



APPDYNAMICS

Enterprise Dilemmas: Innovation on Legacy

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Jonah Kowall's background



- Over **20** years in IT
- Over **15** years working with Infrastructure and Operations enterprises and startups
 - Security - CISSP, CISA, PCI
 - Started one of the first content filtering companies
- Head of global monitoring at Thomson Reuters
- Head of IT Operations at MFG.com – Bezos Expeditions
- Gartner Research VP **4** years
- Strategy AppDynamics **3** years, acquired by Cisco in March 2017

Agenda

- Customer expectations
- Why do businesses transform?
- Why must businesses transform?
- With opportunity comes new challenges
- People and Organization pose the biggest hurdles
- Bimodal IT emerges as a stepping stone
- Small Teams: Part of the big picture in the

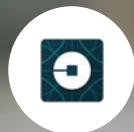


Customer Expectations

Application Loyalty is the New Brand Loyalty



How does your app stack up against the new user expectation bar?



Customer Experience

Emotion

Convenience

Outcomes

Applications

Performance



Customer Experience

=

Technology
+ Process
+ People

Technology

Architecture and service agility



Hybrid cloud adoption
up from 58% (2015) to
71% (2016)

Source: [Right Scale](#)



2.2 million apps on
Google Play. 2 million
on Apple App Store

Source: [Statistica](#)

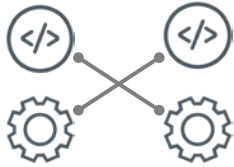


82% of sales during this
year's Singles Day were
via mobile devices

Source: [Reuters](#)

Process

Delivery at velocity



70% are investigating
a microservices
approach

Source: [NGINX](#)



94% of organizations in
2015 practice agile

Source: [VersionOne](#)

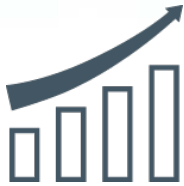


Deploy 200 times
more frequently and
have 24 times faster
recovery times

Source: [Puppet](#)

People

Enterprise IT strives to provide 'digital' value



Nearly 40% of CIOs report that they are the leaders of digital transformation in their enterprise

Source: [Gartner](#)



53% of IT execs believe their relationship with lines of business is “tight”. Only 36% of line of business execs see it that way

Source: [CIO.com](#)



Why do businesses transform?

Digital First Business

Every Company is Becoming a Software Company

Increased Revenue
Opportunities



\$6T

Estimated 2014 global
revenue opportunity based on
increased switching resulting
from poor experiences ⁶

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Rise of the Connected
Consumer



42%+

Estimated % of total U.S. technology spending on customer-facing processes in 2018 ⁴



