

Digital Transformation

Driving Business Value

Tom Marrs
Enterprise Architect

What's The Point?

Digital Transformation (DX)
is not just a technical exercise
— it's about transforming your
business

Your Takeaway

**How to Drive Business Value
with Digital Transformation
and Improve the Bottom
Line**

The Beginning of the DX Journey

Connecting the Dots



cover story | STATE OF THE CIO

IT-BUSINESS ALIGNMENT (finally) GETS REAL

After years of casual courting, IT and business are finally forging effective ways of working together to pursue shared objectives for digital transformation.

BY BETH STACKPOLE

For years, CIOs have been chasing the Holy Grail of IT-business alignment with limited success and plenty of indigestion.

Digital transformation has elevated the CIO role, yet IT leaders still struggle to foster effective collaboration between their organizations and business units at a holistic level. Long-standing perceptions of IT as mired in the technical weeds, disconnected from core ►►►

ILLUSTRATION BY GWEN KERAVAL

WINTER 2018 | CIO.COM [Home](#) < 9 >

Source: CIO Magazine, Winter 2018 - <https://www.cio.com/article/3250845/digital-transformation/state-of-the-cio-2018-it-business-alignment-finally-gets-real.html>

Haven't We Done This Before?

No

The IT-Business Divide

LOB's Issues with IT

Technology for the Sake of Technology

In the Weeds

LOB's Issues with IT

A Bottleneck

Disconnected from Business Objectives

A Cost Center

Source: CIO Magazine, Winter 2018 - <https://www.cio.com/article/3250845/digital-transformation/state-of-the-cio-2018-it-business-alignment-finally-gets-real.html>

The IT-Business Divide

IT's Issues with LOB

Makes Decisions without Including IT

Pie in the Sky

IT's Issues with LOB

Source of Technical Debt

Disconnected from IT Initiatives

Unwilling to Invest

Agenda

Digital Transformation and Business Value

What is Real Digital Transformation?

1

Technical Disciplines of Digital Transformation

Drive Business Value with Innovative Technology

2

Digital Transformation Success Stories

Real World Case Studies

3

Conclusion

What Could Be? Where Do We Go From Here? Leading Change

4

Slides Will Be Available At ...

[https://github.com/tmarrs/presentations/tree/
master/SIM-Next/2019/Digital-Transformation](https://github.com/tmarrs/presentations/tree/master/SIM-Next/2019/Digital-Transformation)

We're Not Covering

**Any Deep Technical
or Architectural Discussion
(unless you ask for it)**

The Journey ...



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What is Digital Transformation (DX)?

Definition #1

Digital transformation is a fundamental rethinking of customer experience, business models, and operations. It's about finding new ways to deliver value, generate revenue, and improve efficiency — and companies are using innovative technologies to do it.

SAP - <https://www.sap.com/trends/digital-transformation.html>

What is Digital Transformation (DX)?

Definition #2

Real digital transformation isn't about getting your company to use a specific set of new technologies; it's about your company's ability to react and successfully utilize new technologies and procedures — now and in the future.

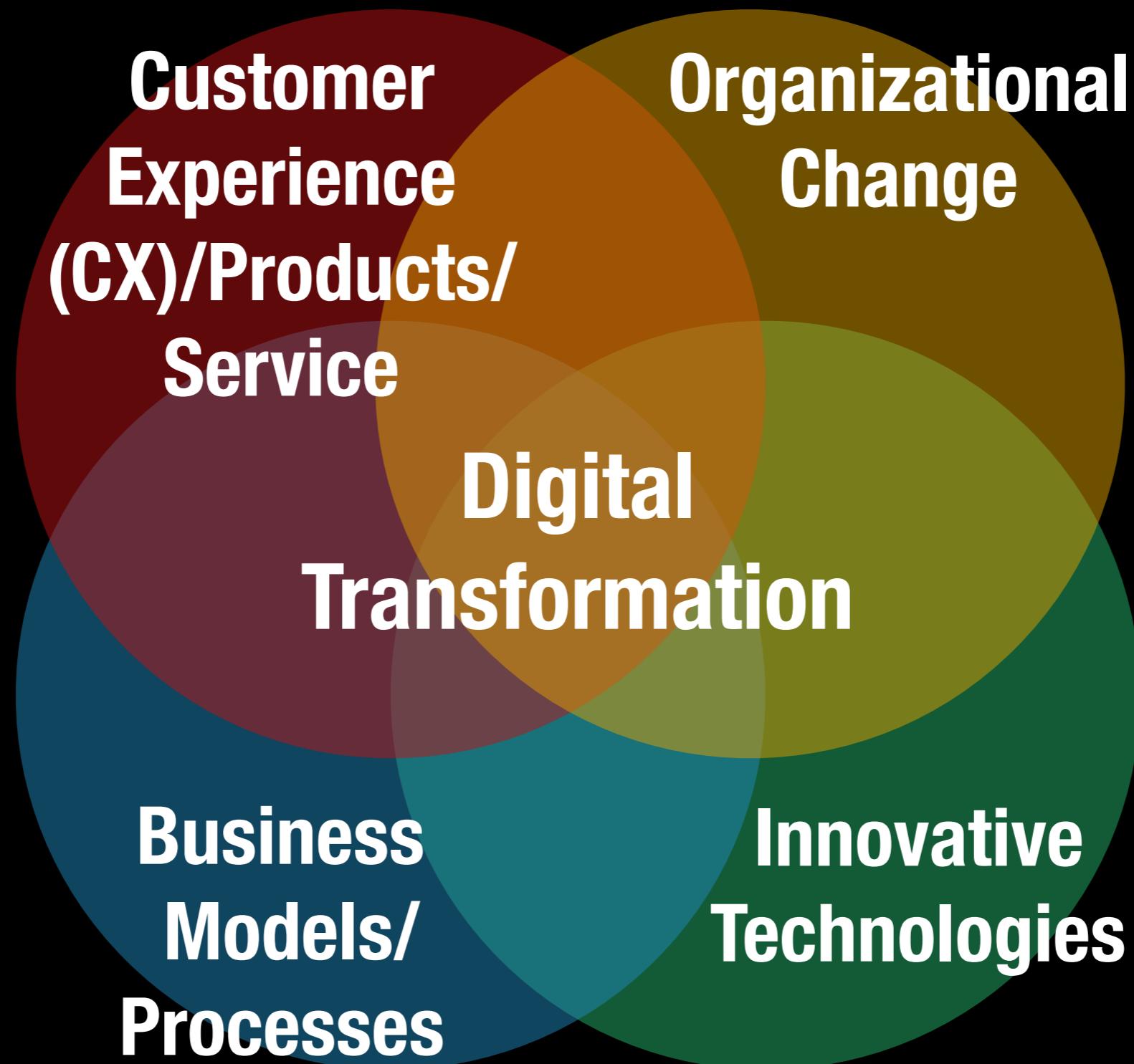
... your transformation programme is going to have to tackle three critical areas of your organization:

1. **Business model** - Revenue, Customer Acquisition & Retention
2. **Customer experience** - Core product and services, Customer engagement
3. **Internal processes** - Operations

Herbert, Lindsay. **Digital Transformation: Build Your Organization's Future for the Innovation Age** (p. 5). Bloomsbury Publishing. Kindle Edition.

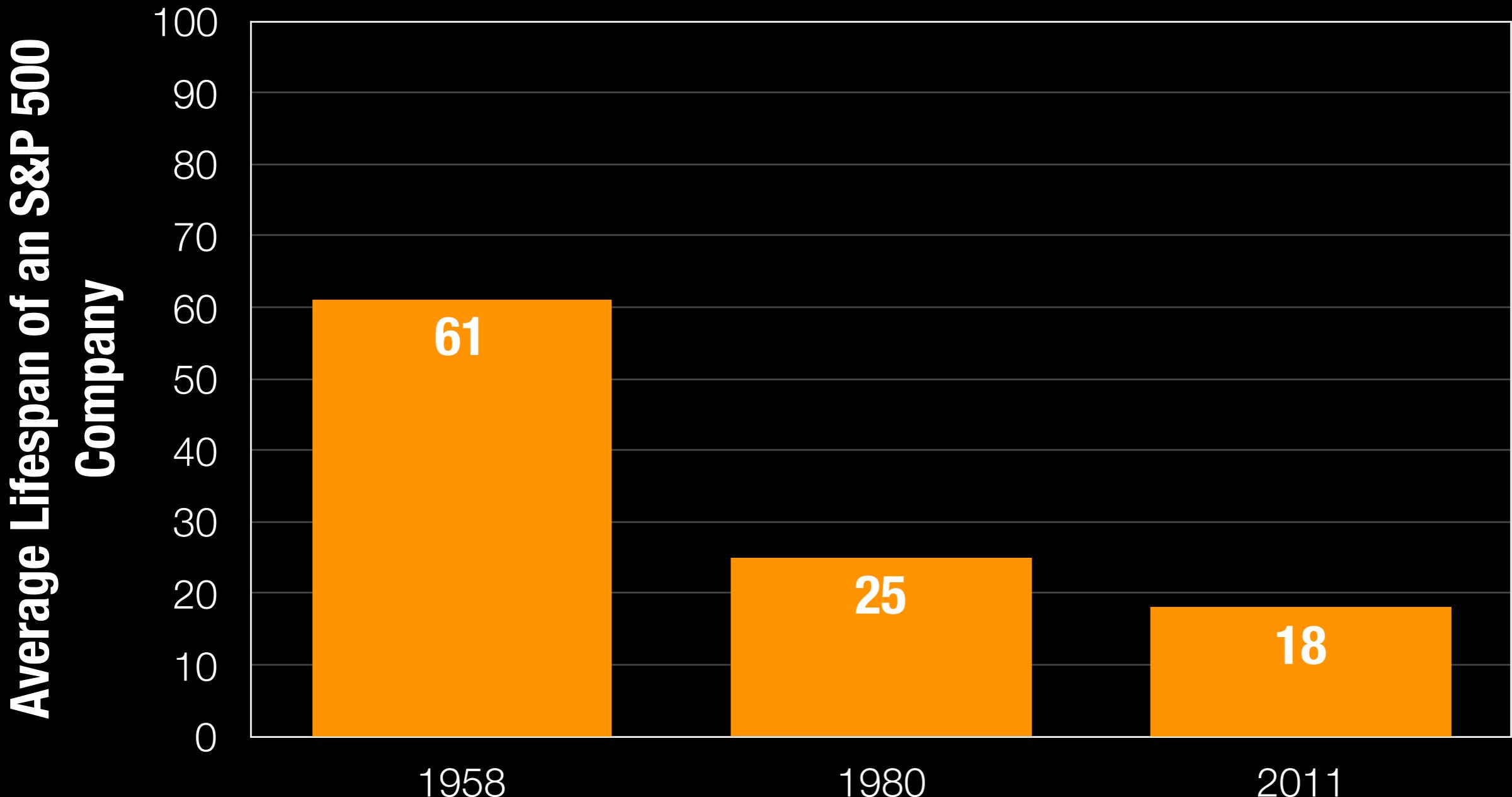
What is Digital Transformation (DX)?

My Definition



Why Digital Transformation?

Adapt or Die

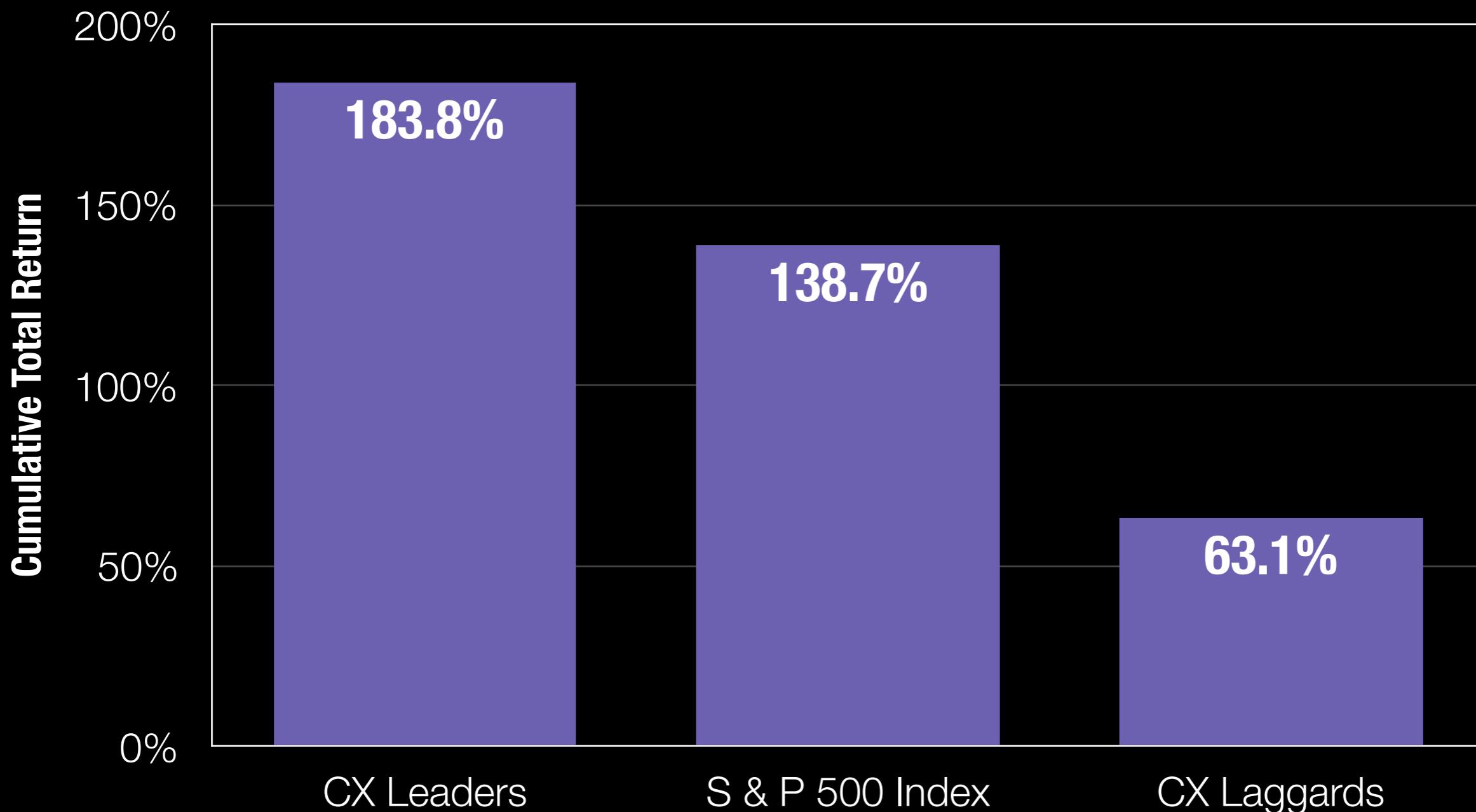


Source: The Enterprisers Project - <https://enterprisersproject.com/what-is-digital-transformation>

