

BAPCO²⁰²⁰

The Annual Event for Public Safety Technology

10 - 11 MARCH 2020

RICOH ARENA, COVENTRY

BAPCO-SHOW.CO.UK



The Digital Front Line





Excel



OneNote



Outlook

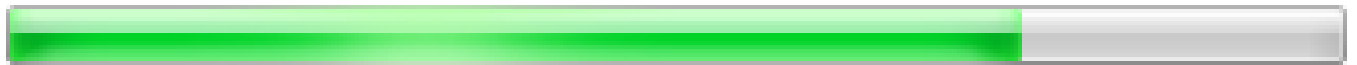


Word

Windows

Please wait while the features are configured

This might take several minutes.



Your PC ran into a problem that it couldn't handle, and now it needs to restart.

You can search for the error online: HAL_INITIALIZATION_FAILED



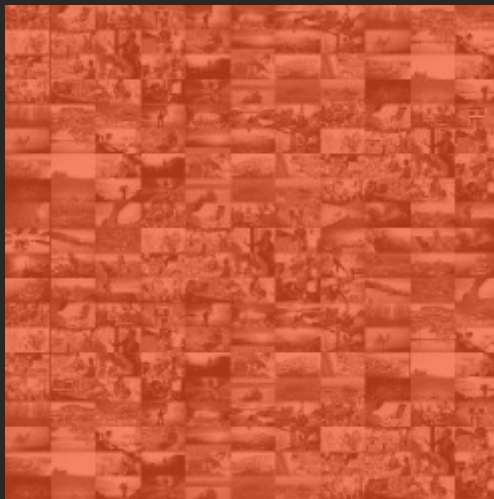
Starting Windows

MICRO SOFT



Our mission

Empower every person
and every organization
on the planet to
achieve more



Digital transformation alignment

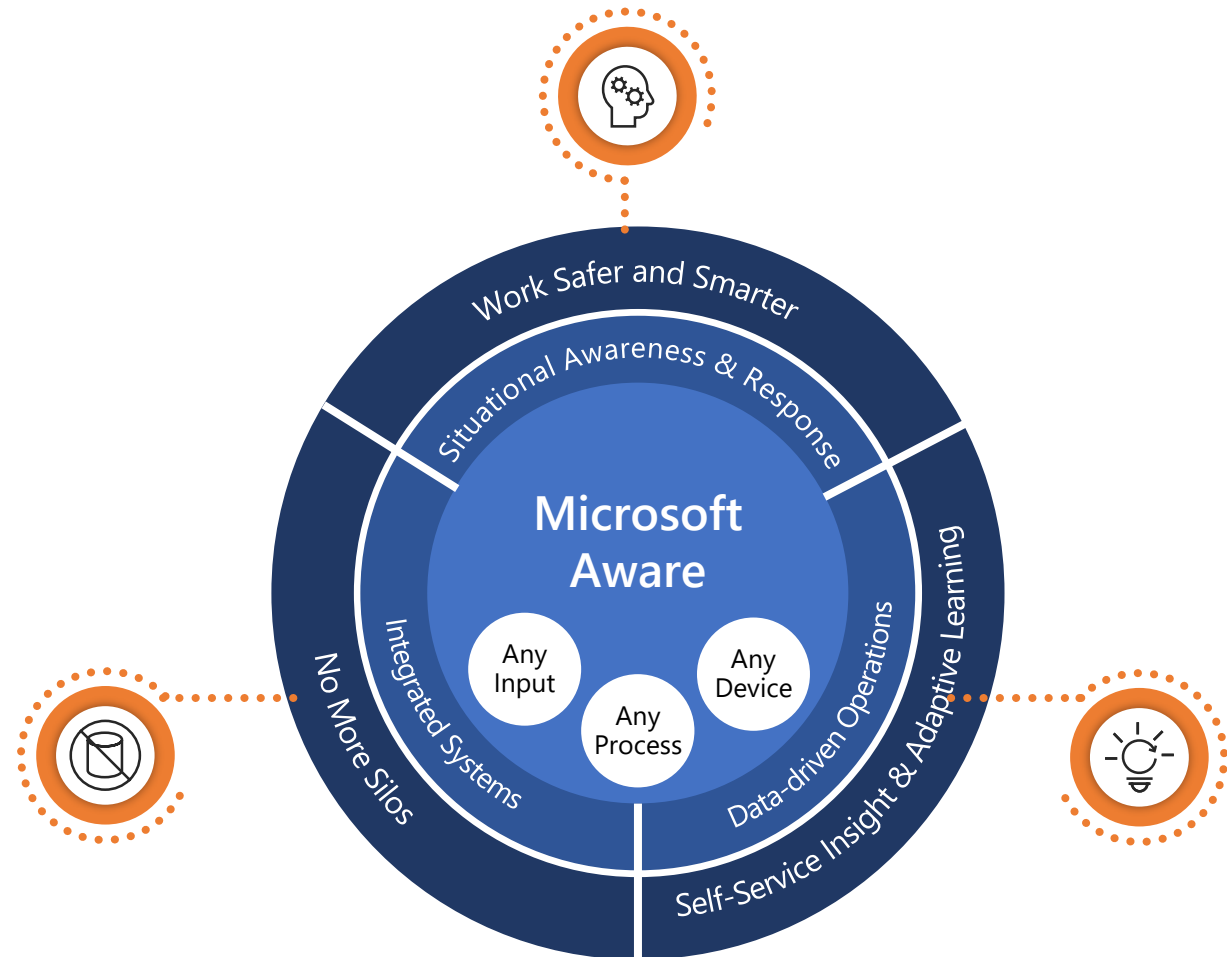


Being Data Driven

Provide clarity from disparate data sources for deeper insights

OBJECTIVE

Foster a safe & vibrant community through empowerment of safety officials & leadership with situational awareness via actionable insights & intelligence



