



Digital Impact

How Technology is Accelerating Global Problem Solving



Welcome

“As we deliver innovation to our customers, and focus on growth, it is imperative for us to consider how all that we do makes an impact on the world around us.

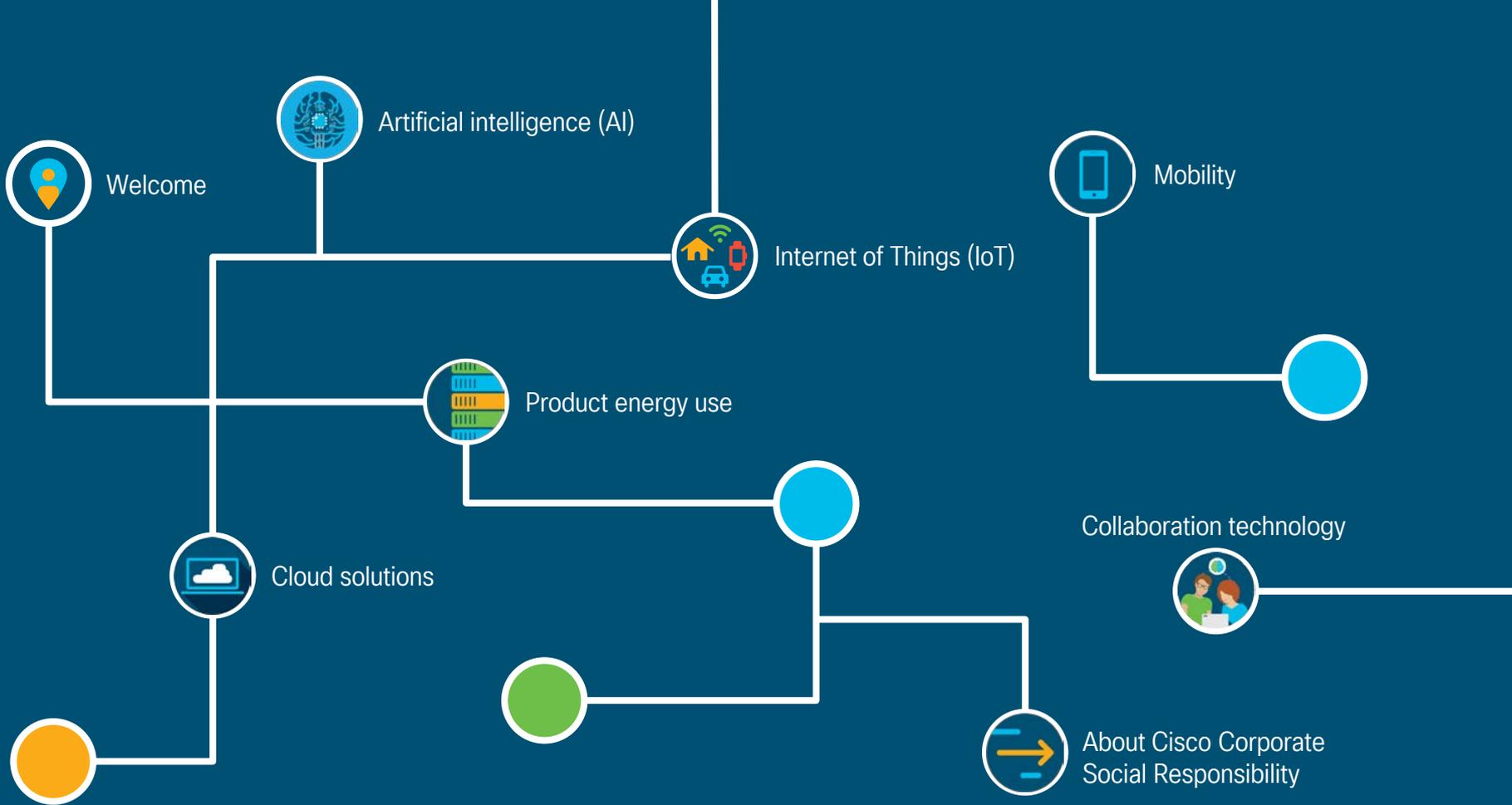
– Chuck Robbins, CEO, Cisco



500 billion devices and things will be connected to the internet by 2030.

