



How partnership with the  
business accelerated  
releases in a regulated  
environment

# WHO WE ARE



**Kenneth  
McLeish**  
Head of Equities  
Technology



**Danny Myers**  
Head of Equities Production  
Management  
DevOps London Community of Practice  
Lead

# COMPANY INFORMATION



History  
dating back  
over **200**  
**years**



Leading global  
financial  
services firm  
with assets  
over **\$2.6**  
**trillion**



Operates in  
over  
**100 countries**



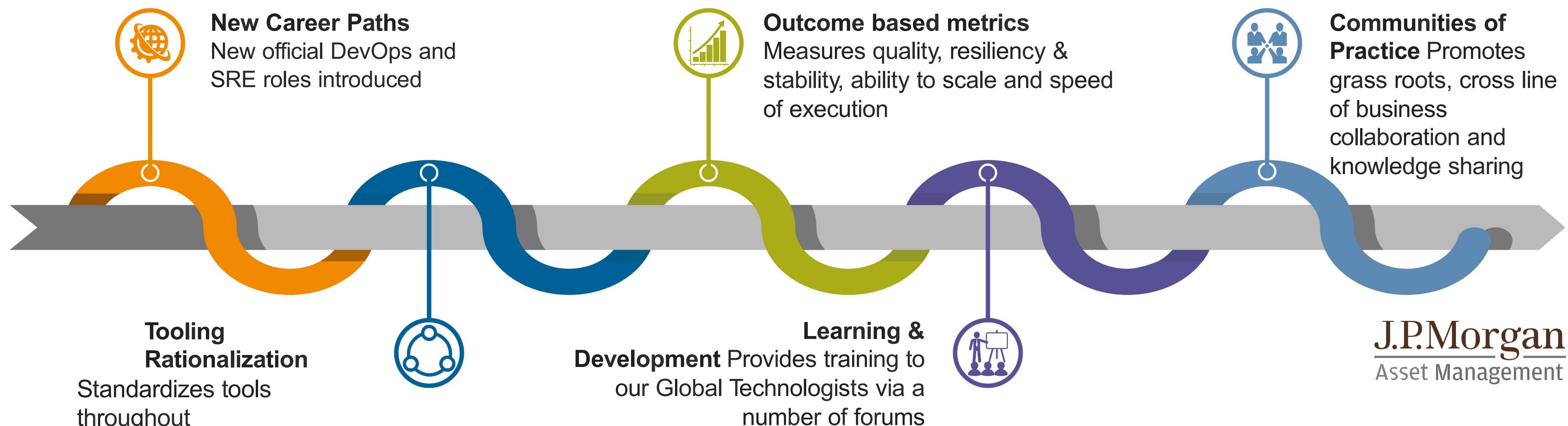
Over  
**250,000**  
employees  
**50,000** in  
technology



**\$10bn** annual  
technology  
spend



# COMPANY-WIDE DEV MODERNIZATION





# OUR TEAM'S JOURNEY

J.P.Morgan  
Asset Management

# Asset Management Equities Trading Statistics



- \$1 trillion 2017
- \$4 billion daily



- Equities
- Futures
- Options
- ETFs
- CBs
- Swaps
- ELNs



- 6,500 orders per day



- 1% of Equity value traded globally



- 11,000 securities

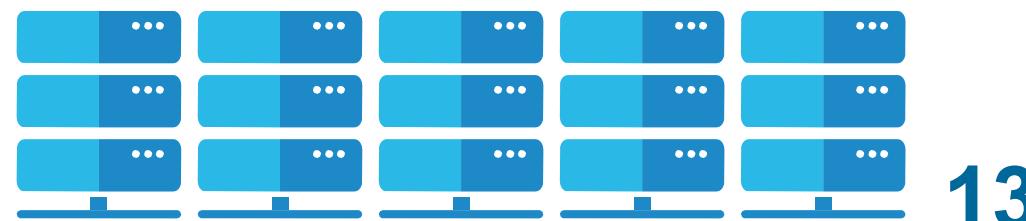


- 70 markets

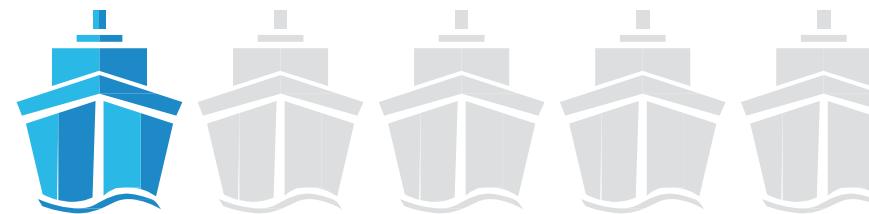
# WHERE WE WERE...