CNBC - <https://www.cnbc.com/2017/08/24/technology-killing-off-corporations-average-lifespan-of-company-under-20-years.html>

CX Leaders Outperform the Market

Customer Experience (CX) Leaders vs S&P 500 vs Laggards
(2007-17)



Source: Watermark Consulting, 2019 - <https://www.watermarkconsult.net/blog/2019/01/14/customer-experience-roi-study/>

Digital Transformation Spending

Worldwide

\$1.25 T

Worldwide DX
spending in 2019

\$1.97 T

Forecasted Worldwide
DX spending in 2022

16.7%

Compound Annual
Growth Rate (CAGR)
on DX from 2017 -
2022

30%

Of G2000 companies
to allocate capital
budget $\geq 10\%$ of
revenue on DX
initiatives by 2020

Source: IDC (International Data Corporation)

<https://www.idc.com/getdoc.jsp?containerId=prUS44440318>

Business Value

Start with the Business and Speak their Language



Source: CIO Magazine, Winter 2018 - <https://www.cio.com/article/3250845/digital-transformation/state-of-the-cio-2018-it-business-alignment-finally-gets-real.html>

Real DX Requires Collaboration

2018 State of the CIO Survey

71%

Of respondents
believe that IT
and LOB engage
more frequently

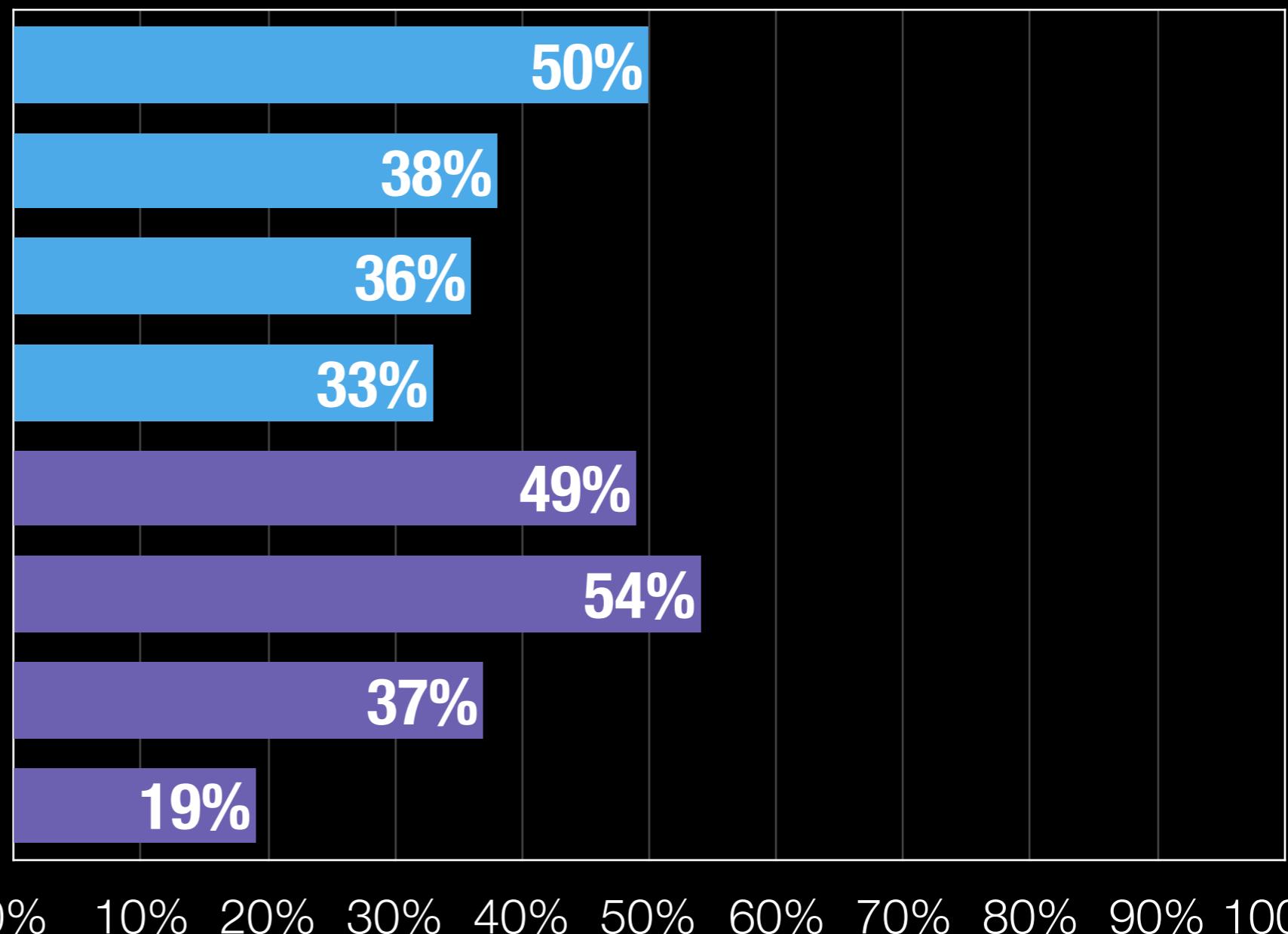
Source: CIO Magazine, Winter 2018 - <https://www.cio.com/article/3250845/digital-transformation/state-of-the-cio-2018-it-business-alignment-finally-gets-real.html>

Real DX Requires Collaboration

2018 State of the CIO Survey

IT Leader Priorities

█ Transformational Leadership
█ Operational



Source: CIO Magazine, Winter 2018 - <https://www.cio.com/article/3250845/digital-transformation/state-of-the-cio-2018-it-business-alignment-finally-gets-real.html>

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Real World Case Studies

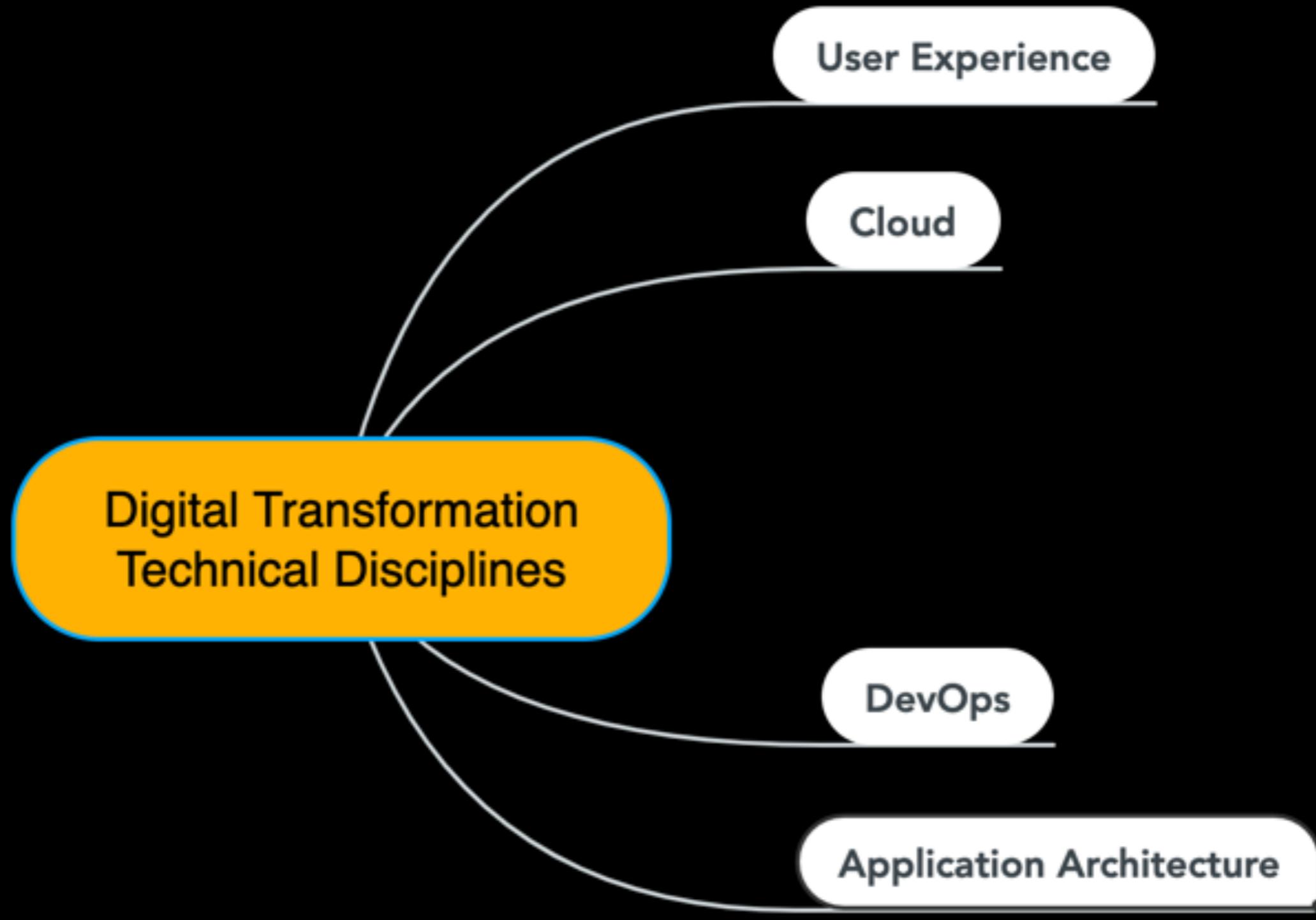
3

Conclusion

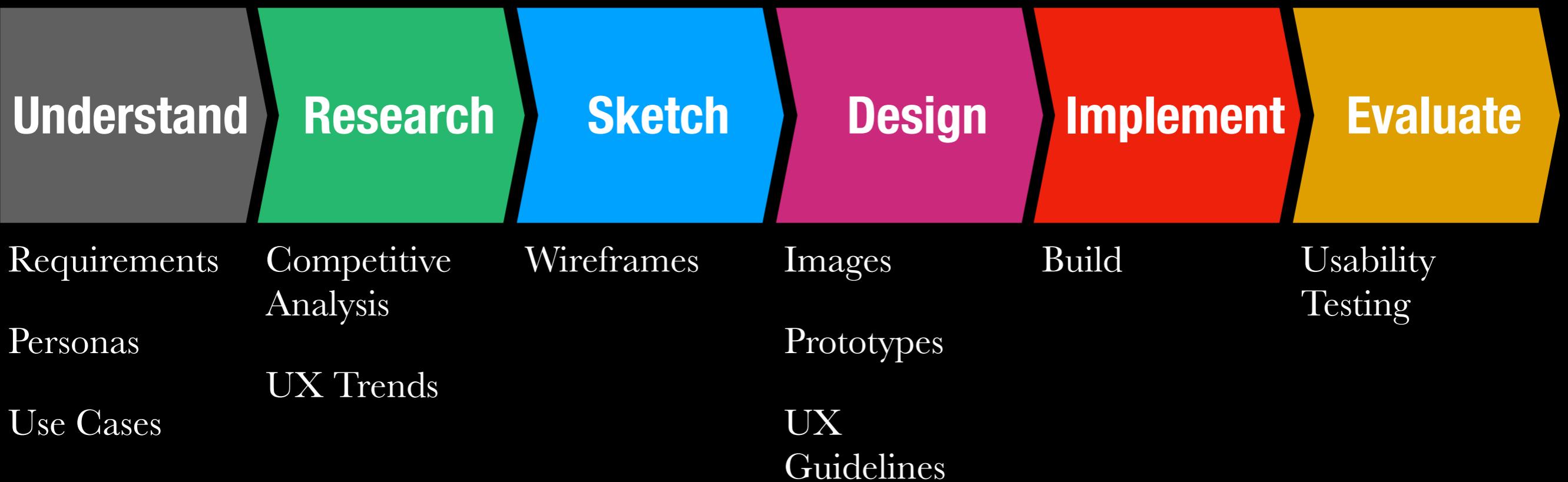
What Could Be? Where Do We Go From Here? Leading Change