58% of the population will be using the internet and there will be 3.5 networked devices and connections per person, by 2021¹.

Let's take a look at how these connections are enabling us to create solutions that change our world for the better.



Click on [the icons](#) to discover how technology is [positively impacting society and the planet](#), turning [opportunity into action](#).



AI-enabled chatbots can improve the fight against global hunger.



1 out of every 9 people worldwide suffers from chronic hunger

70%

greater demand for food than there is today, by 2050²

World Food Programme's [Mobile Vulnerability Analysis and Mapping \(mVAM\)](#) tool is piloting AI-enabled chatbots to enhance data collection, reach beneficiaries in new ways, and become more effective as a global hunger organization.

3M

tons of food moved per year by World Food Programme

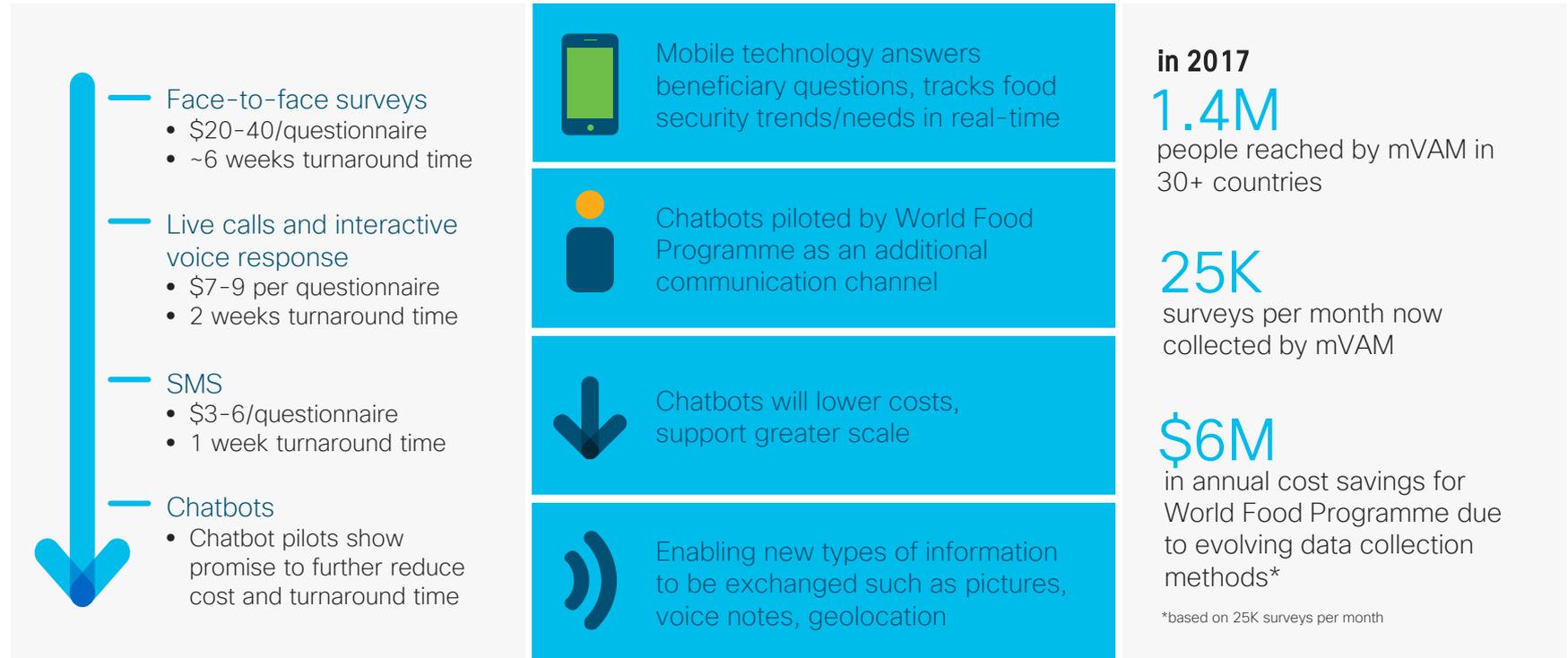
80M

people in around 80 countries helped by World Food Programme every year





Chatbots enable high-frequency data collection that supports humanitarian decision making.



Cloud-controlled networking connects the unconnected when disaster strikes.



65.6M

people have been forcibly displaced worldwide^{3*}

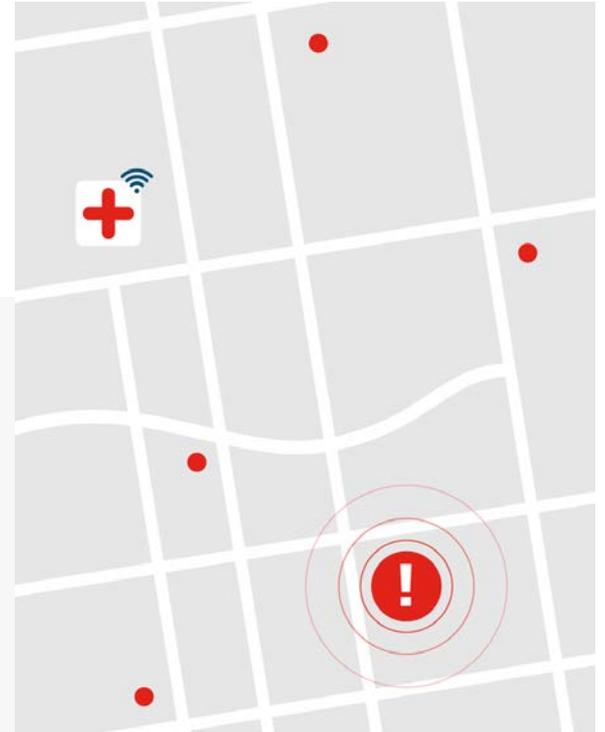
20

people every minute, or one every three seconds, are driven from their homes^{4*}

Cisco Meraki [cloud-controlled networking](#) is a critical lifeline for humanitarian and relief organizations, and affected populations, when communications are disrupted by a crisis.

3.4M

Puerto Rico residents without electricity following Hurricane Maria and four months later, 30% of the island still lacked power



*as a result of persecution, conflict, violence, or human rights violations.

Cloud-based dashboards enable complete network visibility that can be managed remotely.



Cisco Tactical Operations team (TacOps), in partnership with NetHope, reestablish communications following Hurricane Maria



Provide emergency connectivity, enable coordination and management of all aid activities



Deploy Meraki's state-of-the-art, cloud-controlled wireless, switching, security, and communications technology



Meraki technology helps manage and optimize the limited bandwidth that often results from disasters

250K

residents connected enabling them to contact loved ones, access services and use the Internet to resume their daily lives



~100

sites connected



Connectivity vital to government, first responders, schools and nonprofits looking to gather and report data critical to relief efforts

Digital data collection is a critical resource during humanitarian crises.



