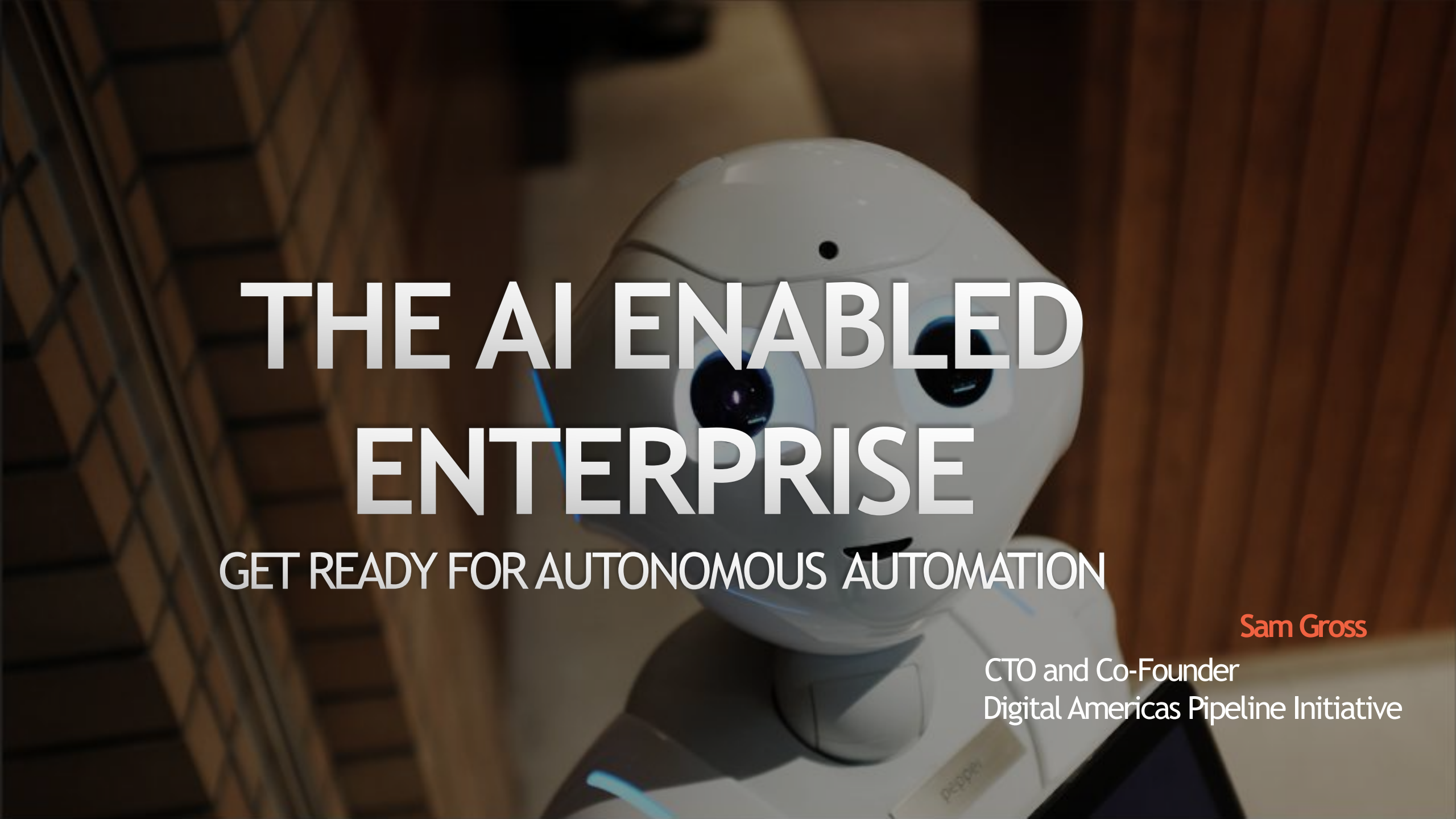


THE AI ENABLED ENTERPRISE

GET READY FOR AUTONOMOUS AUTOMATION

Sam Gross

CTO and Co-Founder
Digital Americas Pipeline Initiative

ABOUT ME

Sam Gross

- Digital America Pipeline Initiative
  - CTO and Co-Founder
    - Robotic Process Automation & Artificial Intelligence
- ChoiceWORX.ai
  - Founder & CEO
    - Apptinuum
    - Opstinuum
    - Robotinuum
- Chief Technology Officer
  - CompuCom
  - Unisys
  - Computer Sciences Corp (now DXC)
  - Siemens/ENTEX

@Sam_Gross

ARTIFICIAL INTELLIGENCE

The goal of AI is to develop machines that behave as though they were intelligent.