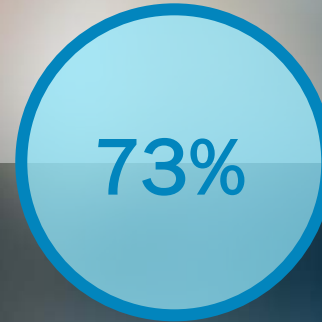
Digital Tailwind

Budgeted for Digital Transformation

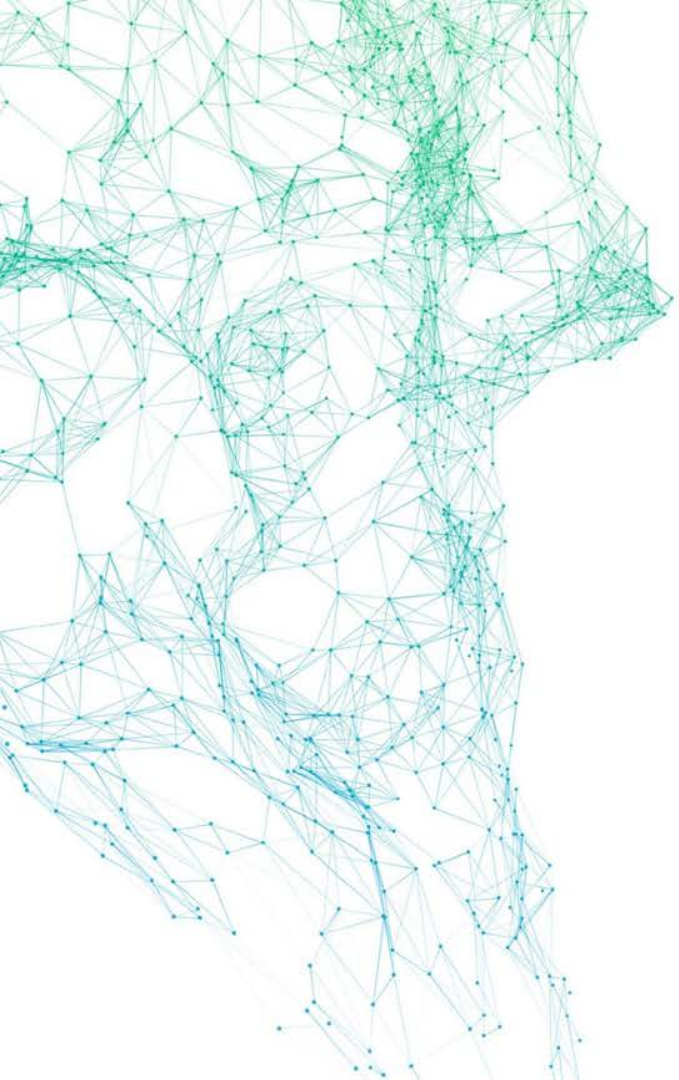


Estimated 2019 WW enterprise spend on digital transformation technologies

Enterprises Lack Coherent Strategies

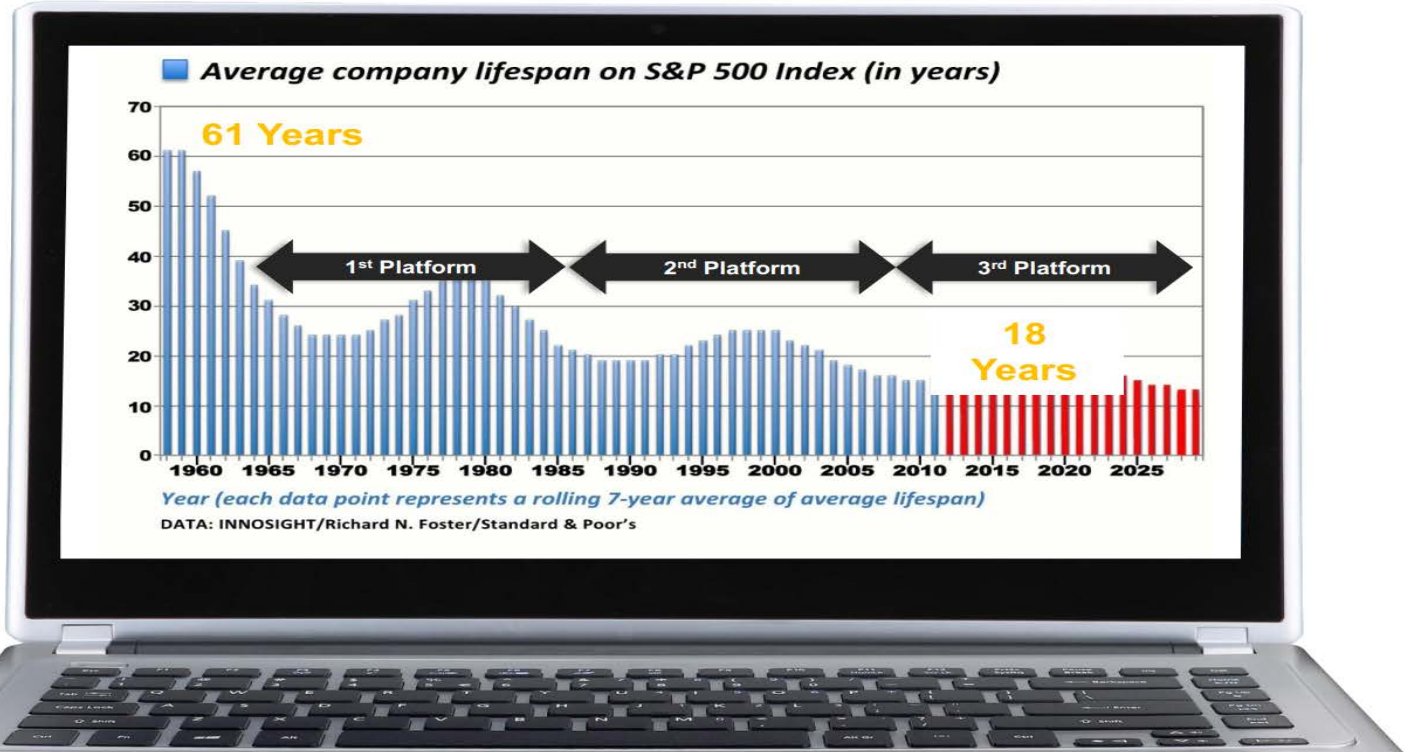


Enterprises polled that didn't have a coherent digital strategy to create customer value



**Why businesses
must transform?**

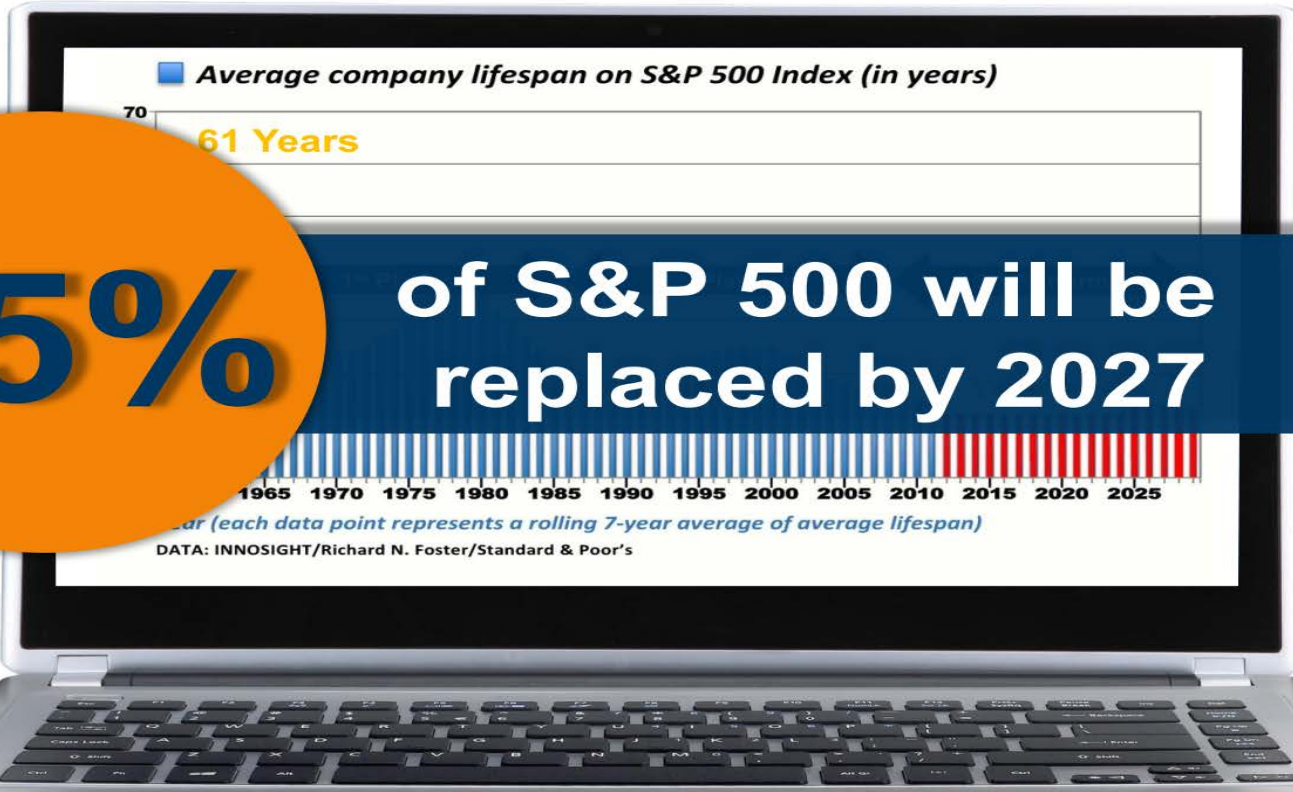
DIGITAL DISRUPTION IS REAL



DIGITAL DISRUPTION IS REAL

75%

of S&P 500 will be replaced by 2027



Transformative technologies lead to better business outcomes....



Organizations with digital ready networks are seeing **2 to 3 times the revenue growth** of organizations without.



Companies digitally linking their distributed enterprises have **increased their profit margins by 30-50%**



Companies with 65%+ of their business applications available to all mobile users were able to **reduce time to market for new products by 58%**



Companies with the majority of their business applications running in public and private cloud have **reduced their operating costs by 5 to 15%** compared to companies with most of their apps running on traditional infrastructure



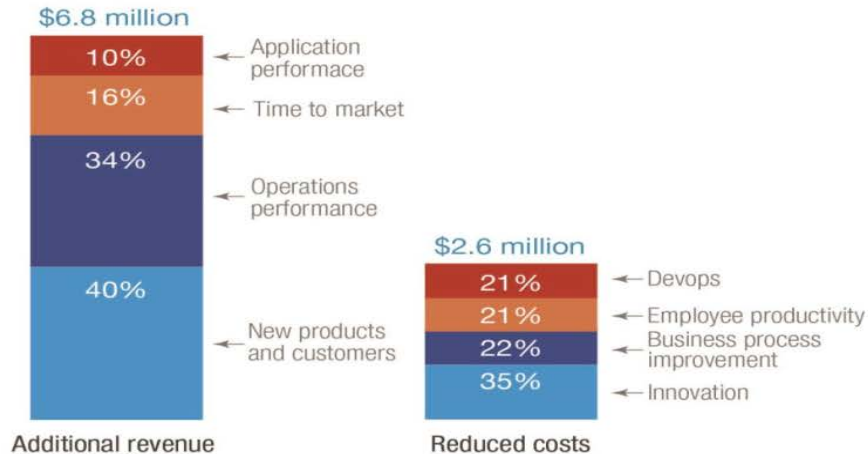
Companies implementing data analytics solutions were able to **predict events or outcomes with 16% more accuracy**

Better business outcomes drive business performance

Business Outcomes KPI Gains

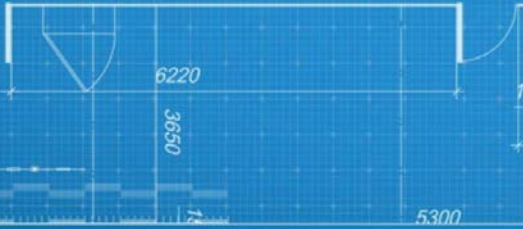


Annual Benefits per Cloud Application



Successful Digital Businesses

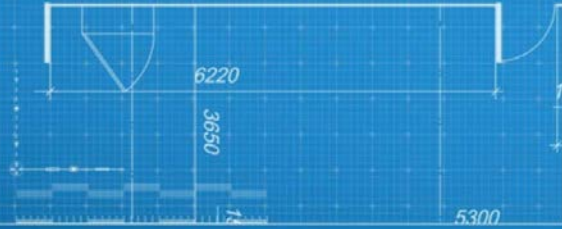
Velocity Wins



There is no “big bang.”
Success is a result of a
thousand iterations.