Monolithic and legacy systems

# 2013



Systems



Releases

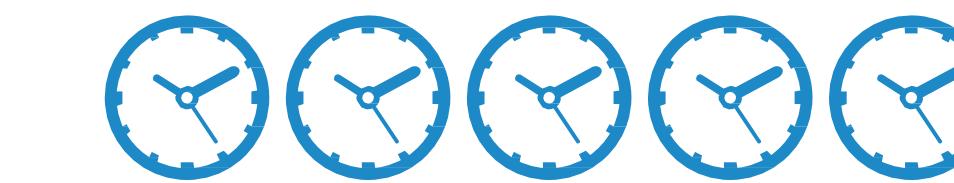


Critical incidents



36%

Code coverage



Code complete to production



Technologists

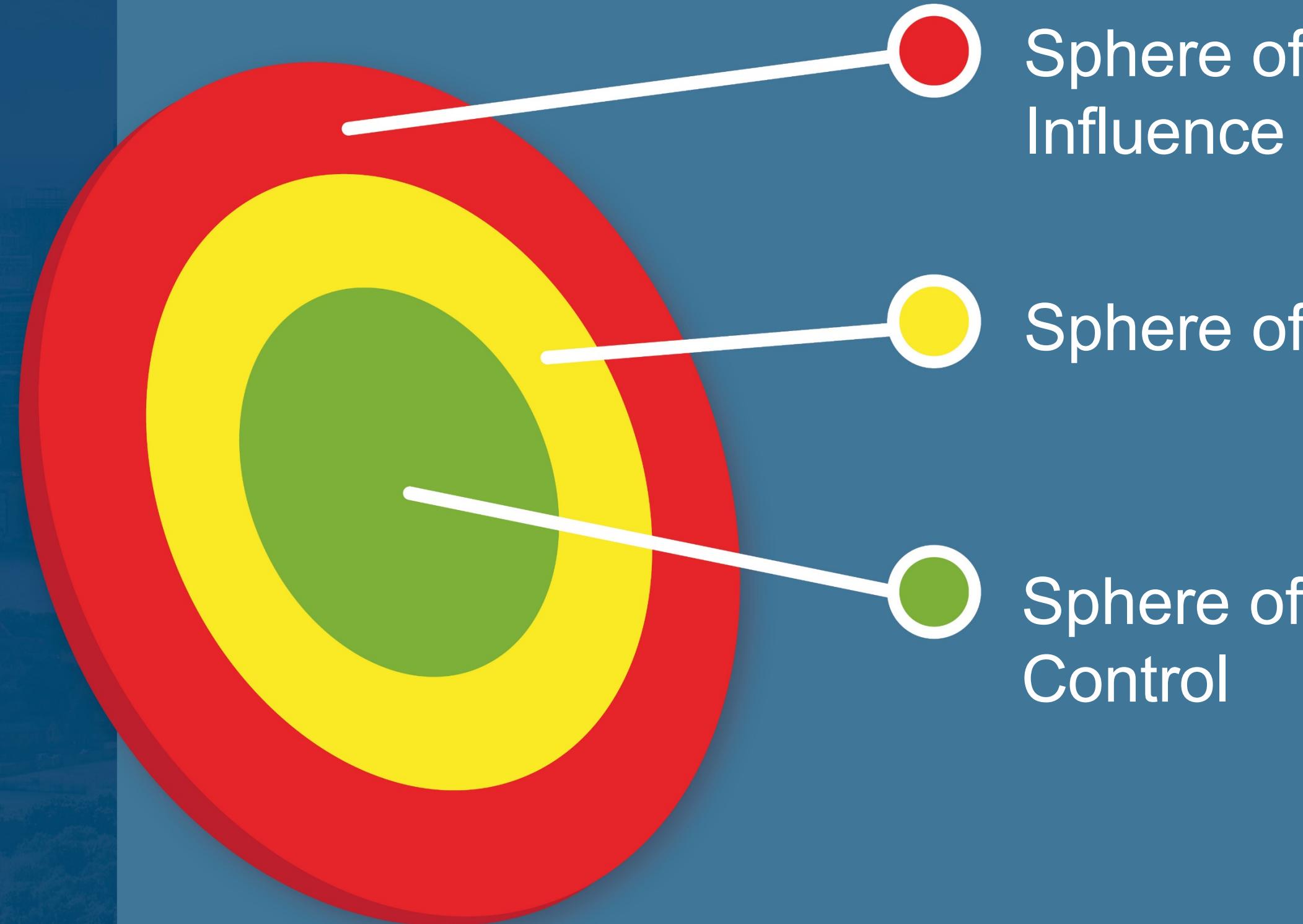
# CHALLENGE

Getting started...



