



# Productizing the Network

## Square Peg, Round Hole?

October 2021

# Speakers



Girija Rao  
Vice President  
Led Enterprise Connectivity  
through transformation



Denée Ferguson  
Director  
Edge Network Services



Jennifer Miles  
Director  
Agile Portfolio



# Capital One at a Glance

- Founder-led company, founded in 1994
- Nation's largest direct bank
- 3<sup>rd</sup> largest credit card issuer in the U.S
- 2<sup>nd</sup> largest financial institution auto loan originator
- Top 10 bank based on U.S. deposits
- More than 70 million customer accounts and 50,000 associates
- FORTUNE 100 Company (NYSE: COF)



# Enterprise Connectivity in a Nutshell

**Organization Size** ~ 350 associates

## Our Technology Scope

Security/App Services	Connectivity	Horizontal Services
<ul style="list-style-type: none"><li>• Proxy</li><li>• VPN</li><li>• Distributed Denial of Service</li><li>• Firewall</li><li>• DNS</li><li>• DHCP</li><li>• NTP</li><li>• Load balancing</li><li>• NAC</li></ul>	<ul style="list-style-type: none"><li>• Distributed Antenna Systems</li><li>• Wireless LANs</li><li>• Optical Networking</li><li>• Routing/Switching</li><li>• Software Defined Networking (SD-WAN, SD-Access)</li><li>• Cloud</li></ul>	<ul style="list-style-type: none"><li>• Contact Centers</li><li>• Voice</li></ul>

## Support connectivity for:

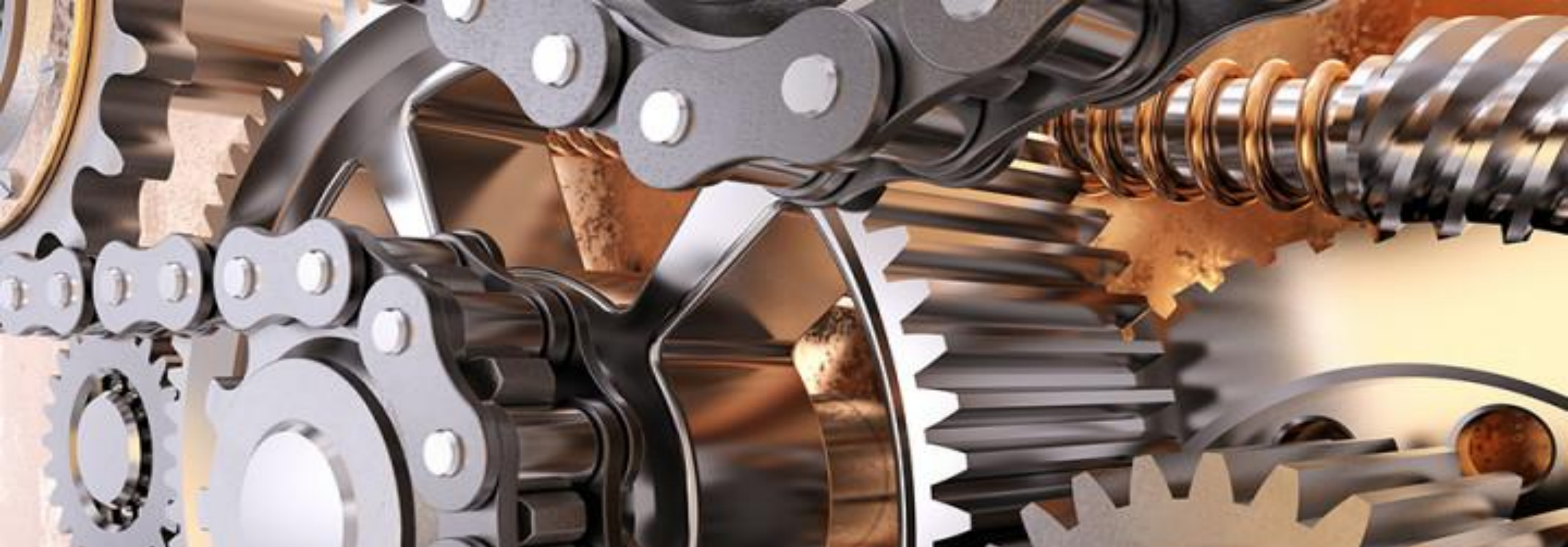
- **50K+** Employees
- **100+** Offices
- Hundreds of Retail Branch/Cafe/ATMs
- **80+** Third Party Vendors

