DIGITAL TRANSFORMATION
In Financial Services

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Business Manager Financial Services
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Microsoft

The scale and pace of change

An astonishing pace of change is accelerating transformation. Technology is more affordable and accessible than ever before.

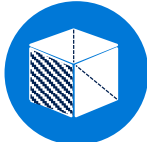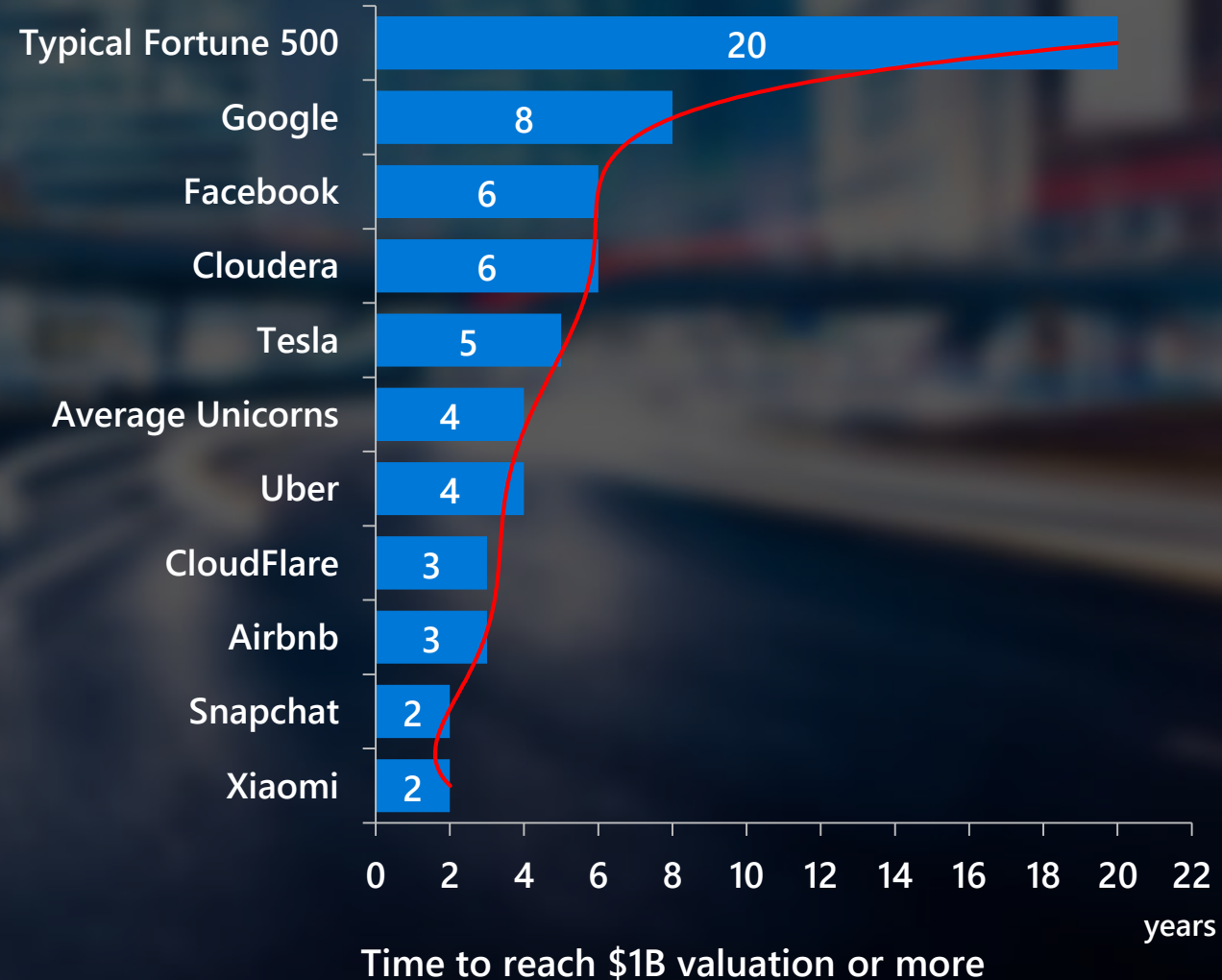|		
Drones	2007	$100,000
	2017	$100
3D Printing	2007	$40,000
	2017	$100
Industrial Robots	2007	$550,000
	2017	$20,000
DNA	2000	$2.7bn
	2007	$10m
	2017	$75
Solar (KWH)	1984	$30
	2017	$2,50
Sensor (3D)	2009	$30,000
	2017	$80
Smartphones	2007	$499
	2017	$10

Typical Fortune 500	20
Google	8
Facebook	6
Cloudera	6
Tesla	5
Average Unicorns	4
Uber	4
CloudFlare	3
Airbnb	3
Snapchat	2
Xiaomi	2

0 2 4 6 8 10 12 14 16 18 20 22 years

Time to reach $1B valuation or more

The need to transform is real, as are the challenges

~65% **Maintenance** dominates IT budgets

Source: Celent

	NORTH AMERICA	EUROPE	APAC
🏛	71,5%	80,6%	71,3%
☂	60,0%	55,6%	63,2%

Cloud key to changing this paradigm

Compliance and regulations pressure is increasing

GDPR, FRTB, MIFID2, PSD2 ...