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DX - Technical Disciplines



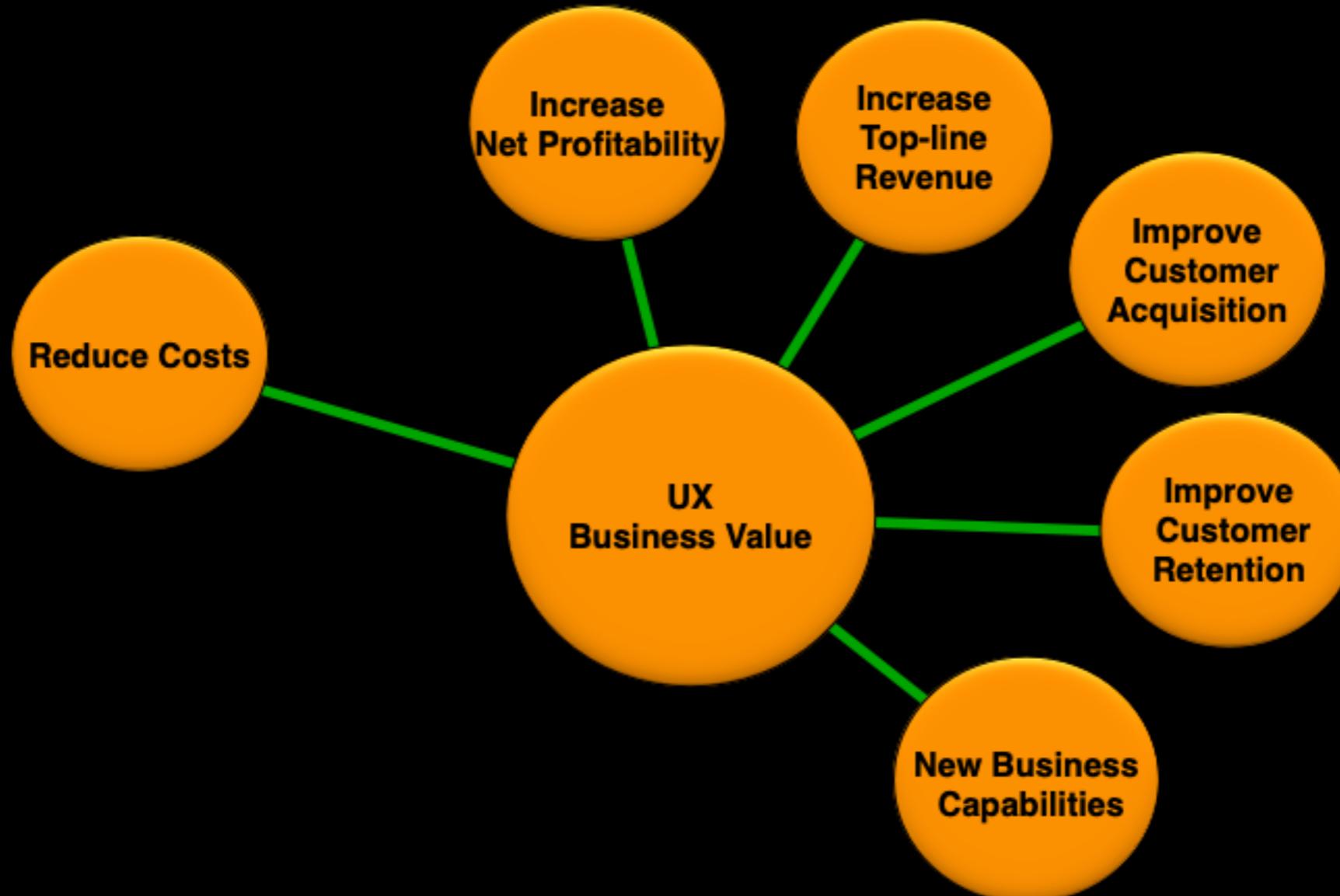
Typical User Experience (UX) Process



Source: UX Planet

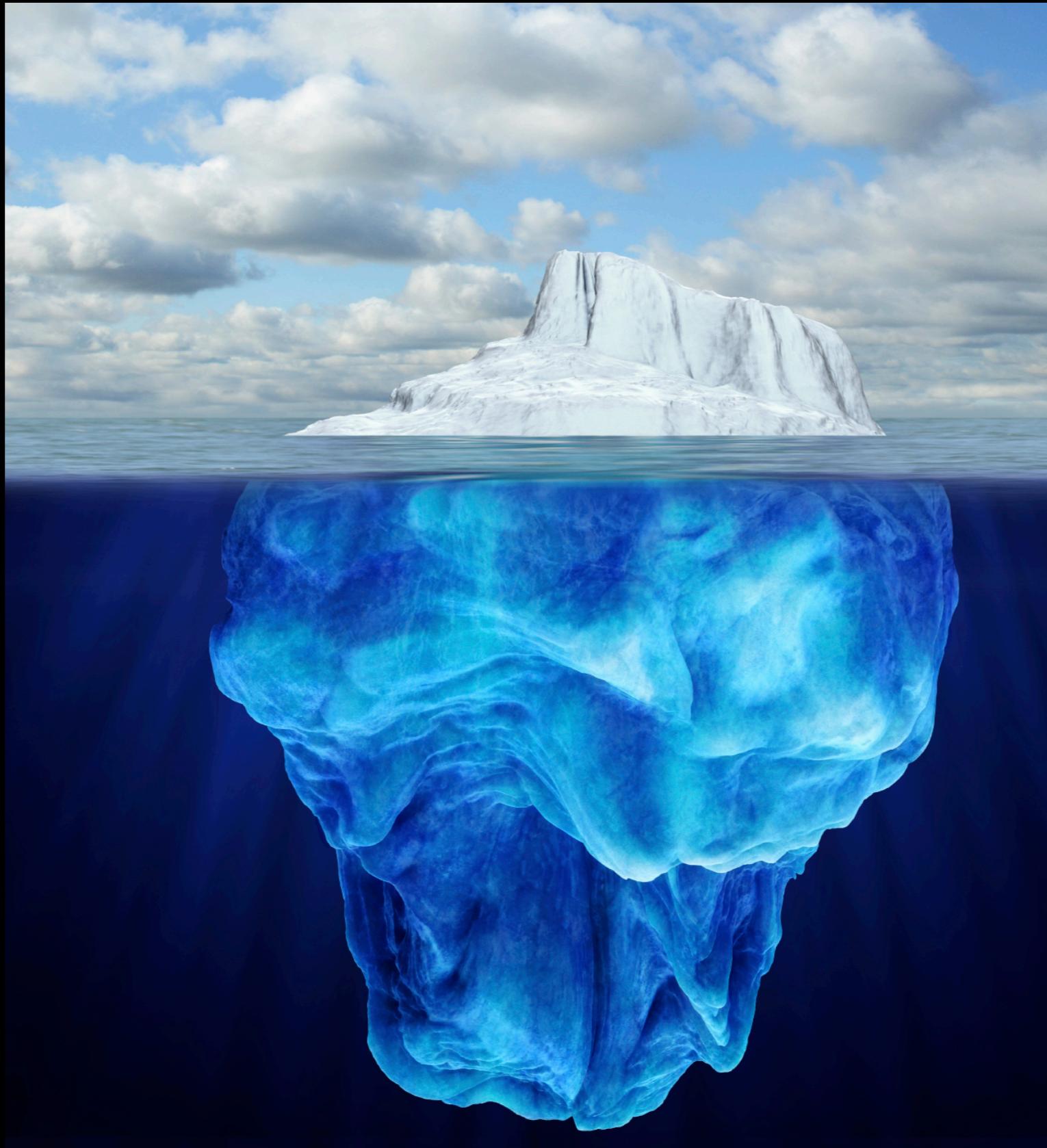
<https://uxplanet.org/user-experience-design-process-d91df1a45916>

UX Business Value



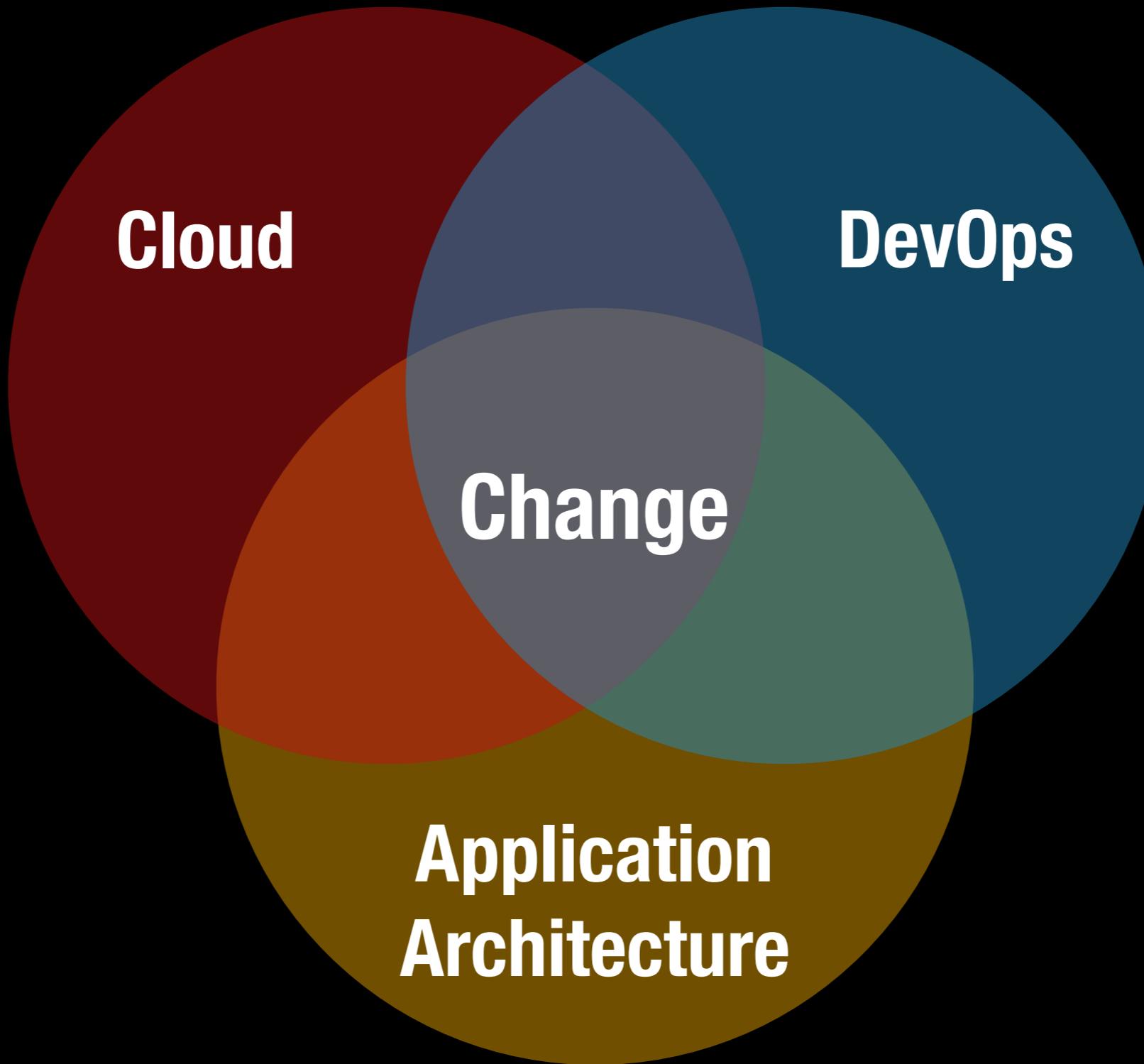
Are We Done Yet?