A new age of Interconnectedness

A new age of Interconnectedness



A new era of computing



1970s

Mainframe era

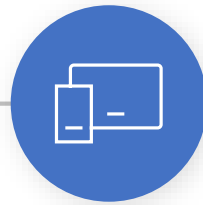
One computer
per many users



1980s

Personal computer era

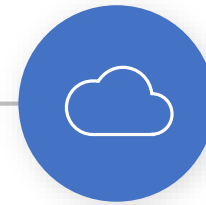
One computer
per user



2000s

Mobility era

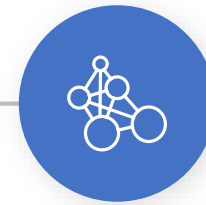
Several computers
per user



2010s

Cloud era

many computers
per many users

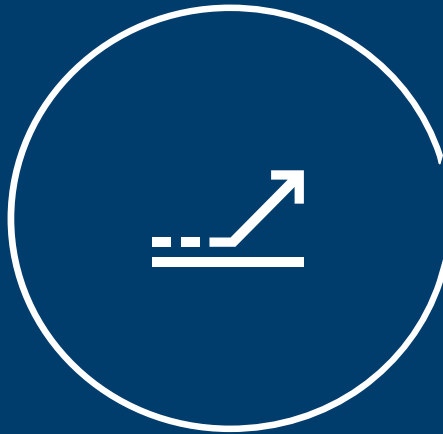


2020 and beyond

Ubiquity era

Millions of computers
per many users

Enabled by the latest in
technological breakthroughs



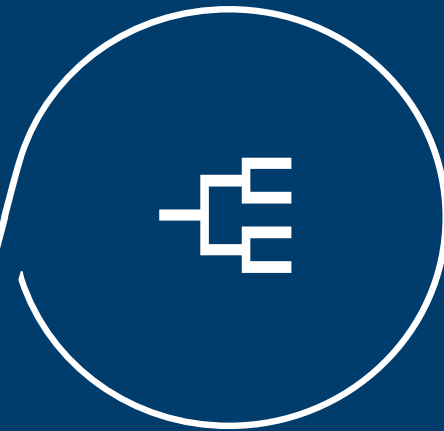
**Big
Data**



**Cloud
Computing**



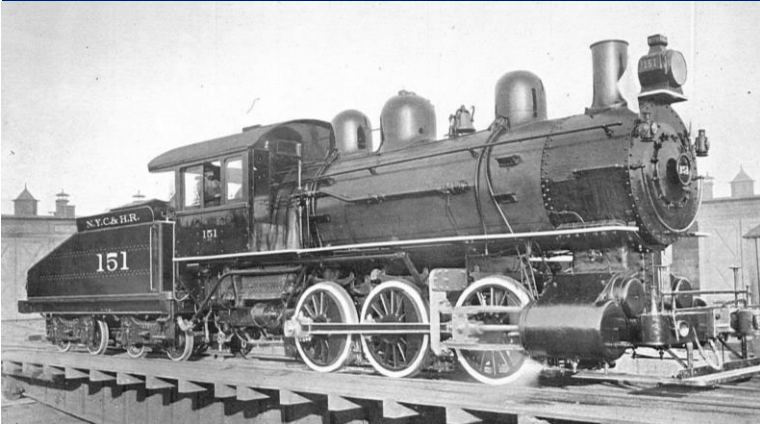
**5G
Network**



**Artificial
Intelligence**

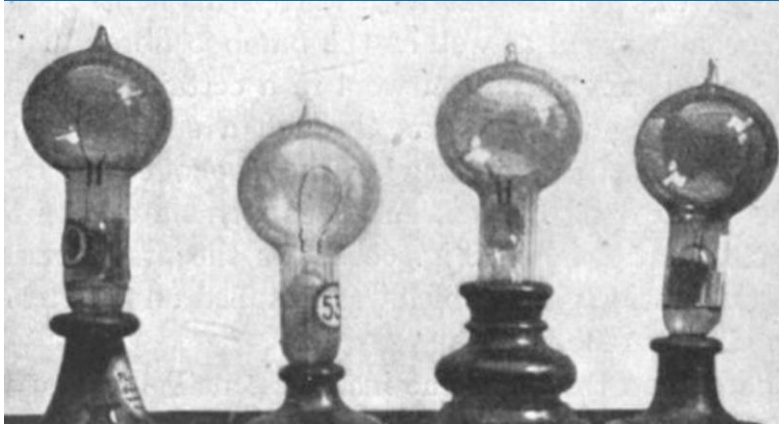
Some innovations fundamentally disrupt the economic landscape

1st Industrial Revolution



1760

2nd Industrial Revolution



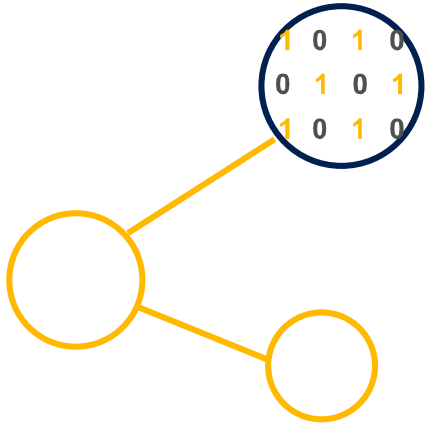
1870

3rd Industrial Revolution



1950

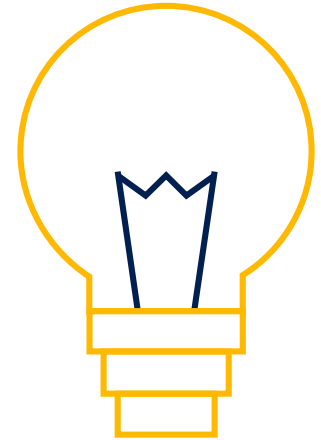
We now face the next disruption – the fourth industrial revolution