... while managing the realities of risk, regulation, legacy systems and cost pressure

Need to deliver digital customer experiences

Focus on maintenance, compliance and regulations

delivering digital customer experiences ...

79% will **only use a digital channel** for insurance interaction

Source: Bain & Company

48% **rely on comments on social media** when buying insurance

Source: Accenture

80% of customers would switch to an insurer that provided **personalized services**

Source: Accenture

Digital Insurance Journey

Yesterday		Today		Tomorrow
Pre-Digital *50+ years ago*	**Early Digital** *25 to 50 years ago*	**Basic Digital** *25 years ago to today*	**Advanced Digital** *Today's Digital Leaders*	**Future Digital** *Tomorrow*
Paper-based insurance sales and operational processes	Monolithic core insurance systems Accounting systems	Agent portals & Collaboration Customer portals 360 degree customer view Enterprise Social Networking Call center automation	Omni-channel Delivery IoT – Use Based / Connected Home Core Systems in the Cloud Social as channel Mobile sales, service, claims self Service	Advanced Predictive Analytics and Machine Learning Right offer, right time, right channel IoT – Wearables Advanced straight-through processing Blockchain & Bots

Role of Data in Insurance

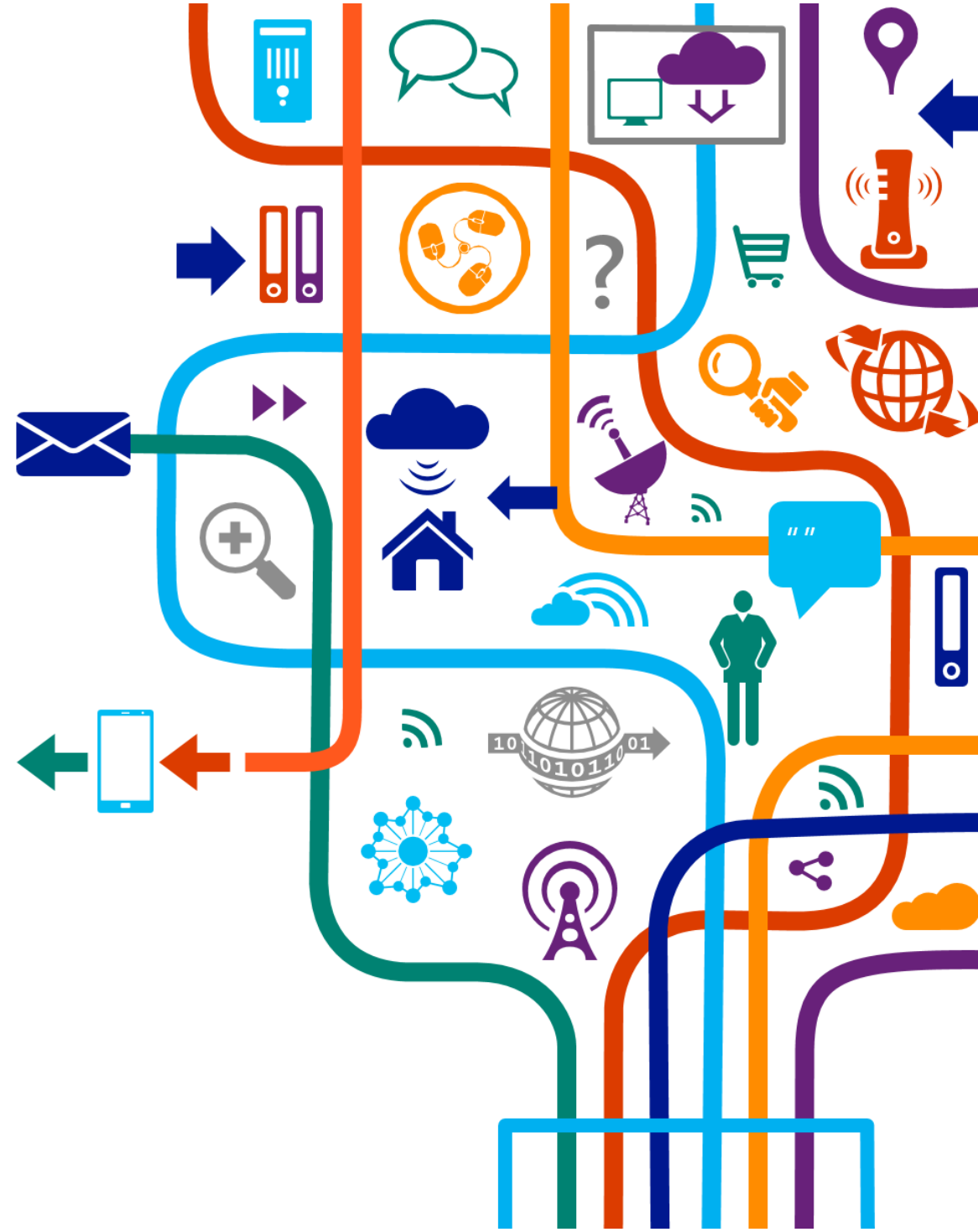|				
