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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.

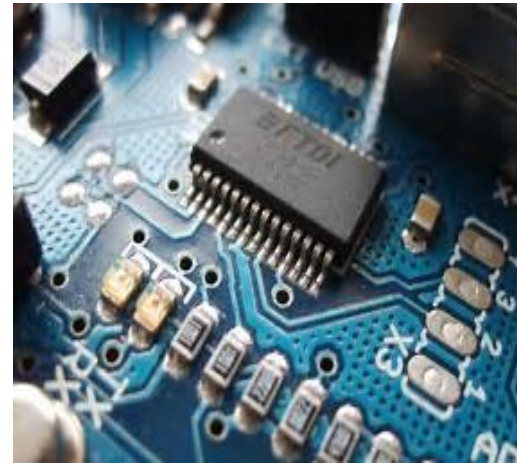
Disruptive Revolutions



Steam
1770's



Electricity
1870's



Electronics
1970's



AI
2015+

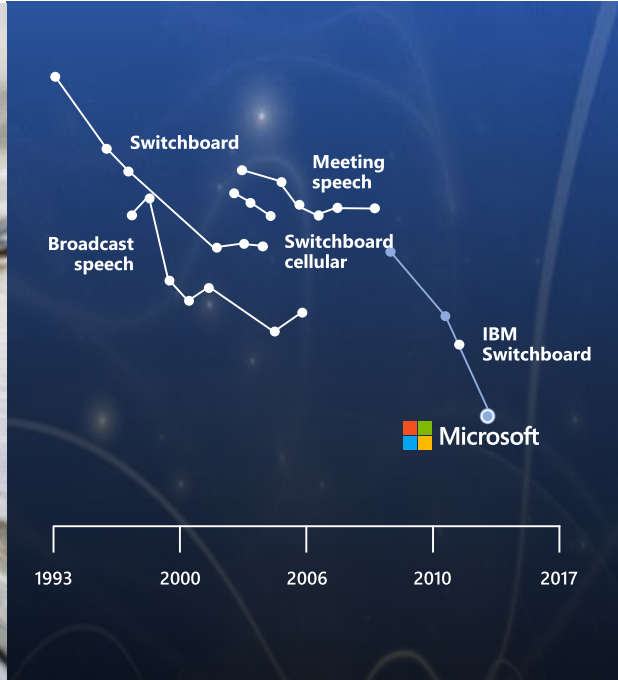
Deep Learning Advancements

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

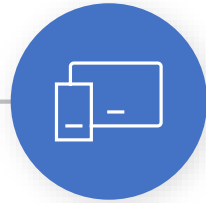
One computer
per many users



1980s

Personal computer
era

One computer
per user



2000s

Mobility era

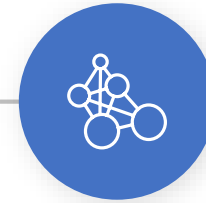
Several computers per
user



2010s

Cloud era

many computers per
many users



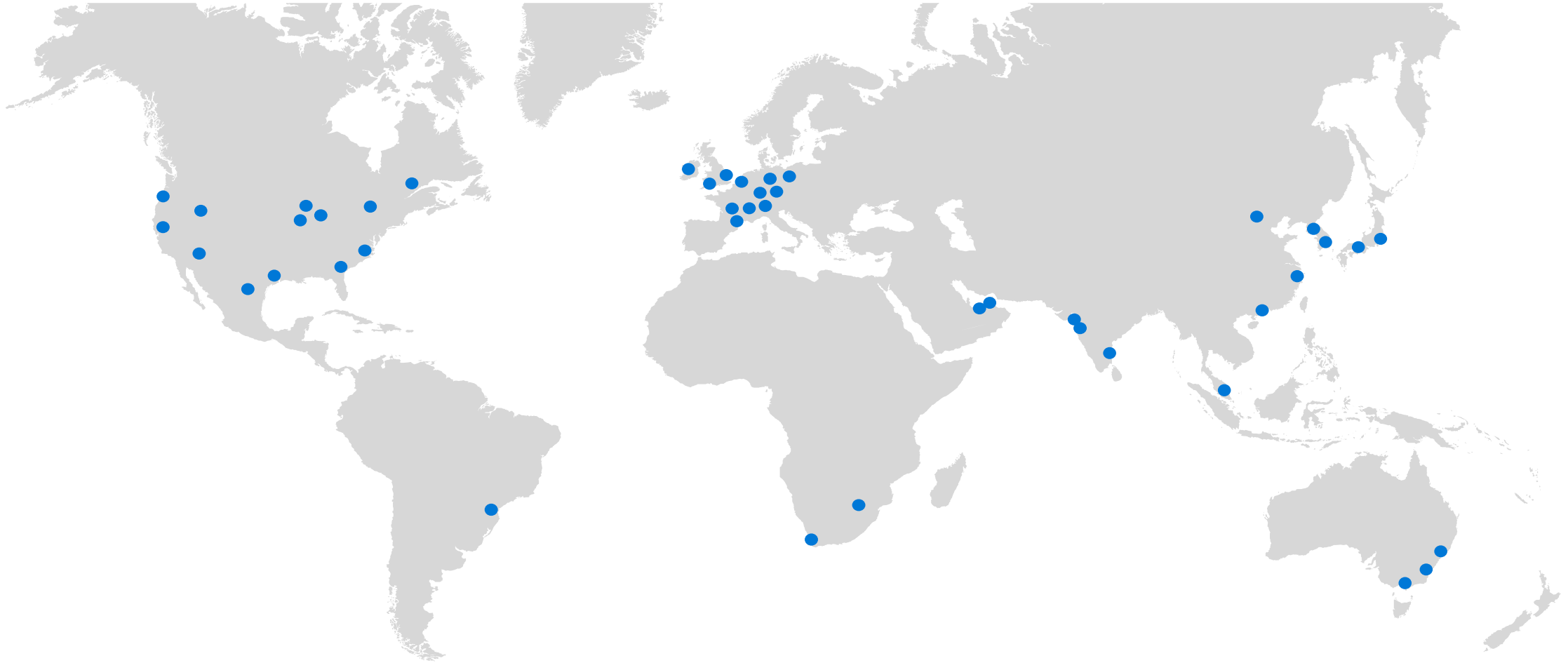
2020 and beyond

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

A photograph of two women in a laboratory or office setting, looking intently at a computer screen. The woman on the left has dark hair, and the woman on the right has blonde hair tied back. They are both wearing white lab coats. The background is slightly blurred, showing what appears to be a laboratory environment with various pieces of equipment.

Precision medicine

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

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.

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.

Crowdsourced health

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

Genomics

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

Clinical-grade wearables

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

Accessibility

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

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

Learning to decode the immune system to diagnose disease



Blood sample

Our immune system is a very sophisticated diagnostic machine



Immunosequencing

We read every immune cell that stores that diagnostic information



Machine learning

We generate a map of the immune system by matching trillions of T cells to the diseases they recognize



Empowered care

This map of the immune system will be used by doctors and researchers to improve disease diagnosis