-- Prof. John McCarthy, 1955

John McCarthy, an American computer scientist pioneer and inventor, was known as the father of Artificial Intelligence (AI)

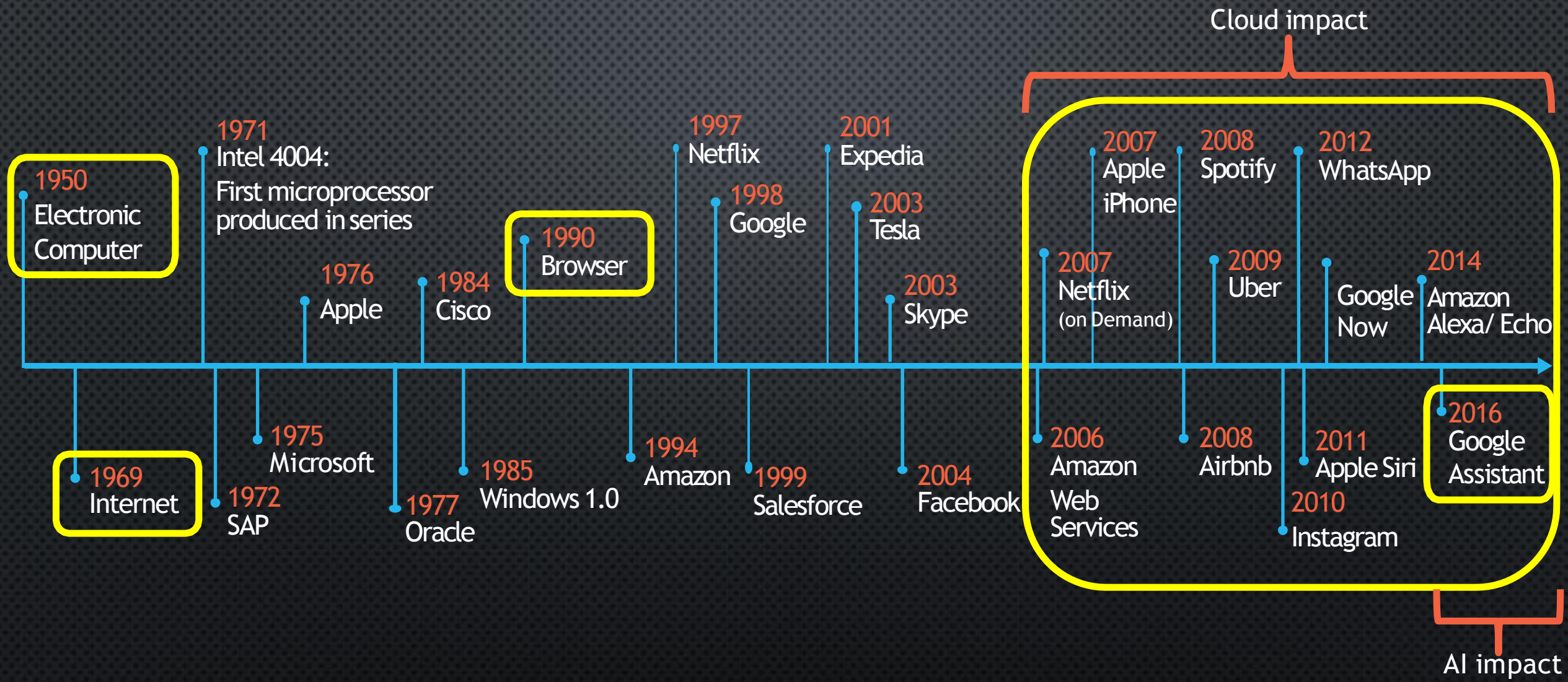
AI AND AUTOMATION
IT'S IMPACT WILL BE,
AS BIG AS THE COMPUTER!

AI AND AUTOMATION
IT'S IMPACT WILL BE,
AS BIG AS THE INTERNET!