Summing up revenue and expenses	Silos of hard to access data	Exposing more data to agents and customers	Many sources, data mining for trends, available to everyone in real time.	Petabytes, increase of 3rd data sources, predictive analytics and ML/AI
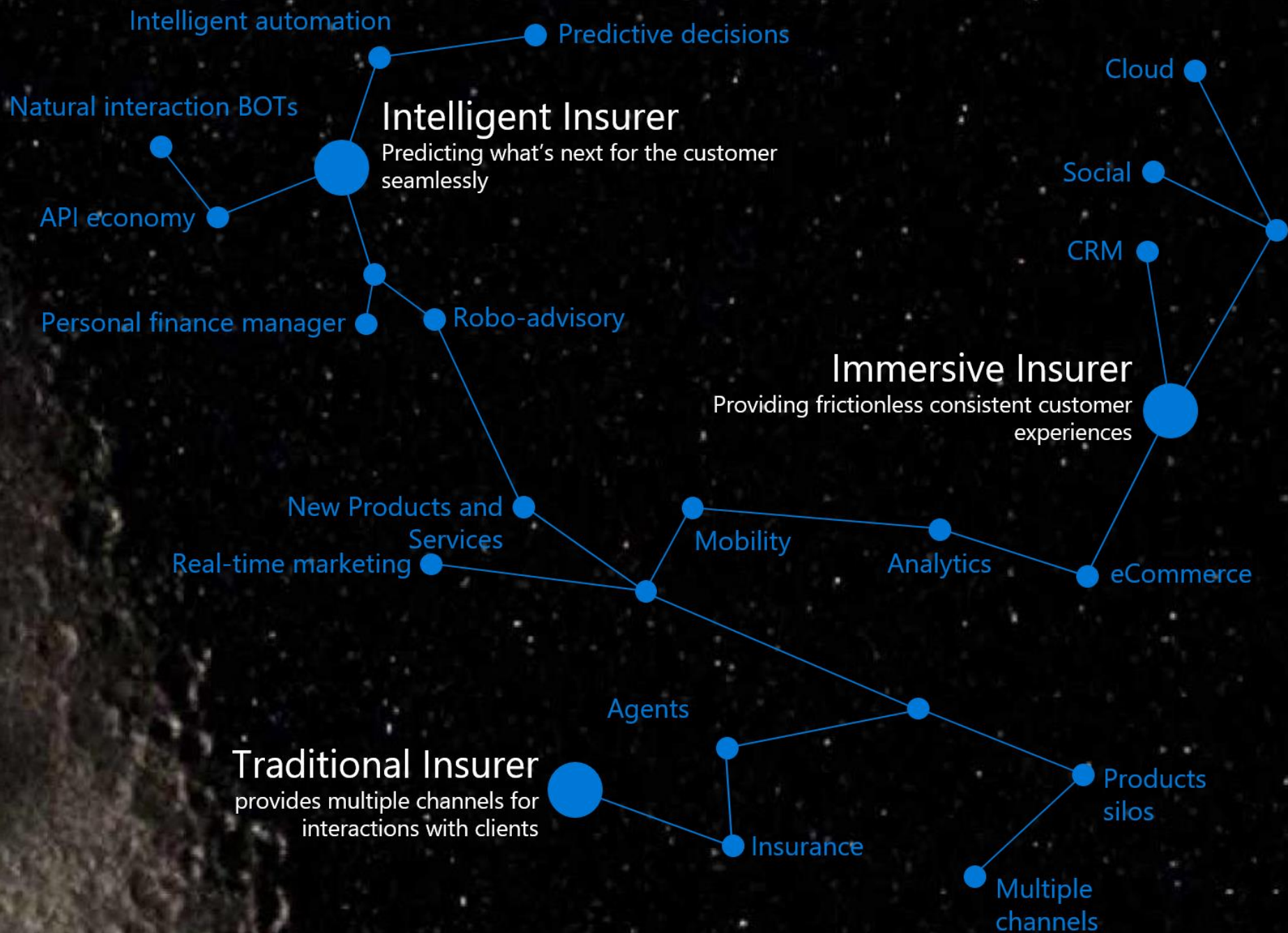
The ultimate goal is the provision of a single experience for customers through all interfaces – one seamless end-to-end journey to the desired customer outcome.

To become the financial trusted advisor.

Intelligent automation

Predictive decisions

Natural interaction BOTs

Intelligent Insurer
Predicting what's next for the customer seamlessly

API economy

Personal finance manager

Robo-advisory

Cloud

Social

CRM

Immersive Insurer
Providing frictionless consistent customer experiences

New Products and Services

Real-time marketing

Mobility

Analytics

eCommerce

Agents

Traditional Insurer
provides multiple channels for interactions with clients

Insurance

Products silos

Multiple channels

Internet of Things

"The network of physical objects that contain embedded technology to communicate and interact with their internal states or the external environment."
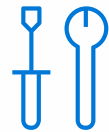
Empowering financial services

Managing the realities
of risk, regulation, legacy systems
and cost pressures

Delivering innovative customer
and employee experiences
with speed and agility

**ENGAGE YOUR
CUSTOMERS**

to help increase
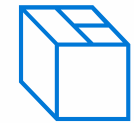relevance, loyalty,
and profitability