Big Data

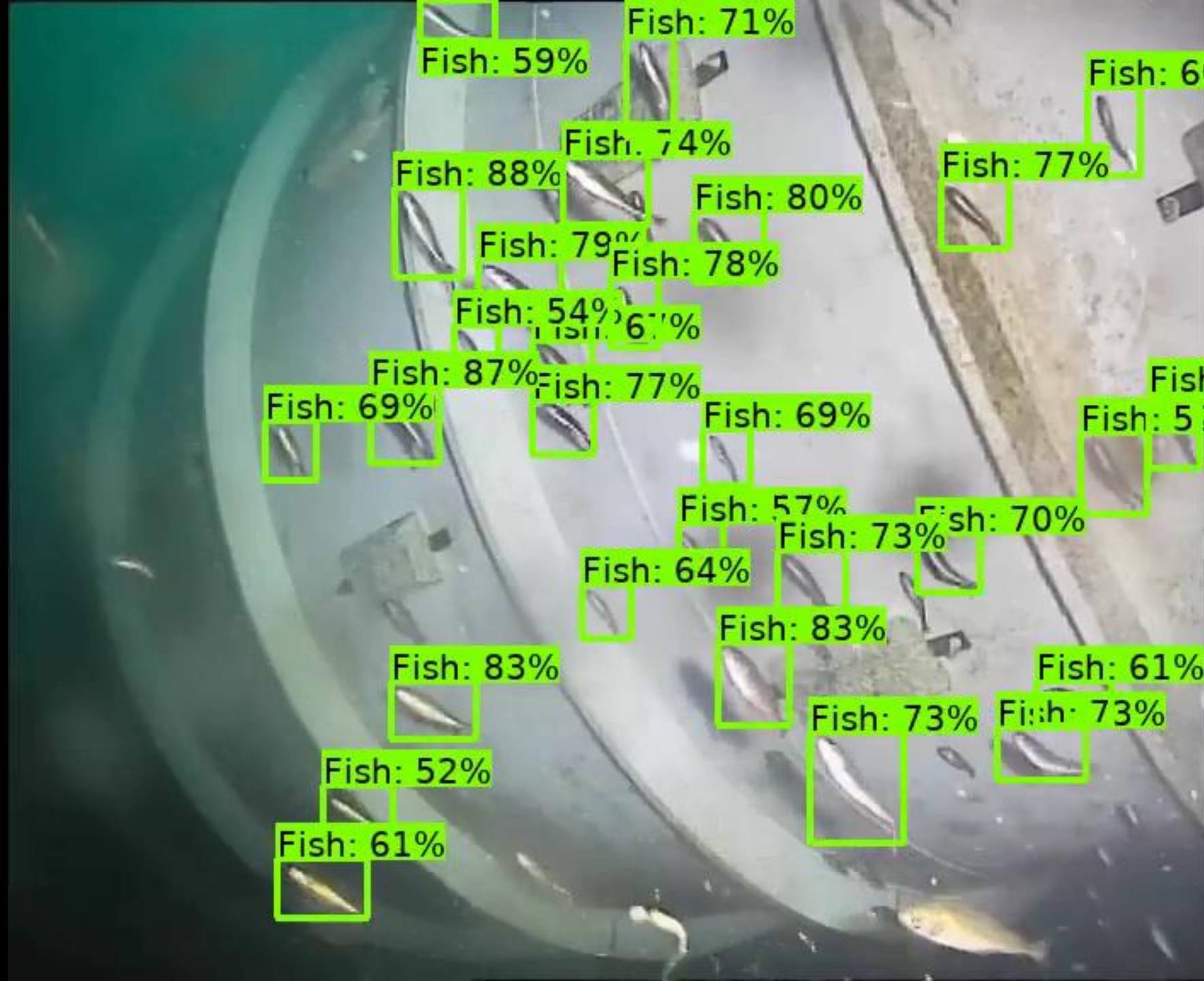


Cloud



Intelligence







Responsible AI to augment human ingenuity

The Future Computed: Artificial Intelligence and its role in society

“

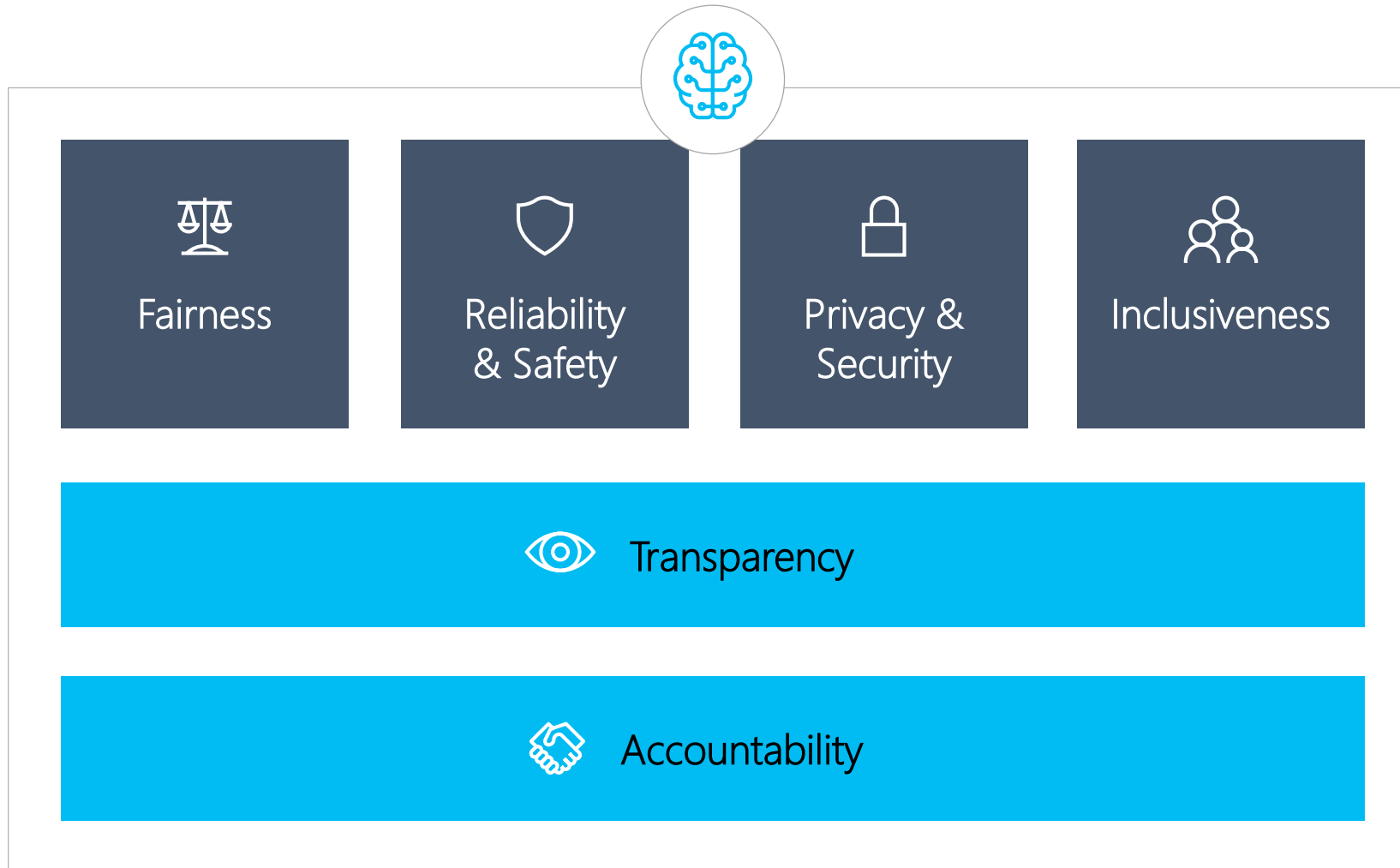
We'll need to be thoughtful about how we address the societal issues that technology advances from AI will bring about.