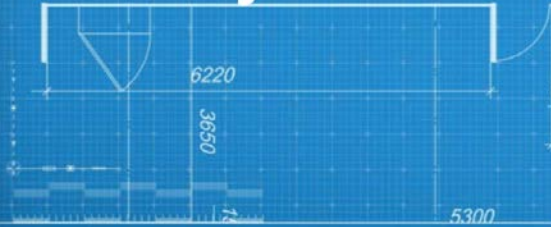
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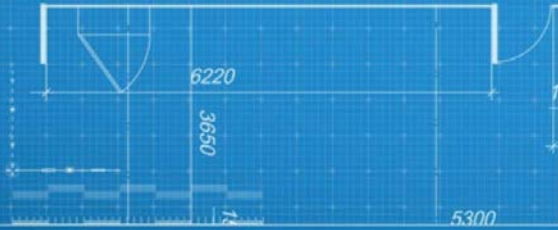
Agility is Key



High velocity businesses
need a high velocity IT
environment.

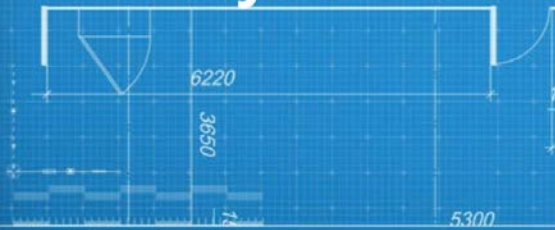
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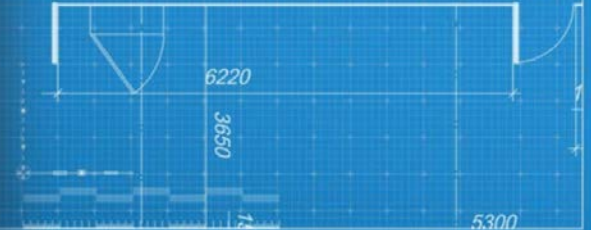
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Apps ARE the Business



App performance drives
customer loyalty and
business performance.

Every Company, in Every Industry, is a Software Company

Financial Services



Busiest branch:
8am morning commute

Government



Innovating business mail
workflow, process

Healthcare



Connecting patients to
doctors via technology

Media



Streamline experience
across digital technology

Retail



Reinventing grocery
shopping worldwide

Technology



Ai based Tax submission via
mobile phone.

Telco




Challenging the industry as
technology-led "uncarrier"

Travel & Transportation

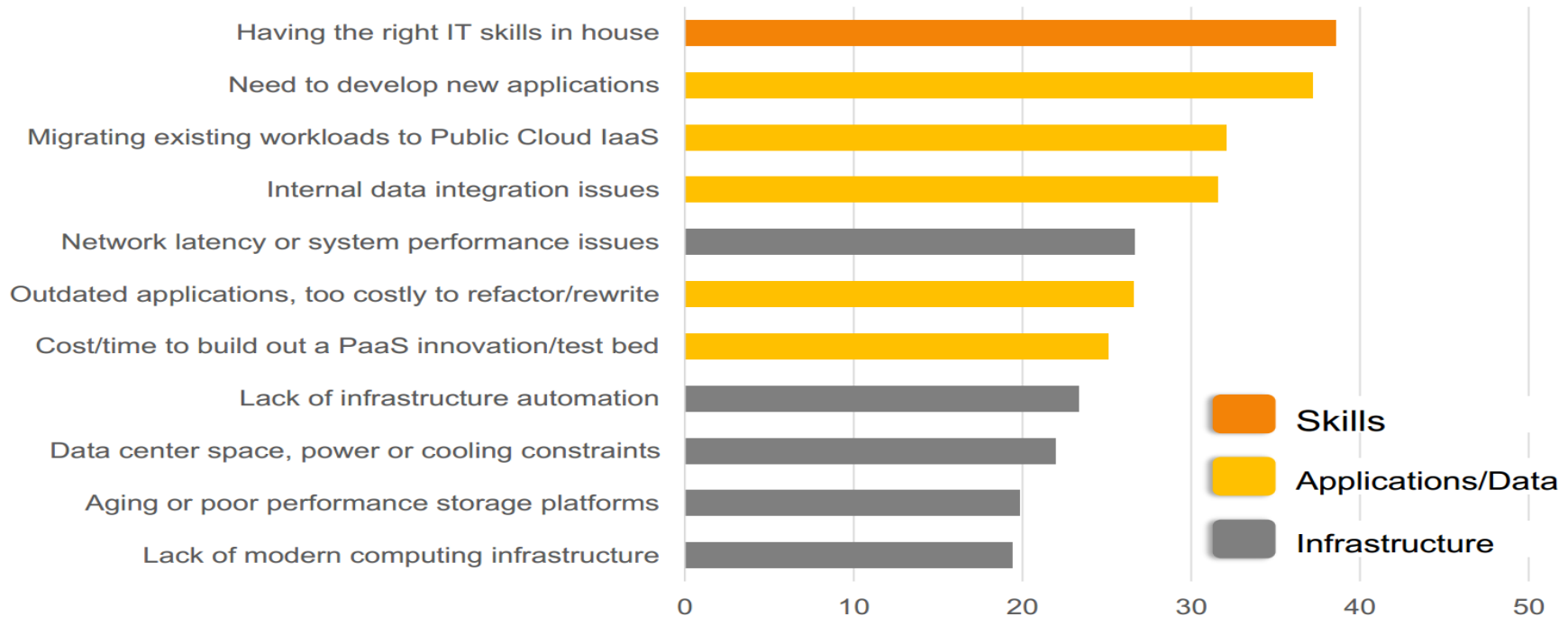


Cross-channel CX,
travel & flight delays



But there are major
hurdles across
multiple areas...

