INDUSTRIAL AI SERIES (EE392B)

AI IN SUPPLY CHAIN OPS

APRIL 2021

INTRODUCTION

Colin Kessinger
Accenture Applied Intelligence

AGENDA FOR TODAY

- Introductions
    - Colin Kessinger
    - Accenture
    - Jim Miller
    - Paritosh Desai

- Class Topic: Industrial AI Big Picture
    - Hiring
    - Outcomes

- Explainability, Usability, and Adoption
    - Digital Twins
    - Primary Challenges to Successful AI programs

Accenture at-a-glance

$44bn rev
4% growth
in local currency

91
Of the Global
Fortune 100 are
Accenture clients

Global
Delivery Network

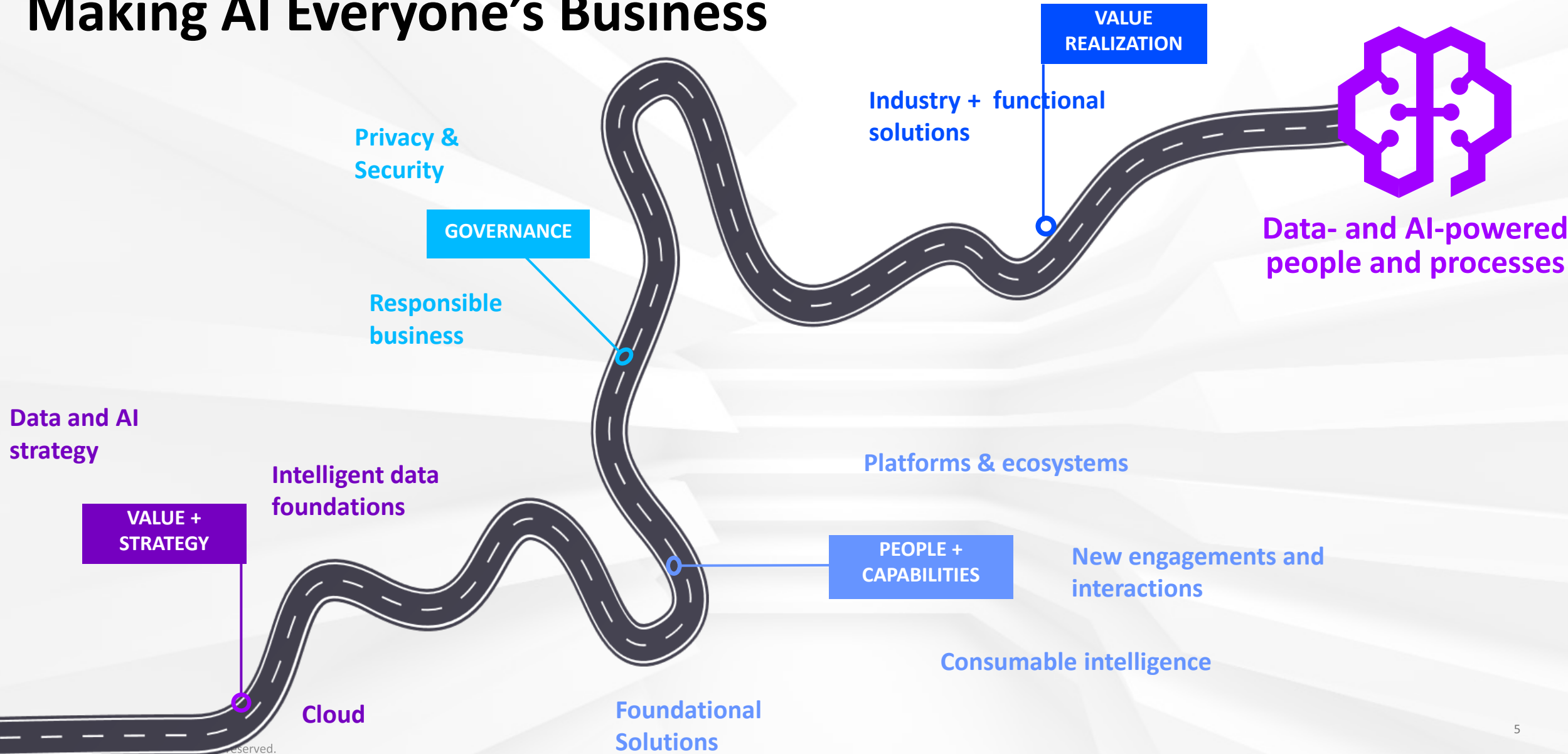**$1.7bn**
Investment on
R&D and Training

506,000
Employees

16
Major Industry
Segments

51
Countries
operating in

ACCENTURE APPLIED INTELLIGENCE
Making AI Everyone's Business

VALUE REALIZATION

Industry + functional solutions

Privacy & Security

GOVERNANCE

Responsible business

Data- and AI-powered people and processes

Data and AI strategy

Intelligent data foundations

Platforms & ecosystems

VALUE + STRATEGY

PEOPLE + CAPABILITIES

New engagements and interactions

Consumable intelligence

Cloud

Foundational Solutions

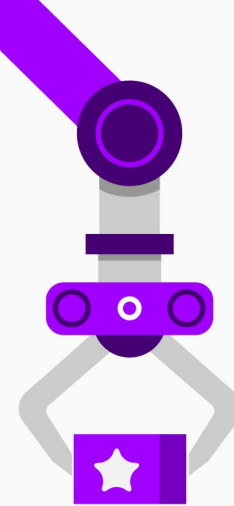# APPLIED INTELLIGENCE BY THE NUMBERS

2000+
Patents and patent-pending

300+
Apps and Solutions

Offices and Operations in **200+ cities in 51 countries**

100%
of leading industry analyst reports rank us in their leader category

84
Clients from Fortune 100

$800M
Investment in research and innovations in FY19

19+
Industries

225+
Technology Alliances

750
Culture Coaches driving positive culture that support working in a Truly Human way within account teams

50
Dedicated Centers

Intros – Jim Miller

Chief Technology Officer, Wayfair
Advisor and Board Member

CTO: Wayfair
- 500 employees consisting of software engineers, product managers, UX/UI design, and data scientists
- functional responsibility for all of the technology and applications that power Wayfair.