**EMPOWER YOUR
EMPLOYEES**

to innovate faster
and meet client
needs

**OPTIMIZE YOUR
OPERATIONS**

for efficiency,
compliance, and
risk management

**TRANSFORM
YOUR PRODUCTS**

to unlock new
opportunities and
achieve growth

How we think about IoT

Build **Things**	Control **Data volume**	Gain **Insights**	Take **Action**
30B	**10 X**	**10%**	**$10B**
connected devices by 2020	Amount of data in 2020. (44ZB)	of the data on earth will come from IoT by 2020	market for business process automation tools by 2020
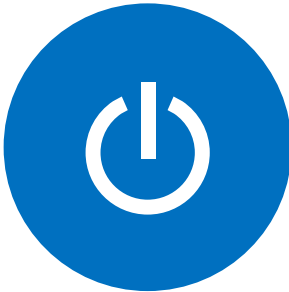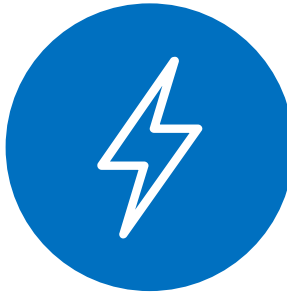
Things ...

Medication adherence

Health monitoring

Pet tracking

Behavior modification

Object tracking

Child and elder monitoring

Sports and fitness

Smart lighting

Indoor navigation

Beacons and proximity

Trip tracking and car health

HOME — **WORKPLACE** — **HOME**

Smart appliances

Food and nutrition tracking

Identity

Office equipment

Smart vending machines

Bike ride stats and protection

Sleep tracking

Air conditioning and temperature control

Environmental sensors

Information capture

Control

Home security

Home automation

Leak detection

Garden, lawn and plant care

New devices and sensors

Entertainment systems

10

Innovation at work – real IoT use cases

Street sweepers · Aircrafts · Auto · Cows · Fryers · Electric charging stations · Dogs · Power plant · Buses · Oil equipment · Vending machines · Buildings · Elevators · Trucks · Oil distribution · IoT · Factory floor · Racing · Postboxes · Smart meters · Surveillance · Power tools · Engines · Mining equipment · Vaccine dispensers · Smart grids · Medical devices
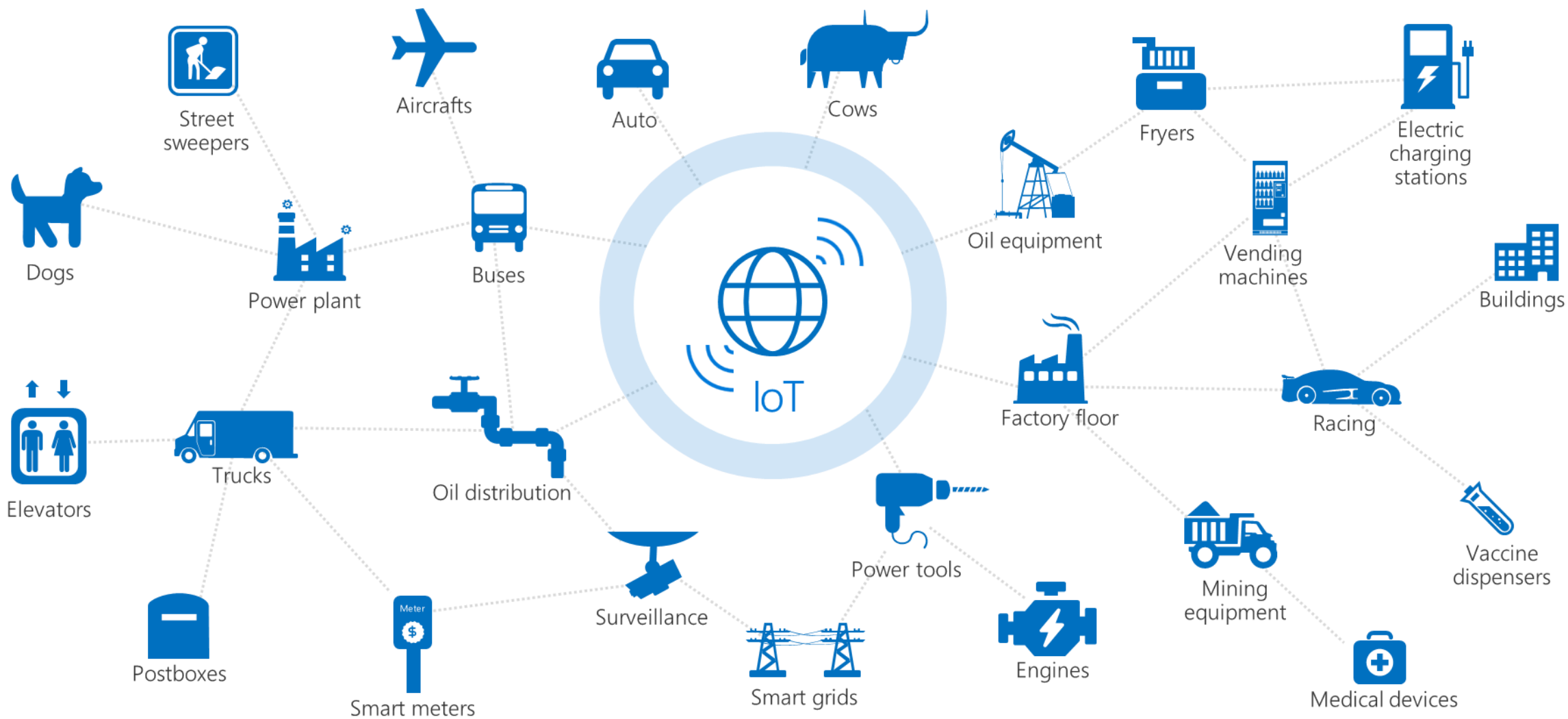
IoT is already delivering results across industries