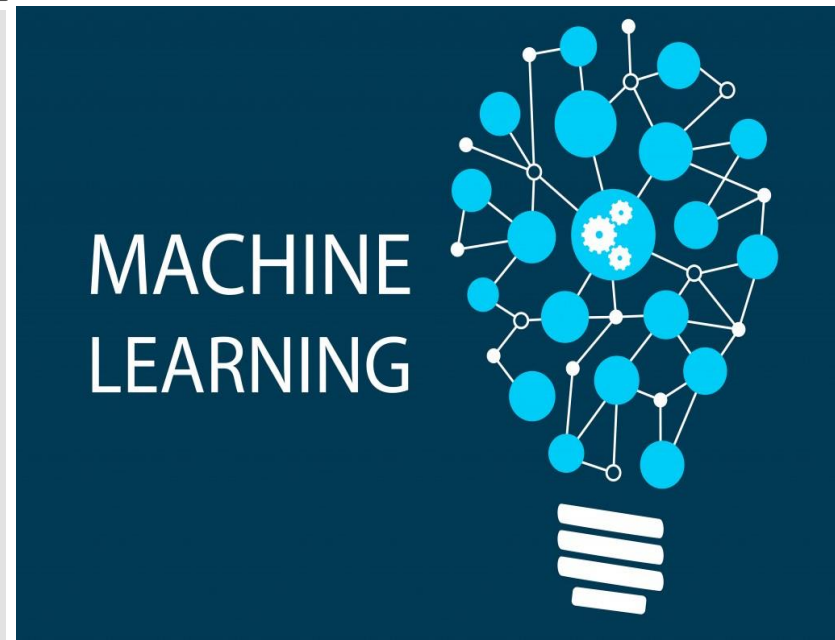
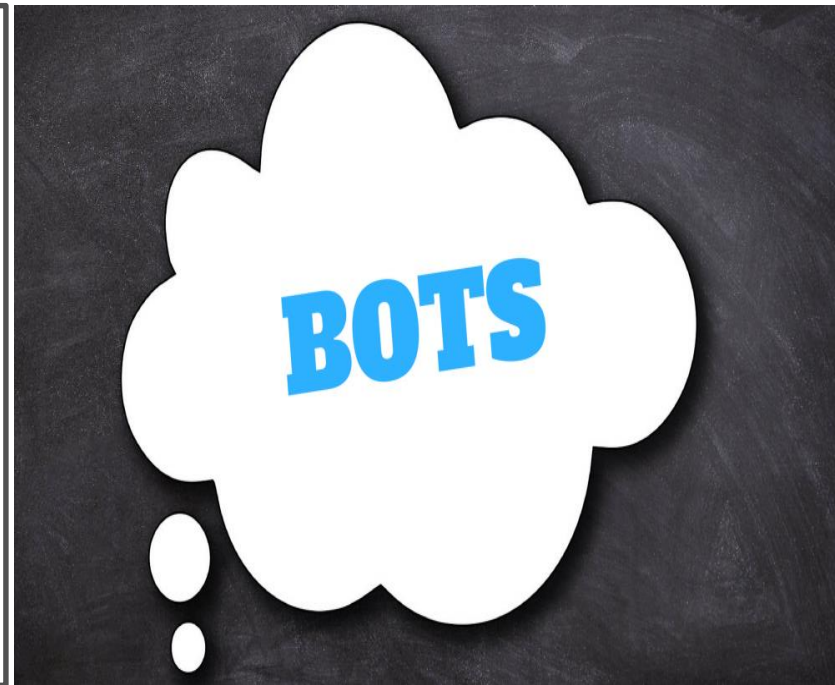
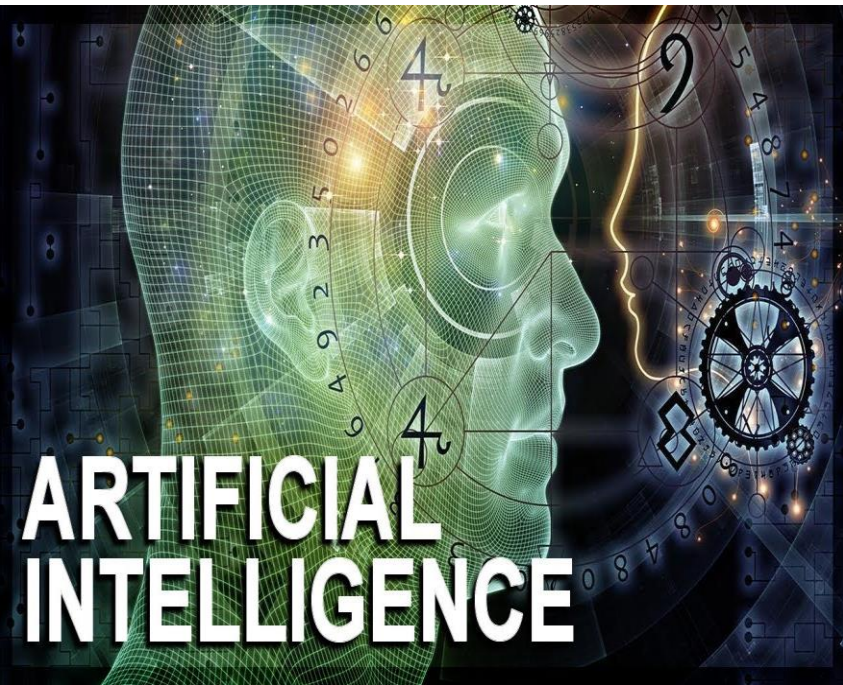
”