Challenges: Skills, Applications and Data Stymie Successful DX Execution



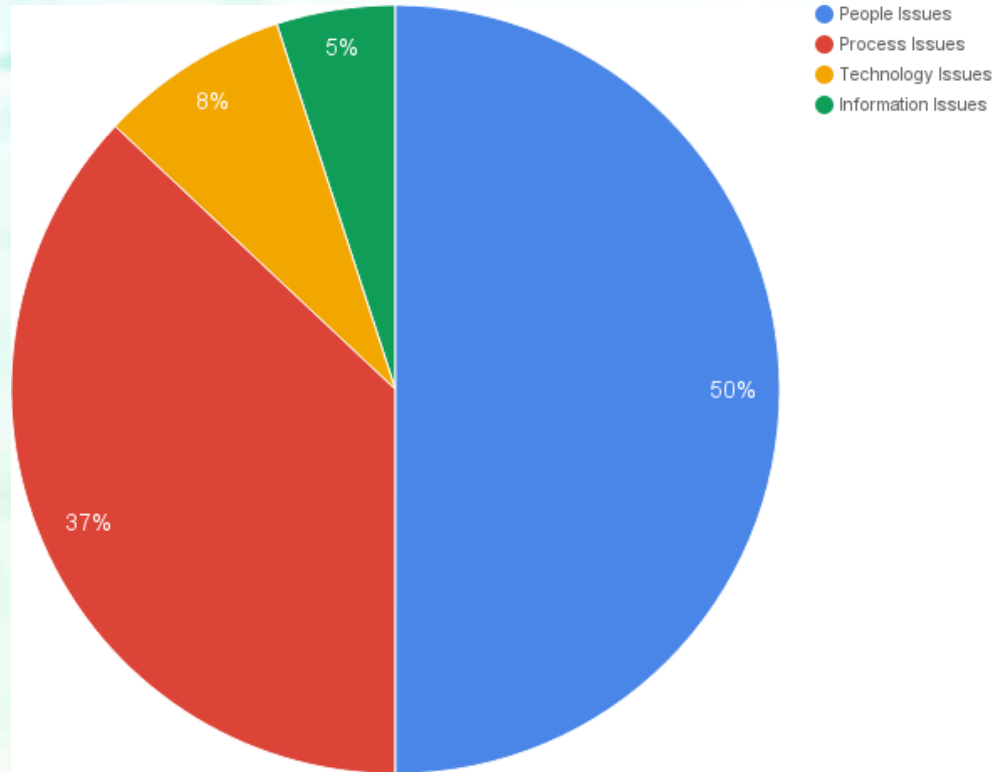
Q. From an IT perspective, what were the biggest challenges with the Digital Transformation (DX) project's successful execution?

Source: DX Data Center Study 2017, N = 304



People and Organization pose the biggest hurdles

Gartner: People are the Biggest Challenge



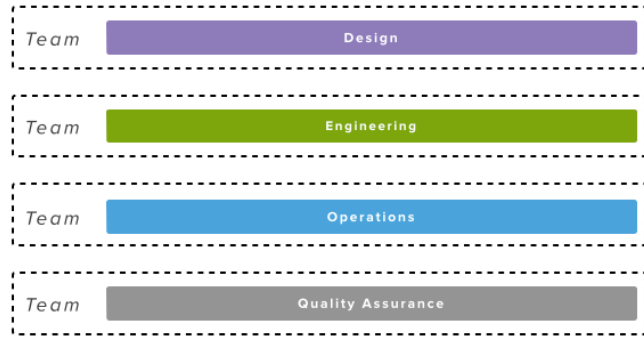
Source Gartner : "Survey Analysis: DevOps Adoption Survey Results" (G00279161)
n = 113
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Teams are Disconnected

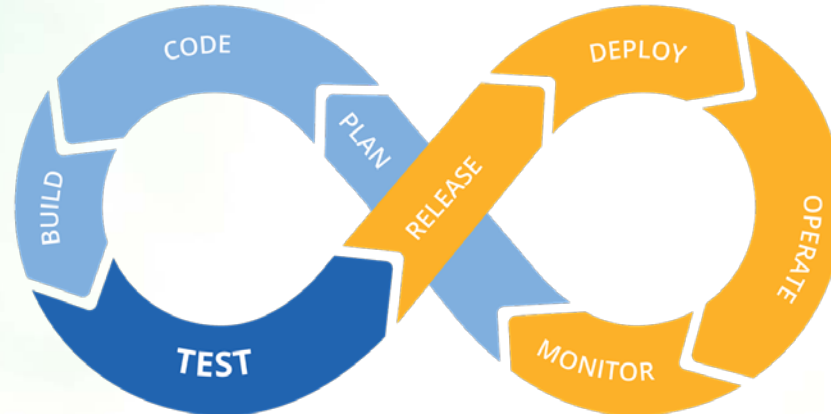
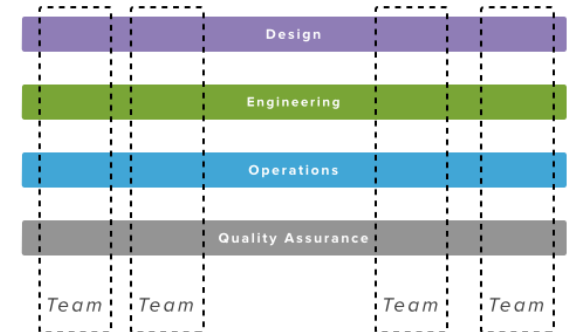
	Dev	Ops	Business
Primary Goal	Feature delivery / innovation	Service level / security / resiliency	Revenue growth
Connected to user	Do not get data to better understand customers	Analyze end user data when issue escalated	Customer focus and discussions are key
Diagnostics	Complex applications are difficult to debug. Devs cannot see into COTS apps (w/o APM).	Cannot understand the code	Not relevant
Deployment	Deployments are done by Operations, defined by dev. No prod access.	Deployment requirements sent to Operations	Not relevant

Enter DevOps

Functional



Cross-Functional



Trust in Your Team and Across Teams

- **The capacity for trusting** your work and personal experiences combined influences your willingness to risk trusting other people/teams.
- **The perception of competence** of what you are good at and where you are weaker. How you can be complemented by the ability of others to handle the current situation.
- **The perception of intentions** of yourself and others that actions, words, and decisions are mutually-serving rather than self-serving.

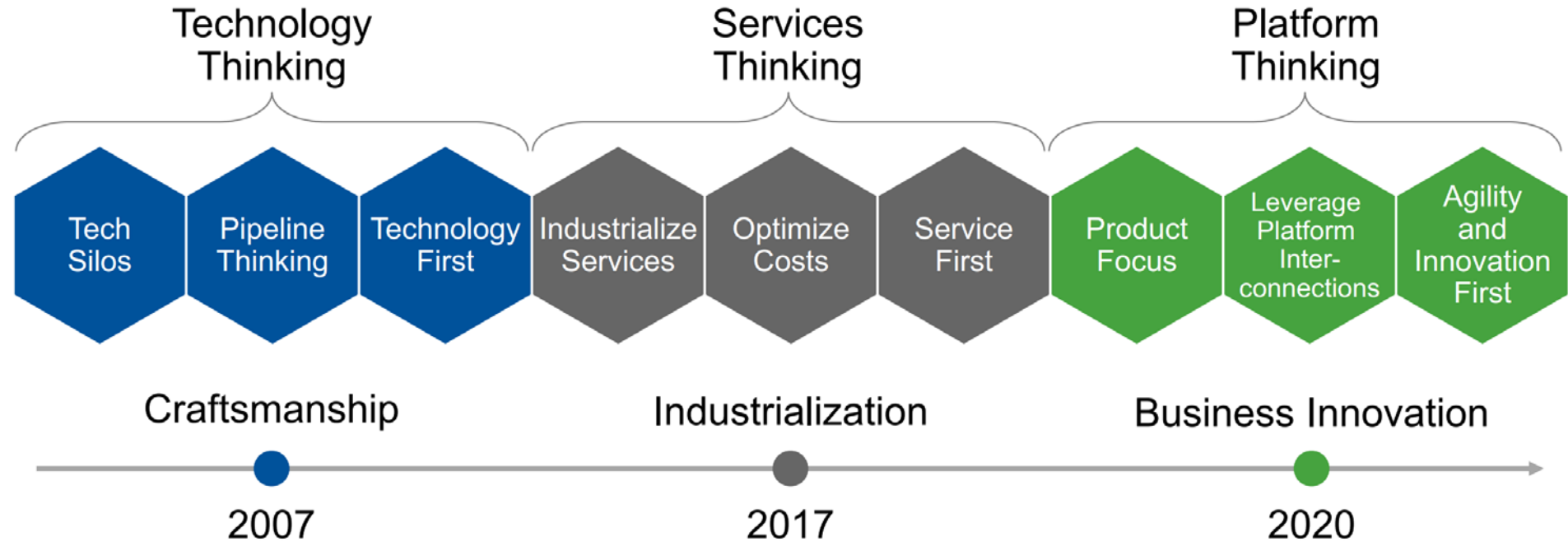
Adapted from Dr. Duane C. Tway, Jr. "A Construct of Trust"