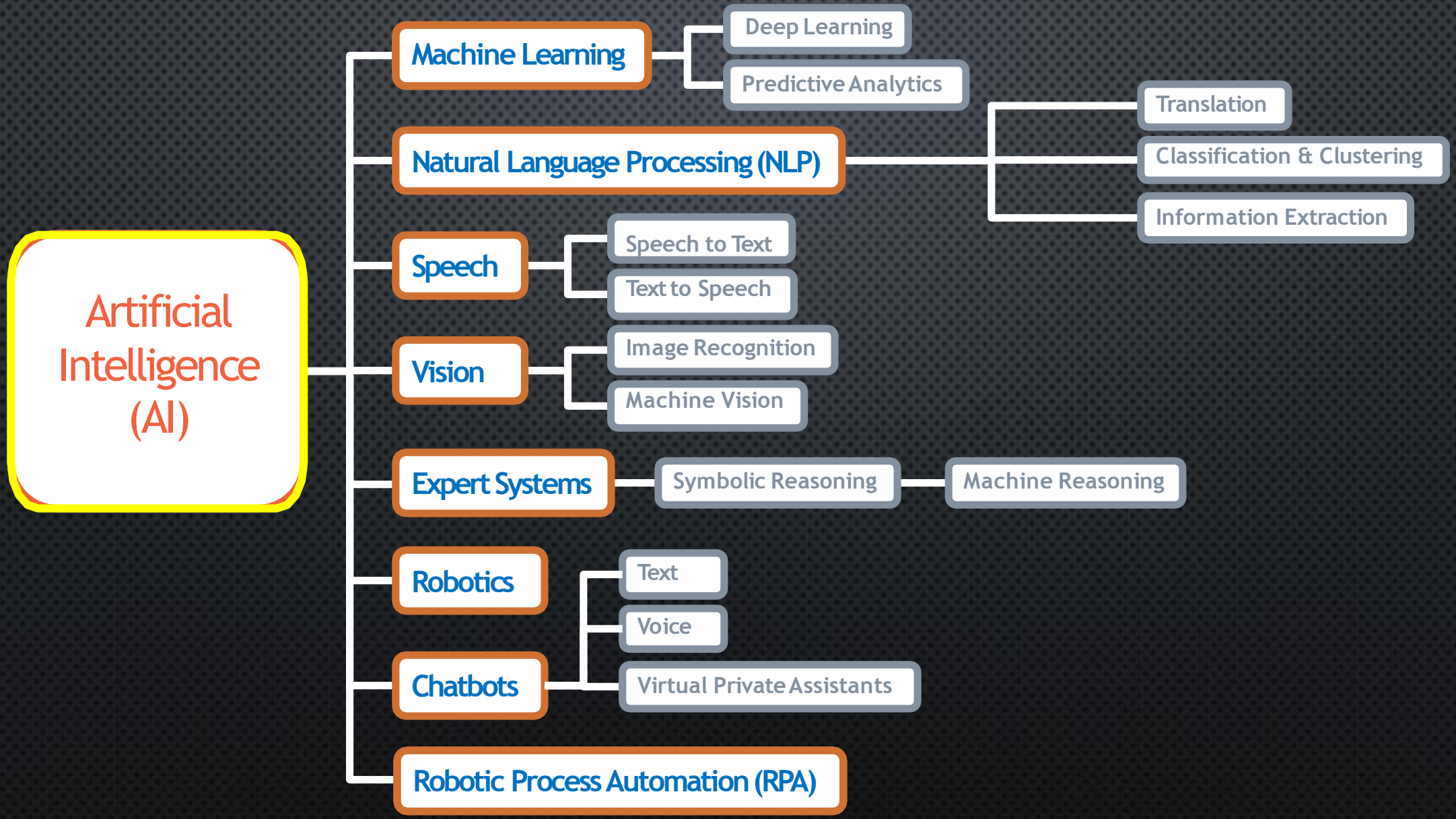
AI AND AUTOMATION
IT'S IMPACT WILL BE,
AS BIG AS THE BROWSER!

AI AND AUTOMATION
IT'S IMPACT WILL BE,
AS BIG AS THE CLOUD!

