A Strategist`s Guide to Adopting AI Applications

KTH Executive School

accenture

Stockholm, November 27th

AGENDA

1	**A brief history and introduction on ML/AI**
2	Identifying AI/ML implementation opportunities
3	Application of ML/AI in enterprises
4	Scaling AI/ML enterprise wide

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AI: WHERE ARE WE, REALLY?

https://www.foxnews.com/tech/nightmare-inducing-robots-are-now-able-to-do-backflips

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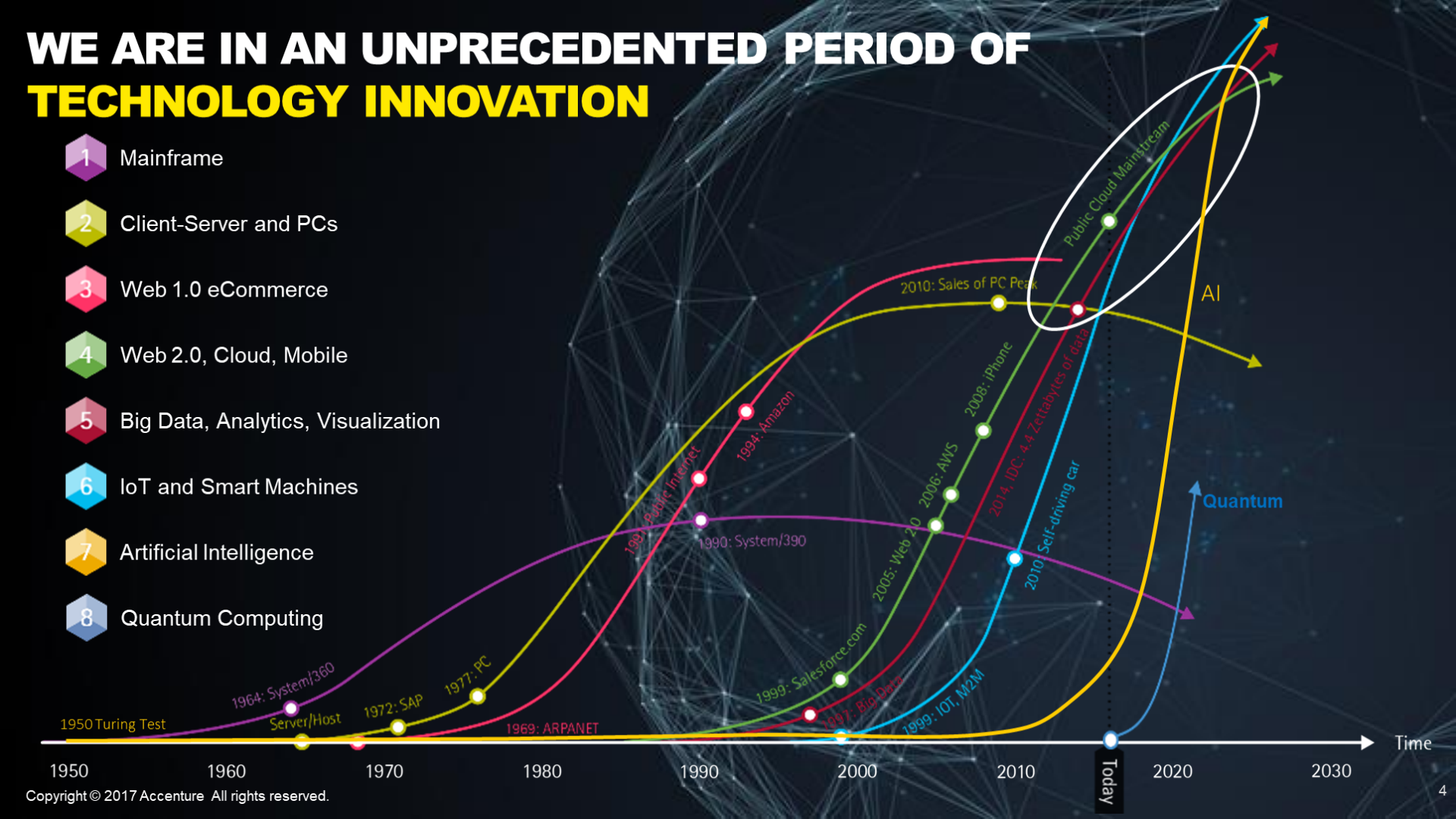
WE ARE IN AN UNPRECEDENTED PERIOD OF TECHNOLOGY INNOVATION