BRAD SMITH



Our AI ethics values



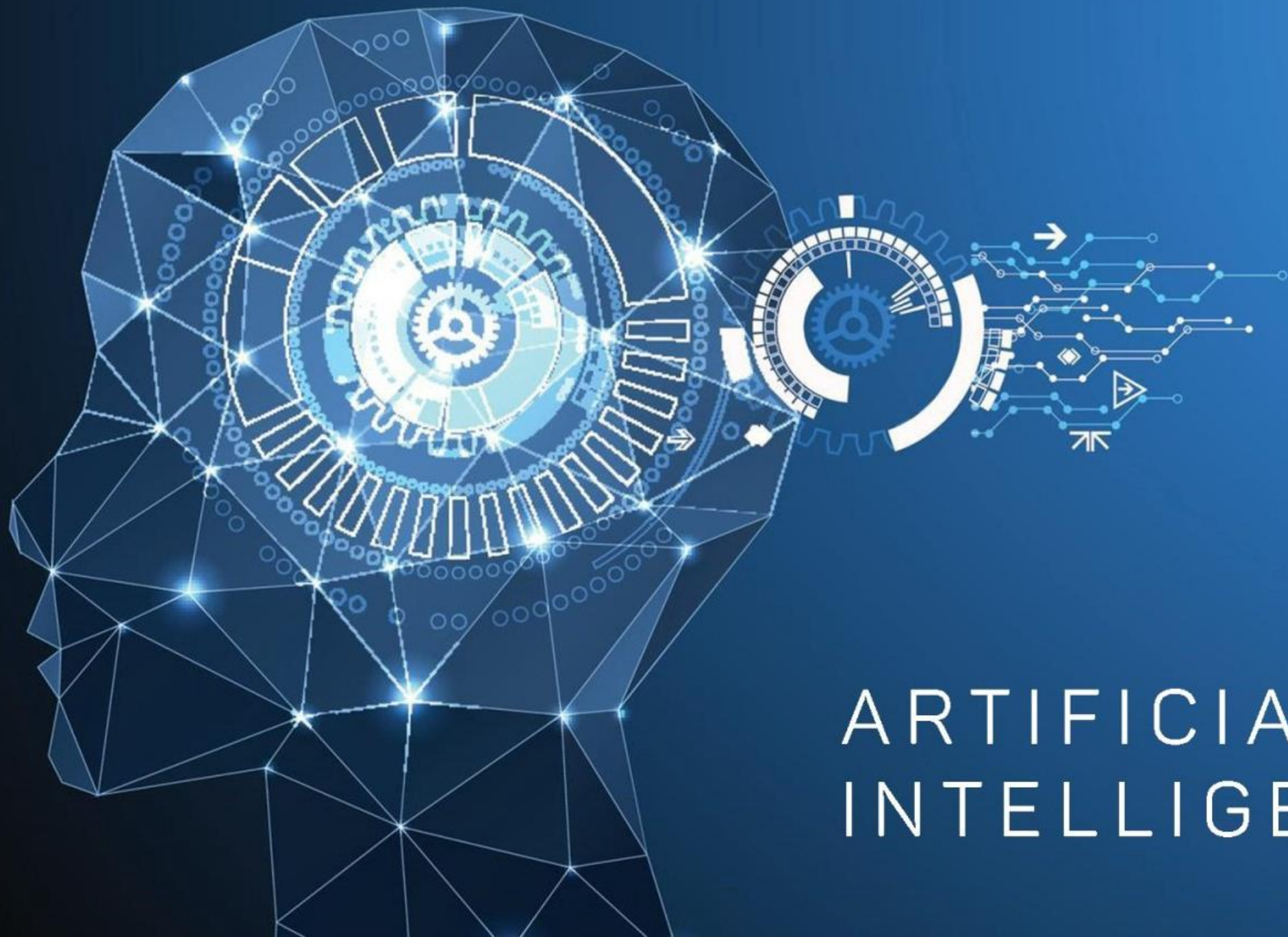




GISEC

INFORMATION SECURITY EXPO & CONFERENCE
معرض ومؤتمر أمن المعلومات





ARTIFICIAL
INTELLIGENCE



-	30434 × 10 = 304340
■	801 × 50 = 40050
	17 × 200 = 3400
	6 × 400 = 2400
	3 × 800 = 2400
	1 × 1600 = 1600
	42 × 100 = 4200
	40 × 200 = 8000
	33 × 500 = 16500
	43 × 700 = 30100
	48 × 1000 = 48000
	47 × 2000 = 94000
	89 × 5000 = 445000

999990

Level: 201

AI is Human Intelligence

Vision



Speech



Language



Reasoning



Understanding



Interacting



Customized language understanding **Text-to-speech**
Content moderation **Spell**
Speech translation check
Custom image classification
Speaker recognition Entity linking
Sentiment analysis, & augmentation
key phrase extraction **Image tagging**
Custom Object detection Text translation Intend
voice **OCR handwriting** analysis
Emotion detection
Video insights **recognition** Custom translation
Face Custom speech Assisted text moderation
identification Speech transcription