# PRINCIPAL E

Sphere of  
Influence



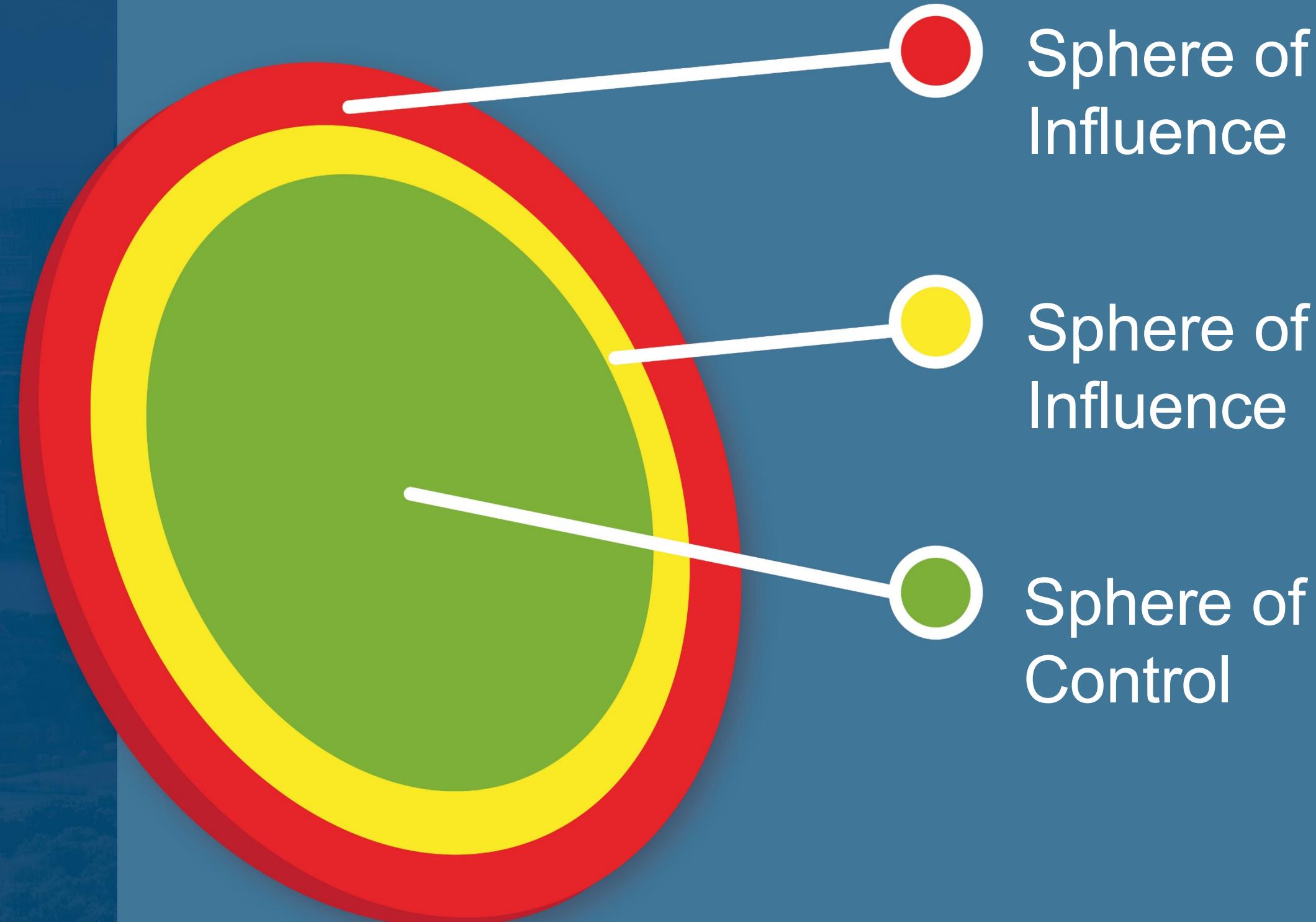
Sphere of No Control/No  
Influence

Sphere of Influence

Sphere of  
Control

# PRINCIPAL E

Sphere of  
Influence



# Change Process

The screenshot shows a web-based ITSM system interface for managing changes. At the top, there's a navigation bar with links for 'CREATE', 'VIEW', 'My Calendar', 'Changes', 'Templates', 'Approvals', 'Tasks', 'Restrictions', 'Events', 'PDPA', and 'Search'. A warning message in a red box at the top left states: 'Do not include sensitive, personal or client information in ITSM Change Records or in corresponding attachments. If it is essential to include this information to support the change implementation, it must be attached to a link that has appropriate security so that only the authorized individuals have access to it.' Below the navigation, there's a summary card with fields for 'Initiator', 'Owner', 'Owning Line of Business', 'Status' (Ready to Implement), 'Category' (Normal Risk), 'Impact' (Low), 'Probability' (Low), 'Scheduled Start Date', and 'Scheduled End Date'. A large orange arrow points from the 'Summary' section of the main interface towards the circular callout on the right.



