Fast, agile and responsive: how a global bank adopted a Silicon Valley mindset

Darryl West, Group CIO, HSBC

August 2018
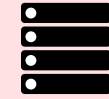
HSBC

HSBC – The world's leading international bank

3,900 offices

Reported revenue
$51.4bn

102PB of data

38 million customers

229,000 people around the world

Data Centres in **21** countries

Present in **67** countries & territories

$1.5 trillion Daily payments processed

90,000+ Servers

40,000 IT professionals   **$2.5bn** Run / **$3bn** Change (cash)

The call to action… business strategic context

CEO priorities – HSBC Group transformation programme 2015 – 2017

1 Reduce Group risk weighted assets (RWA) by c.USD290bn

2 Continue to optimise our global network; reduce complexity of the six-filter process

3 Leverage international network and strategic opportunity NAFTA region

4 **Set up UK ring-fenced bank**

5 **Deliver USD4.5-5.0bn cost savings**

6 Deliver revenue growth above GDP from our international network

7 **Pivot to Asia**

8 Grow business from RMB internationalisation and extend global leadership position

9 **Complete implementation of Global Standards; our globally consistent and rigorous financial crime controls**

10 **Transform customer experience by investing in digital capability and technology innovation**
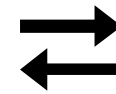
4 Full separation of core banking and investment banking activities

5 Technology contributed $1.7bn of cost savings from the run-rate

7 Global Technology Delivery Centres opened in India and China and roles migrated from high cost locations to India and China

9 Centralized client due diligence systems across all business lines for our 38 million customers

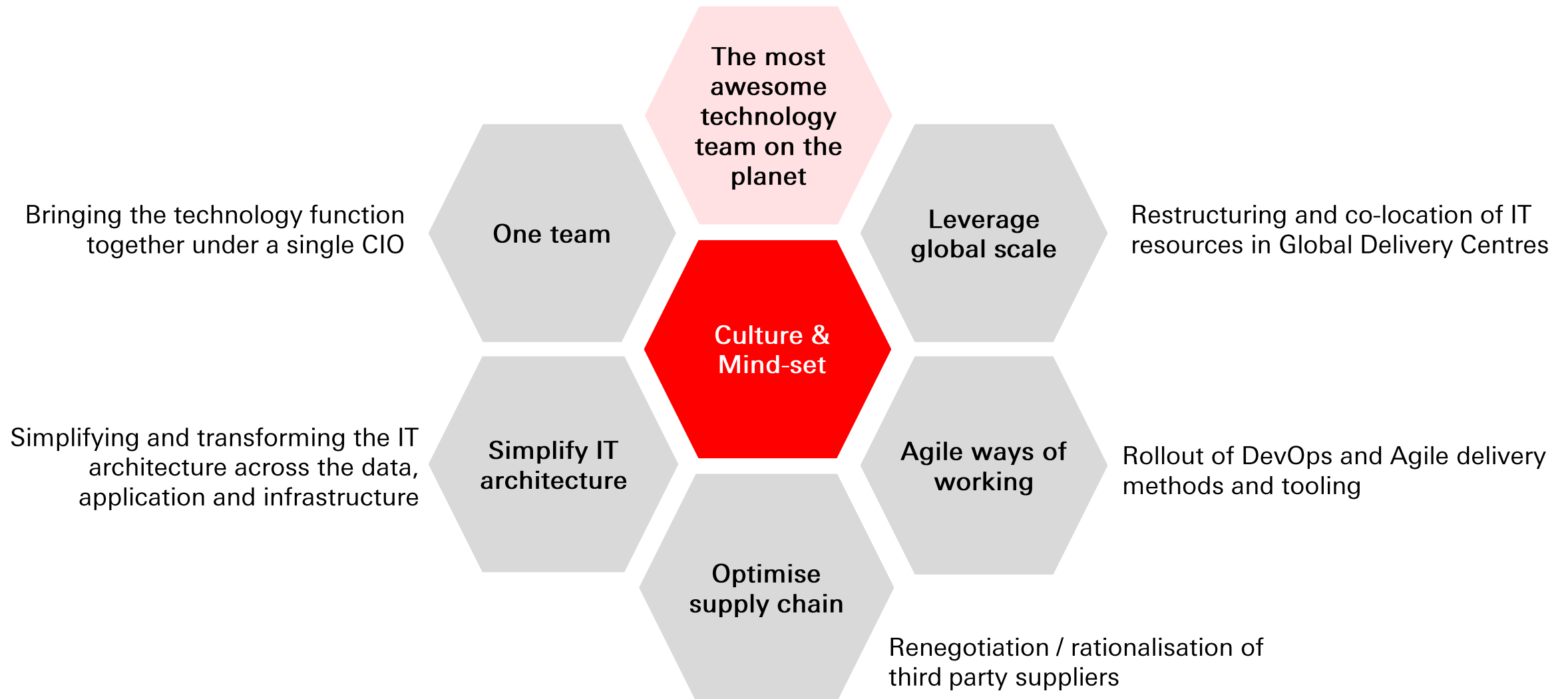10 Global rollout of Agile delivery methodology and DevOps practices & tooling to entire technology function

Incremental IT investment

- Optimise IT function: $1.5bn
- Business programme $1.5bn

The IT transformation programme

Bringing the technology function together under a single CIO

Simplifying and transforming the IT architecture across the data, application and infrastructure