Empowerment

- Teams feel a sense of ownership
- Ability to make a change and impact quickly
- Everyone learns what they are weakest at
- Goal: everyone is a generalist with specific expertise



I&O Leadership Must Evolve





**Bimodal IT emerges
as a stepping stone**

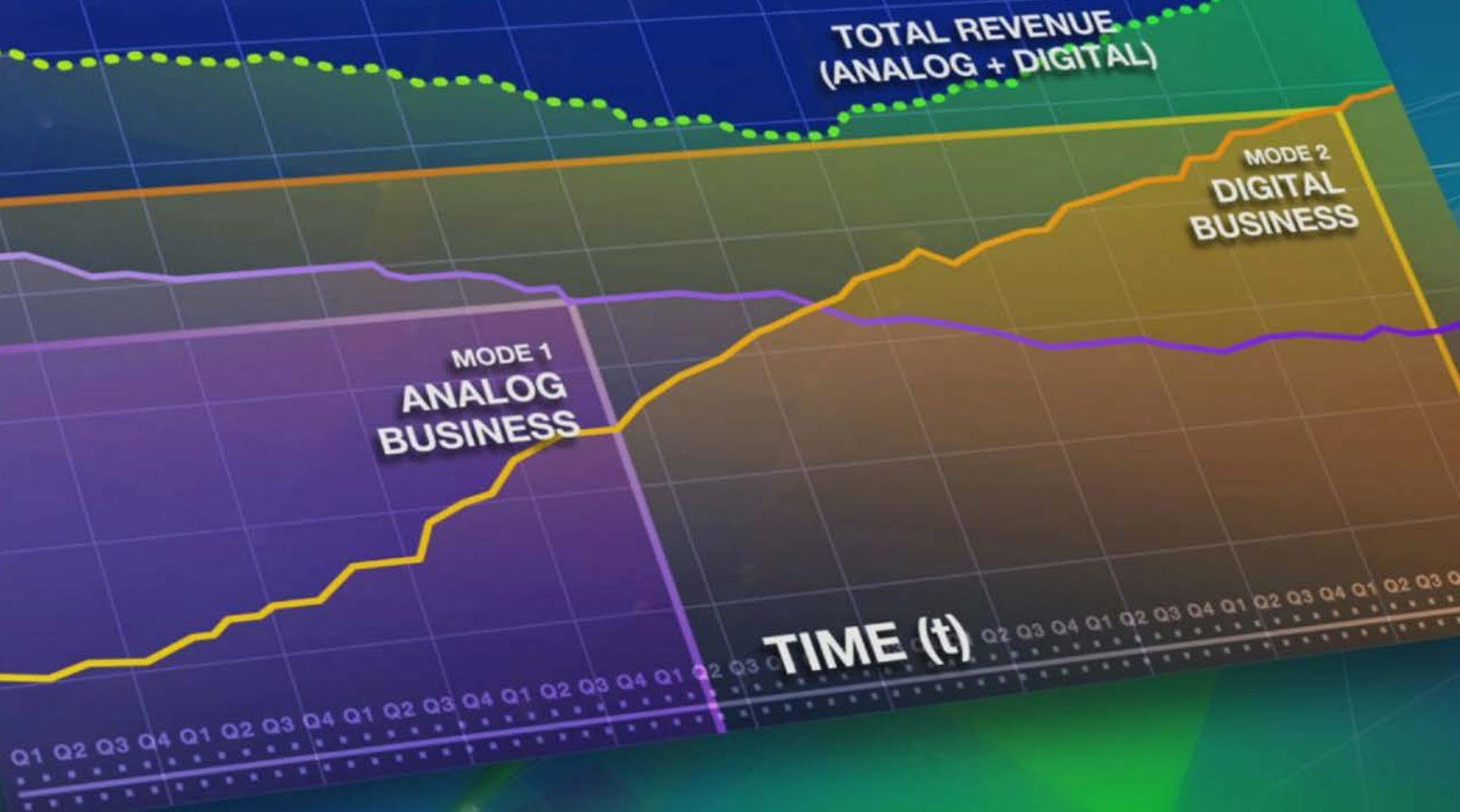
Certainty vs Uncertainty

Mode 1 - Traditional business and operations which are predictable

Mode 2 - Experimental and fast iteration

38% of organizations today adopt a bimodal approach

REVENUE



**TOTAL REVENUE
(ANALOG + DIGITAL)**

**MODE 1
ANALOG
BUSINESS**

**MODE 2
DIGITAL
BUSINESS**

TIME (t)

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4

Bimodal = Samurai + Ninja: Two Distinct but Coherent Approaches, Deeply Different, Both Essential