AI



Vision



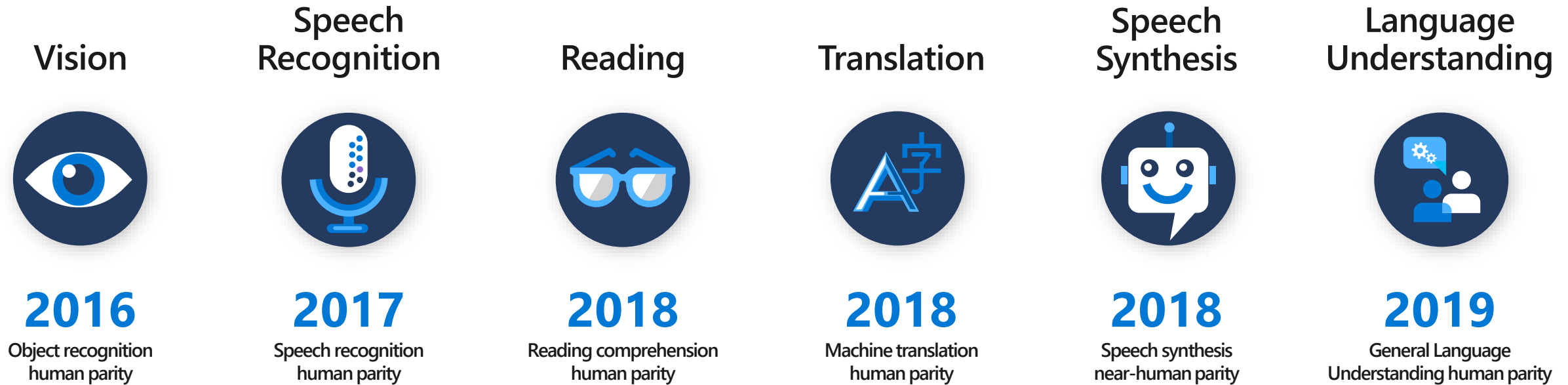
Speech



Language

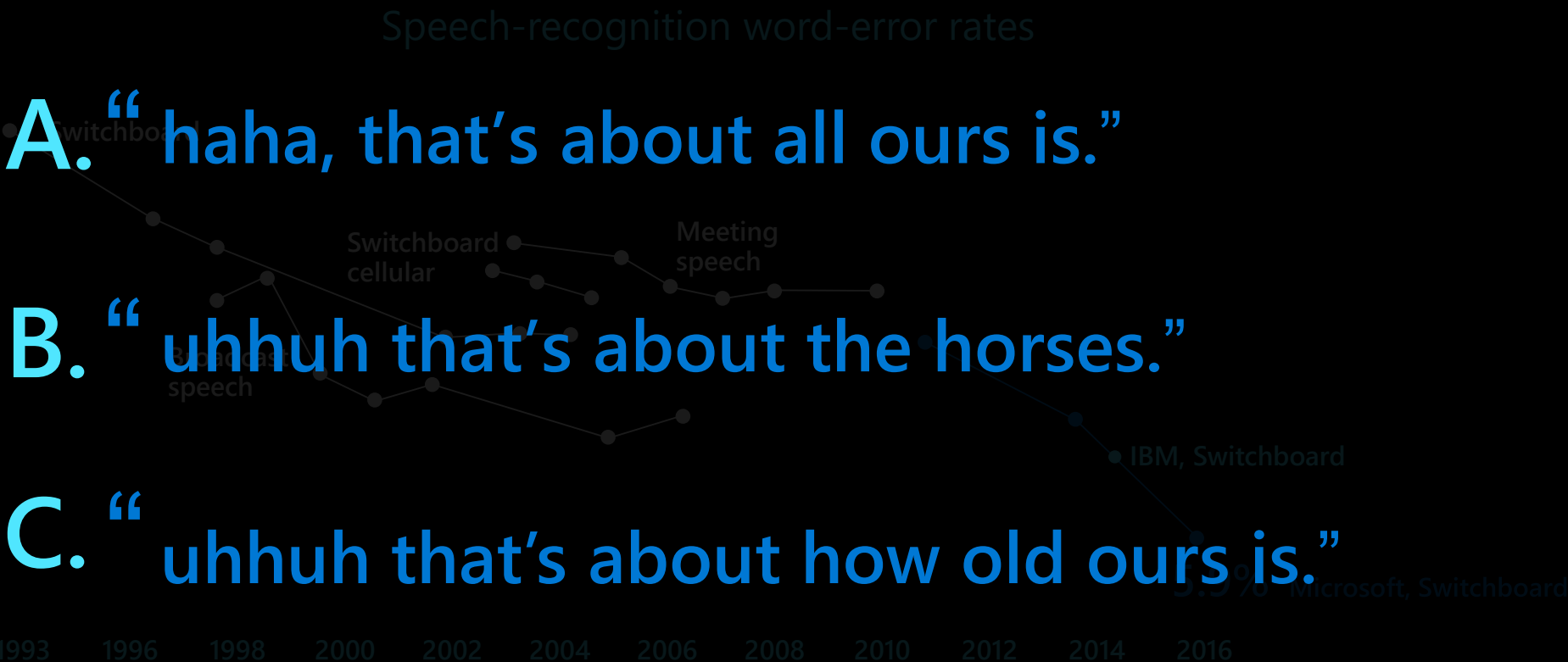
Advancements in AI

Advancements in AI are different than other technologies because of the **pace of innovation**, and its **proximity to human** intelligence - impacting us at a personal and societal level.



Speech recognition human parity

What does she say?



Sources: Microsoft: research papers





8449
Border Force

Integrated Situational Awareness

The screenshot displays the Microsoft Aware Solution interface. At the top is a navigation bar with icons for Alerts, Events, Search, Video Management, Configuration, Reports, and Settings. The left sidebar, titled 'Alerts', lists several incidents: #245 911 ARREST, #244 VIDEO ANALYTICS PERSON OF INTEREST, #243 911 VEHICLE PURSUIT, #242 VIDEO ANALYTICS SPEEDING VEHICLE, and #241 SOCIAL MEDIA TWITTER POST. The main area features a satellite map of a city with several camera icons. Below the map is a 'CAMERA' tab, which is highlighted with a red box. This tab displays three video feeds from different camera locations: 'South Capital Street & M Street SW', 'South Capital Street & L Street SW', and 'Half Street & L Street SW'. Each video feed shows a street scene with cars and buildings. The bottom right corner of the interface shows the incident ID 'ORIGINAL INCIDENT 77441' and the title '#237 911 AGGRAVATED ASSAULT'.