## Active Devices / Assets

- **~14,000** devices
- **~185,000** carrier assets

# Why Change?





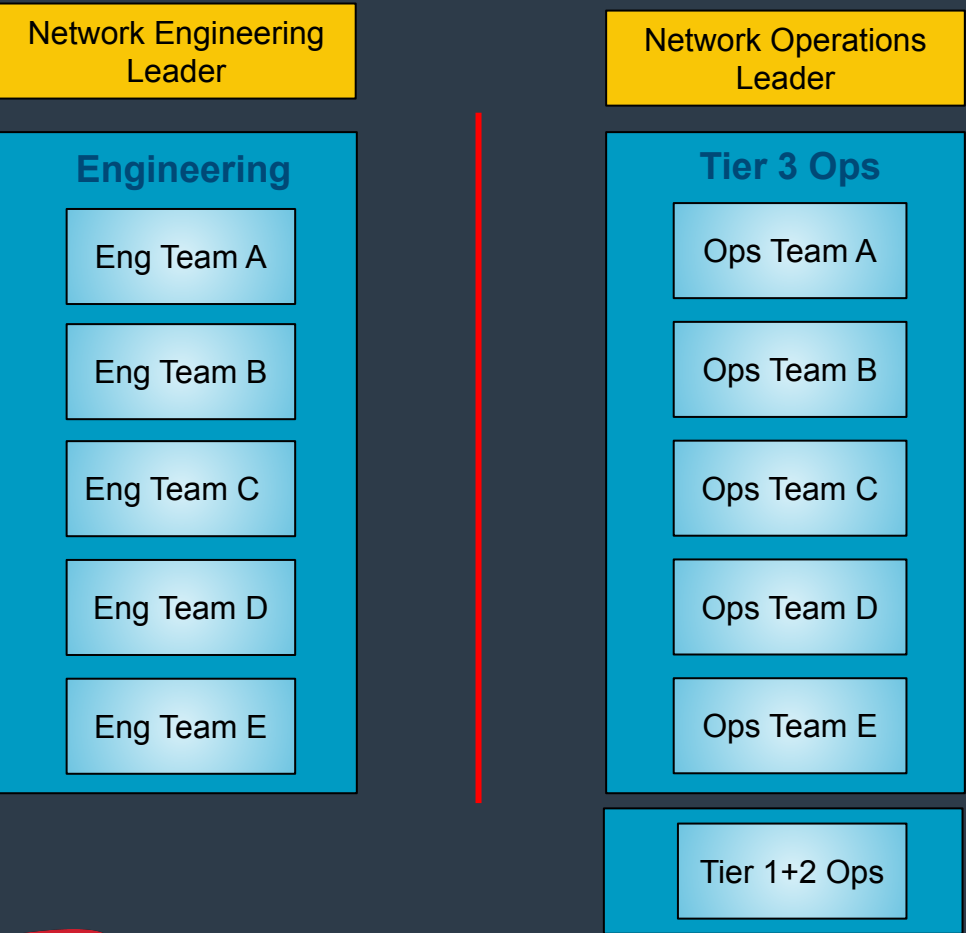
Unify Vision, Improve Efficiency, Make Delivery Predictable