Think
Samurai

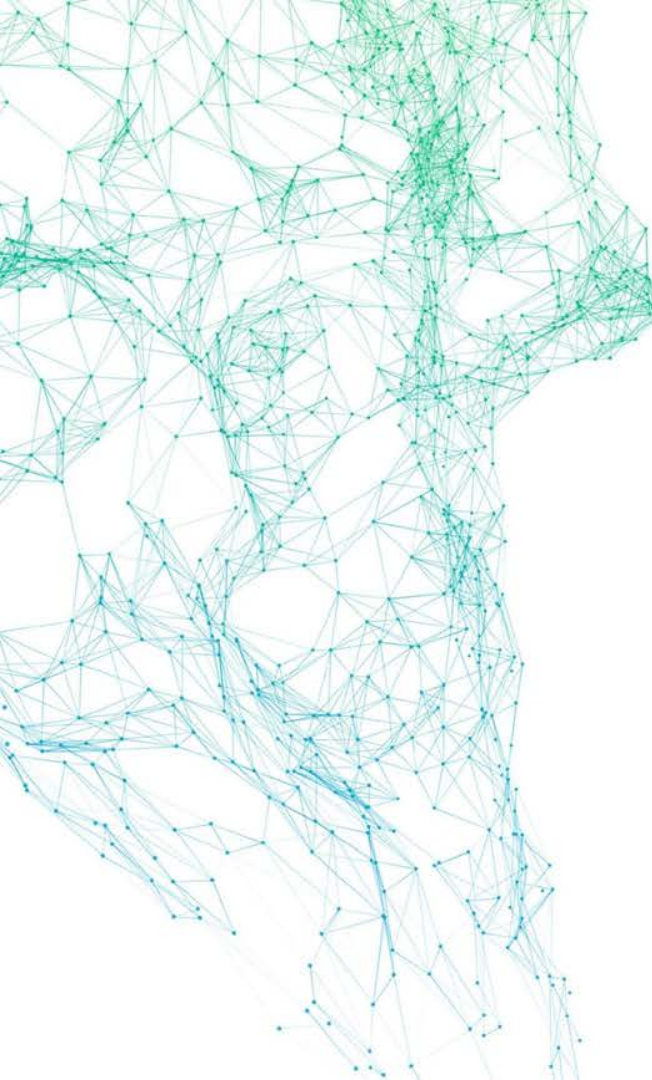


* Iterative Incremental Development

	Mode 1		Mode 2
	Reliability	Goal	Agility
	Price for performance	Value	Revenue, brand, customer experience
	Linear, waterfall, high-ceremony IID* & agile AD	Approach	Iterative, low-ceremony, nonlinear, Lean Startup, Kanban, agile AD
	Plan-driven, approval-based	Governance	Empirical, continuous, implicit in the approach
	Enterprise suppliers, long-term deals	Sourcing	Small, new vendors, short-term deals
	Good at conventional process & projects	Talent	Good at new approaches & dealing with uncertainty
	IT-centric, arms-length from customer	Culture	Business-centric, close to customer
	Long (months)	Cycle times	Short (days, weeks)

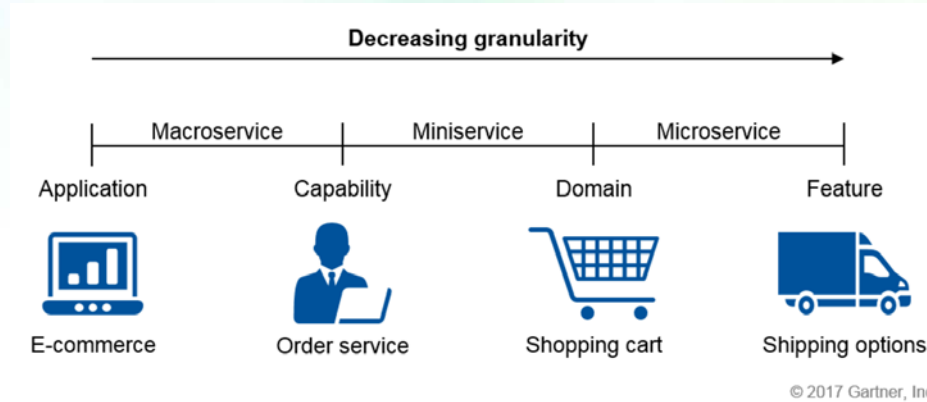
Think
Ninja





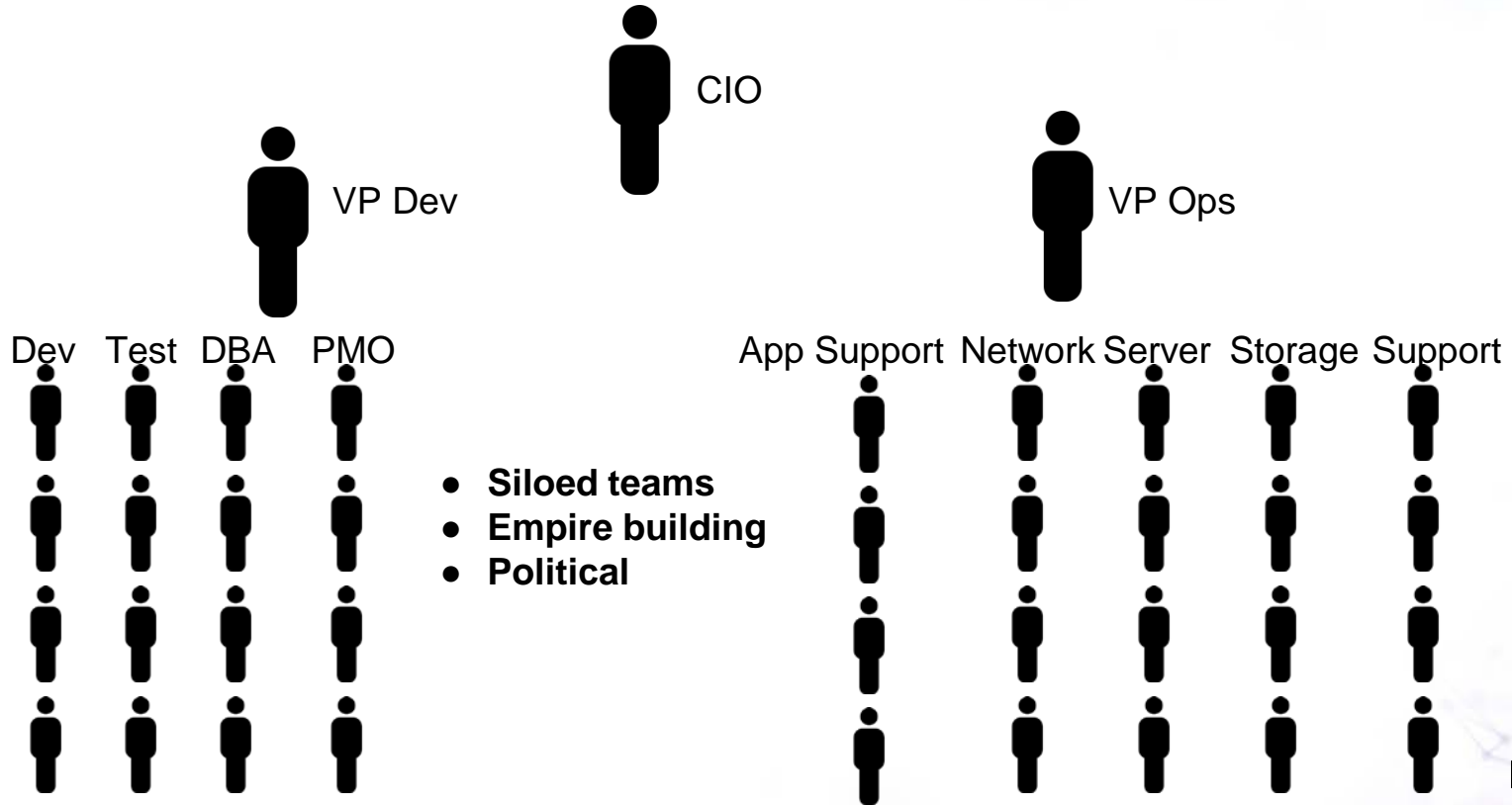
Small Teams: Part of the big picture in the Enterprise