Johnson Controls

Connected chillers are back online 9x faster than unconnected equipment, avoiding more than **$300,000** in hourly downtime costs

Rolls-Royce

"Power by the hour" model maximizes aircraft availability, while **cutting fuel usage by 1%, saving $250,000** per plane, per year

thyssenkrupp

Data from sensors and systems create valuable business intelligence and **reduce downtime by 50%**

Rockwell Automation

Access to production and supply chain **data** worldwide can reduce downtime costs by as much as $300,000 per day

WEIR   FUJITSU   Schneider Electric   LIEBHERR   Purell   HERSHEY'S   JABIL   ABB

Internet of Things Scenarios in Insurance

Wearables/ Health Devices
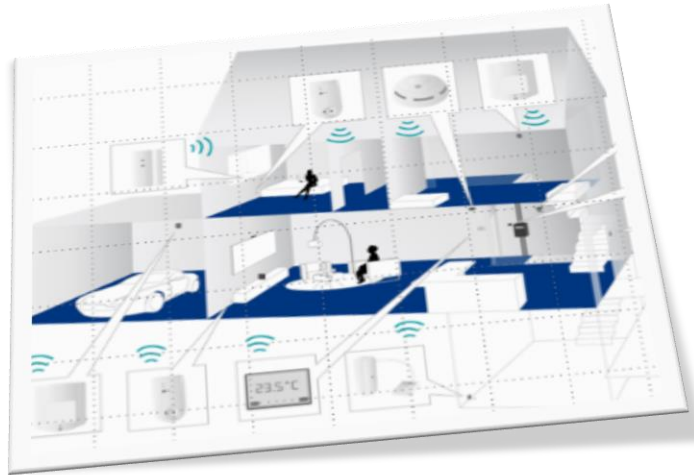
Connected Home

Telematics & Usage Based Insurance (UBI)

Platform Services

Security & Management

- Security Center
- Portal
- Azure Active Directory
- Azure AD B2C
- Multi-Factor Authentication
- Automation
- Scheduler
- Key Vault
- Store/ Marketplace
- VM Image Gallery & VM Depot

Media & CDN

- Media Services
- Media Analytics
- Content Delivery Network

Integration

- API Mgt
- BizTalk Services
- Logic Apps
- Service Bus

Compute Services

- Container Service
- VM Scale Sets
- Batch
- RemoteApp
- Dev/Test Lab

Application Platform

- Web Apps
- Mobile Apps
- API Apps
- Cloud Services
- Service Fabric
- Notification Hubs
- Functions

Developer Services

- Visual Studio
- Mobile Engagement
- VS Team Services
- Xamarin
- Application Insights
- HockeyApp

Data

- SQL Database
- SQL Data Warehouse
- DocumentDB
- SQL Server Stretch Database
- Redis Cache
- Storage Tables
- Azure Search

Intelligence

- Cognitive Services
- Bot Framework
- Cortana

Analytics & IoT

- HD Insight
- Machine Learning
- Stream Analytics
- Data Catalog
- Data Lake Analytics Service
- Data Lake Store
- IoT Hub
- Event Hubs
- Data Factory
- Power BI Embedded

Hybrid Cloud

- Azure AD Health Monitoring
- AD Privileged Identity Management
- Domain Services
- Backup
- Operational Analytics
- Import/Export
- Azure Site Recovery
- StorSimple

Infrastructure Services

Compute

- Virtual Machines
- Containers

Storage

- Blob
- Queues
- Files
- Disks

Networking

- Virtual Network
- Load Balancer
- DNS
- Express Route
- Traffic Manager
- VPN Gateway
- App Gateway

Datacenter Infrastructure

AXA Connected Home

- Mobile application My AXA to control all these devices remotely from a single interface.

- Coupled with AXA Assistance in order to send help if an emergency is detected

MyFox
A sensor, camera and alarm to detect intrusion attempts ↗

Kiwatch
An entry-level Wi-Fi camera to monitor your home remotely ↗

Philips Hue
A connected LED light bulb that can be controlled remotely ↗

Orange My Plug
A smart plug with connected smoke & water leakage sensors ↗

Source: https://www.axa.com/en/newsroom/news/axa-connected-devices

Zurich safe driving & accident assistance

Zurich safe driving & accident assistance includes three major services:

- **Urgent notice service**
  When the on-board terminal detects a strong shock, typical of an accident, it automatically sends a notice to a Zurich accidents center, and also offers the driver active support and practical advice.

- **Safe driving assistance**
  The terminal makes audio announcements if it detects sharp turns of the steering wheel or sudden braking.[*5] Drivers can review their driving for themselves with the smart phone applications. Accumulated driving data will be used for assessing future insurance applications.