One team

The most awesome technology team on the planet

Culture & Mind-set

Leverage global scale

Agile ways of working

Simplify IT architecture

Optimise supply chain

Restructuring and co-location of IT resources in Global Delivery Centres

Rollout of DevOps and Agile delivery methods and tooling

Renegotiation / rationalisation of third party suppliers

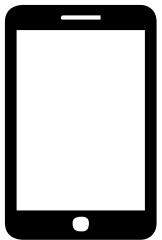# Technology is transforming the way we live

Technology is transforming banking
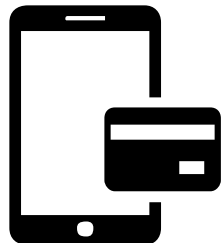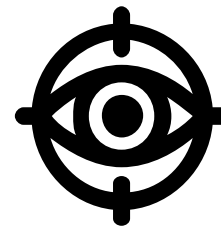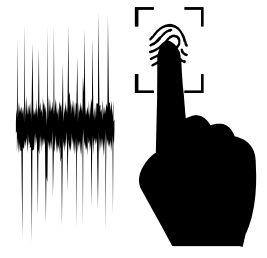
Branch / ATM

Mobile banking

Cash

Mobile payments

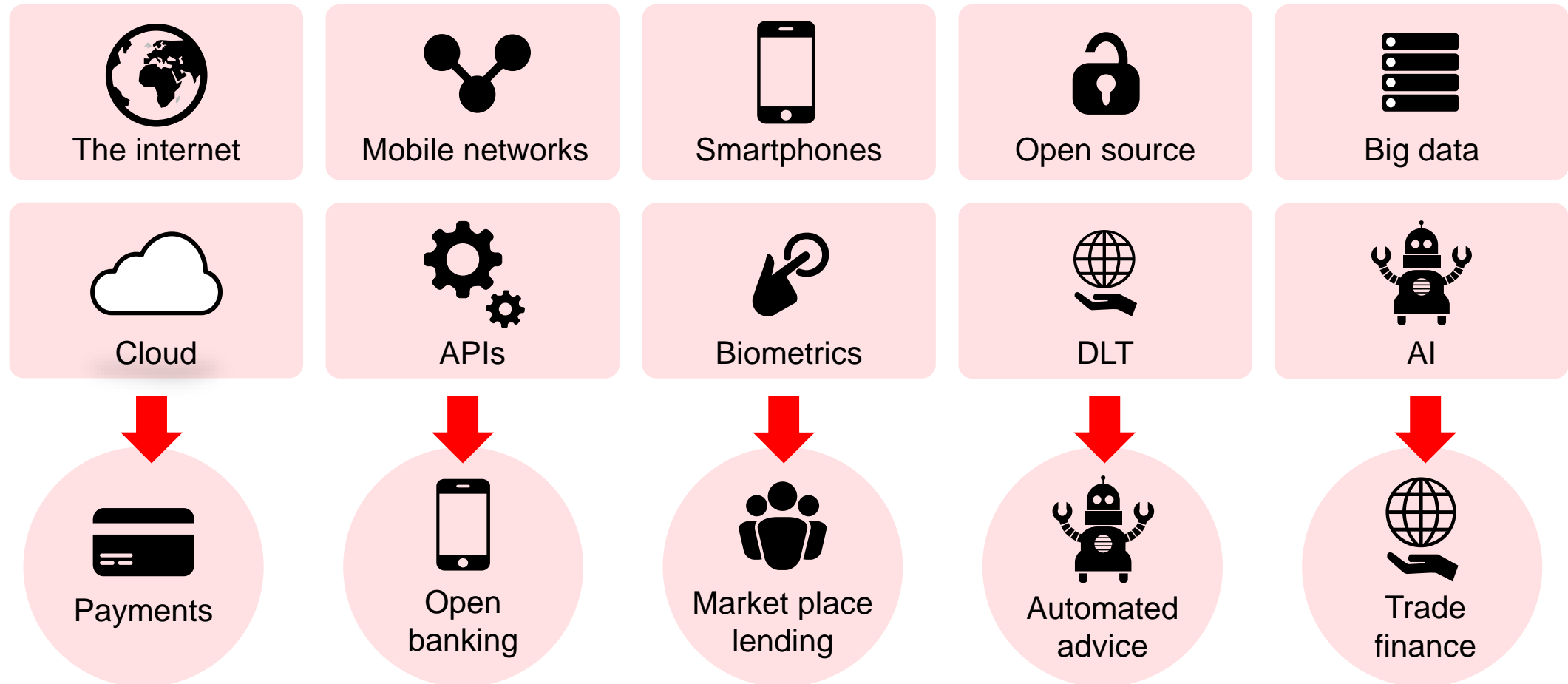Offline analytics

Real-time intelligence

Identity documents

Biometrics

# Technology trends are driving disruption in Financial Services

| The internet | Mobile networks | Smartphones | Open source | Big data |

| Cloud | APIs | Biometrics | DLT | AI |

| Payments | Open banking | Market place lending | Automated advice | Trade finance |