# What Changed?

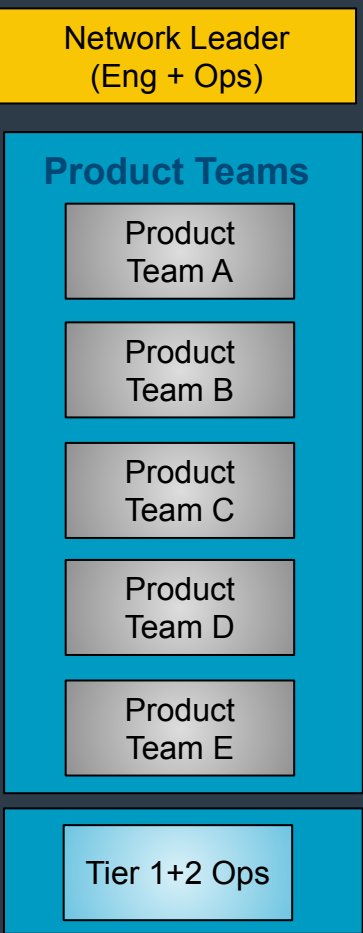
# Organizational Structure

Before



After

Changed to





# Prioritization

## Business Objectives

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

Move to  
Backlog

## Prioritized Initiatives

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_
- 7. \_\_\_\_\_
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_
- 10. \_\_\_\_\_