But We Have a Beautiful UI

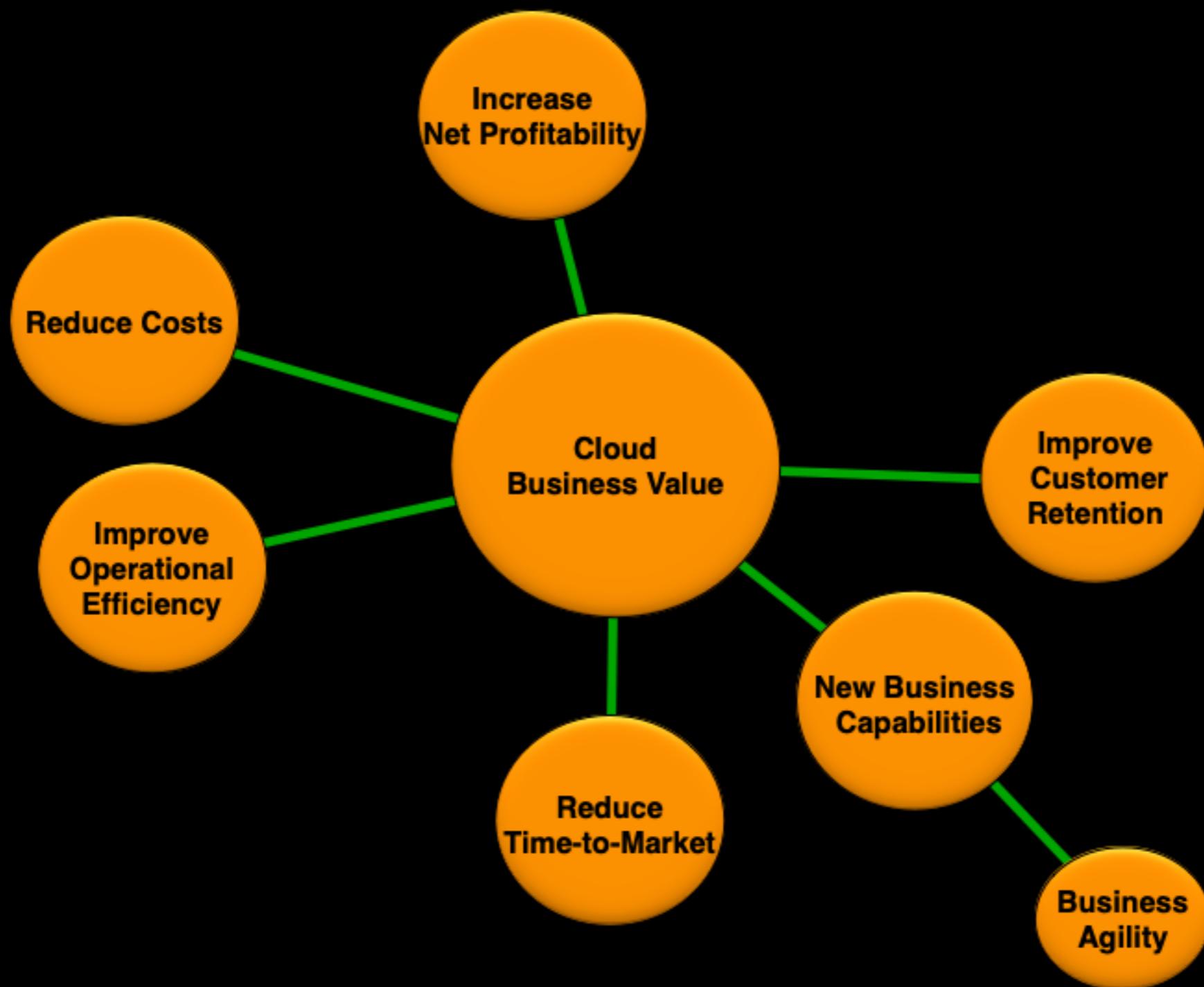


Delivering Real Change

The Rest of the Story



Cloud Business Value



Cloud Provider Market Share

The Big 3 - AWS, Azure, GCP

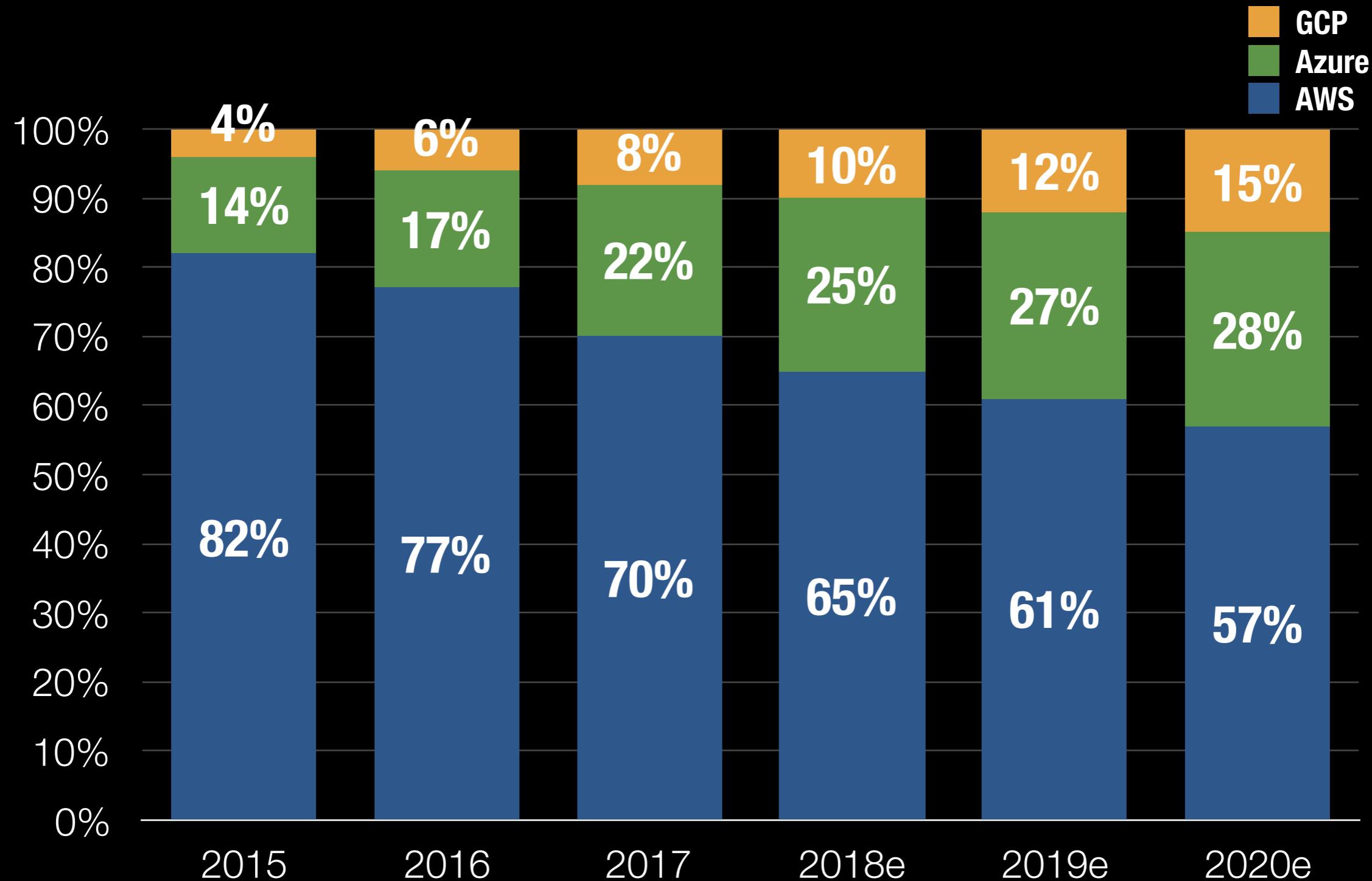
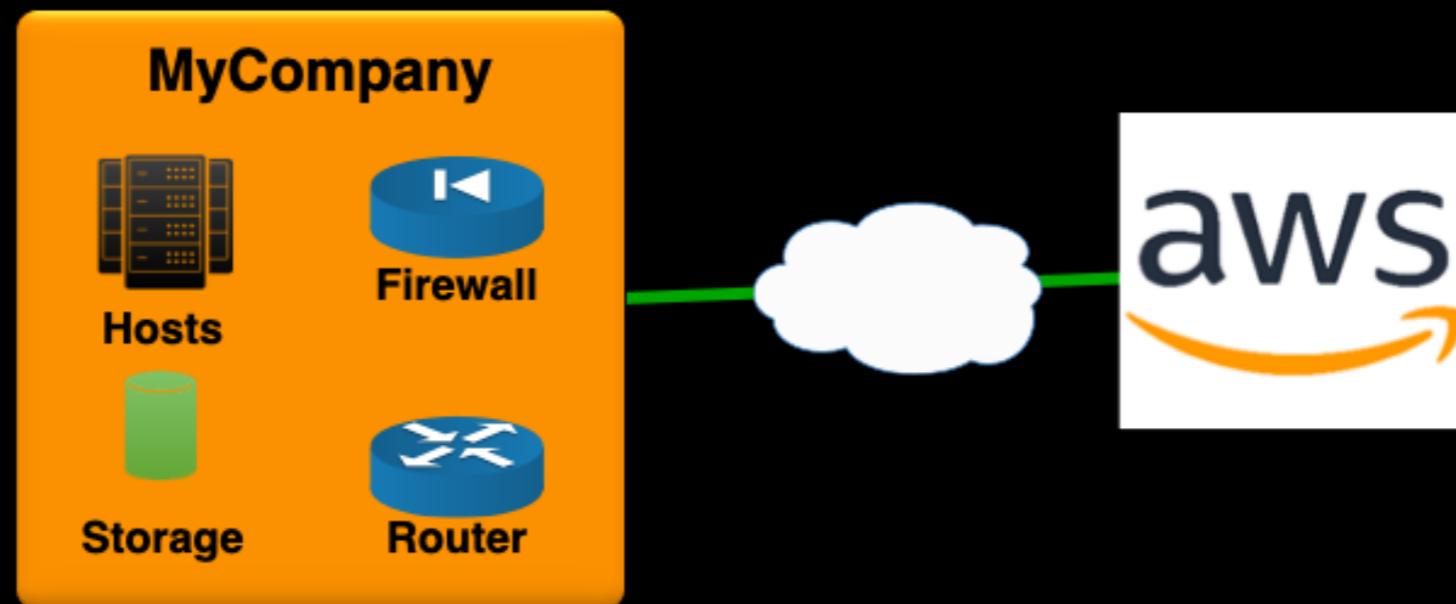


Image: Jeffries

Source: <https://www.zdnet.com/article/top-cloud-providers-2019-aws-microsoft-azure-google-cloud-ibm-makes-hybrid-move-salesforce-dominates-saas/>

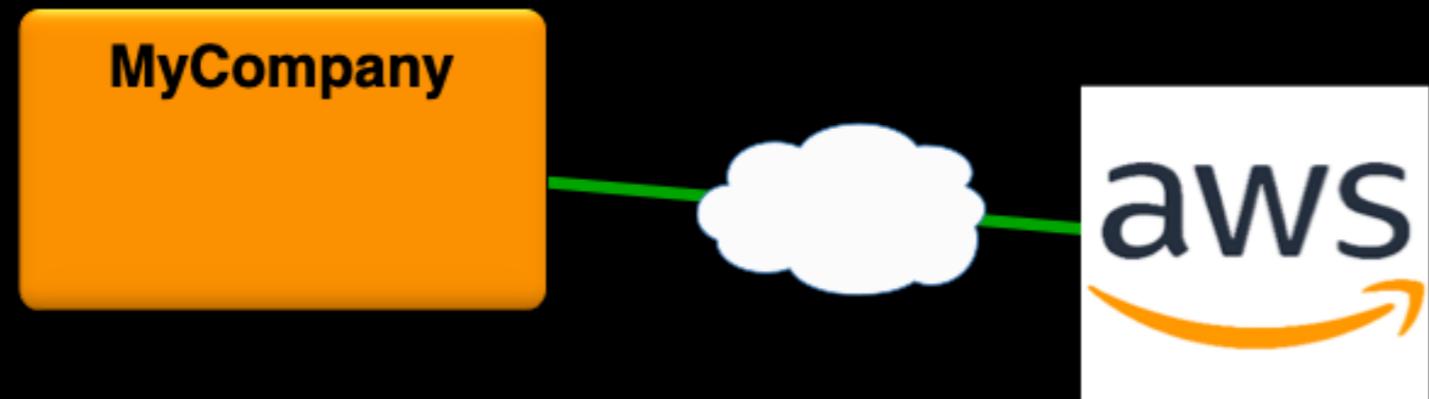
Cloud Strategy

Hybrid Cloud - Bridge or Final Destination?



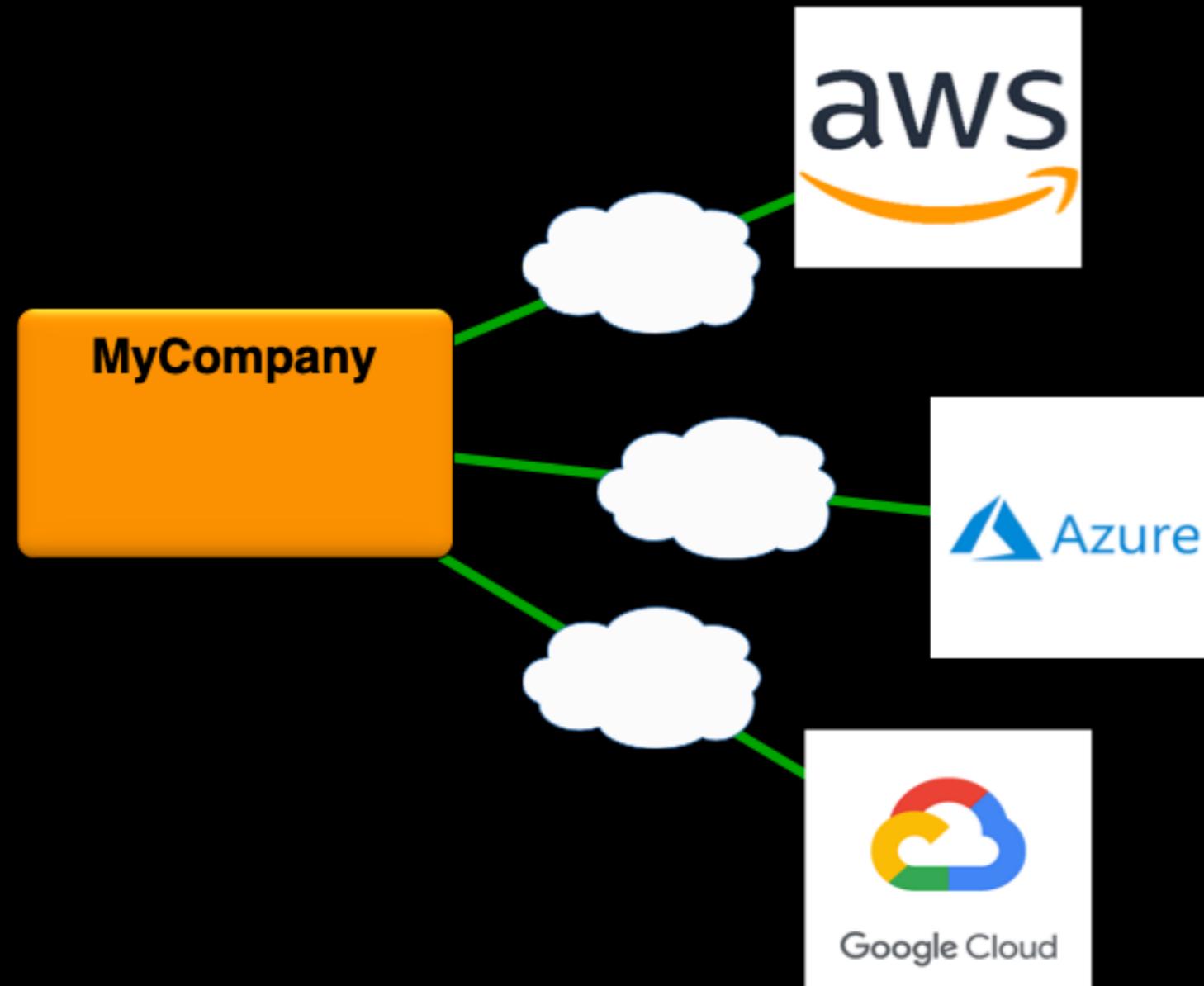
Cloud Strategy

Public Cloud



Cloud Strategy

Multi Cloud - The Preferred Cloud Strategy



Source: <https://www.rightscale.com/blog/cloud-industry-insights/cloud-computing-trends-2019-state-cloud-survey>