HSBC is leading this transformation

Mobile First
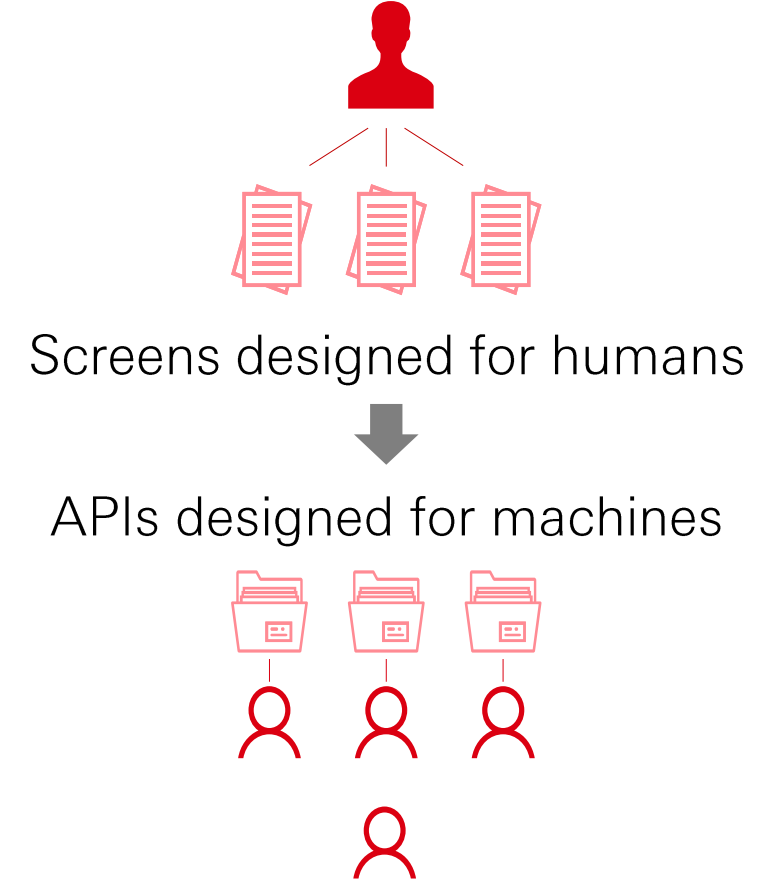
Apple Pay & Android Pay

WeChat integration
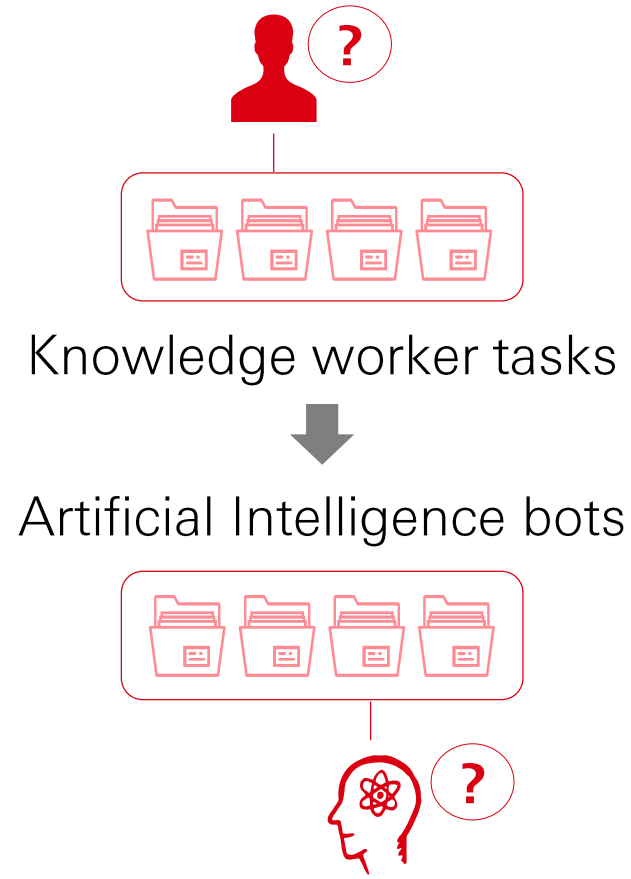
Big data & real time analytics

Cognitive technology and AI

Real time communications
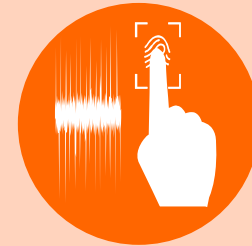
Voice login for over 20 million customers

Touch ID across major markets

Industry leading identity verification

We are digitizing the way we work internally

Manual tasks

Software robots

Knowledge worker tasks

Artificial Intelligence bots

Screens designed for humans

APIs designed for machines
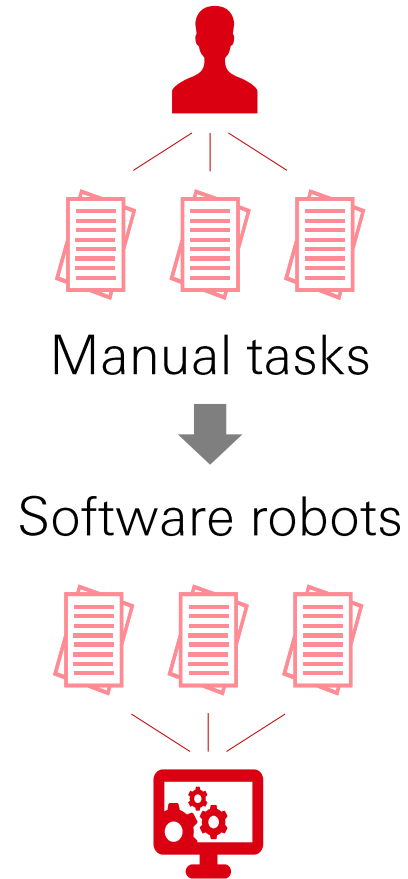
We are building on a new technology platform…

Mobile

Cloud based

Integrated

Robust

Core Banking

Payments

etc.