# CHALLENGE

Toolin  
g



# PRINCIPLE

## Nudge Theory

Encouraging behaviour by  
making it:

- **EASY**
- **ATTRACTIVE**
- **SOCIAL**
- **TIMELY**

Reference: Nudge Theory, Richard Thaler

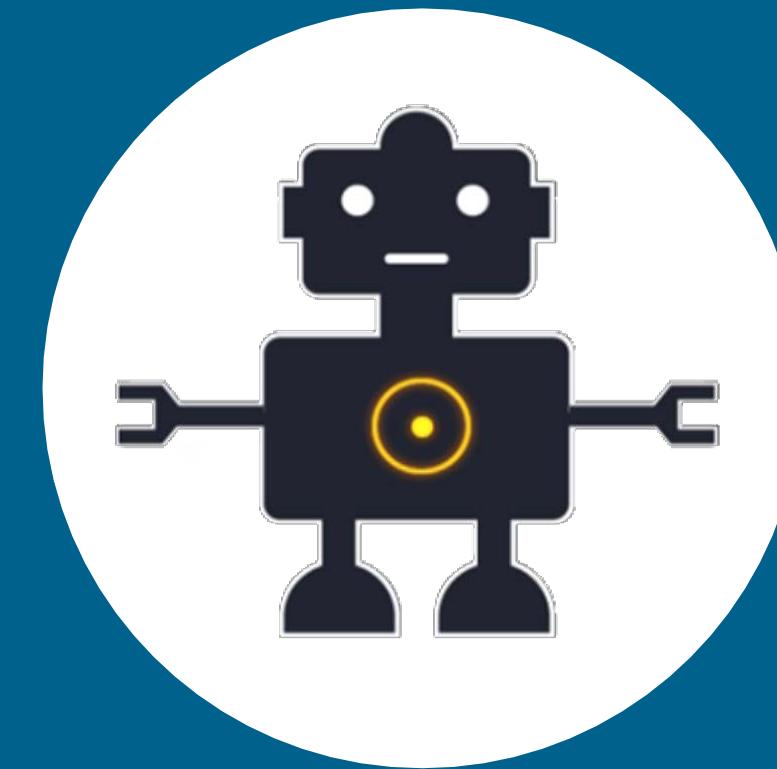
Google Search, Nudge  
EAST





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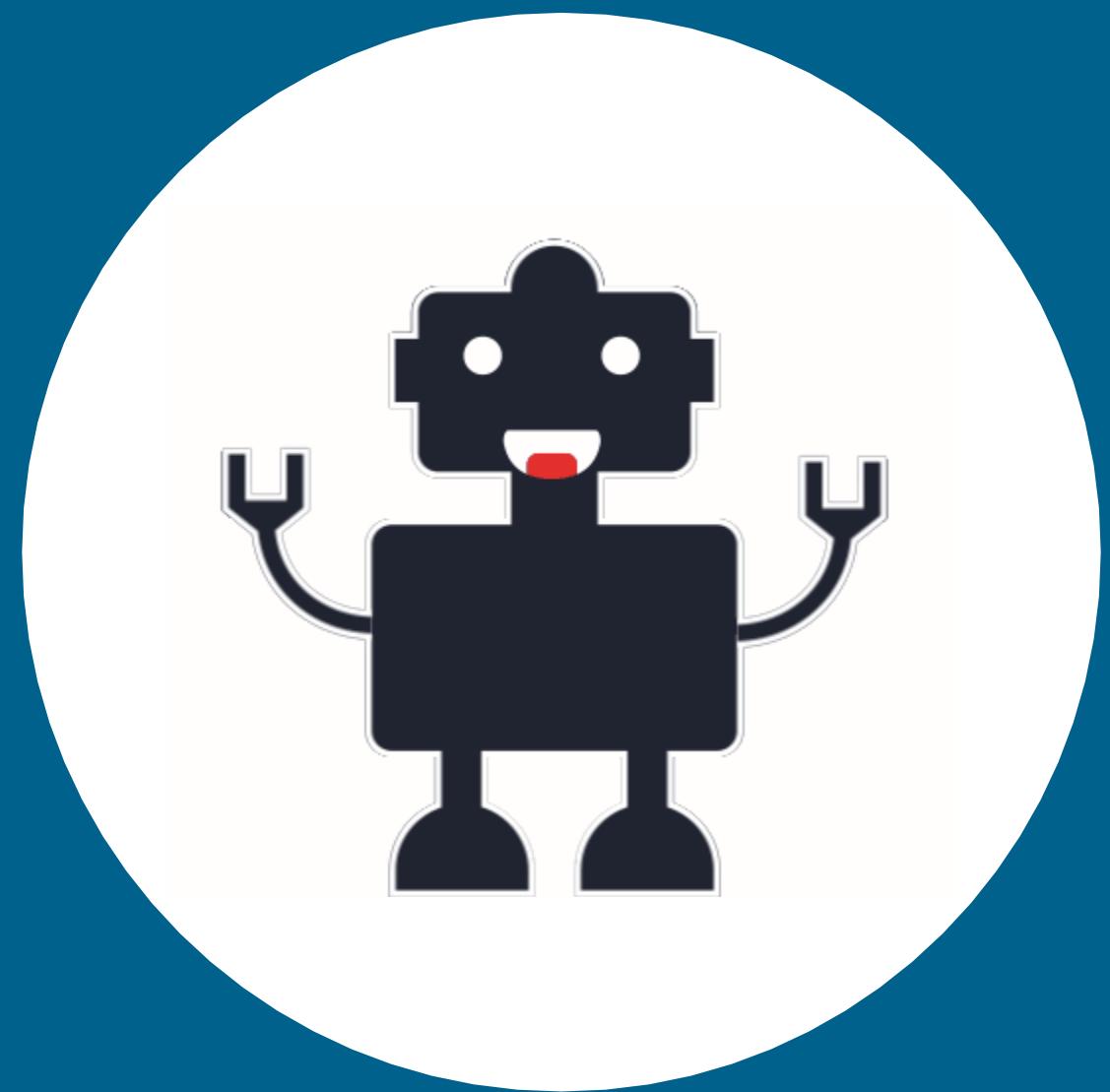
# AppFit