Cloud Challenges

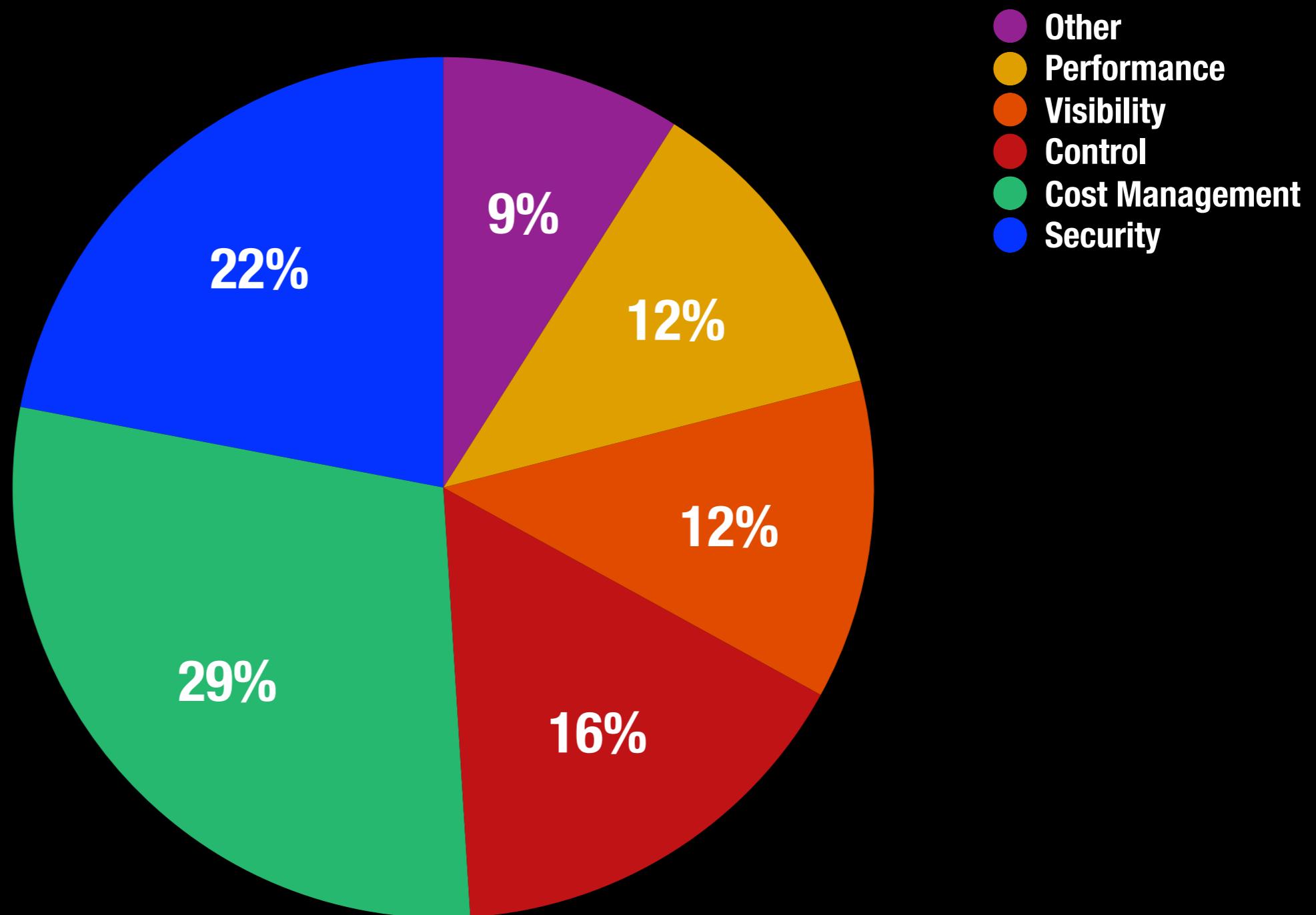
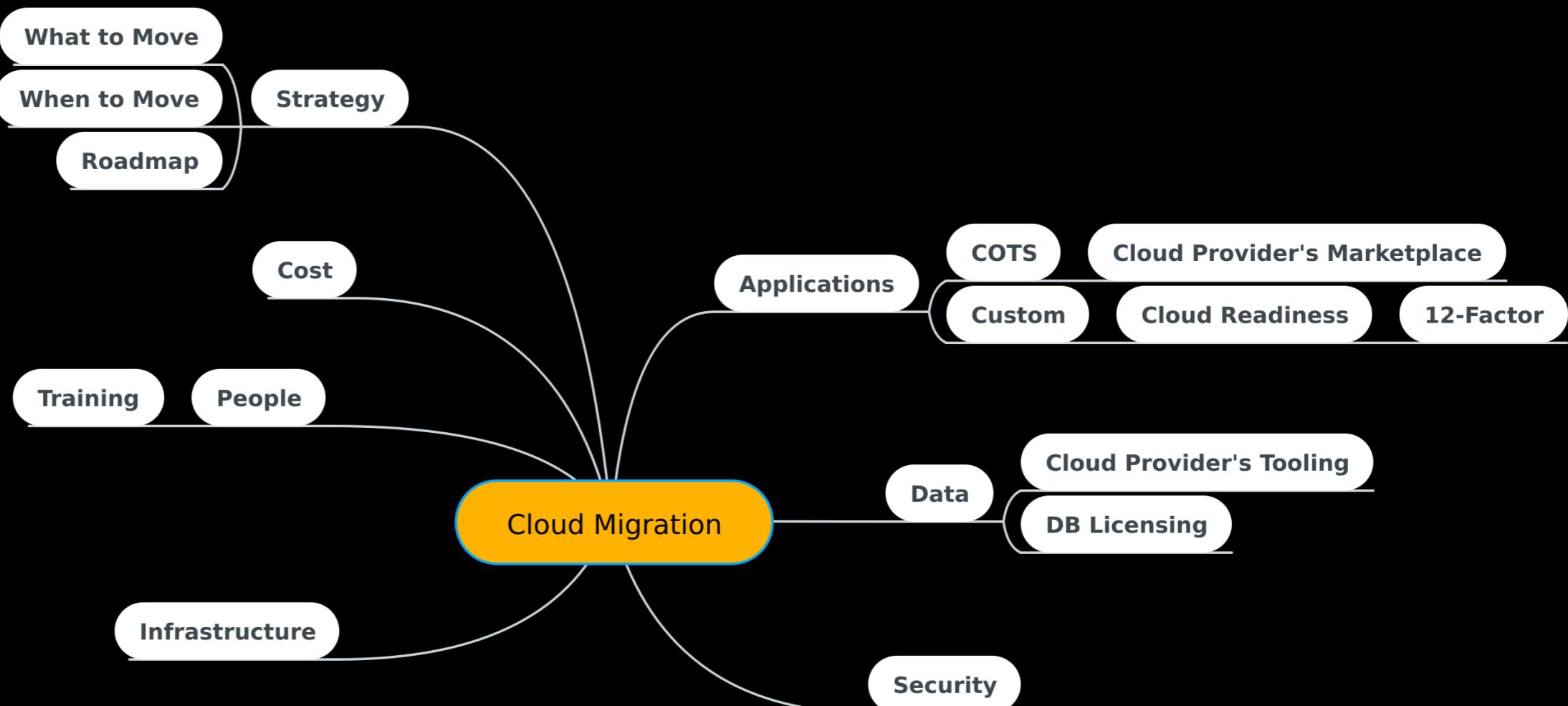


Image: Kentik

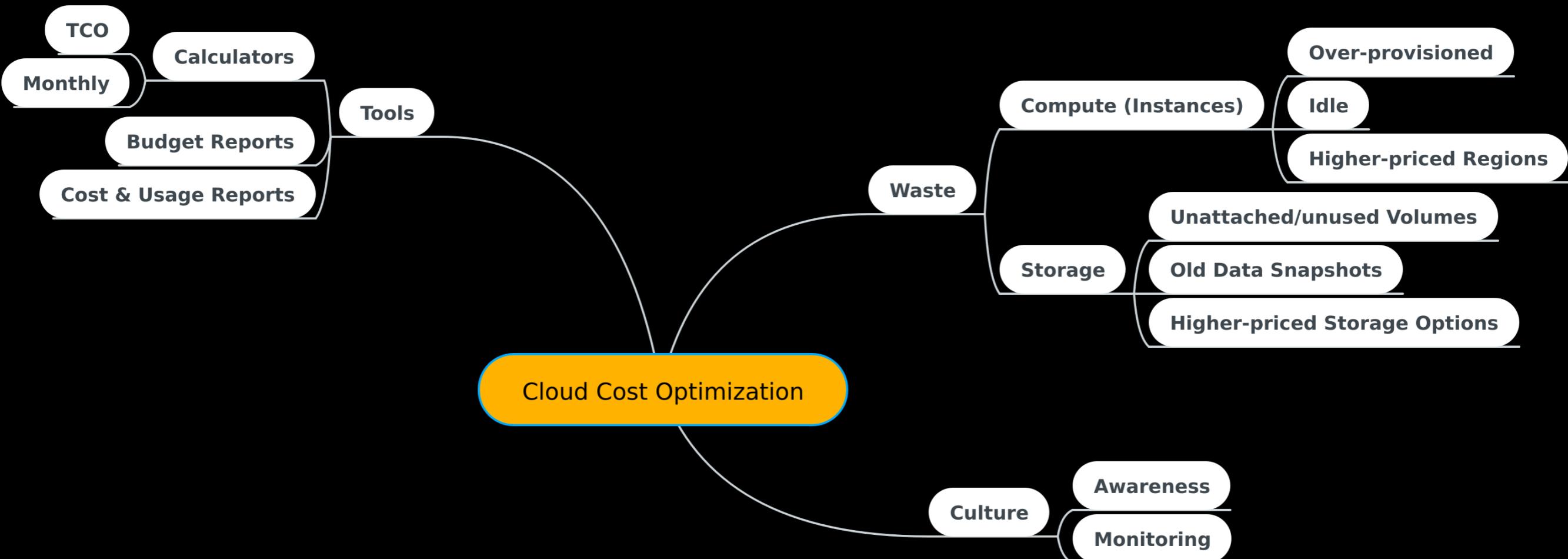
Source: <https://www.zdnet.com/article/top-cloud-providers-2019-aws-microsoft-azure-google-cloud-ibm-makes-hybrid-move-salesforce-dominates-saas/>

Cloud Migration - Overview



Cloud Cost Optimization

Addressing the #1 Concern

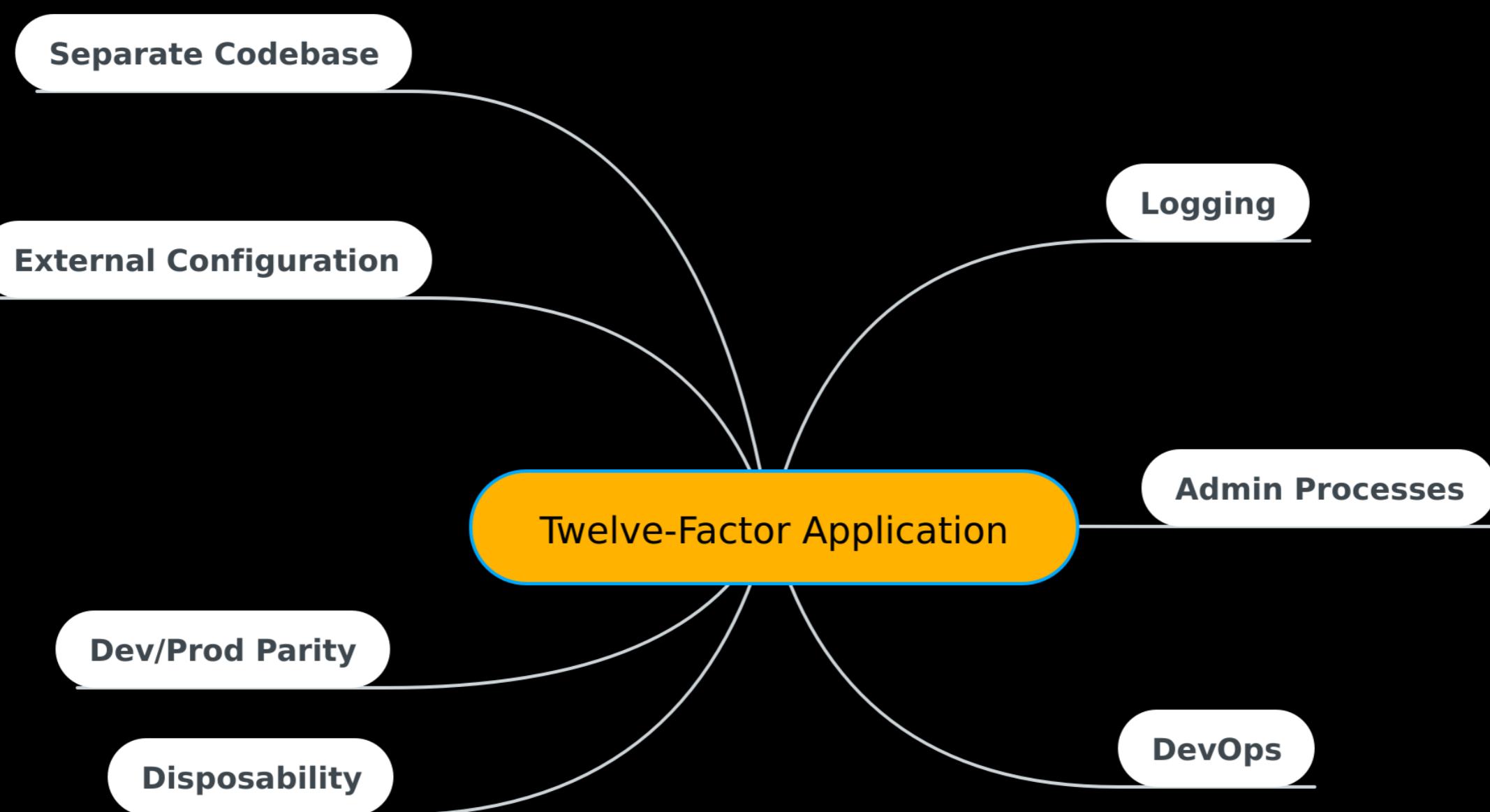


Source: <https://www.rightscale.com/blog/cloud-industry-insights/cloud-computing-trends-2019-state-cloud-survey>

<https://docs.aws.amazon.com/aws-technical-content/latest/cost-management/cost-management.pdf>