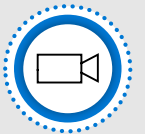
Alert details

Alert details are displayed in the alert details panel



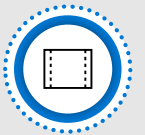
Visualization

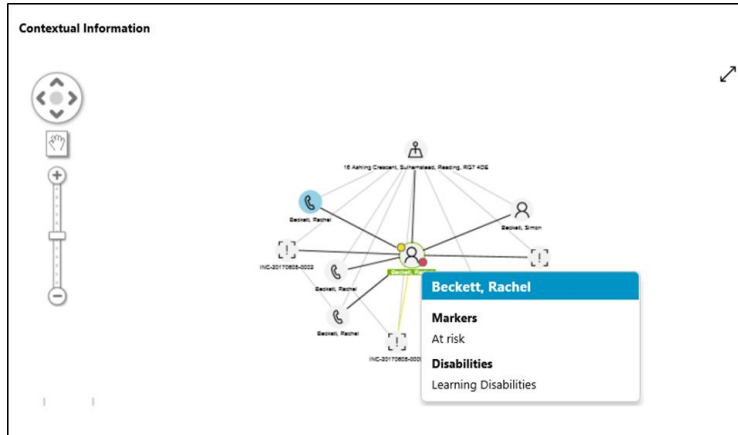
Mapping shows location of cameras, sensors, emergency vehicles relevant to the incident location



Video panel

Cameras in the vicinity of an incident will automatically show, or rewind to show, pictures before incident





Jessica went to sit in her rocking chair. Today was her birthday and she was turning 80. Her granddaughter Annie was coming over in the afternoon and Jessica was very excited to see her. Her daughter Melanie and Melanie's husband Josh were coming as well. Jessica had ...

Q1 : Who had a birthday?
A1 : Jessica
R1 : Jessica went to sit in her rocking chair. Today was her birthday and she was turning 80.

Q2 : How old would she be?
A2 : 80
R2 : she was turning 80

Q3 : Did she plan to have any visitors?
A3 : Yes
R3 : Her granddaughter Annie was coming over

Q4 : How many?
A4 : Three
R4 : Her granddaughter Annie was coming over in the afternoon and Jessica was very excited to see her. Her daughter Melanie and Melanie's husband Josh were coming as well.

Q5 : Who?
A5 : Annie, Melanie, and Josh
R5 : Her granddaughter Annie was coming over in the afternoon and Jessica was very excited to see her. Her daughter Melanie and Melanie's husband Josh were coming as well.

A conversation from the CoQA dataset. Each turn contains a question (Q_i), an answer (A_i), and a rationale (R_i) that supports the answer.



Bringing AI to Public Contact





National
Enabling
Programmes



Microsoft Teams



Audio Evidence

30/03/2017 11:02 - HoloLens-1796D



12:18

Video Evidence

30/03/2017 11:02 - HoloLens-1796D



Capture object

The object has been captured.
Please select an option.