- **Video service**
  An onboard video camera, mounted on the front shield, provides video output that supports driver safety and security. It also offers the additional value of allowing drivers to take and share videos of drives through scenic areas on their preferred SNS.

The solution server system is built on Microsoft Azure, a cloud service from Microsoft Corporation, and incorporates Bing Maps.

Structure

https://www.zurich.co.jp/car/z-assist/index.html
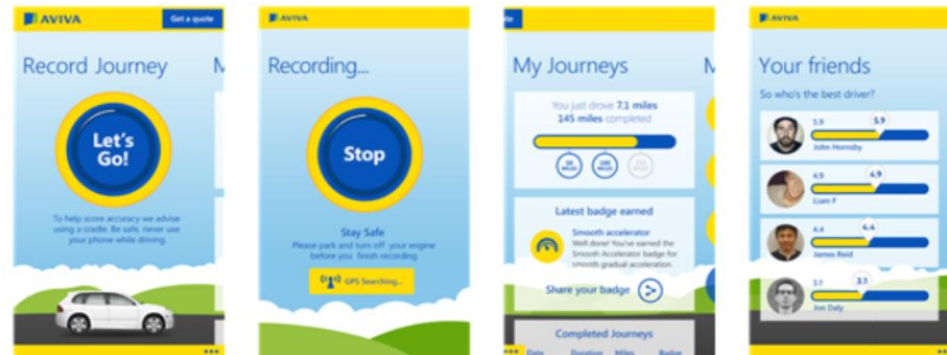
Telematics and Usage Based Insurance at Aviva

Aviva leverages Windows Phone and the Microsoft Cloud to power Aviva Drive.

Solution Details:

- Implemented for commercial and consumer lines.
- Uses mobile phone's accelerometer and GPS to collect data (Windows Phone, iOS, and Android).
- Data store and in the Azure cloud with Microsoft SQL Server
- 300,000 application downloads
- Incorporates gamification
- Helped raise Net Promoter score

Video see: https://youtu.be/zRr3swwZTTE

API economy / Microsoft Cognitive Services

Put intelligence APIs to work

Microsoft Cognitive Services let you build apps with powerful algorithms using just a few lines of code. They work across devices and platforms such as iOS, Android, and Windows, keep improving, and are easy to set up.

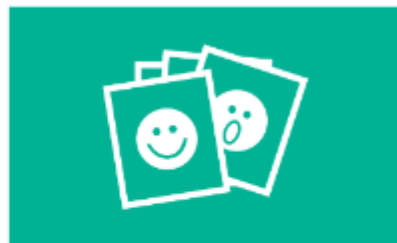# Microsoft Cognitive Services API's

Vision

Computer Vision APIs
Preview
Understand images and generate thumbnails

Face APIs Updated
Preview
See your users with Face Detection and Recognition

Emotion APIs New
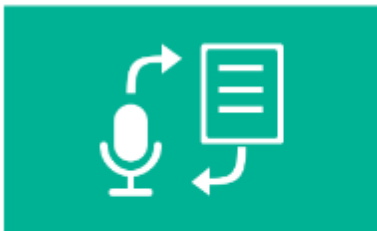*Preview*
Understand your users with Emotion Recognition

Video APIs New
Preview
Understand and transform your videos

Speech

Speech APIs
Preview
Communicate with your users with speech recognition and synthesis powered by Bing

Speaker Recognition APIs New
Preview
Recognize your users from their voice using our state-of-the-art Speaker Recognition APIs

Custom Recognition Intelligent Service (CRIS) New
Private preview
Customize both language and acoustic models for better speech recognition tailored to your application

Language

Spell Check APIs New
Preview
Detect and correct common and uncommon spelling errors, via the Bing document index

Language Understanding Intelligent Service (LUIS)
Preview
Understand natural language commands tailored to your application

Web Language Model APIs New
Preview
Leverage the power of language models trained on web-scale data

Face API's

Face Detection `Updated`

To detect human faces in image with face rectangles and face attributes including face landmarks, pose, and machine learning-based predictions of gender and age.

Face Verification

To check two faces belonging to same person or not, with confidence score.