Cloud Migration - Applications

Cloud-Ready/Cloud-Native - The Twelve-Factor Application

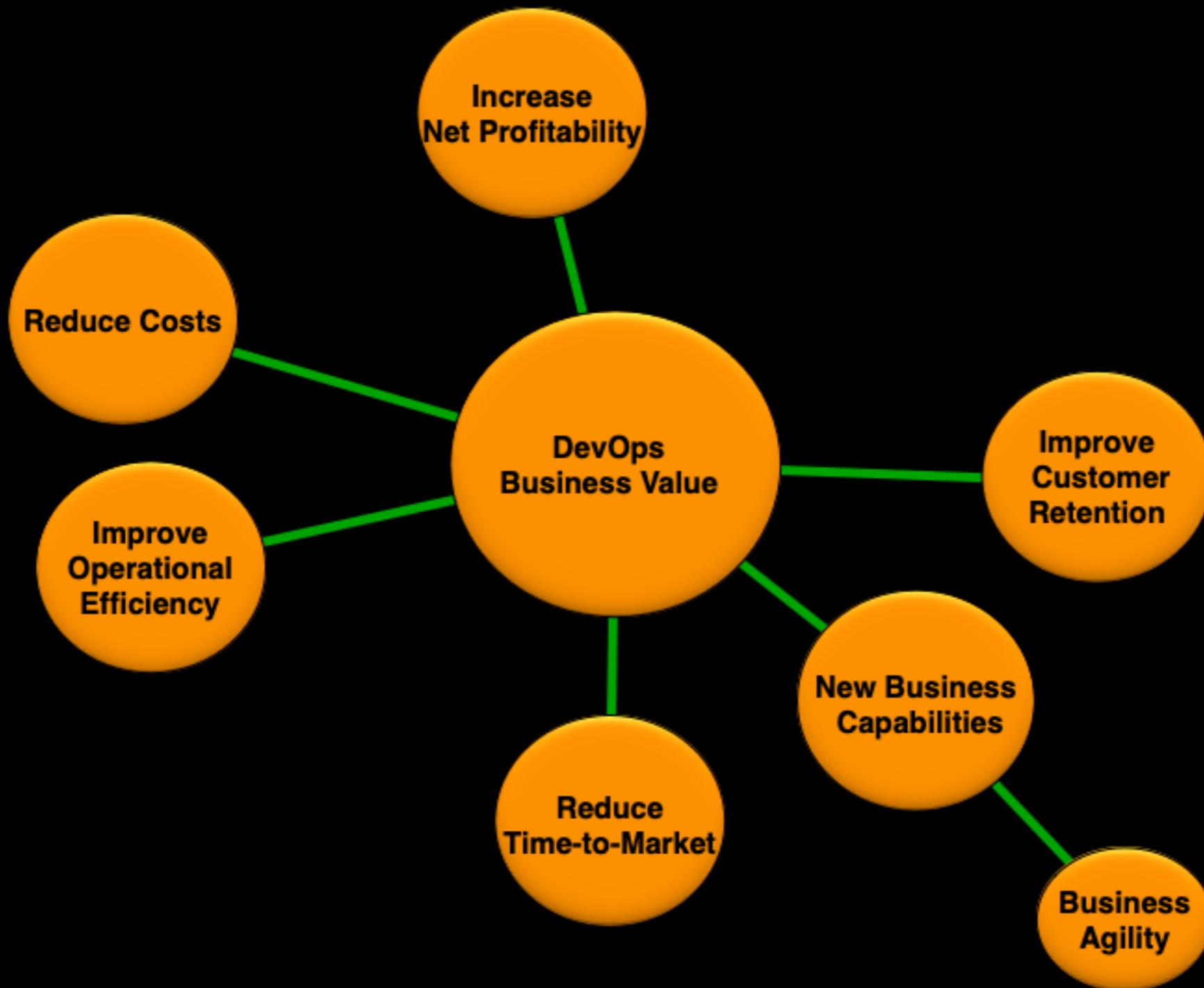


DevOps Defined

DevOps is a set of software development practices that combines software development (Dev) and IT operations (Ops) to shorten the systems development life cycle while delivering features, fixes, and updates frequently in close alignment with business objectives.

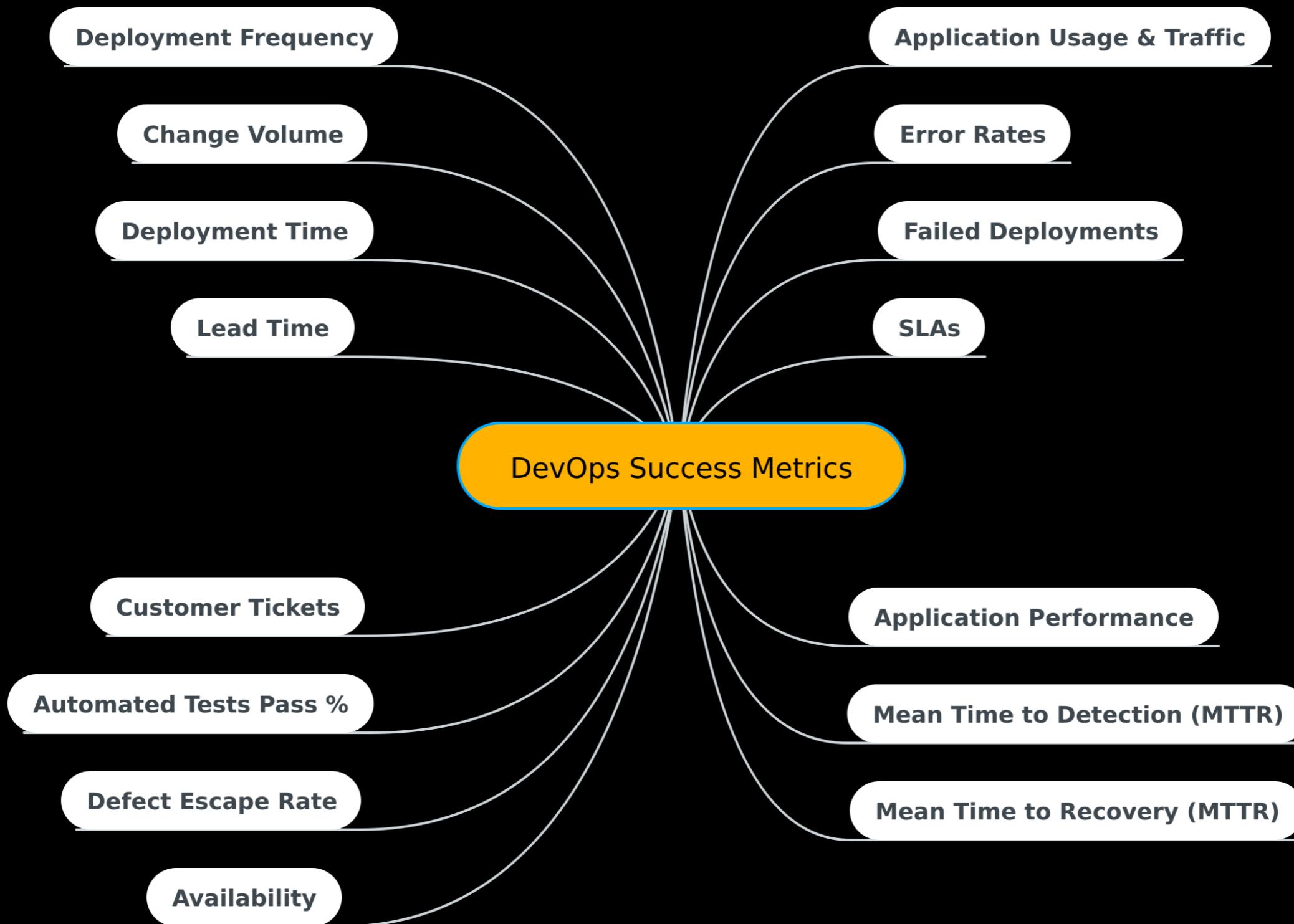
- Wikipedia

DevOps Business Value

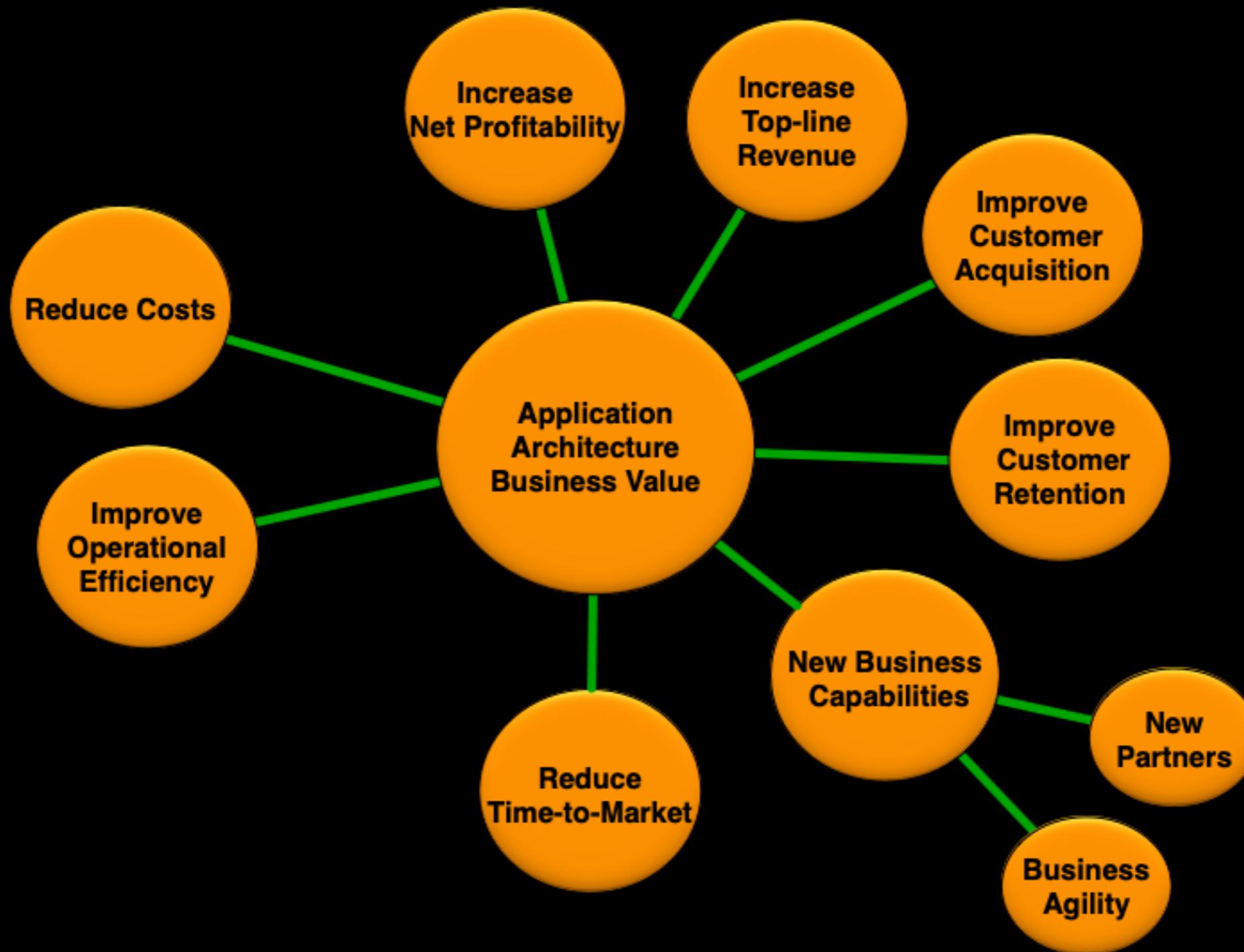


DevOps Metrics

How Do We Measure Success?