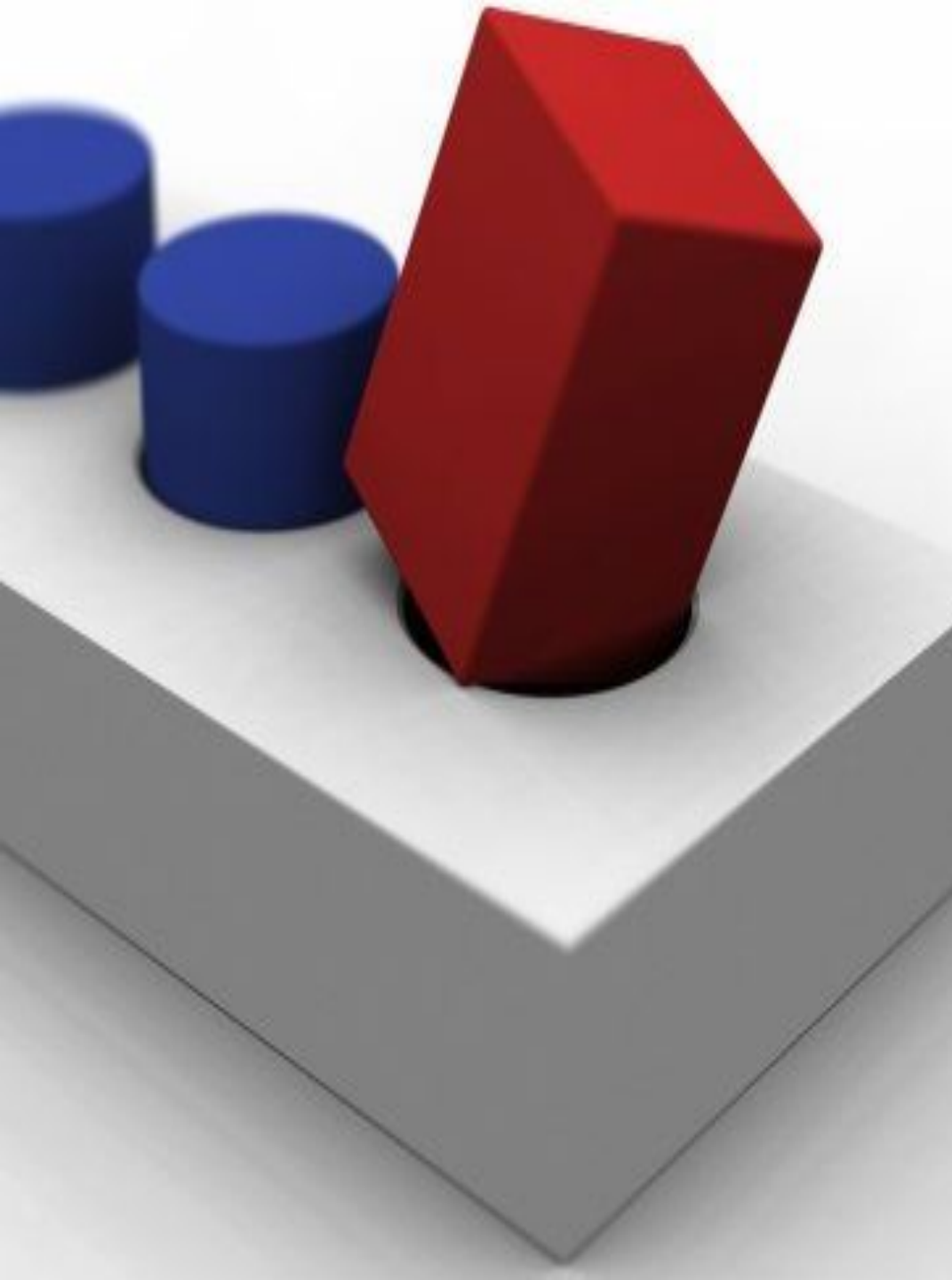
WIP  
Limit

Just  
Say  
No!

# Reporting



- Operational Metrics
- Agile Metrics
- Initiative Progress



# Network Delivery vs Application Development Delivery

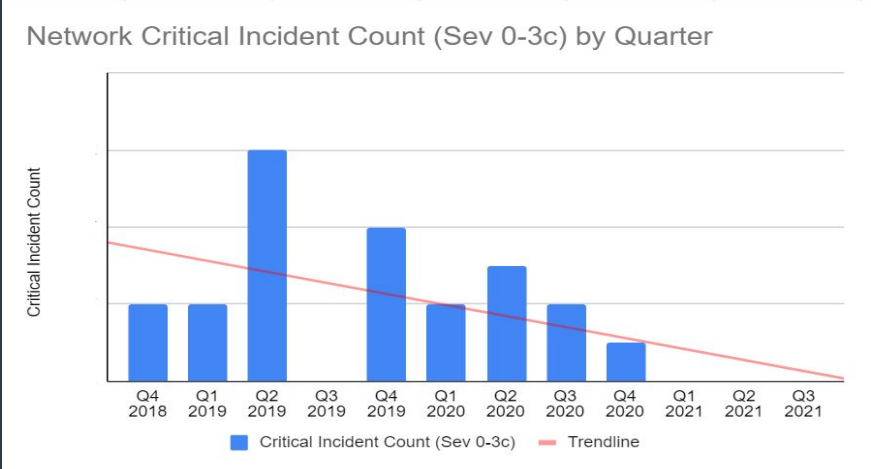
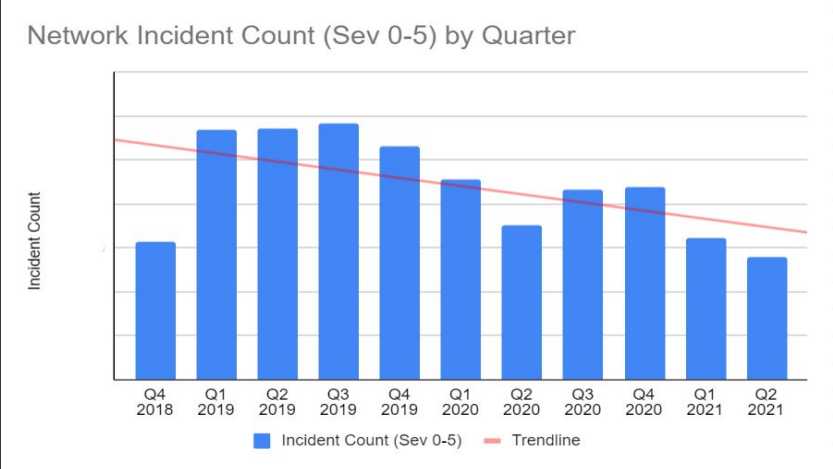
- Most staff not software developers
- Significant physical infrastructure footprint
- Agile delivery methodologies not perfect fit
- Product management constructs challenging