Data driven

Automated, instrumented and secure

…with Cloud at its heart

Mobile

Cloud based

Integrated

Robust

Data driven
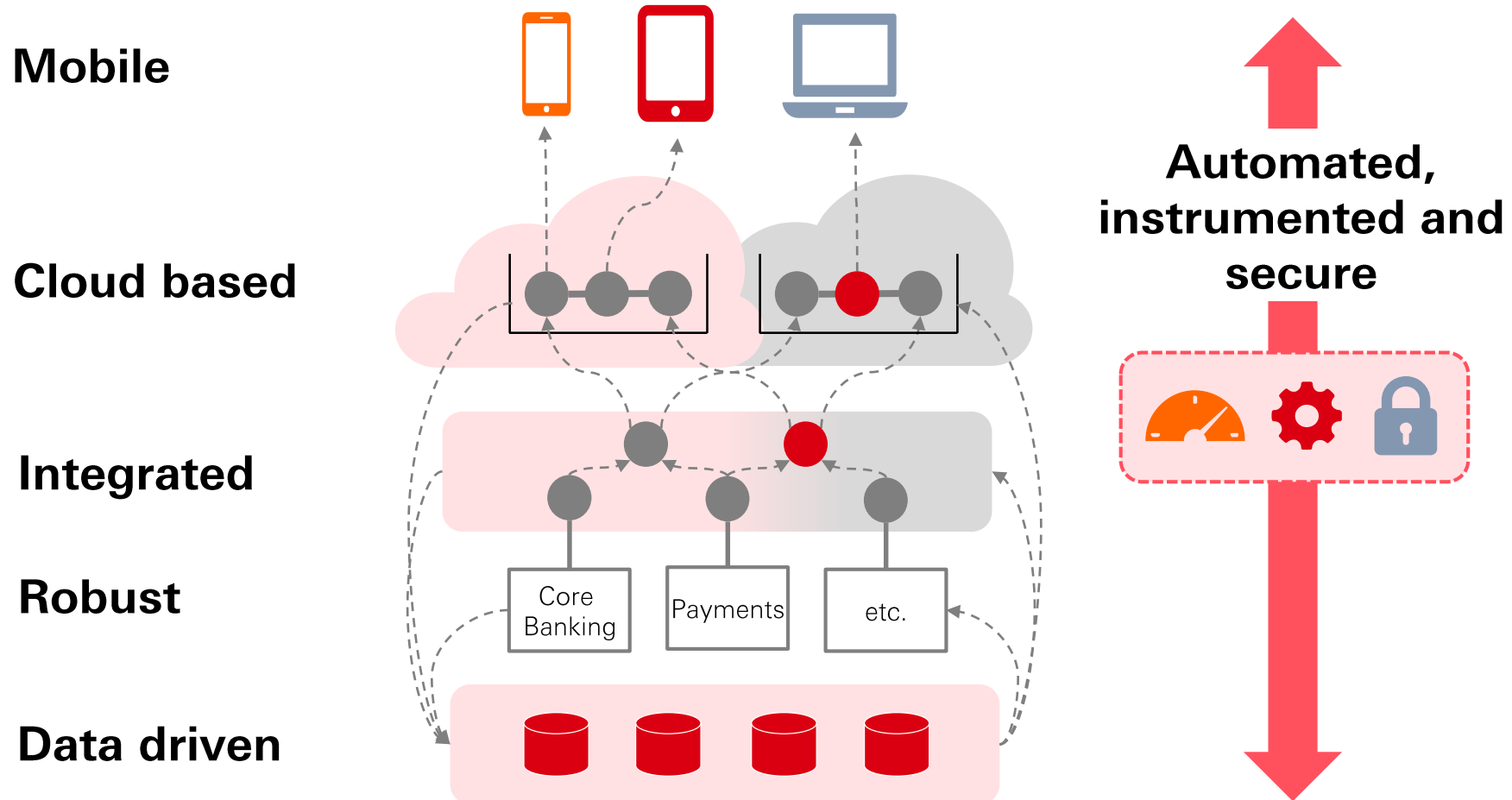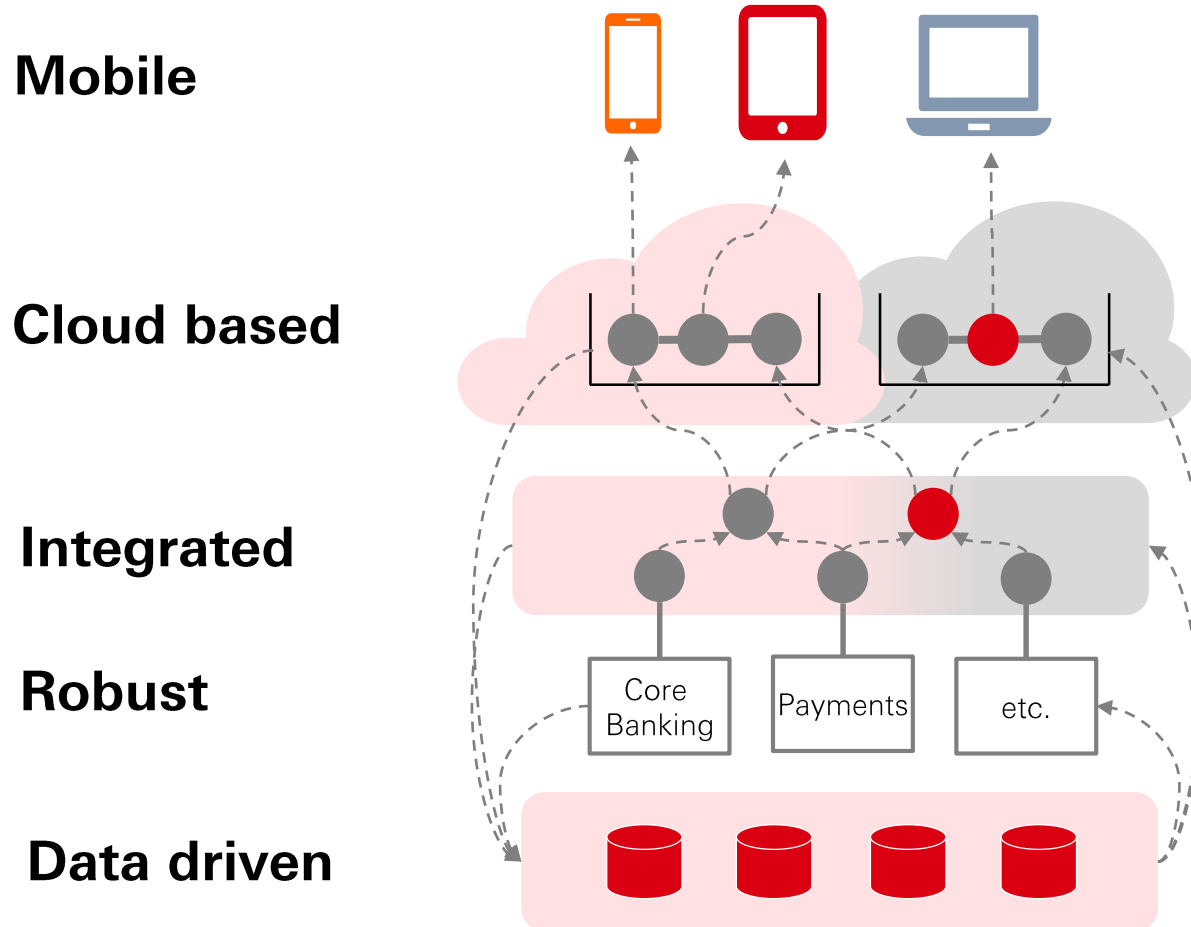
MAS recognises cloud services
Monetary Authority of Singapore recognises cloud services can offer various benefits such as scalability and advanced functionalities…