Confirm

Redo

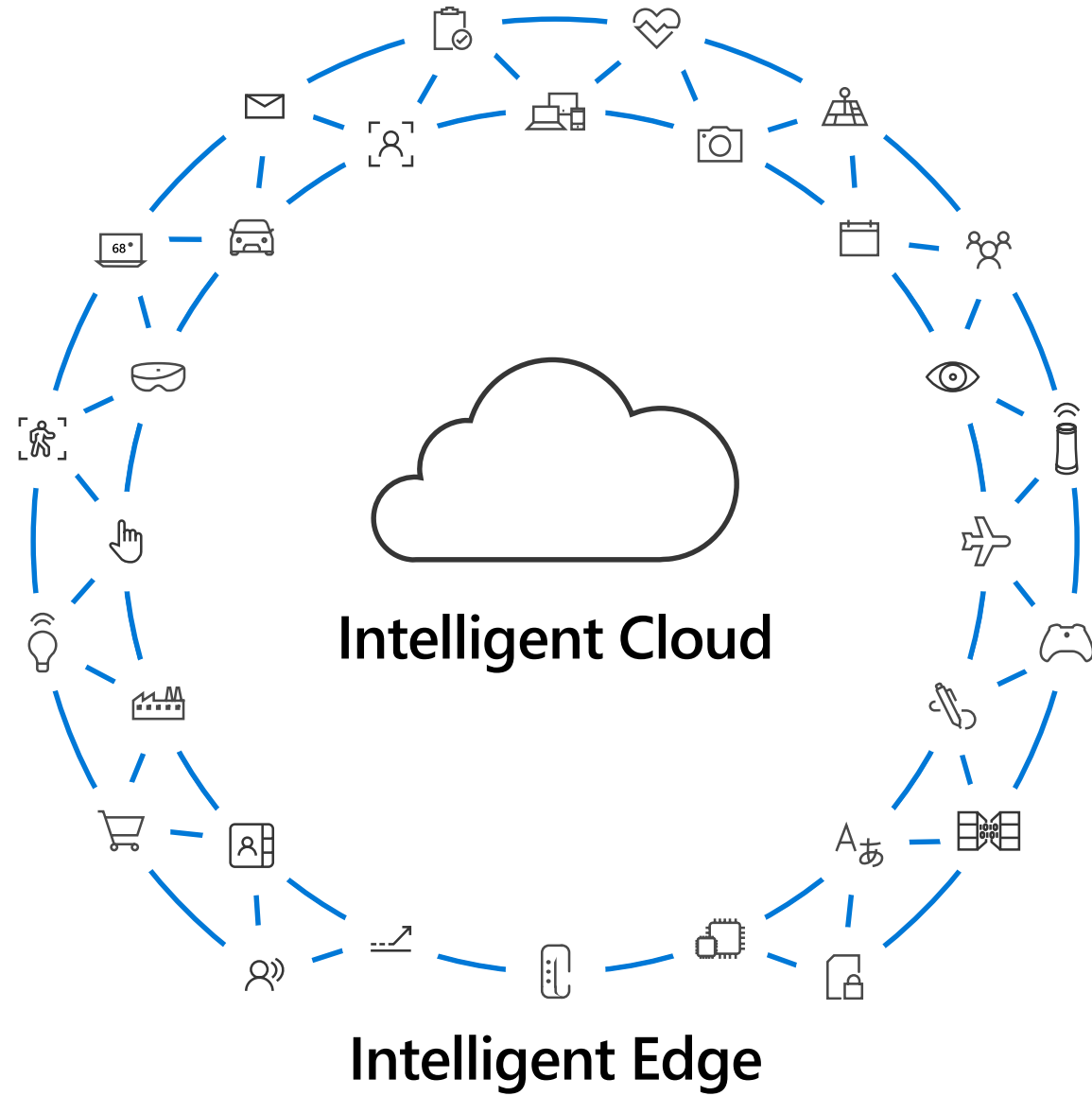
3

2

1

Access to Information, at the right time, everywhere in the right context....





Waves of Innovation

Cloud

Globally available, unlimited compute resources

IoT

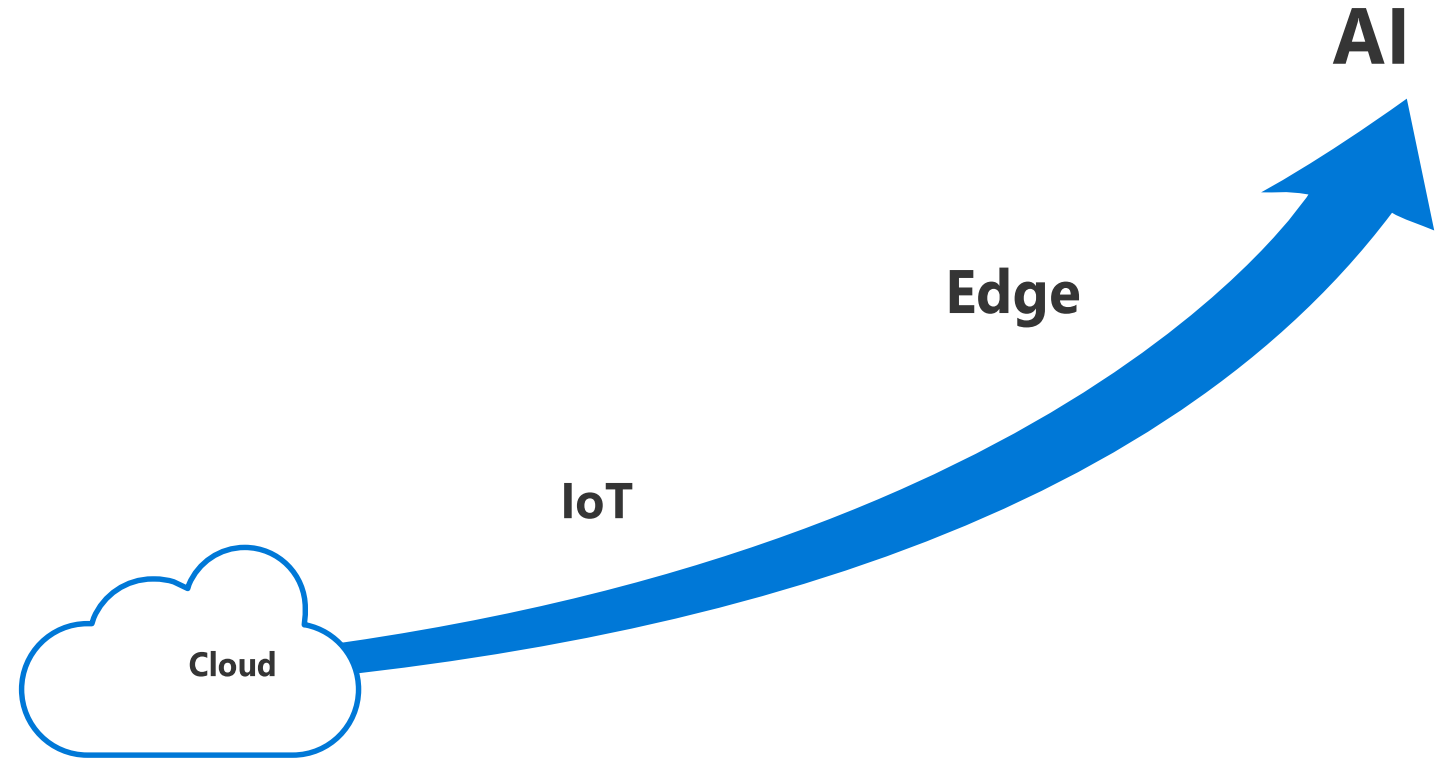
Harnessing signals from sensors and devices, managed centrally by the cloud

Edge

Intelligence offloaded from the cloud to IoT devices

AI

Breakthrough intelligence capabilities, in the cloud and on the edge





Our principles of trust



Security



Privacy



Transparency

 <https://www.microsoft.com/en-us/trust-center>



Disaster Response – Azure Stack



“Our estate is complicated”

“We have difficult security requirements”

“Security won't let us do it”

“The business doesn't know what it wants”

“We have no budget”

“We aren't ready for that technology yet”



You have to draw the line somewhere

“As a culture, we are moving from a group of people who know it all to a group of people who want to learn it all.”

Satya Nadella



Two mindsets





From: know-it-all

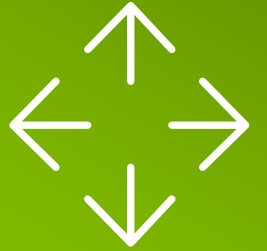
Inspection

Fear

Insular

Hero

Individual



To: learn-it-all

Insights

Brave

External

Team

One Organisation

STAY CONNECTED



Twitter

@BAPCOEvent

Email

Jimmy.cockerton@microsoft.com



LinkedIn Page

BAPCO Annual Event

LinkedIn Group

BAPCO Annual Conference and Exhibition



10 - 11 MARCH 2020
RICOH ARENA, COVENTRY
BAPCO-SHOW.CO.UK