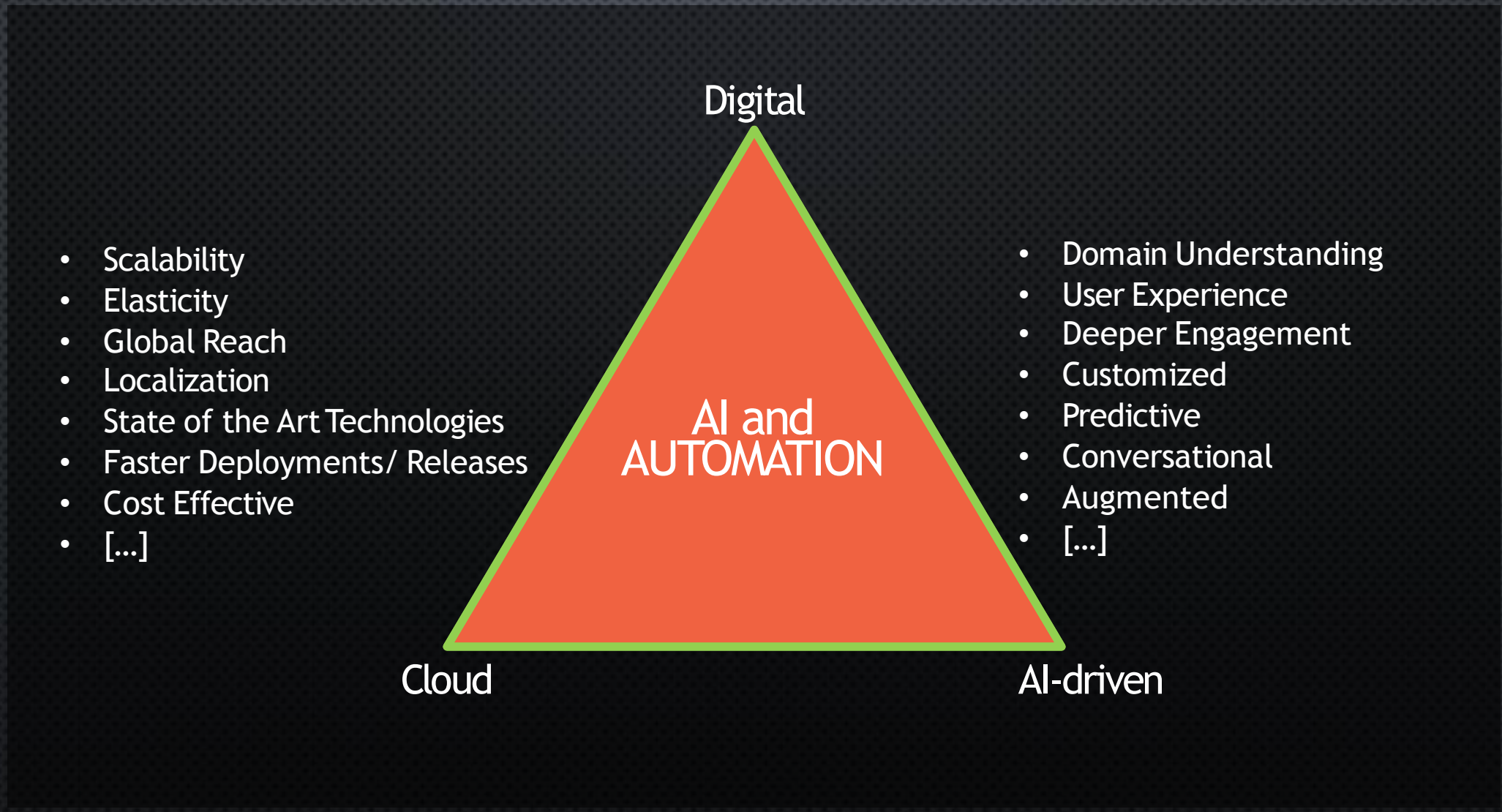
THE DIGITAL EVOLUTION



THE AI LANDSCAPE



THE AI AND AUTOMATION TRIANGLE



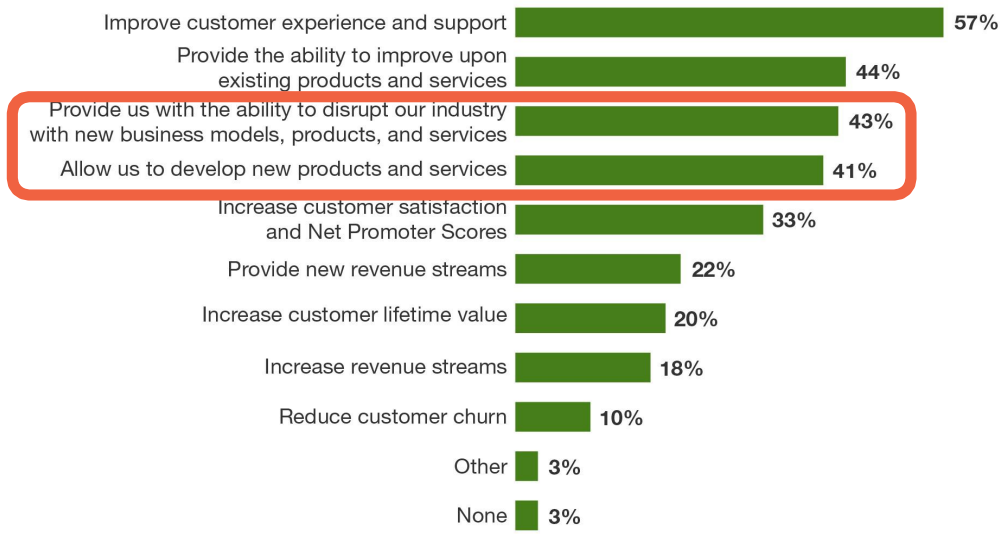
AI ENABLES NEW BUSINESS MODELS, PRODUCTS AND SERVICES

FORRESTER® RESEARCH

Enterprises Believe The Benefits Of AI Will Be To Improve Customer Experience And Support

Artificial Intelligence: What's Possible For Enterprises In 2017

"What are the biggest strategic/growth benefits AI will contribute to your organization?"
(Please select up to three)



Base: 598 business and technology professionals
