Graeme Chapman

Health and Life Sciences Industry Solutions Executive

grachap@microsoft.com

Industry Trends

TREND ONE

We spend a lot of money taking care of people once they are sick

TREND TWO

Most money in healthcare is spent treating a small number of people who are very sick

TREND THREE

Changing demographics are changing healthcare needs

TREND FOUR

Dramatic rise of chronic disease

TREND FIVE

Shortage of clinicians and caregivers

TREND SIX

Price of self-inflicted health conditions

TREND SEVEN

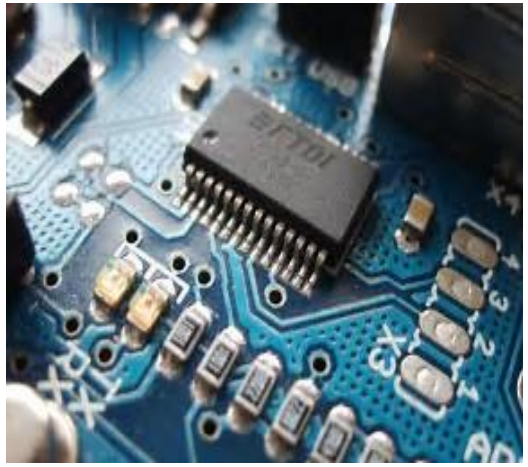
Inconsistent quality comes with a high price

The world will be **short 13 million** healthcare workers by 2035.