FCA provides guidelines on cloud
We see no fundamental reason why cloud services cannot be implemented, with appropriate consideration, in a manner that complies with our rules.

US Regulator considers cloud another form of outsourcing
The Federal Financial Institution Examination Council Agencies consider cloud computing to be another form of outsourcing with the same basic risk characteristics and risk management requirements as traditional forms of outsourcing…

We are transforming the way we deliver IT

From traditional processes where teams work in silos…

Build

Test

Deploy

Disjointed approach

Manage

Operate

Provision

Procure

Configure

Install
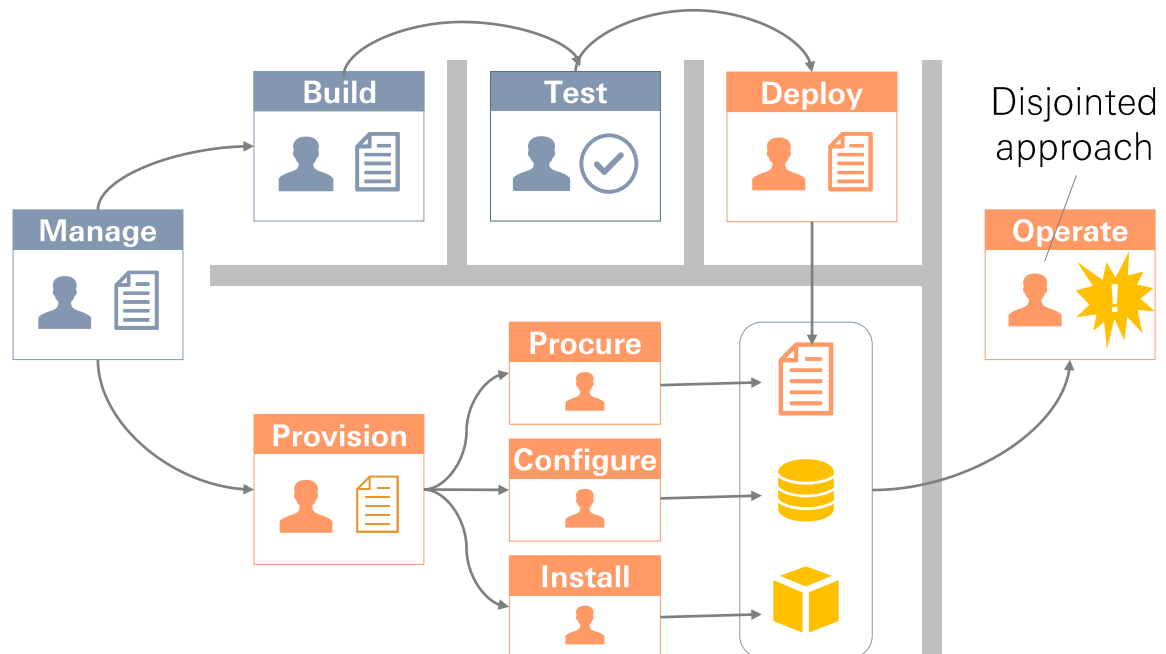
…To DevOps teams that share accountability

We'll fix this together!