Source: Forrester's Q2 2016 Global State Of Artificial Intelligence Online Survey

FORRESTER® RESEARCH

Forrester Expects More Organizations To Research And Implement AI Capabilities

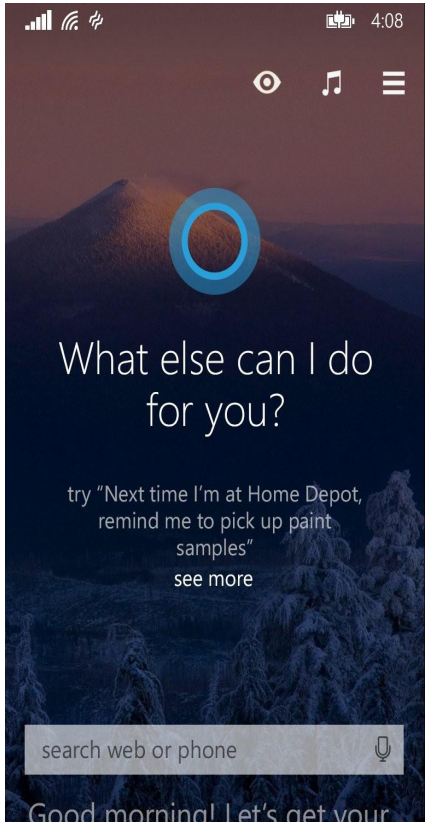
Artificial Intelligence: What's Possible For Enterprises In 2017

"Where does your organization spend most of its time with AI systems?"
(Please select up to three)

Base: 391 business and technology professionals
Note: "Don't know" responses were excluded from analysis.
Source: Forrester's Q2 2016 Global State Of Artificial Intelligence Online Survey