Disruptive Revolutions

Steam
1770’s

Electricity
1870’s

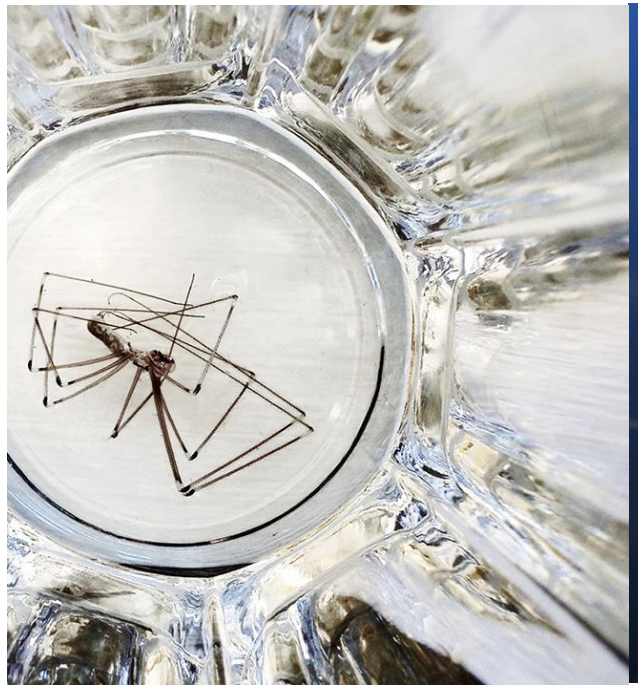


Electronics
1970’s

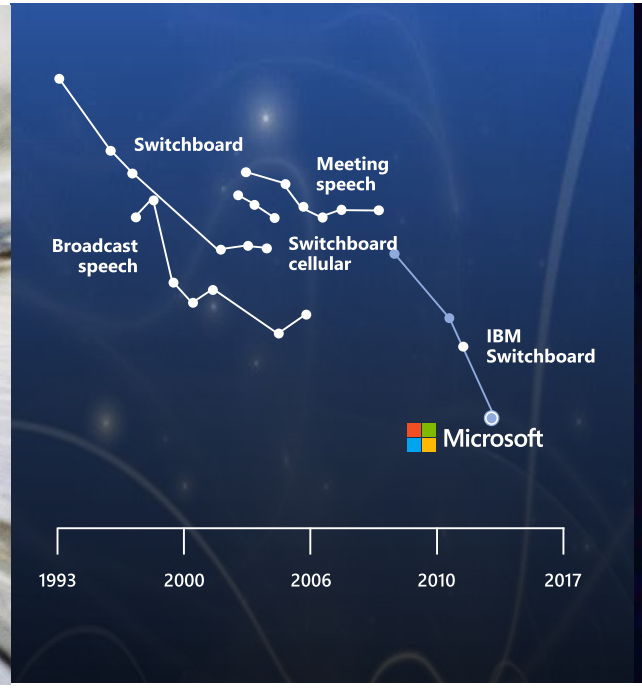
AI
2015+

Deep Learning Advancements

Object Recognition
Human Parity
2016



Speech Recognition
Human Parity
2017

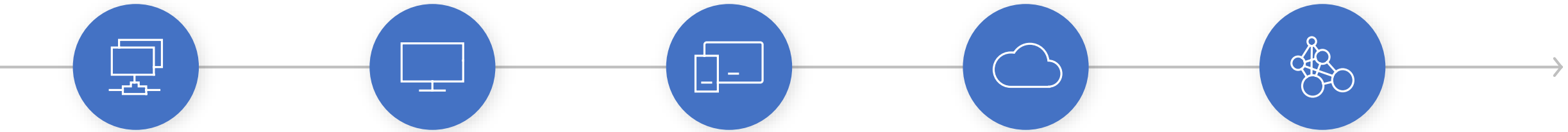


Machine Reading
Comprehension
Human Parity
Jan 2018

Machine Translation
Human Parity
March 2018

Public Cloud Credentials

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

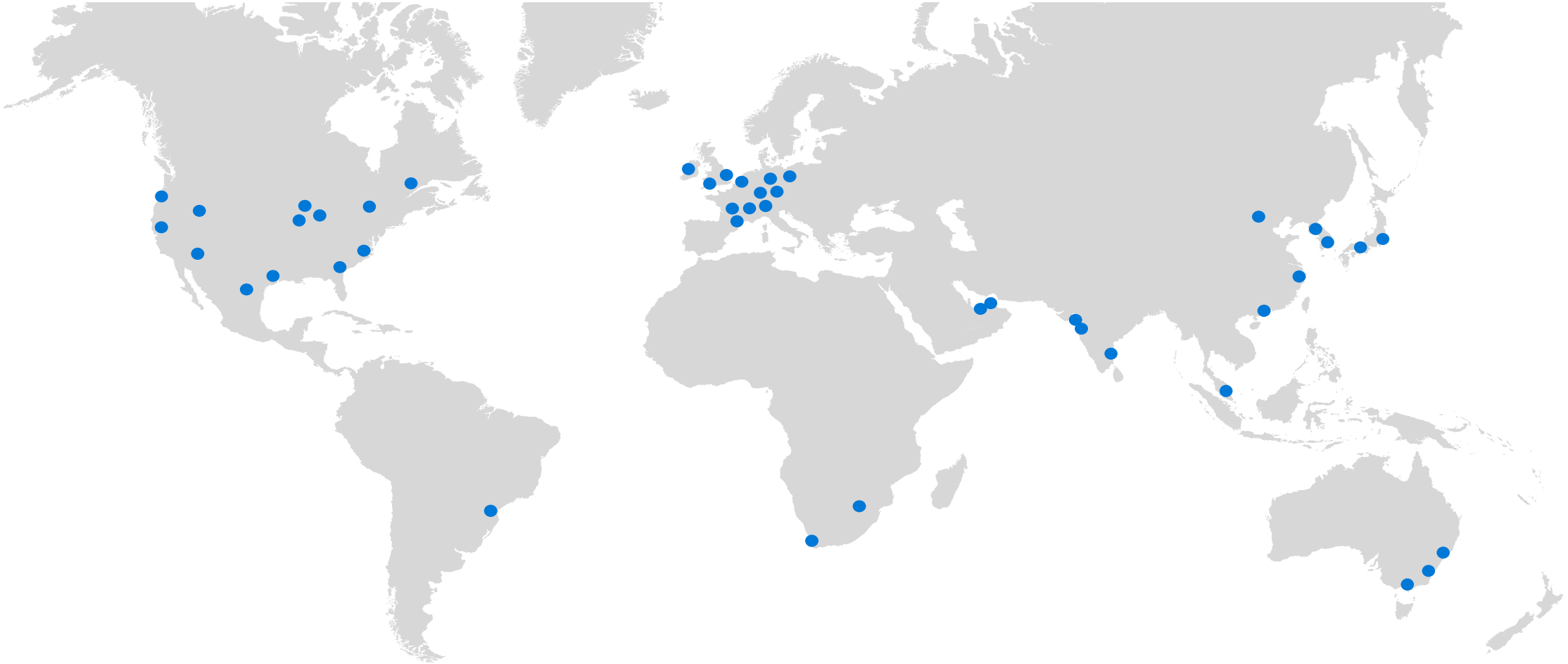
many computers per many users

2020 and beyond

Ubiquity era

Millions of computers per many users

Microsoft Infrastructure Investments
54 Regions Worldwide



We build our Trusted Cloud on four foundational principles

Security

Privacy

Compliance

Transparency

Referenceability

Microsoft Research

Precision medicine

Using artificial intelligence and machine reading in cloud-based decision-support systems to analyze medical images, review patient data and recommend precise diagnoses and treatments.

Genomics

Applying computer science tools and techniques to accelerate and refine technologies such as genome sequencing and gene editing.

Computational biology

Researching how computation occurs in biology and developing computational techniques for application to problems in biology such as identifying disease mechanisms and viable drug targets.

Clinical-grade wearables

Creating and testing wearable technologies to monitor vital signs, improve personal health and issue calls to action.

Public health

Designing and applying new technologies to address medical and health challenges that impact populations at scale such as emerging infectious diseases and compliance with medication.

Accessibility

Innovating technologies that allow people with physical and cognitive impairments to fully engage with the digital world.

Crowdsourced health

Collecting and analyzing search and social media data to advance medicine, provide insights and improve wellness across user populations.

Computational psychology

Developing effective, emotionally intelligent and personalized interventions to help patients stay healthy through positive behaviors such as diet, exercise and social connections.

Proteomics

Adaptive Biotechnologies