Design

Operate

Provision

Co-located DevOps teams

Deploy

Build

Test
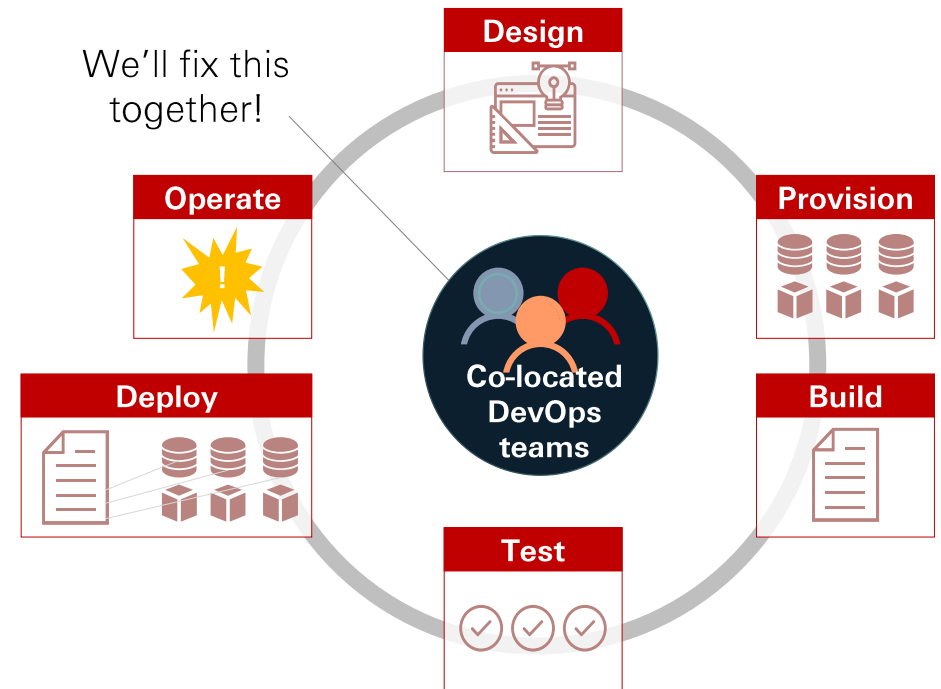
We are bringing business and technology closer together
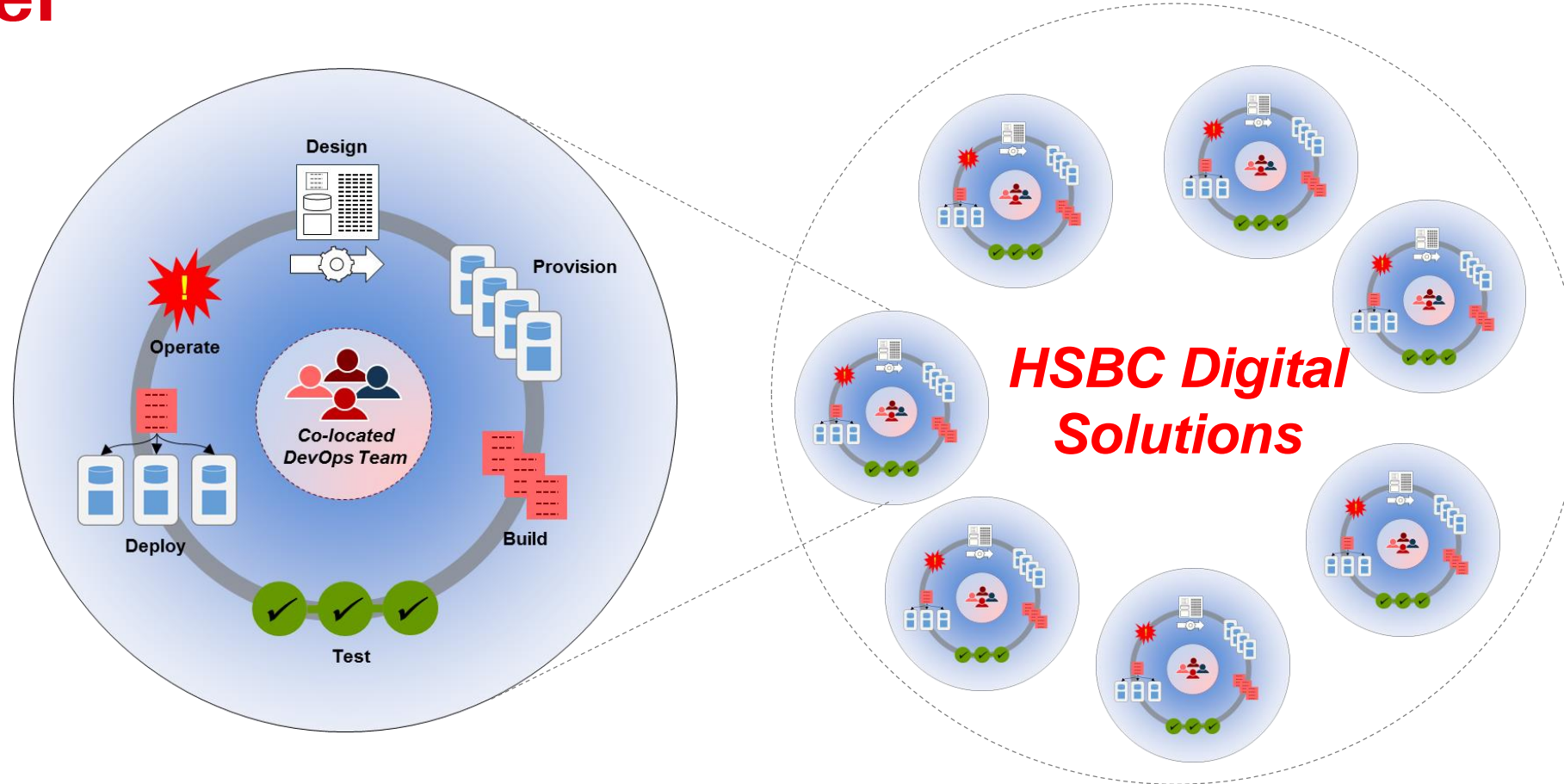
We are combining technology and business disciplines into autonomous Pods which can deliver quickly . . .