THIS IS PROBABLY WHAT YOU KNOW AS ARTIFICIAL INTELLIGENCE

Apple Siri

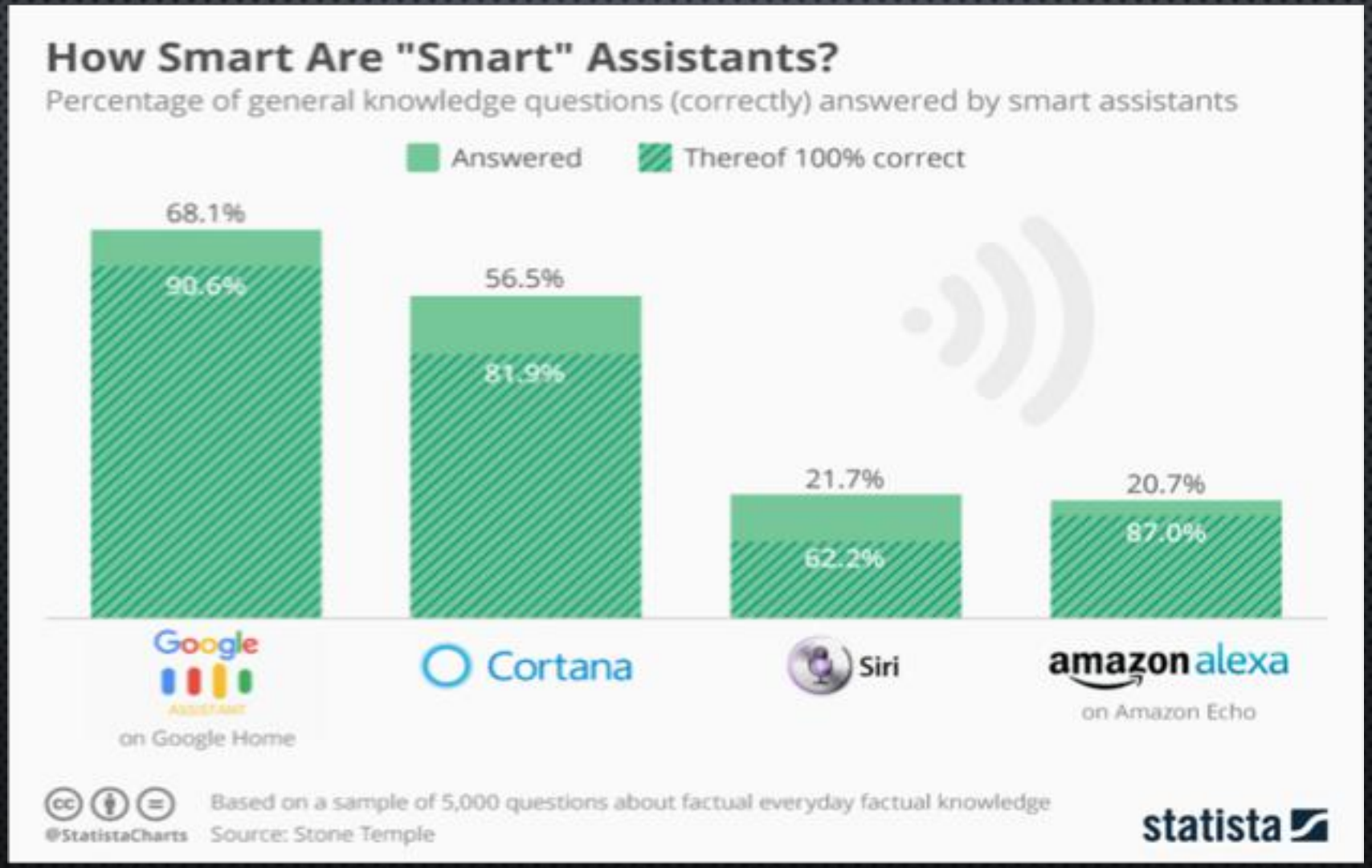


Microsoft Cortana

Google Now (Home)

Amazon Alexa (Echo)

VIRTUAL ASSISTANTS: THE REALITY



THE DIFFERENCE BETWEEN THE MARKETING AND THE SCIENCE

1. MACHINES DO NOT UNDERSTAND

Machines pattern match data against predefined patterns of understanding. The level of a machines understanding is equivalent to the size of the data pool. The more data that can be matched to something that we can understand, the more "understanding" a machine can have.

2. MACHINE LEARNING IS NOT EQUAL TO AI

AI research has been oscillating between several techniques. Whenever one technique does not do "the job completely" data scientists turn to another one. Human thinking patterns or decision patterns are composed of many techniques. Machine learning is only one component of a general AI, not the AI.

3. VIRTUAL ASSISTANTS DO NOT HAVE HUMAN LIKE BRAINS

Large neural networks have millions of neurons, brains have billions of neurons. Neural networks only simulate the electrical system in a brain. The layer based modelling approach required for deep learning networks is needed to simplify training, the brain has no such dependencies. Neural networks are about as far away from a brain in thinking power as a snail is from a jet plane in speed.

FORMS OF AI THAT ARE POSSIBLE TODAY.

1. SPEECH RECOGNITION AND NATURAL LANGUAGE PROCESSING AND GENERATION

Conversational systems, where the computer not only recognizes what the person is saying but can also engage in a two way (Duplex) dialogue.

2. PREDICTIONS USING MACHINE LEARNING AND MACHINE REASONING

"Next Best Action" leverages a variety of machine learning techniques to optimize recommendations and personalization.