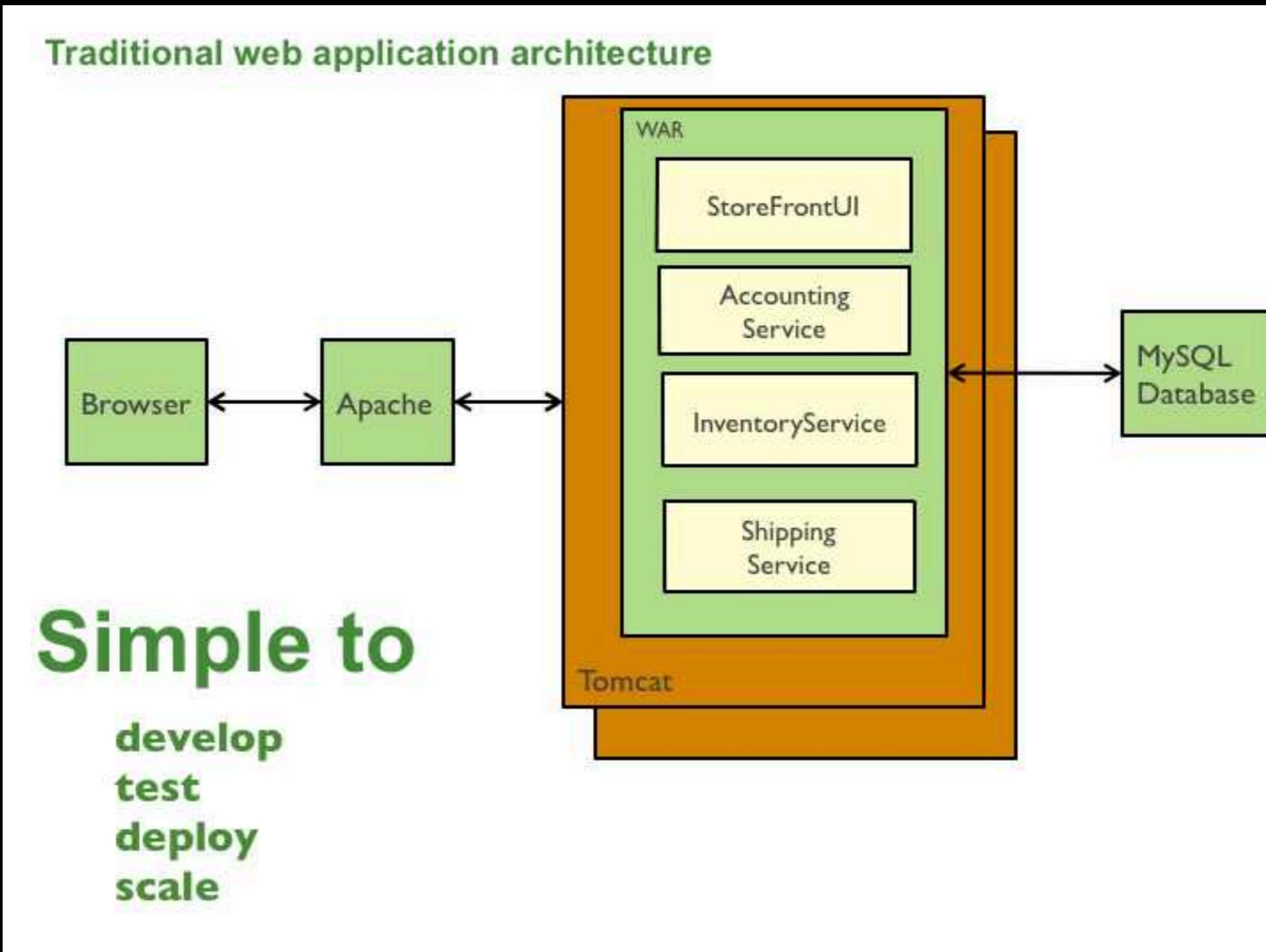


Application Architecture Business Value



Introducing ... The Monolith

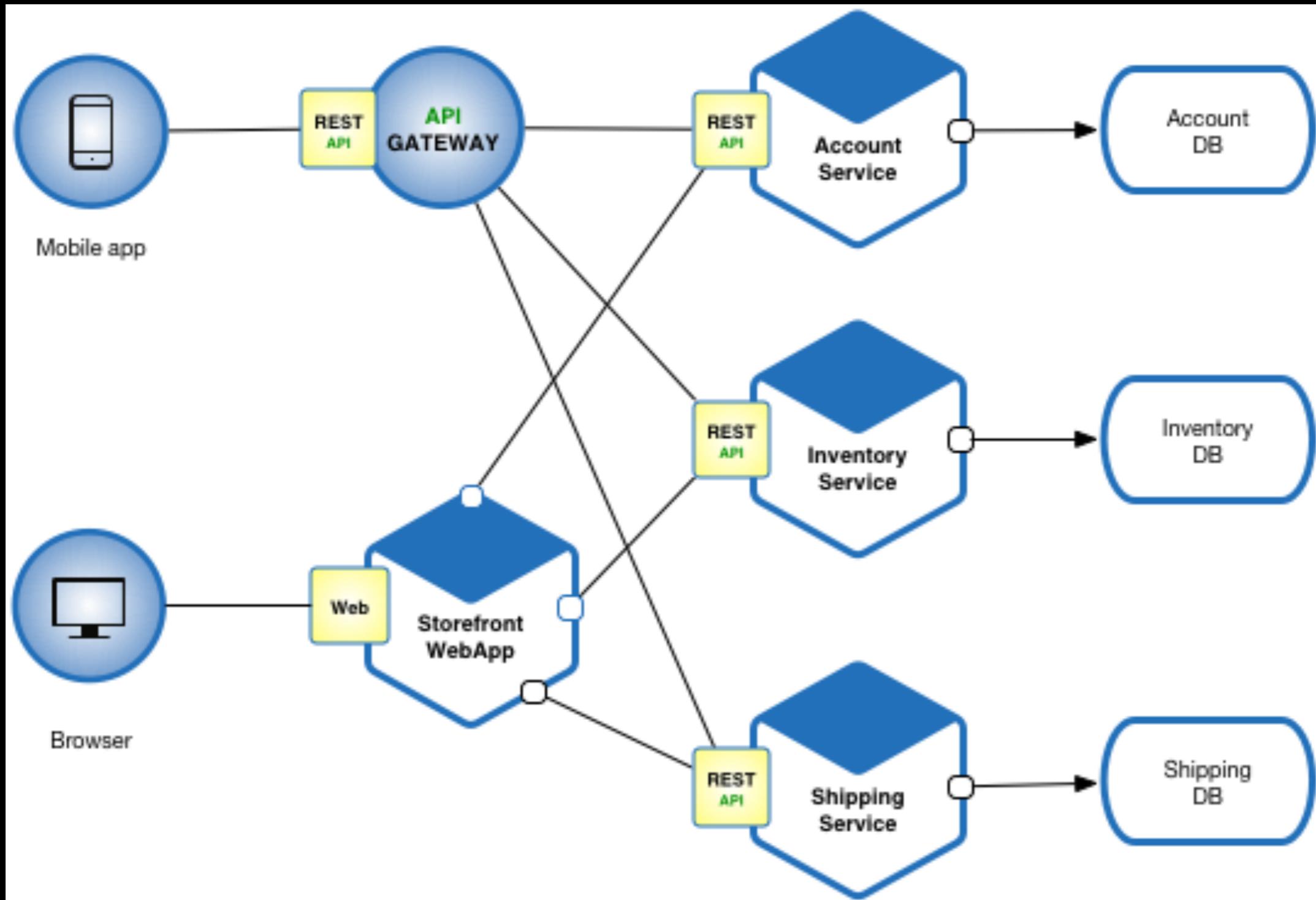
What's the Problem?



Source: <https://microservices.io/patterns/monolithic.html>
https://en.wikipedia.org/wiki/Monolithic_application

Micro Components - Microservices

What's Different Here?



Source:

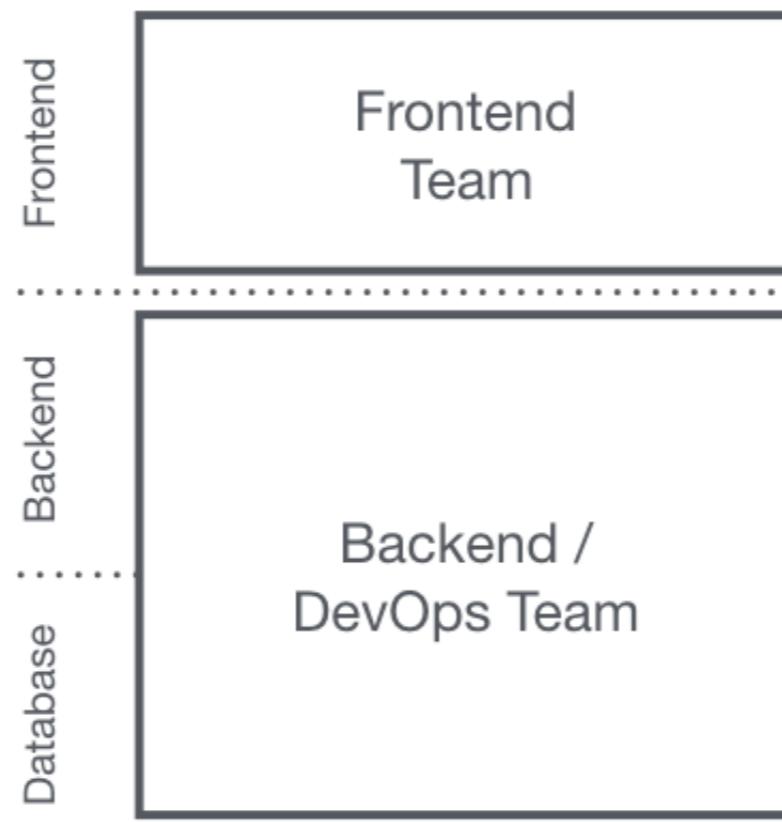
<https://microservices.io/patterns/microservices.html>

Micro Components - Micro-Frontends

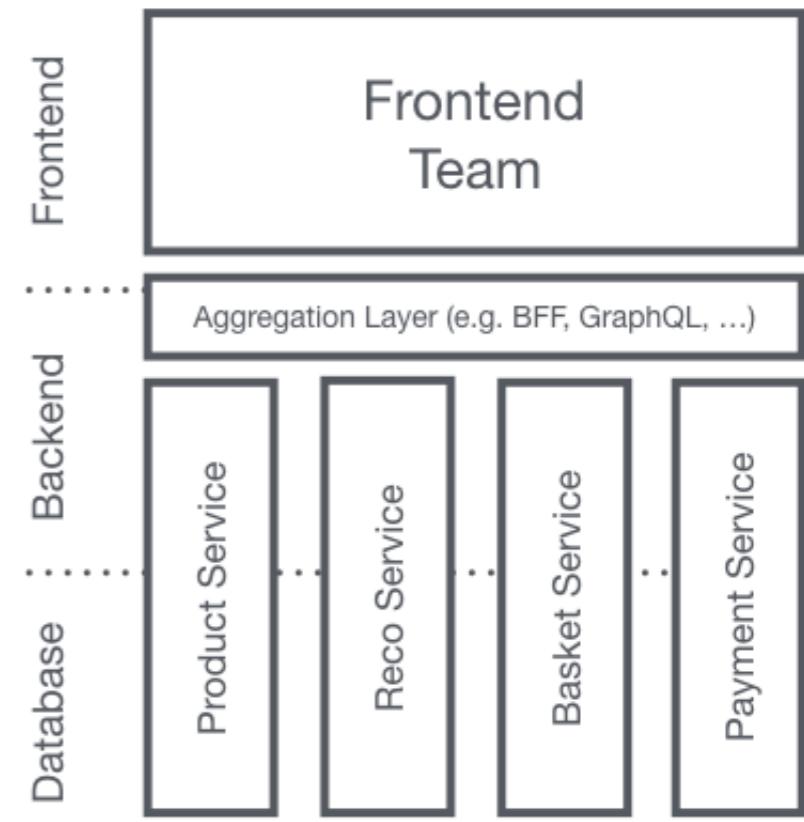
The Monolith



Front & Back



Microservices



Source:

<https://micro-frontends.org/>

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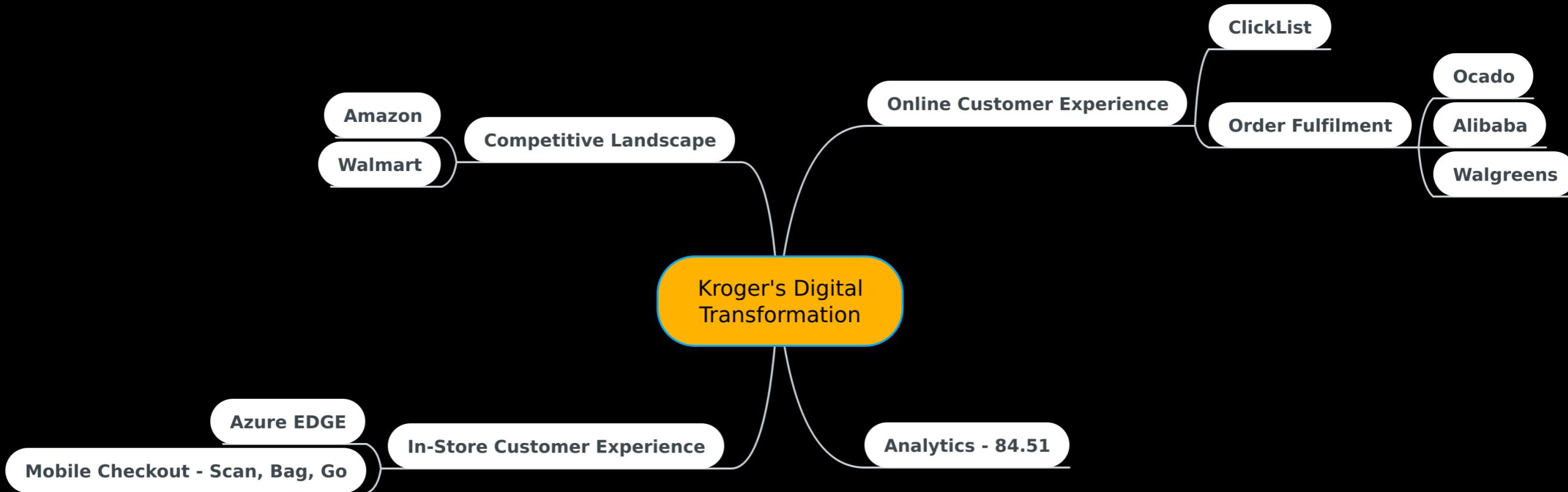
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Kroger's Digital Transformation

Responding to Change



“We’re a technology company that *happens* to sell groceries”
- Chris Hjelm, Kroger CIO

Source:

<https://www.grocerydive.com/news/kroger-and-walmart-outline-digital-transformations/545947/>

<https://www.edgeself.com/lang/en/index.html>

<https://www.cio.com/article/3274544/how-kroger-transforms-it-innovation-to-revenue-generation.html>

Kroger

Living on the EDGE (Powered by Azure)



Improved effectiveness of at-the-shelf marketing and merchandising

- Generate advertising revenue by advertising specials, competitive, and complementary brands at the shelf.
- Display messages for missing product, alternatives and expected replenishment dates.
- Use videos to enhance product information.

Delivering an enhanced shopping experience to consumers

- Implement price updates instantly across one or multiple stores, making execution of promotions a snap.
- Deliver relevant messaging to consumers at the shelf for a more satisfying shopping experience.
- Deliver coupons at-the-shelf to make the most of promotions.

Improved operational efficiency

- Streamlined restocking activities with visual indications of which products belong on which shelves.
- Dynamically adjust pricing to accommodate special promotions, in-store marketing tests and limited-time-only deals.