. . . and have created an integrated unit to lead digital transformation.

Investing in collaboration and DevOps Tooling

Organised into end to end delivery pods….

Design
Operate
Provision
Deploy
Test
Build

With access to world class tooling…

Jenkins

And world class agile methods….

...And measuring our maturity

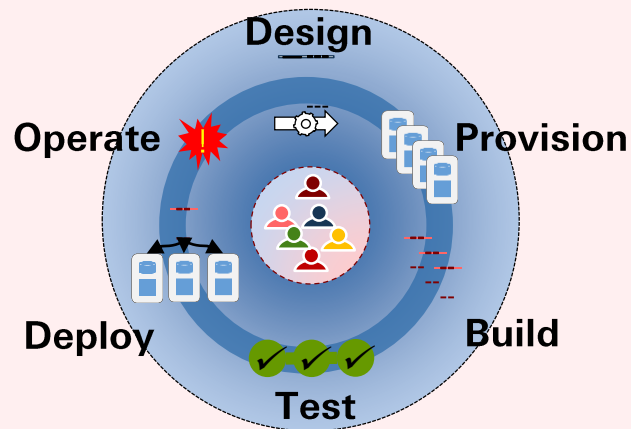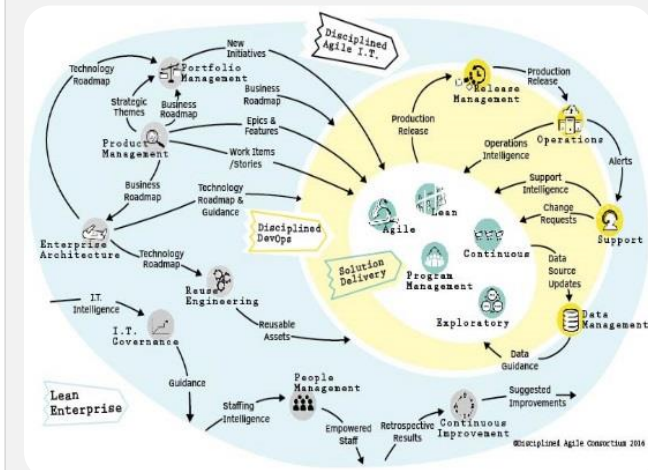|	METRIC	DESCRIPTION	MATURITY LEVEL	
Productivity	Release frequency	Number of releases per month	> 5 times a day	Less than twice yearly
	Lead time to deploy	Amount of time from end of development to deployment	Less than 1 hour	More than 2 months
	Productive time	% of time dedicated to core tasks	> 90%	<10%
	Mean time to recover (MTTR)	Average number of minutes	Less than 30 min	More than 5 days
Effectiveness	Service Availability	Average % of service availability	More than 99.999%	Less than 70%
	Incidents	Number of priority incidents per month	<40	>200
	Quality (Defects)	Number of post-production defects per month	<10	>200

IT Enabled Transformation

1 **Delivered Business Value**

c.$1.5bn
Business Investment 2015-2017

Digital

New platforms

Enablement

2 **Transformed Technology**

c.$1.5bn
Technology Investment 2015-2017

Operating model

Co-location

Ways of working

Tooling and automation

3 **Transformed Architecture**

Big Data capability

HSBC private cloud

Core banking

Storage

AIP | services

The IT Transformation Programme

The most "Awesome" Technology Team on the Planet

Bringing the technology function together under a single CIO

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Culture & Mind-set

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Simplify IT Architecture

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What Culture do we need in Technology to be successful?