3. IMAGE RECOGNITION IN COMBINATION WITH MACHINE LEARNING AND DEEP LEARNING

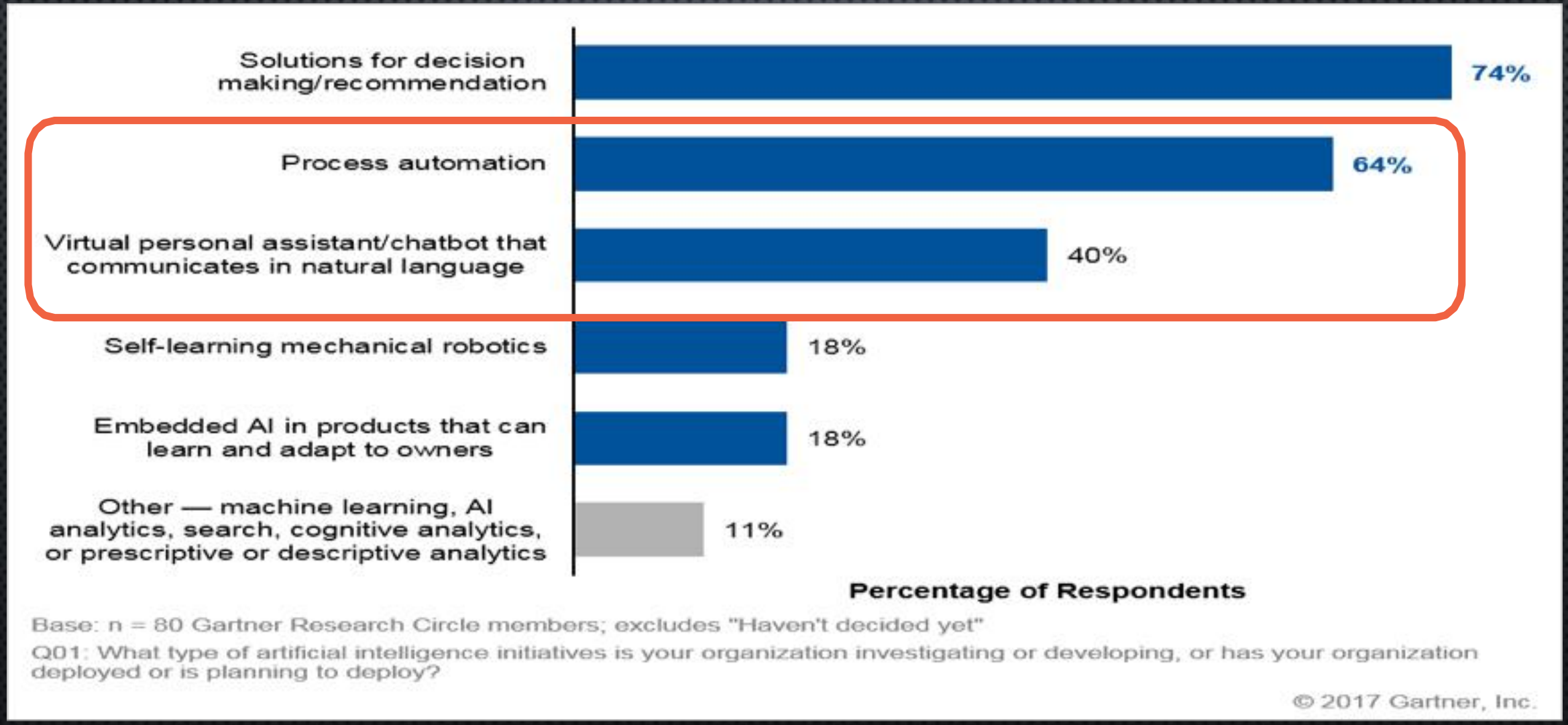
Optical Character Recognition will be superseded by Computer Vision. Alternatively a machine vision system can detect flaws on a production line that are difficult for a human to identify and it can do so more quickly.

4. COGNITIVE DISCOVERY TECHNIQUES

Machines can beat humans any time when it comes to searching through vast amounts of information either structured (e.g. from transaction or financial systems) or unstructured (e.g. legal texts, medical literature or call center notes).

With content from Forrester Inc.