Similar Face Searching `Updated`

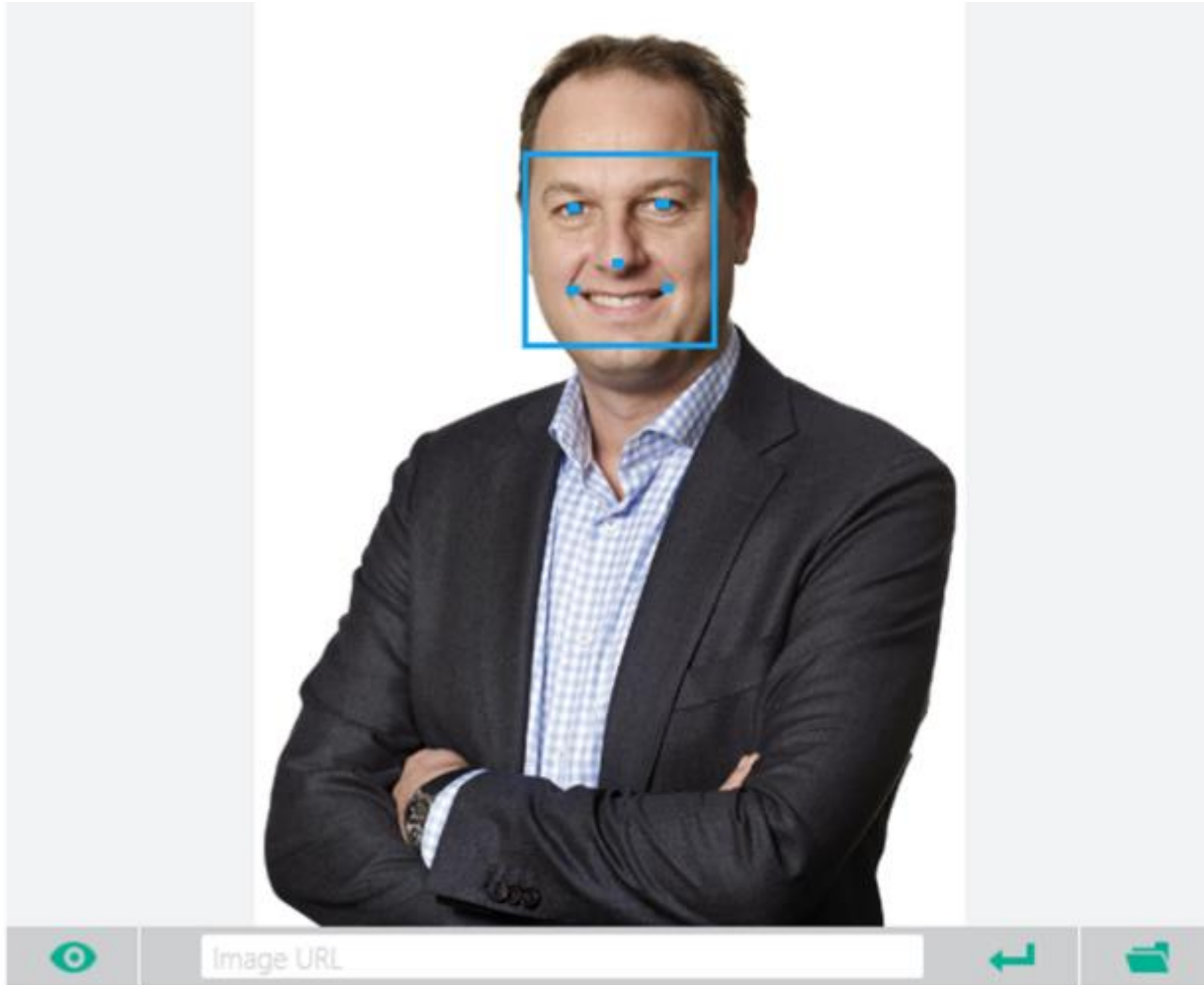To find similar-looking faces from many faces by a query face.

Face Grouping

To organize many faces into face groups based on their visual similarity.

Face Identification

To search which specific person entity a query face belongs to, from user-provided person-face data.

Face Verification

Verification Result:
The two faces belong to the same person.
Confidence is 0.643.
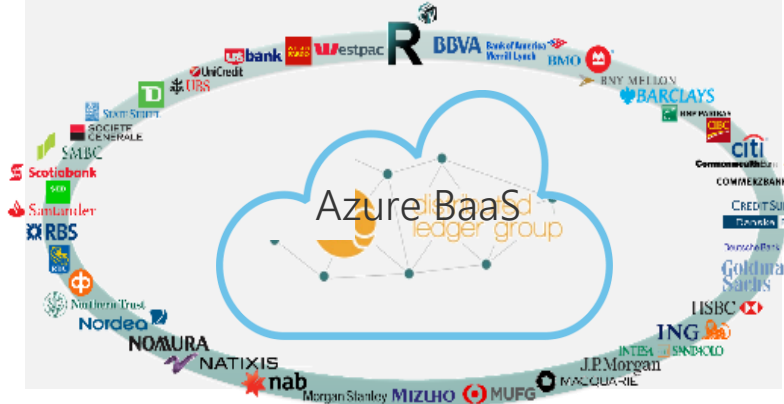
Cloud-based platforms maximize business agility

Open API economy

Elastic compute capacity risk modeling

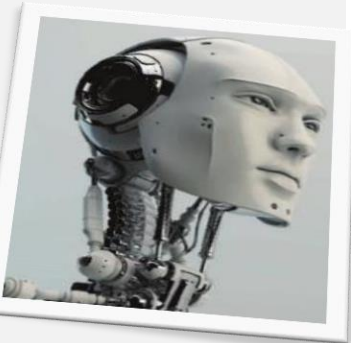## Blockchain and transformational digital ledger