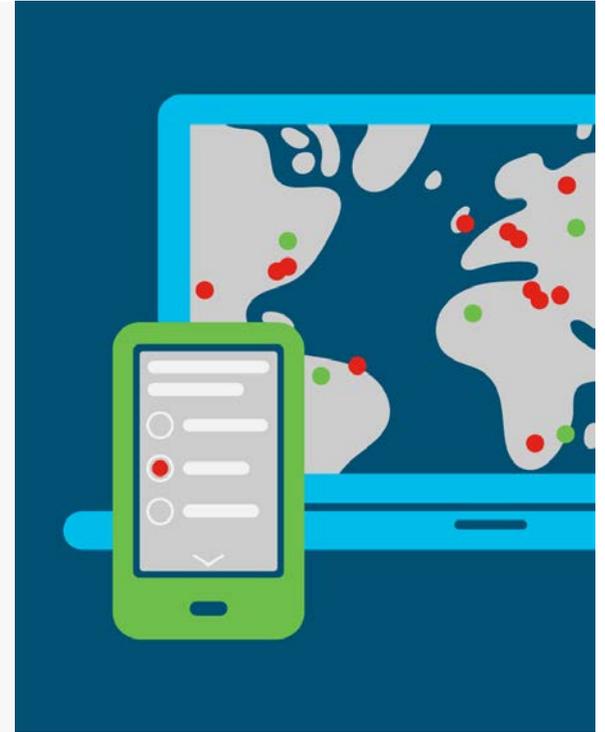
700,000+

people died as a result of disasters between 2005 and 2014⁵



Manual data collection can take months to code and analyze, causing missed opportunities to save lives and deliver crisis relief

KoBoToolbox's [mobile, real-time data collection](#) platform is a tool of choice for tens of thousands of humanitarian workers and development practitioners.



Secure, reliable data collection with rapid results improves humanitarian aid and saves lives.



KoboToolbox, a free, open source suite of tools for field data collection, analysis, and visualization in humanitarian emergencies



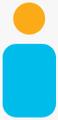
Combines process of collecting and recording data for secure, quality data collection with rapid results



Reduces errors, brings together qualitative, quantitative and multimedia data



Data can be collected offline or online on a variety of devices

 71K+
users

215K+
projects managed



Widely used
by UN and
international
humanitarian
agencies

16M+
data points collected

 130
countries

13M+
survey submissions
since 2014

As ICT energy consumption is projected to grow, an energy efficient network is essential to advancing environmentally sustainable growth in a digital world.



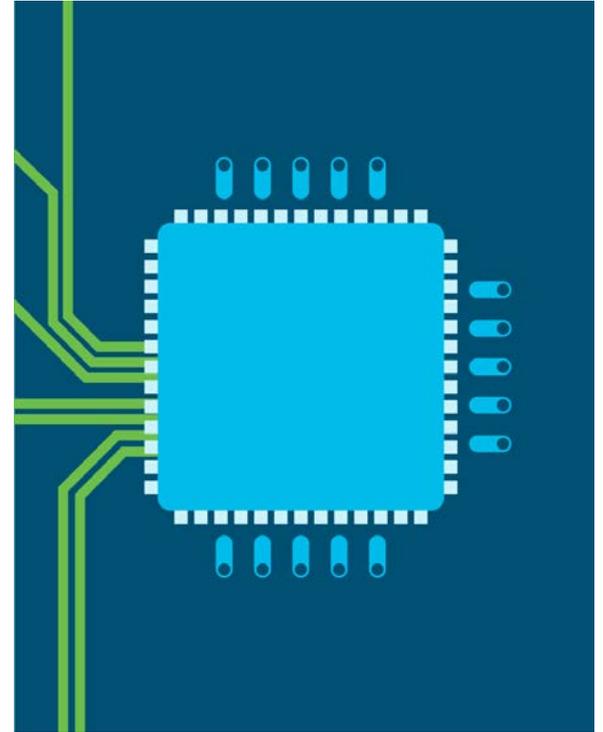
↑ 4.6B

projected global internet users by 2021, 58% of global population⁶

27B+

projected global networked devices/connections by 2021 (3.5 per capita)⁷

Cisco's world-class **product energy efficiency** reduces global energy demand, lowers greenhouse gas emissions, and helps customers save on energy costs.



Scaling energy use of products and embedding efficiency in design will reduce the energy demands of the network.