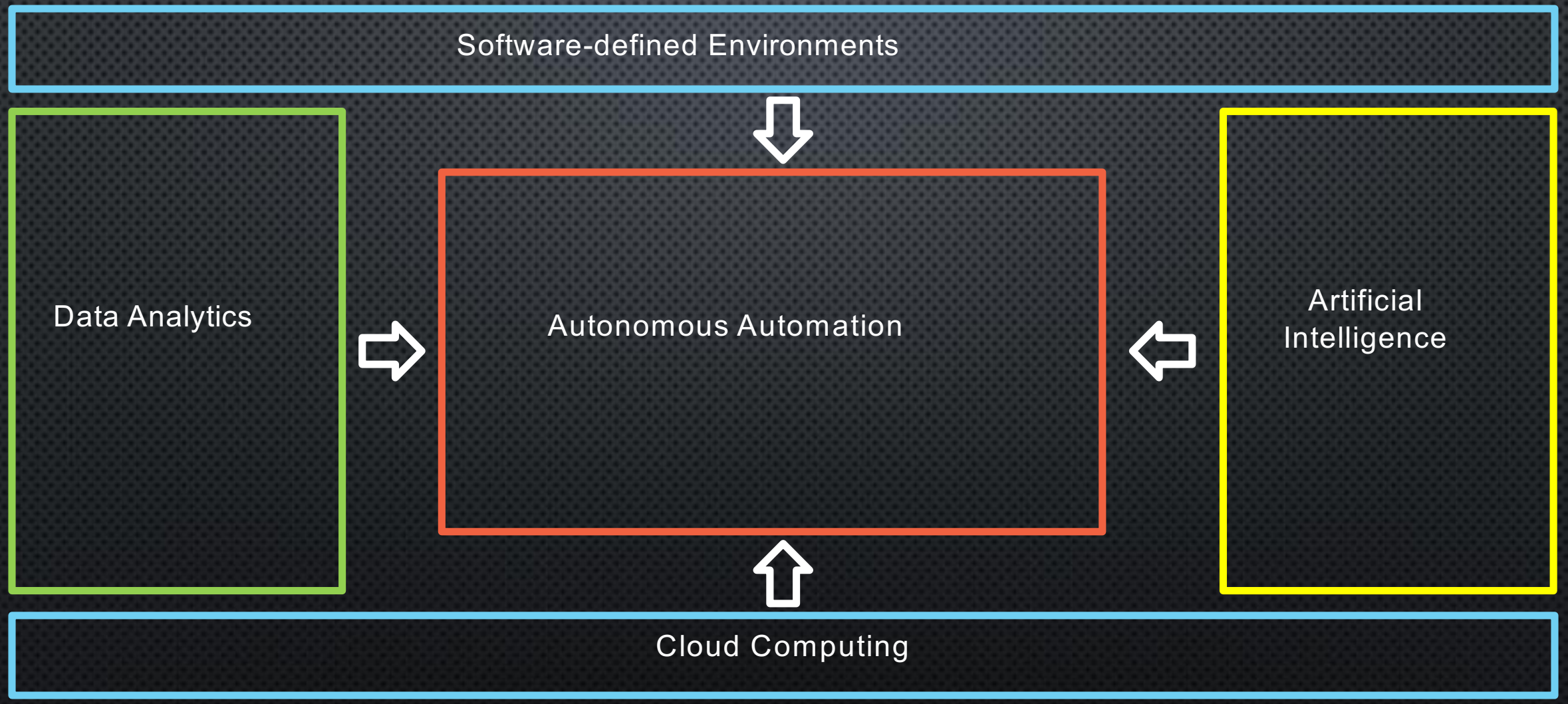
ENTERPRISES ARE FOCUSED ON PROCESS AUTOMATION AND AI



Base: n = 80 Gartner Research Circle members; excludes "Haven't decided yet"

Q01: What type of artificial intelligence initiatives is your organization investigating or developing, or has your organization deployed or is planning to deploy?

THE AI ENABLED ENTERPRISE: AI AND AUTOMATION



THE AI ENABLED ENTERPRISE: AI AND AUTOMATION

GET READY FOR AUTONOMOUS AUTOMATION

Digital Enterprise 1.0 (1970 - 2000)

- Mainframes
- Terminal Systems
- Personal Computer
- Local Area Networks
- Client-Server-Architecture
- Enterprise Computing
- Software & Applications
- Internet

Digital Internet Enterprise 2.0 (2001 - 2015)

- Mobile Computing (Smartphones, Tablets)
- Cloud (IaaS, PaaS, SaaS)
- Web-Centric-Architecture
- Software-defined X (SDx)
- Internet of Things (IoT)
- Interconnection with Partners, Customers, Suppliers and Ecosystems

Digital AI Enterprise 3.0 (2016 - ...)

- End-to-End offerings (Devices + Services)
- Sophisticated Interconnection of People, Objects, Locations and more
- Context-Economy based on Data & Knowledge
- AI-defined Smart/ Intelligent Environments

Digital Americas
Pipeline Initiative
RPA & AI Talent on Demand

WE ARE HIRING!
Email YOUR Resume to
info@digitalamericas.ai

Our PARTNER PROGRAM
Is Launching!

Contact us @
info@digitalamericas.ai
to schedule a call