## Measures

- JIRA tracking
- Commits
- Code Review
- Continuous Integration
- Automated Testing
- Code Quality
- Vulnerability Scanning
- Automated Deployment

# AppFit



IN  
PRACTICE

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# CHALLENGE

Technical Debt



# PRINCIPLE

## Marginal Gains

“ You can achieve optimal performance by the aggregation of marginal gains. ”

**David Brailsford**

General Manager of Team Sky and British cycling coach



**J.P.Morgan**  
Asset Management

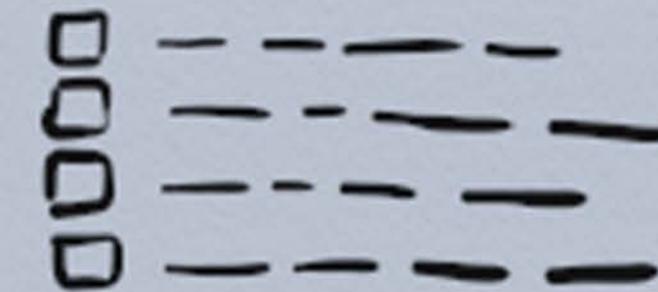
# IMPROVEMENT THEME

NOW/PROBLEM



NEXT TARGET CONDITION

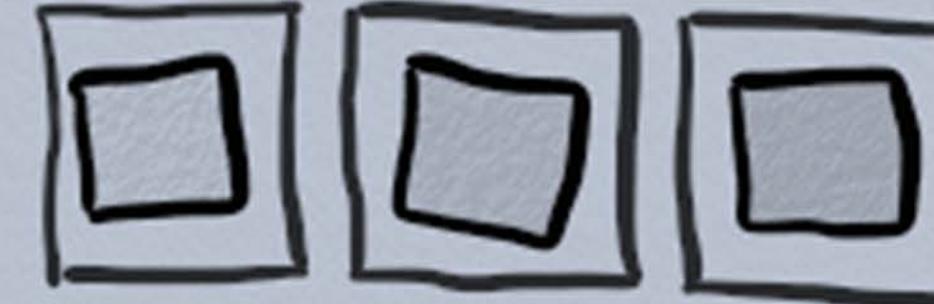
6 weeks from now:



DEFINITION OF AWESOME



FIRST STEPS



# CHALLENGE

Gaining buy-in  
from the team  
and the business



# PRINCIP

Mantras

“NEVER SEE THE SAME ISSUE TWICE”

“Changing Trading from an Art to a Science”

“Code complete to Production in an hour”