# Our Outcomes



# Operational Metrics

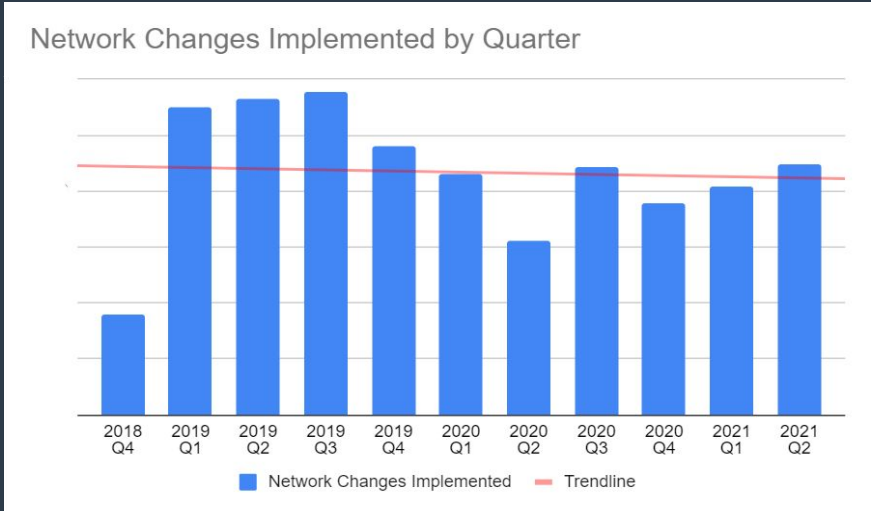
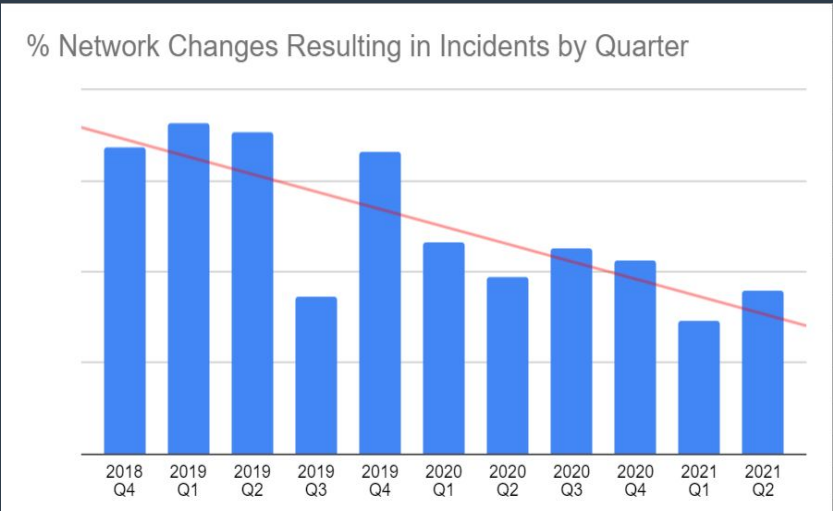
Incident Statistics