Software Evolution

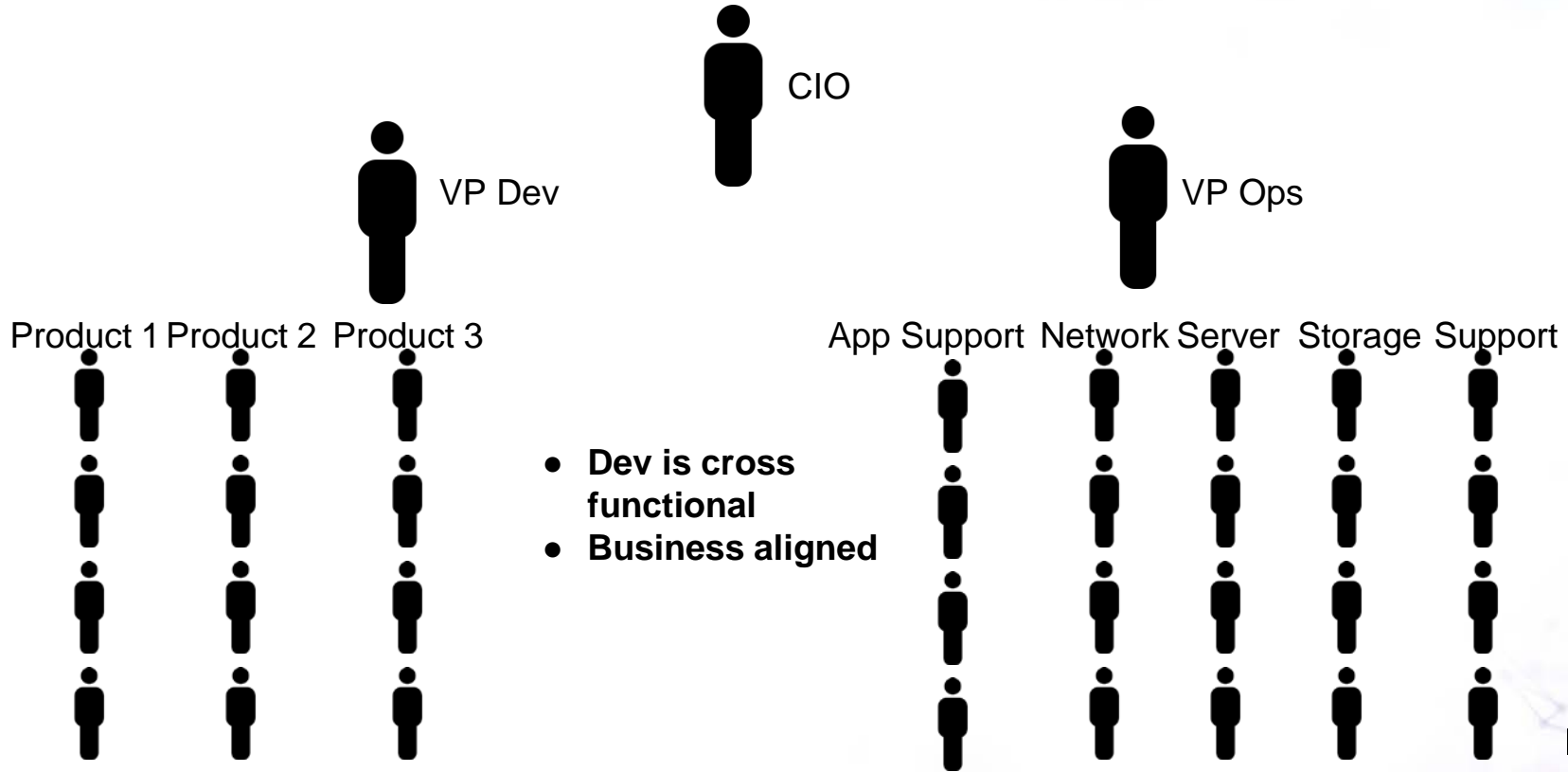


	Macroservice ▼	Miniservice ▼	Microservice ▼
Objective	Enable access	Improve agility	Support web scale
Scope	Capability	Domain	Feature
Primary principle	Encapsulation	Separation of concerns	Independence
Deployment	Deployed with monolith	Deployed independently	Deployed independently
Coupling	Loosely coupled	Loosely coupled	Decoupled
Data ownership	Shares data	May own its data	Owns its data