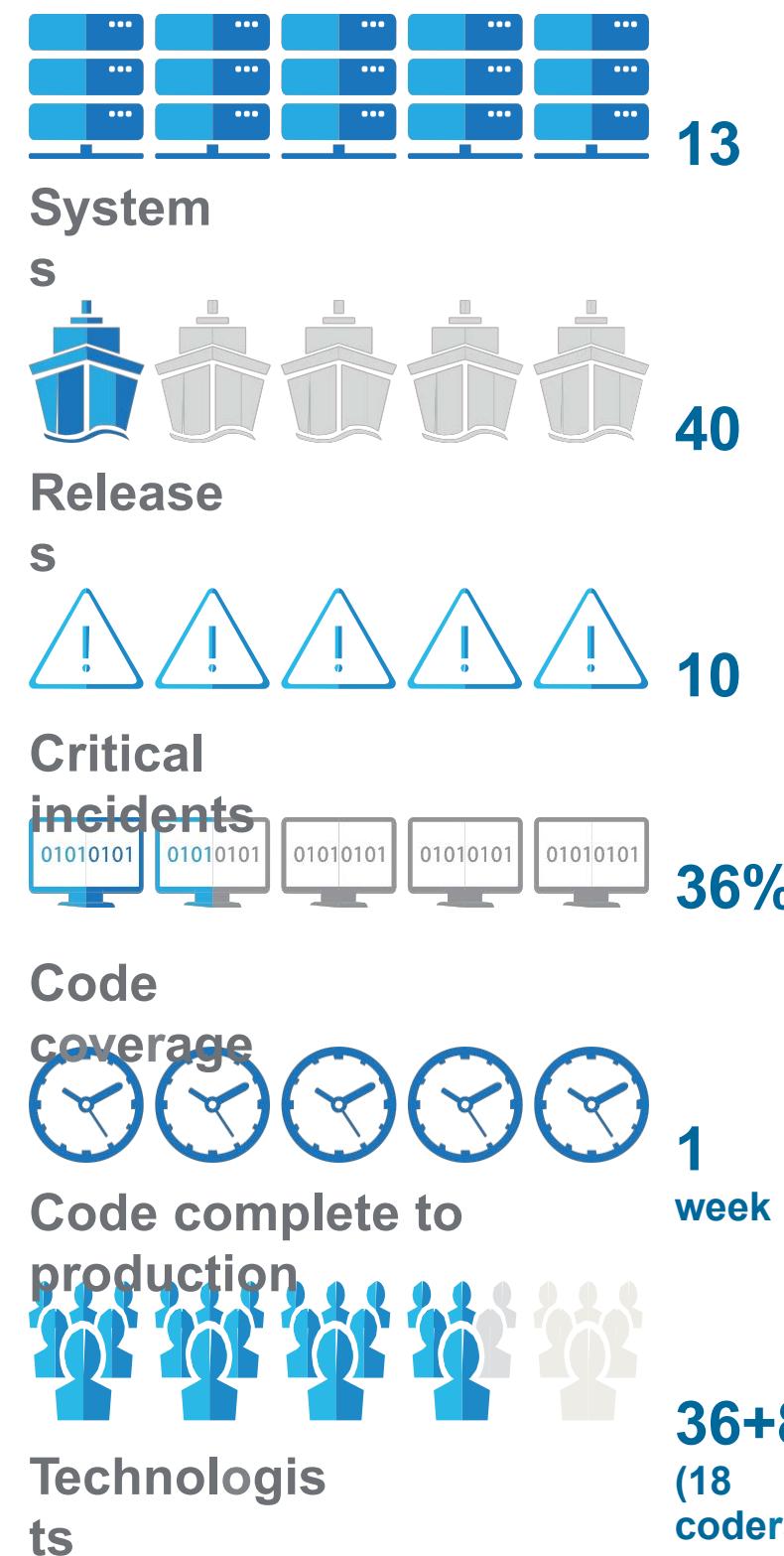
“From Quarterly to Daily Releases”

“It’s no fun if it’s too easy.”