Source:

<https://www.grocerydive.com/news/kroger-and-walmart-outline-digital-transformations/545947/>

<https://www.edgeshelf.com/lang/en/index.html>

<https://www.cio.com/article/3274544/how-kroger-transforms-it-innovation-to-revenue-generation.html>

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Strategic DX Frameworks

Leading Change

Initiating Digital Transformation: The Journey

A Roadmap for the Board of Directors, CEO, COO, CFO, CIO, CMO, and CDO
and the Communities that Will Realize and Sustain the Change and Adaptation

Before Start

one quarter before

Define the Vision and Frame Possibilities

- Analyze the organization's situation
- Explore initial possibilities with internal and external stakeholders
- Honestly assess the external obstacles and internal barriers to change
- Develop hypothesis of ground rules, key opportunities, and acceptable parameters of digital innovation and change
- Create short list of initial new digital markets, channels with matching products and services
- Articulate mandate and assign decentralized leadership
- Allocate resources to start

Start

one quarter after

Engage and Enlist the Organization

- Openly discuss the digital mandate
- Outline change process, encourage participation
- Identify and engage change champions
- Align leadership with network
- Establish an open community of decentralized change agents
- Curate and evaluate digital opportunities in the network
- Establish gating processes to activate on and capture high value digital business opportunities
- Capturing and storytelling of change trajectory

Going Forward

in perpetuity

Sustain Decentralized Transformation



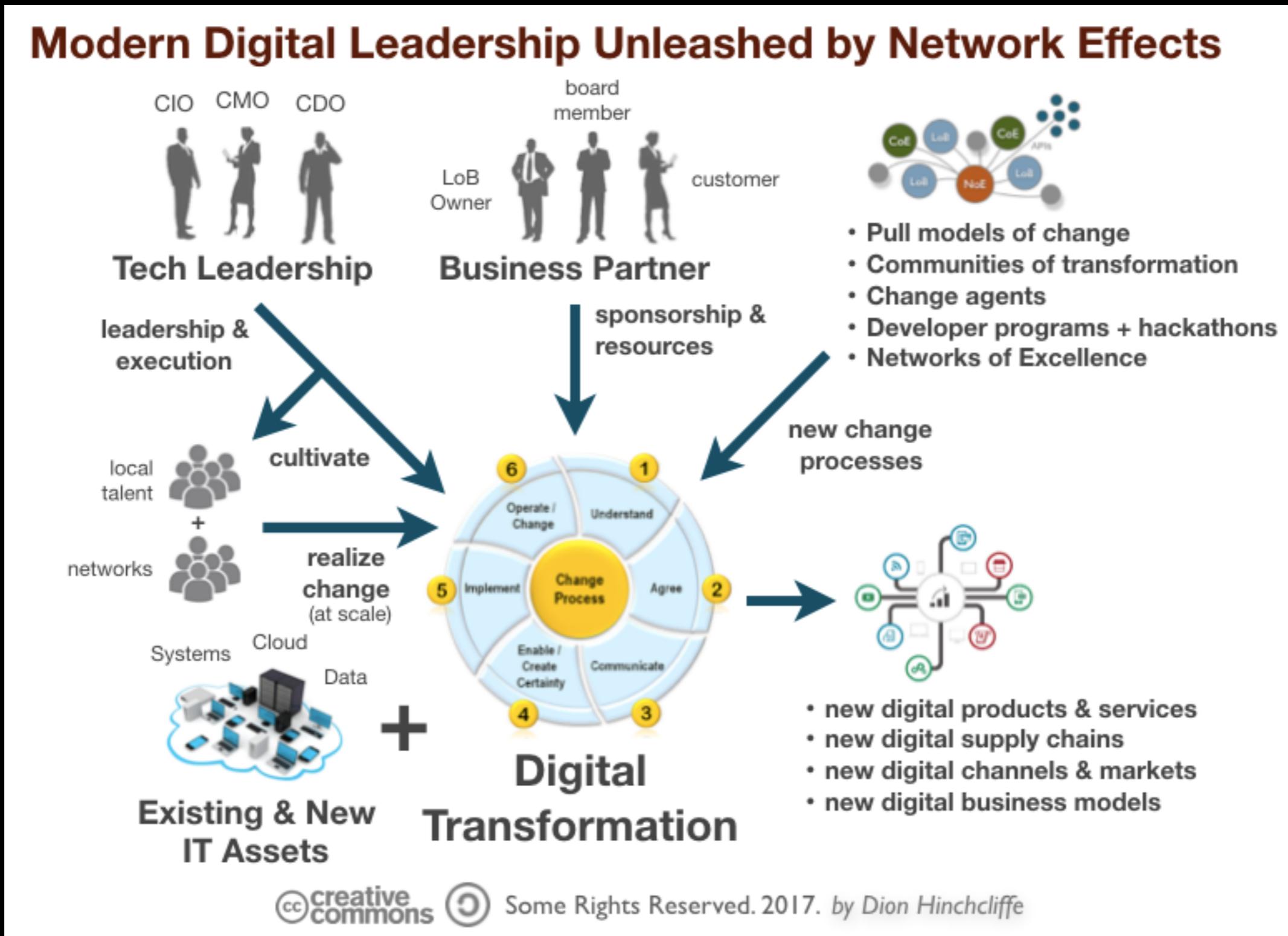
Some Rights Reserved. 2015. by Dion Hinchcliffe

Source:

<https://dionhinchcliffe.com/2018/10/18/four-strategic-frameworks-for-digital-transformation/>

Strategic DX Frameworks

Leading Change

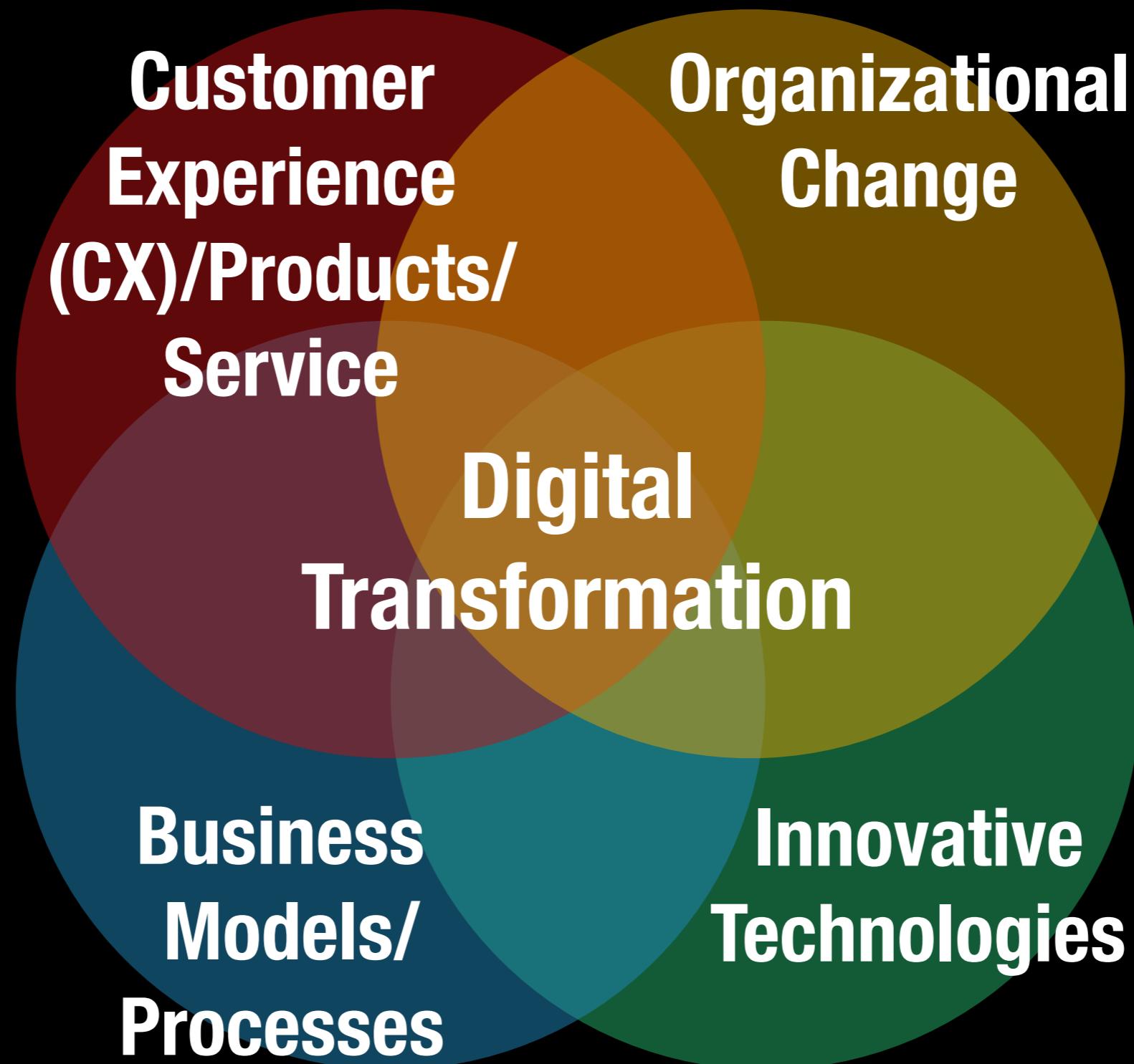


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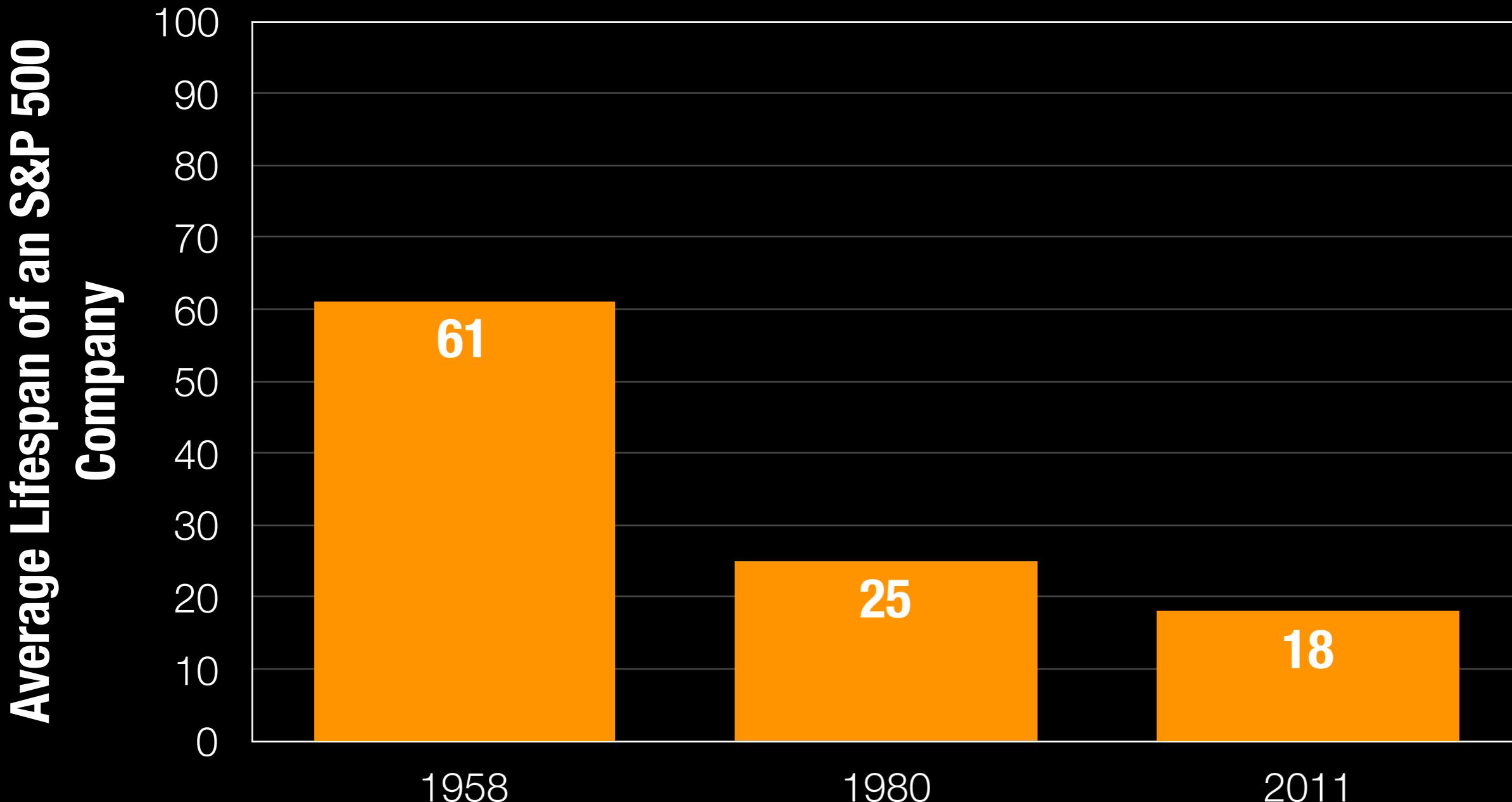
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My Definition



Why Digital Transformation?

Adapt or Die



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CNBC - <https://www.cnbc.com/2017/08/24/technology-killing-off-corporations-average-lifespan-of-company-under-20-years.html>

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Questions?



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Enterprise Architect
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Resources

CIO.com

The Digital Transformation People

The Enterprisers Project

Digital Transformation – Build Your Organization's Future for the Innovation Age, Lindsay Herbert

The DevOps Handbook, Gene Kim, Jez Humble, Patrick Debois, & John Willis

<https://www.michielrook.nl/2018/01/typical-ci-cd-pipeline-explained/>

Resources

<https://nrf.com/blog/walmarts-cto-digital-transformation>

<https://digit.hbs.org/submission/walmart-blurring-the-lines-between-digital-and-physical/>

<https://www.cio.com/article/3292663/how-the-walmart-microsoft-partnership-builds-on-the-four-strategic-themes-for-digital-transformatio.html>

<https://www.cio.com/article/3149977/digital-transformation-examples.html>

Resources

[**https://www.cio.com/article/3211428/what-is-digital-transformation-necessary-disruption.html?nsdr=true**](https://www.cio.com/article/3211428/what-is-digital-transformation-necessary-disruption.html?nsdr=true)

[**https://www.forbes.com/sites/gilpress/2015/03/09/5-things-to-do-when-you-lead-a-digital-transformation/#52da00416782**](https://www.forbes.com/sites/gilpress/2015/03/09/5-things-to-do-when-you-lead-a-digital-transformation/#52da00416782)

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[**https://martinfowler.com/articles/break-monolith-into-microservices.html**](https://martinfowler.com/articles/break-monolith-into-microservices.html)

[**https://microservices.io/patterns/apigateway.html**](https://microservices.io/patterns/apigateway.html)

Resources

<https://microservices.io/patterns/ui/client-side-ui-composition.html>

<https://microservices.io/patterns/ui/server-side-page-fragment-composition.html>

Microservice Patterns, Chris Richardson, Manning.

Microservice Architecture - <https://microservices.io/>