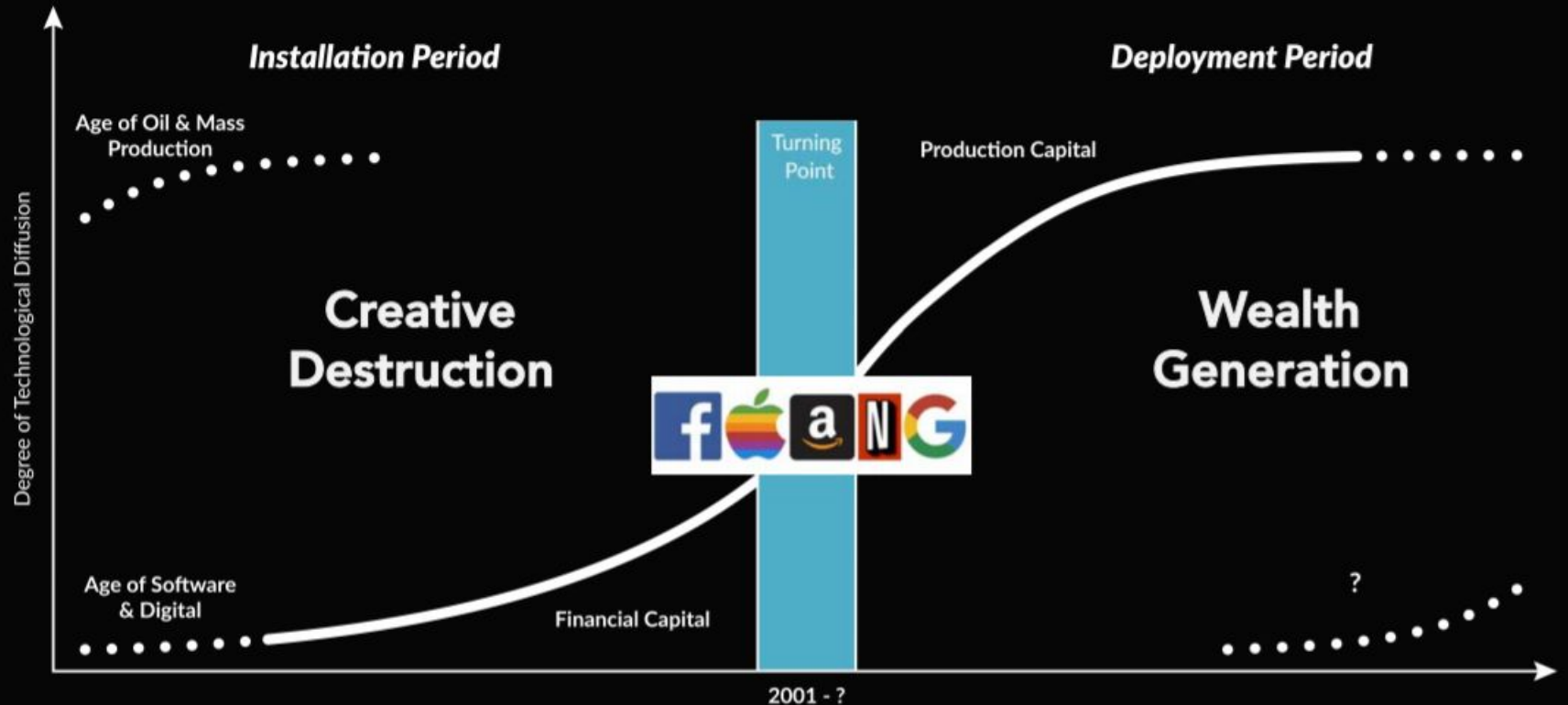
Technological Revolutions

	1771		1793 - 1801	
Industrial Revolution				Factory systems

	1829		1848 -50	
Age of Steam & Railways				Subcontracting

	1875		1890 - 95	
Age of Steel & Heavy Engineering				Taylorism

Project Management

	1908		1929-43	
Age of Oil & Mass Production				Fordism

	1971		2000 - ?	
Age of Software & Digital				?