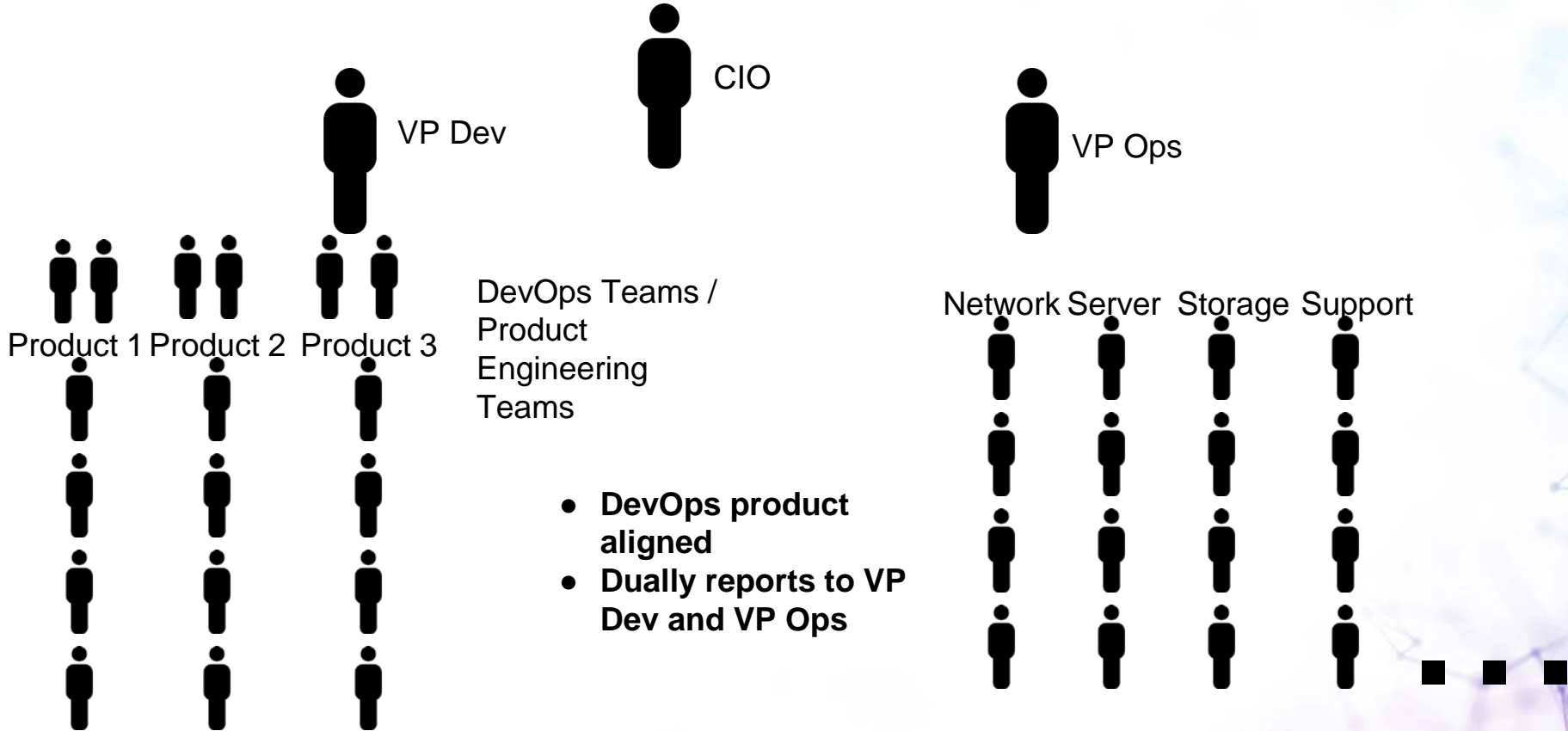
Traditional Enterprise Organization



Product Oriented Development



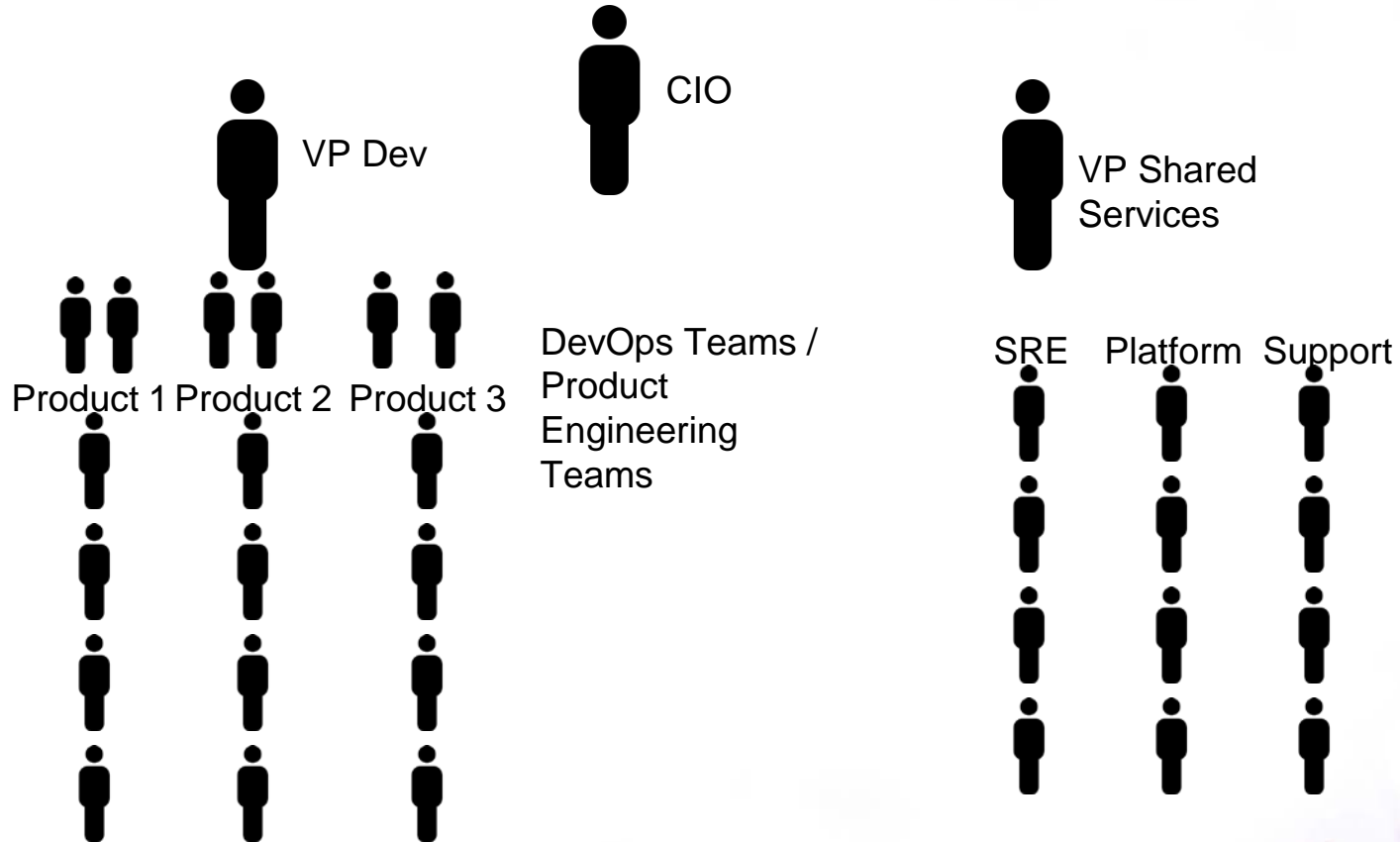
BiModal (Option)

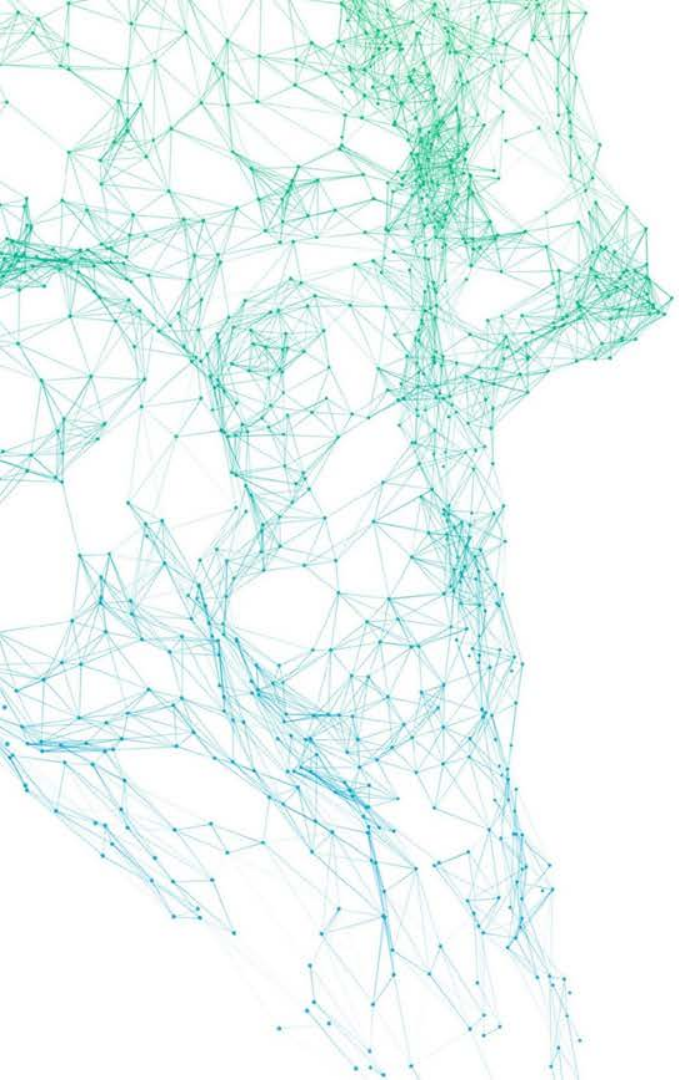


DevOps Teams /
Product
Engineering
Teams

- DevOps product aligned
- Dually reports to VP Dev and VP Ops

DevOps





Don't forget...

Digital natives rely upon traditional businesses

- How does Amazon ship a package? Process a credit card?
- Netflix deliver content (Networks and internet - Mobile carriers)
- How does Uber get cars? Gas? Maintenance of cars?
- Older businesses even if digital create debt and legacy (google kill off history)



Thank You

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