Prior Experince: Multiple

- Chief Executive Officer of Arevo Inc. commercializing and ramping Arevo's continuous carbon fiber 3D deposition technology and fabrication processes.
- Vice President of Operations at Google: global operations, planning, supply chain and new product introduction for Google's Cloud infrastructure and Google Fiber.
- Supply chain leadership roles at Amazon, Cisco, First Solar, Sanmina-SCI Corporation, IBM Corporation, Intel

Other Roles: Multiple
- Board of Directors
  - ITRenew
  - Brambles Limited
  - The RealReal.
  -

- Other
  - Technical Advisory Network at the Boston Consulting Group.
  - Member of the MIT Corporation.
  - Advisor to multiple early-stage, mid-stage and public companies, venture capital firms, and private equity firms.

Intros – Paritosh Desai

Senior Director: Google
PhD Operations Research, Stanford

Senior Director: Google
- Ads Quality and Engineering for
  - Discovery Campaigns
    - Gmail Ads
    - Discover Ads

SVP, Chief Data and Analytics Officer: Target
- Designed and led a centralized function with capabilities in data engineering, data-science, and AI
- In-sourced critical engineering and AI capabilities (25+ opensource contributors) based upon cloud-computing and microservices

Senior Director, Data Sciences: Gap Inc Direct
- Customer Behavior Analytics
  Retail Analytics: inventory allocation, initial order quantities, pricing and promotion optimization,
- Web Analytics: conversion-rate, path analysis, A/B testing, click-stream based behavioral analytics
- Web-scale personalization platform based upon Hadoop, Mahout, R, and Java stack.
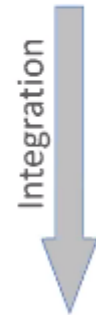
Class Topic: Industrial AI Big Picture

- **What do companies mean when they hire AI engineers?**

- **Why are companies compelled to do AI?**

- **What is the outcome they expect?**
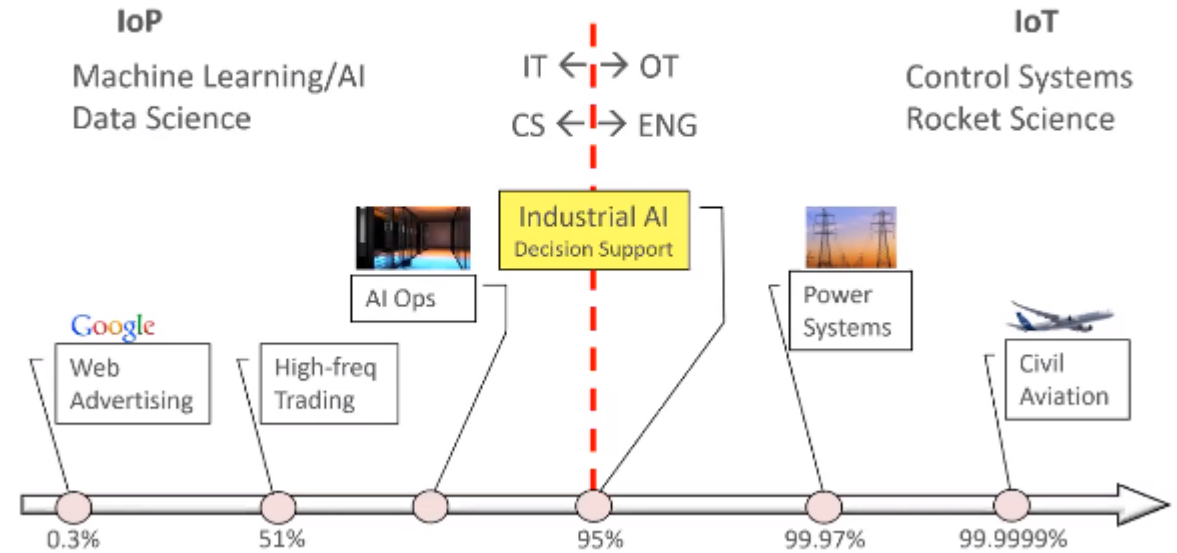
Analytics in Industry

- Business Intelligence (BI)
  - Spreadsheets
- Data Science
  - Exploratory analysis services
- AI
  - Automated applications

Integration →

Explainability, Usability, and Adoption

- **When, where, why is explainability important**

- **Digital Twins – where is the value real, where is just buzz words?**

- **What are the real issues associated with the implementation of Industrial AI**

  - Business Challenges

  - Engineering Challenges

Mission Critical Analytics

IoP
Machine Learning/AI
Data Science

IT ←|→ OT
CS ←|→ ENG

IoT
Control Systems
Rocket Science

Industrial AI
Decision Support

Google
Web Advertising

High-freq Trading

AI Ops

Power Systems

Civil Aviation

0.3%   51%   95%   99.97%   99.9999%

Industrial AI in Digital Transformation