Artificial intelligence

Financial Crime Detection

Next Best Action/Offers

Churn Propensity

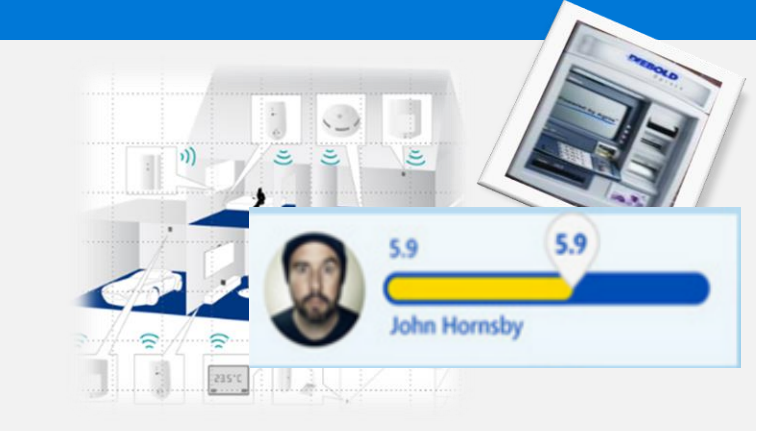Trading Analytics

Risk Management

Customer Service

Conversation as a platform (CaaP), chatbots, and robo-advisory

Hi, I'm Cortana
⊙ Your
Personal Assistant

Conversational apps with >2 billion users

Internet of Things

5.9   5.9

John Hornsby
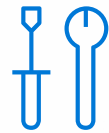
Empowering financial services

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**ENGAGE YOUR
CUSTOMERS**

to help increase
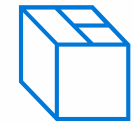relevance, loyalty,
and profitability

**EMPOWER YOUR
EMPLOYEES**

to innovate faster
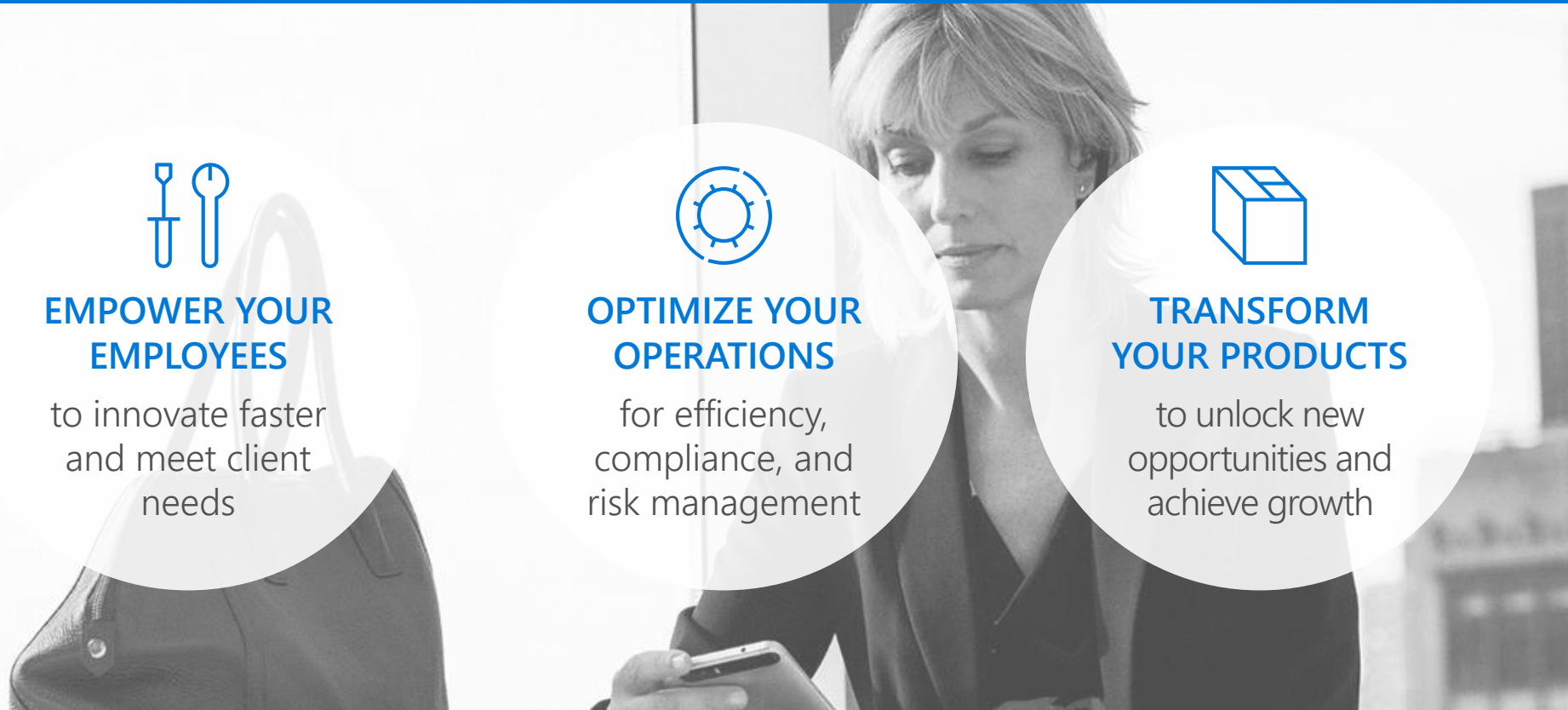and meet client
needs

**OPTIMIZE YOUR
OPERATIONS**

for efficiency,
compliance, and
risk management

**TRANSFORM
YOUR PRODUCTS**

to unlock new
opportunities and
achieve growth

Like to learn more?

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   ➜ Our perspectives in blogs, videos and articles
   ➜ Customer stories
   ➜ Events & webcasts
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