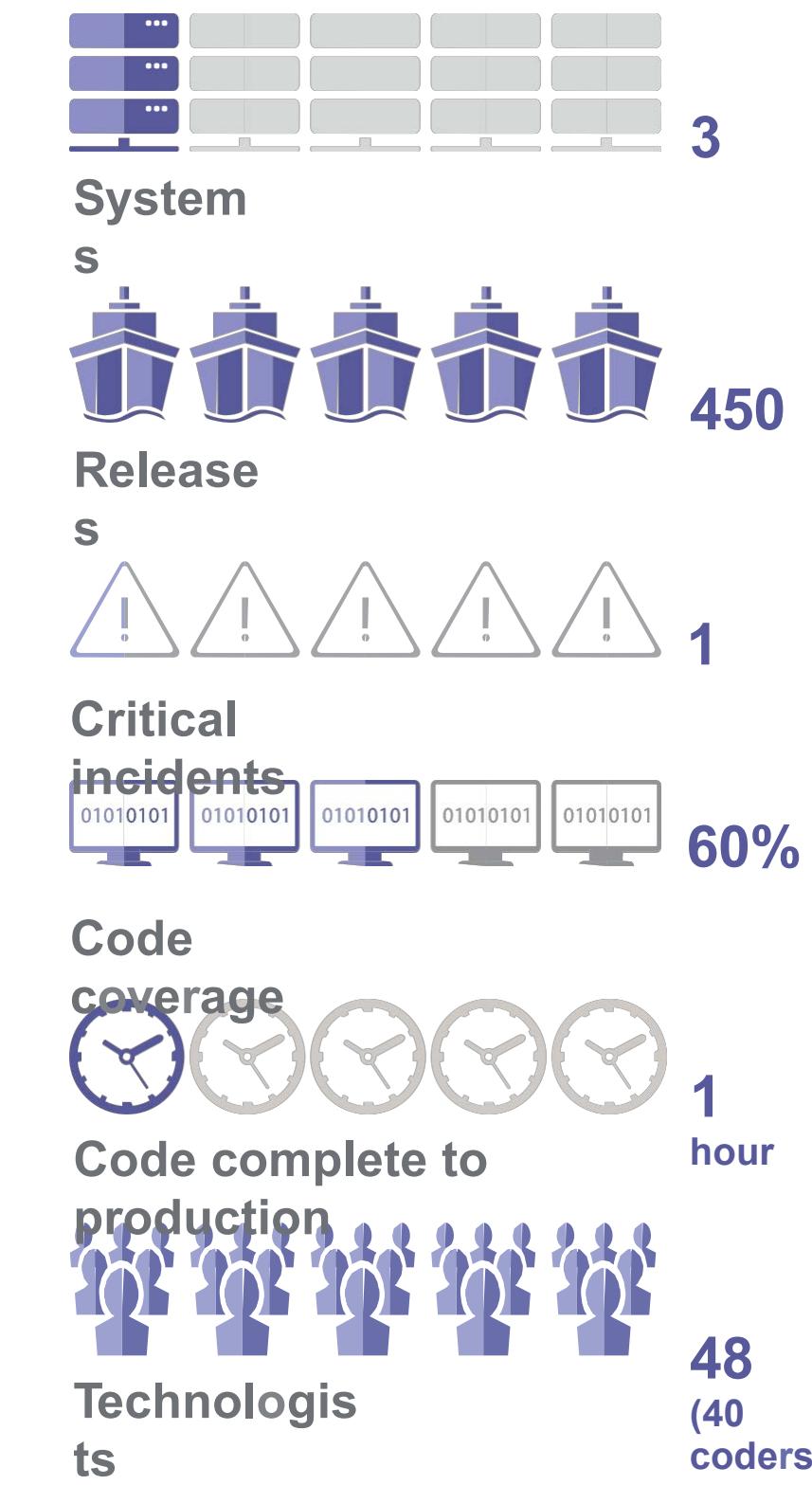
# CURRENT RESULTS

Then and now

2013



2018



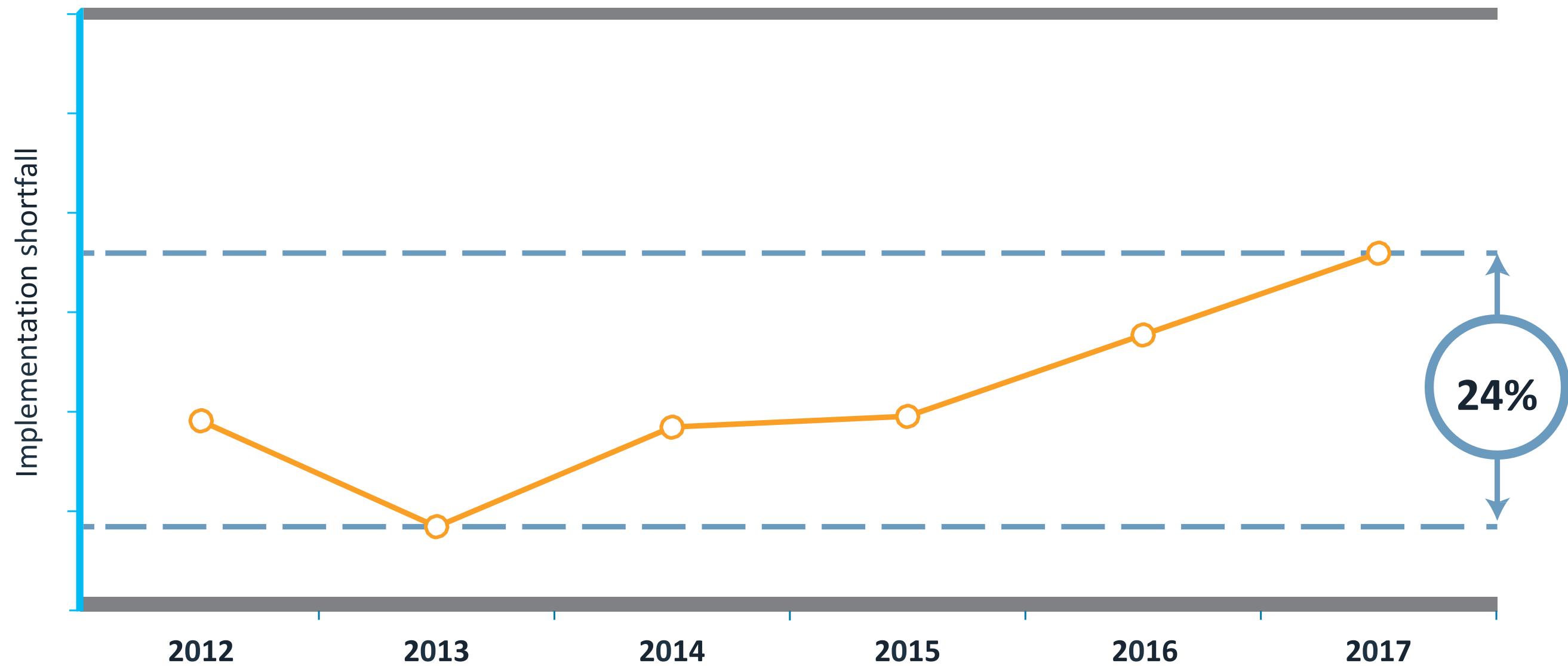
# BUSINE SS RESULT

## TRADING VOLUMES



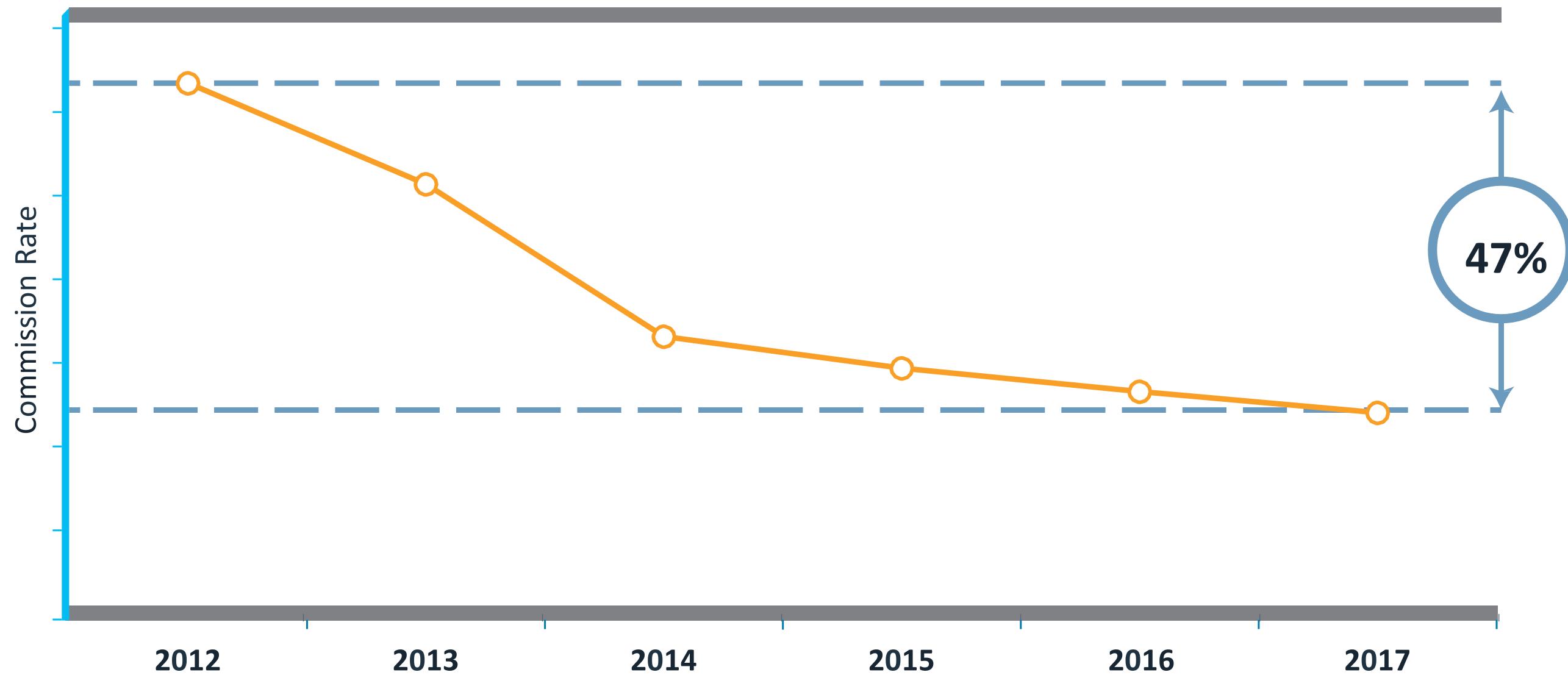
# BUSINE SS RESULT S

## TRADING PERFORMANCE



# BUSINE SS RESULT S

## TRADING FEES





**“Our trading team  
has some a mix of  
traders, quants and  
technologists, with  
the latter two groups  
becoming a bigger  
part of the mix”.**

**Kristian West,**  
Head of Equity Trading

**“Awarded Best Buy-  
Side Equity Trading  
Desk for the last 3  
years in a row”.**

**Markets Choice  
Awards**

# BUSINESS TRANSFORMATION

**J.P.Morgan**  
Asset Management

# TAKEAWA YS

01

Know your sphere of influence

02

Use of nudge theory to help drive behavioral mindset change

03

Use of marginal gains and improvement themes

04

“Create your own mantras”, “Sometimes reality is too complex. Stories give it form.”



“Here are the problems that still remain”



How to implement  
DevOps at scale in a  
huge organisation



Hiring and  
nurturing the right  
kind of talent