Agile and DevOps

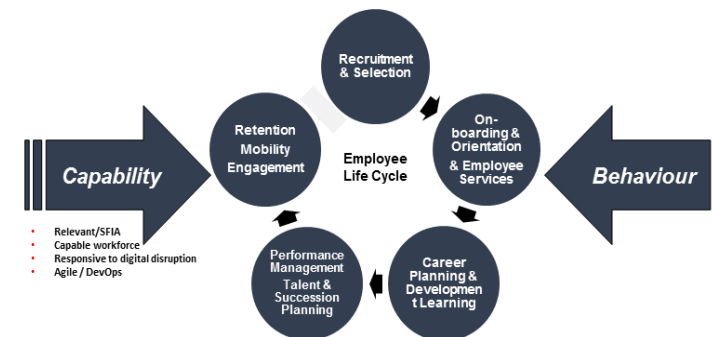|	
Command and control	Empowerment and delegation
Managing	Taking responsibility and ownership
Silo mentality	Cross-functional collaboration
Top down assessment	Peer review and peer pressure
Forecasting	Joint dynamic planning and adjusting
Protecting most employees from "stressors"	Exposing employees to some uncertainty

HSBC Technology manifesto

Leadership and ways of working
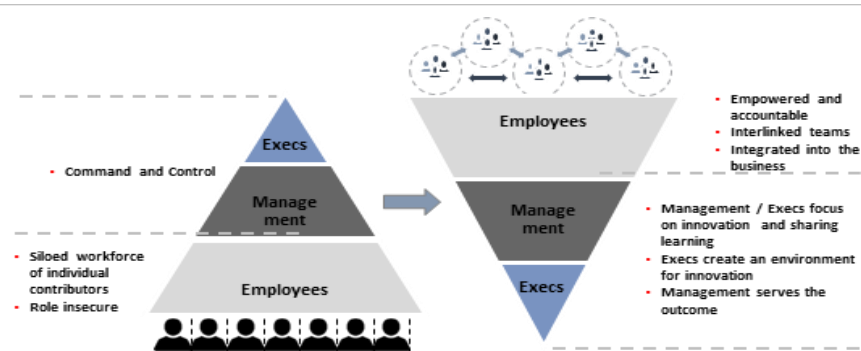
People and culture

Transforming leadership mindset and behaviours

Manifesto Themes	Manifesto Behaviours
1 **Ownership – leaders are owners**	✓ They think long term ✓ They act on behalf of the entire company
2 **Learn and be curious**	✓ Leaders are always learning ✓ Leaders always seek to improve themselves ✓ Leaders are curious about new possibilities ✓ Leaders act to explore new possibilities
3 **Insist on the highest standards**	✓ Leaders have relentlessly high standards many people think these standards are unreasonably high ✓ Leaders are continuously raising the bar ✓ Leaders drive their teams to deliver high quality products, services and processes ✓ Leaders ensure that problems are fixed and stay fixed
4 **Think big – thinking small is a self-fulfilling prophecy**	✓ Leaders create a bold direction ✓ Leaders communicate a bold direction that inspires results ✓ They think differently and look around corners for ways to serve customers
5 **Dive deep**	✓ Leaders operate at all levels ✓ Leaders stay connected to the details ✓ Audit frequently and are sceptical when metrics and anecdote differ
6 **Learn from the best**	✓ Leaders track the best in the industry ✓ Leaders learn all they can from the best in the industry. That's why we have taken these principles from Amazon

Transforming leadership mindset and behaviours

Manifesto Themes	Manifesto Behaviours
Leaders aim to be better (7)	✓ Leaders aspire to lead their industry ✓ Leaders enjoy helping others to learn from them
One team (8)	✓ Leaders understand and recognise the value of collaboration ✓ As a global organisation we share our solutions and knowledge, for the benefit of our customers ✓ We are an integrated part of the business ✓ We focus on our customers
Bright ideas (9)	✓ Leaders create an ideal environment for creative thought, free flow thinking and ideation ✓ Leaders recognise the best ideas and encourage their development ✓ Leaders also praise and recognise shared successes
Teams: high performing teams of high performing people (10)	✓ **Robustness with respect:** we cannot afford to have people keep there opinions to themselves. If someone believes that the team is doing it wrong, they challenge firmly but always respectfully ✓ **Confidence with humility:** every team should be proud of what they do and confident in their own abilities. However, every team will be stretched beyond it's abilities and should ask for help and guidance when they need it. ✓ **Challenge with loyalty;** every team member should challenge the team to improve itself and do better every day, but should be loyal to the mission and leadership of the team ✓ **Ambition with focus:** we set ourselves big ambitious goals, but focus our attention on the tasks in front of us to achieve those goals ✓ **Accountability without question:** every team owns a service, system or capability and takes complete ownership and accountability for its performance

Innovating like a start-up

Selfie-payments team

Omni channel team

Voice sentiment analysis team

PayMe team

CUSTOMERS

Embedding culture change …… embrace diversity of thought

Chris Larsen
Executive Chairman, Ripple

Dr Gurjeet Singh
CEO, Ayasdi

Haoyu Shen
Former CEO, JD.com

Dr Kira Radinsky
Chief Scientist, eBay

Megan Quinn
General Partner, Spark Capital

Mickey Boodaei
CEO, Transmit Security

Steve Kirsch
CEO, Token

Dr Vishal Sikka
Former CEO, Infosys

Technology Advisory Board

Key Success Factors

⇄ Recognise the need for change…only the paranoid survive

🏃 Rethink your ways of working…Make the leap to Agile / DevOps… everywhere

👥 Hire the best… nurture the talent

Communicate the aspiration… articulated through a manifesto

💬 Transform the leadership mindset…measure behaviours and give feedback

🔓 Listen to the engineers…remove blockers

Invest in collaboration and DevOps tools

💡 Embrace innovation and diversity of thought…Technology Advisory Board

🤝 Partner with the best…Big techs and start-ups

🏆 Celebrate success

And… just keep going… persistence is a virtue