Days without Critical Incident

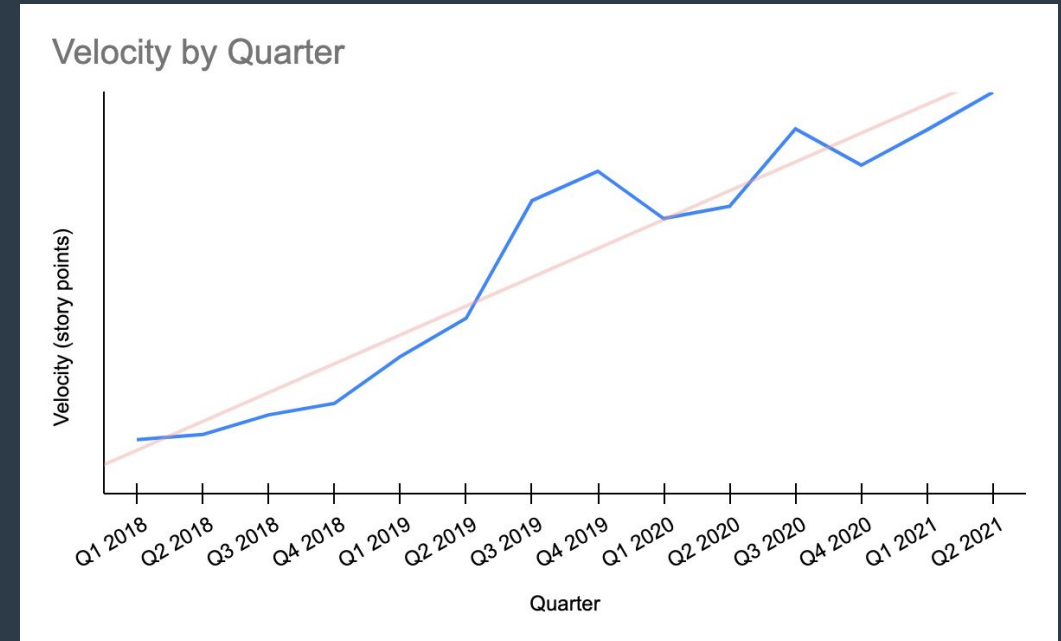
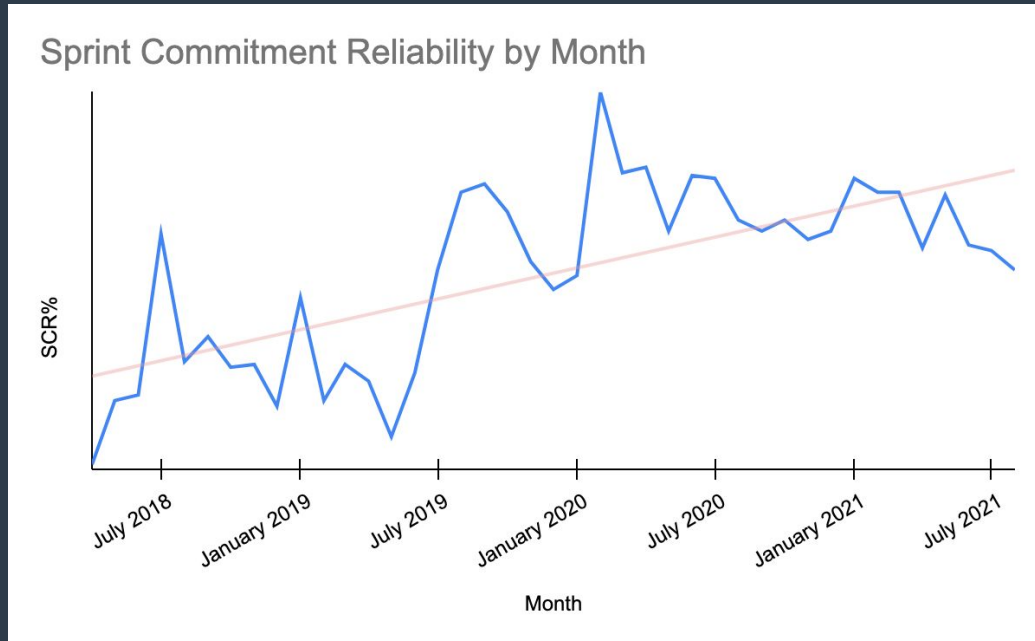
300+

Change Statistics



- Network Incident volumes dropped significantly
- Network changes resulting in incidents dropped nearly 60%

# Agile Metrics



Teams were initially disrupted by the transformation and became more reliable as time progressed

# Initiative Progress



# Lessons Learned





## Do Over List

- Get buy-in at all levels
- Product model may not fit all teams
- Skill retooling assumptions
- Focus on reporting needs earlier
- More robust agile training

# In Closing

I'm incredibly pleased at the transformation we achieved with our product-oriented agile-driven restructuring - it enabled us to establish a unified mission and sense of identity, full visibility and prioritization of work, improved execution and delivery, and clear accountability internally and with our stakeholders. This structure also allowed us to easily incorporate several new functions over the past two years. It's an ongoing journey as we continue to iterate upon this foundation to best meet the evolving needs of our dynamic organization and the services we provide.

*Girija Rao*  
*Vice President*

The unification of efforts and ownership across the architecture, engineering, and operational aspects of product teams, in concert with the ability to effectively manage priorities has enabled us to transform our technical capabilities while maintaining stable business operations in a more focused and optimized manner.

*Vince Gutosky*  
*Senior Director & Chief Network Architect*