Energy scalability provides energy-efficiency for different kinds of traffic, demand, customer usage, and configuration



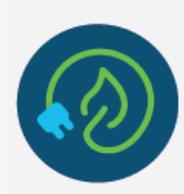
Data interconnects between products consume a significant portion of total system power



Significant power can be saved by using liquid cooling



Innovative facility design avoiding step-down transformers and integrating product cooling provides substantial energy savings



Total available power increase of 2.5 times while increasing total system power efficiency by 47% over the same period

77% latest-platform use-phase power efficiency as measured from plug to points-of-load (FY16)*



93% use-phase router and switch life-cycle emissions (as percent of total emissions)

*Next platform release scheduled for FY18

Collaboration technology creates a virtual work experience that reduces the need for physical travel.



14%

of global greenhouse gas emissions come from the transportation sector⁸

In a typical organization, air travel is proportional to head count.
More people = more travel.

Cisco's [remote collaboration technologies](#) reduce business air travel, employee commuting, greenhouse gas emissions, and operating expenses, while increasing employee productivity and work-life balance.

1500+

Cisco Telepresence rooms worldwide

25K+

employees use Cisco Virtual Office



Leading-edge networking technology enables collaboration on any device, from many locations.



Cisco Telepresence provides a virtual meeting experience, reducing travel for face-to-face meetings



Smaller video conferencing units enable collaboration in flexible-use rooms

~11%

absolute reduction in Cisco business air travel (2007-2017) while revenue and headcount each increased >40%



Cisco Jabber combines IM, voice and video calls, voice messaging, desktop sharing, conferencing, and presence



Cisco WebEx Board users can present, video or audio conference, and collaborate with virtual teams

~30%

annual global ISO 14001 environmental management system audits performed via remote collaboration



Cisco OfficeExtend and Cisco Virtual Office provide a highly secure extension of the corporate network to employee homes

IoT enables smarter, digitized solutions that uncover efficiencies, optimize resource use and allow business to grow in a more sustainable way.



84%

of existing IoT deployments can address the UN Sustainable Development Goals⁹

\$58M

amount that Barcelona city saved per year through IoT enabled water management, \$37M from connected street-lighting¹⁰

Cisco's [Internet of Things \(IoT\)](#) solutions enable breakthrough technologies, products, and services that drive environmental efficiencies, support a circular economy and solve critical social and environmental challenges.



IoT solutions increase energy efficiency, improve resource management, and solve threats to endangered species.



Cisco Partner Energy Management: IoT energy management utilize thousands of sensors to measure and manage energy consumption



15,492M

MWh saved in two IoT pilot projects at partner manufacturing facilities



Cisco Connected Conservation: Networked security systems track human movement in and around game reserves to reduce poaching



80%

reduction in water waste by an agriculture company that leveraged Cisco IoT Control Center



Cisco IoT Control Center: Real-time network intelligence enables ability to predict and prevent costly downtimes

96%

reduction in rhino poaching at a popular southern Africa game reserve since 2015, through Cisco's Connected Conservation solution

Source

¹ Cisco Visual Networking Index (VNI) – 2016–2021

² [World Resources Report 2013–2014: Creating a Sustainable Food Future](#), a collaboration of the World Resources Institute, the United Nations Development Programme, the United Nations Environment Programme, and the World Bank

^{3, 4} <http://www.unhcr.org/news/stories/2017/6/5941561f4/forced-displacement-worldwide-its-highest-decades.html>

⁵ <https://www.unisdr.org/we/inform/disaster-statistics>

^{6, 7} Cisco Visual Networking Index (VNI) – 2016–2021

⁸ [EPA Global Greenhouse Gas Emissions](#) (IPCC (2014))

⁹ World Economic Forum/IoT Analytics: IoT for Sustainable Development Project (<https://www.weforum.org/agenda/2018/01/effect-technology-sustainability-sdgs-internet-things-iot/>)

¹⁰ World Economic Forum (2014): [Are you ready for the Internet of Everything](#) (By John Chambers, Former Executive Chairman, Cisco)