Installation Period   Turning Point   Deployment Period

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Figure: Adapted from Carlota Perez

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Reconsider What and How You Deliver

- Yes, we build "systems" but they are usually in quantities between 1 and 100, not a mass produced item
- Therefore, the systems themselves must evolve to meet changing real world needs

- Re-think your value stream to focus on delivering changes to your baseline (aka 4 types of work)
- Optimize your processes and infrastructure to quickly, cheaply deliver high quality changes with confidence
- This applies to the whole value stream, not just software development

Lean Principles

- Precisely specify value by _product_,
- Identify the _value stream for each product_
- Make _value flow_ without interruptions
- Let the _customer pull_ value from the producer

Lean Thinking by James P. Womack

What flows in software delivery?

Features
New business value, pulled by customer

Risks
Security, availability, compliance, pulled by risk officers

Defects
Quality improvements, pulled by customer

Debts
Technical debt improvements, pulled by architects

Flow Items are MECE*

*Mutually Exclusive and Comprehensively Exhaustive

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Lead Time Starts

Flow Time Starts

Lead Time Stops
Flow Time Stops

Active Time

Waiting Time

Customer
Request

Running
Software

= **Lead Time**

= **Flow Time**
*(Total Active Time
+ Total Waiting Time)*

Flow Efficiency = Total Active Time / Flow Time

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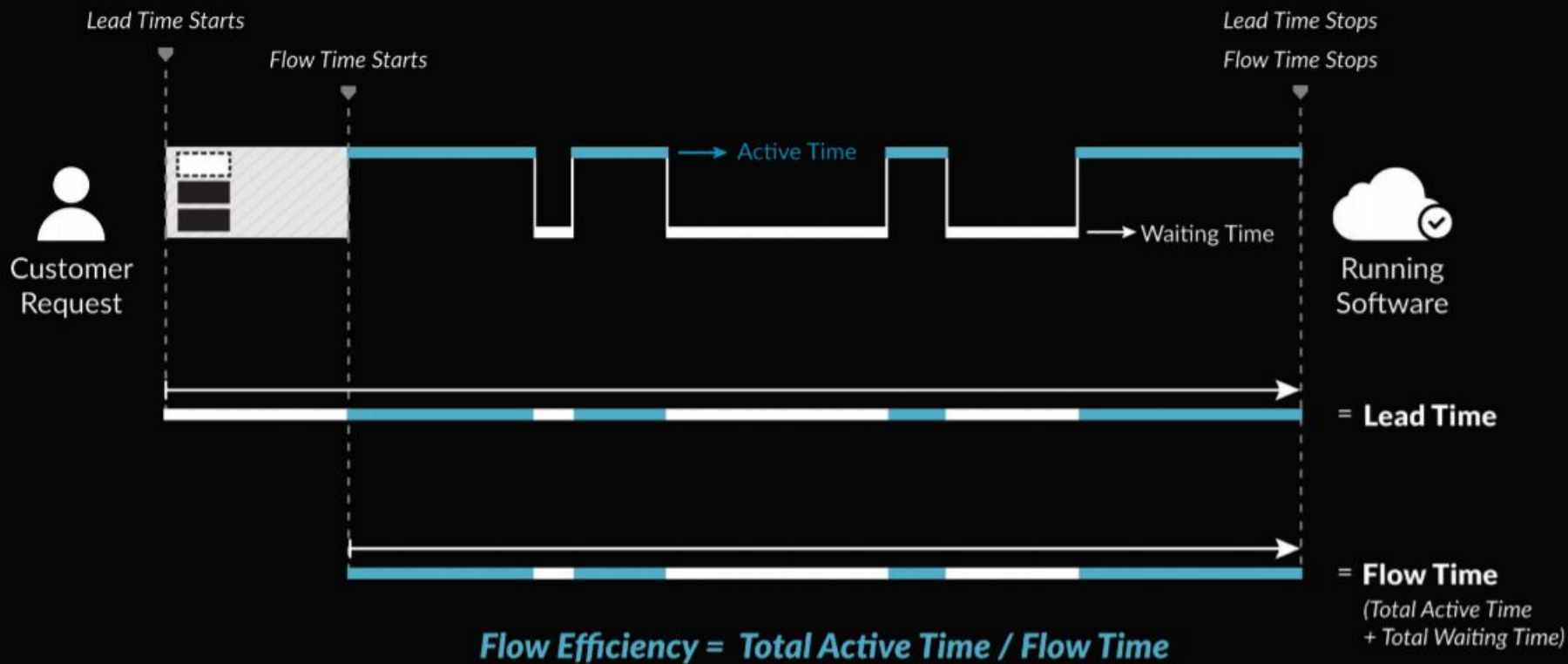
The Economic Outcomes are Real!

High Performers Win In The Marketplace

2x more likely to exceed profitability, market share & productivity goals

2x more likely to achieve organizational and mission goals, customer satisfaction, quantity & quality goals

Source: Puppet/DORA 2017 State Of DevOps Report https://puppet.com/resources/whitepaper/state-of-devops-report @RealGeneKim

High Performers Win In The Marketplace

2.2x higher employee Net Promoter Score

50% higher market capitalization growth over 3 years*

Source: Puppet Labs 2016 State Of DevOps Report https://puppet.com/resources/white-paper/2016-state-of-devops-report @RealGeneKim

High Performers Are More Agile

46x more frequent deployments

440x faster lead times than their peers

Source: Puppet/DORA 2017 State Of DevOps Report https://puppet.com/resources/whitepaper/state-of-devops-report @RealGeneKim

High Performers Are More Reliable

5x lower change failure rate

96x faster mean time to recover (MTTR)

Source: Puppet/DORA 2017 State Of DevOps Report https://puppet.com/resources/whitepaper/state-of-devops-report @RealGeneKim

High Performers Are More Secure And Controlled

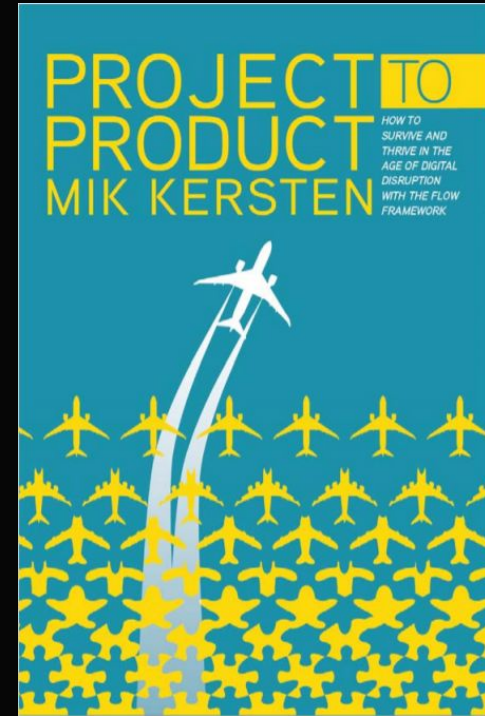**2x** less time spent remediating security issues

29% more time spent on new work

Source: Puppet Labs 2016 State Of DevOps Report https://puppet.com/resources/white-paper/2016-state-of-devops-report @RealGeneKim
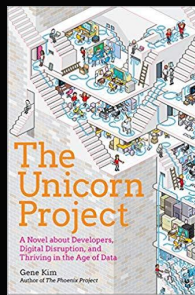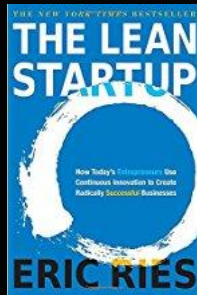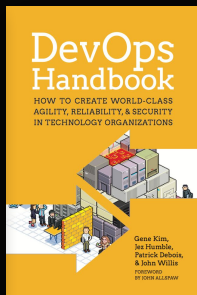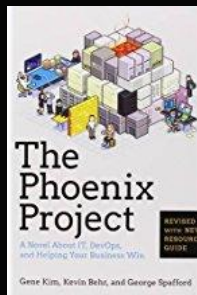
Material adapted from Mik Kersten's 2018 DOES Presentation, Project to Product.

https://youtu.be/E5VP3ioSRU8

DevOps Resources

https://devopsfordefense.org/resources/

Books / Publications:

https://www.meetup.com/DevOps-for-Defense/
https://github.com/jondavid-black/DevOpsForDefense
devopsfordefense@gmail.com

Conference Presentations (YouTube):
- DevOps Enterprise Summit (DOES)
- IT Revolution
- Velocity
- GoTo