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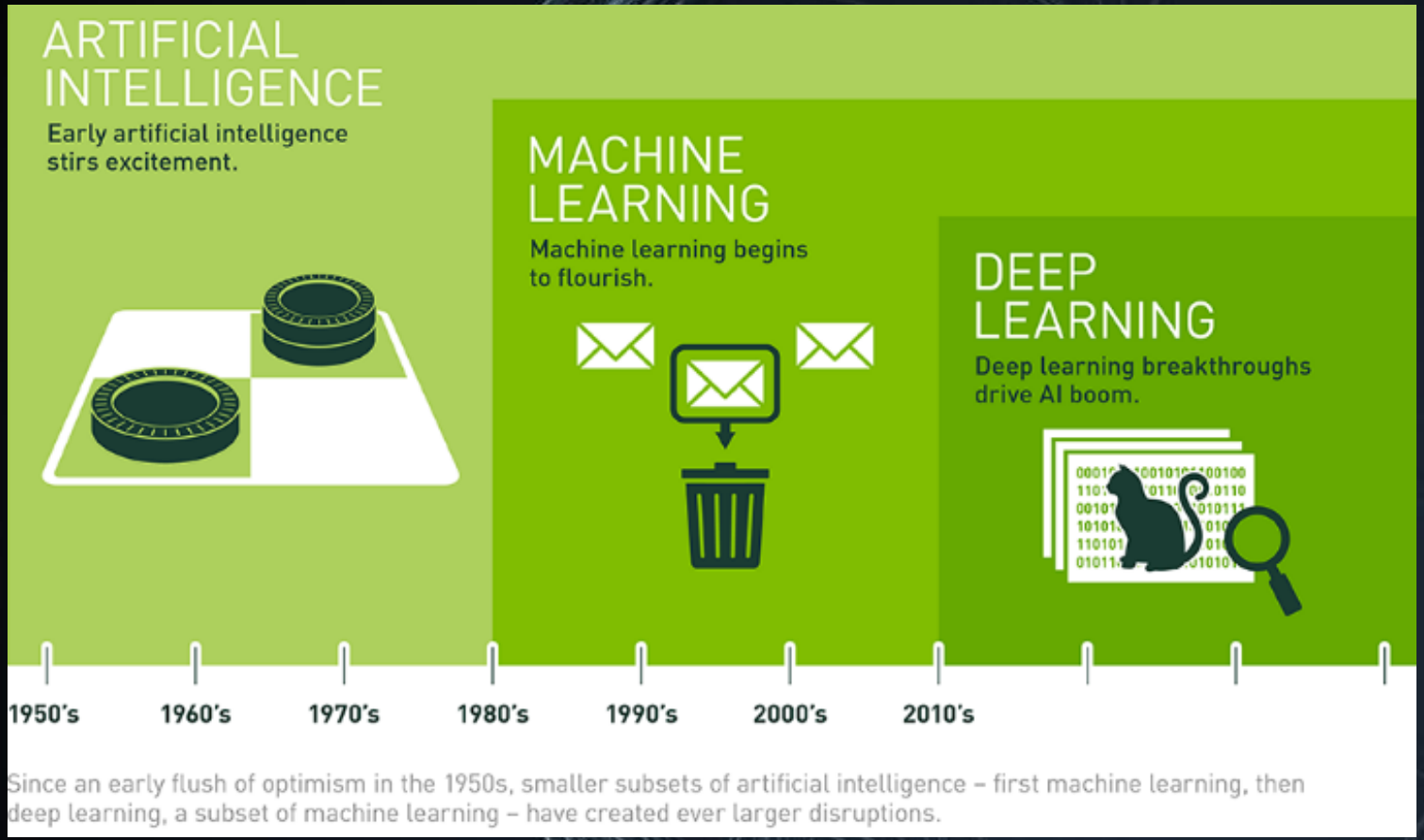
A SHORT HISTORY OF AI AND MACHINE LEARNING



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WHAT NEXT?

2018

75% of developer teams will **include AI** functionality in one or more **application or service**

IDC FutureScapes 2017

2019

40% of digital transformation initiatives **will use AI services**

IDC

2020

85% of customer interactions will be managed **without a human**

Gartner

2024

Most **interfaces** will not have a screen, and will be **integrated into daily tasks**

Accenture

2027

Digital assistants will **keep employees productive 24/7/365,** operating in the background for workplace interactions

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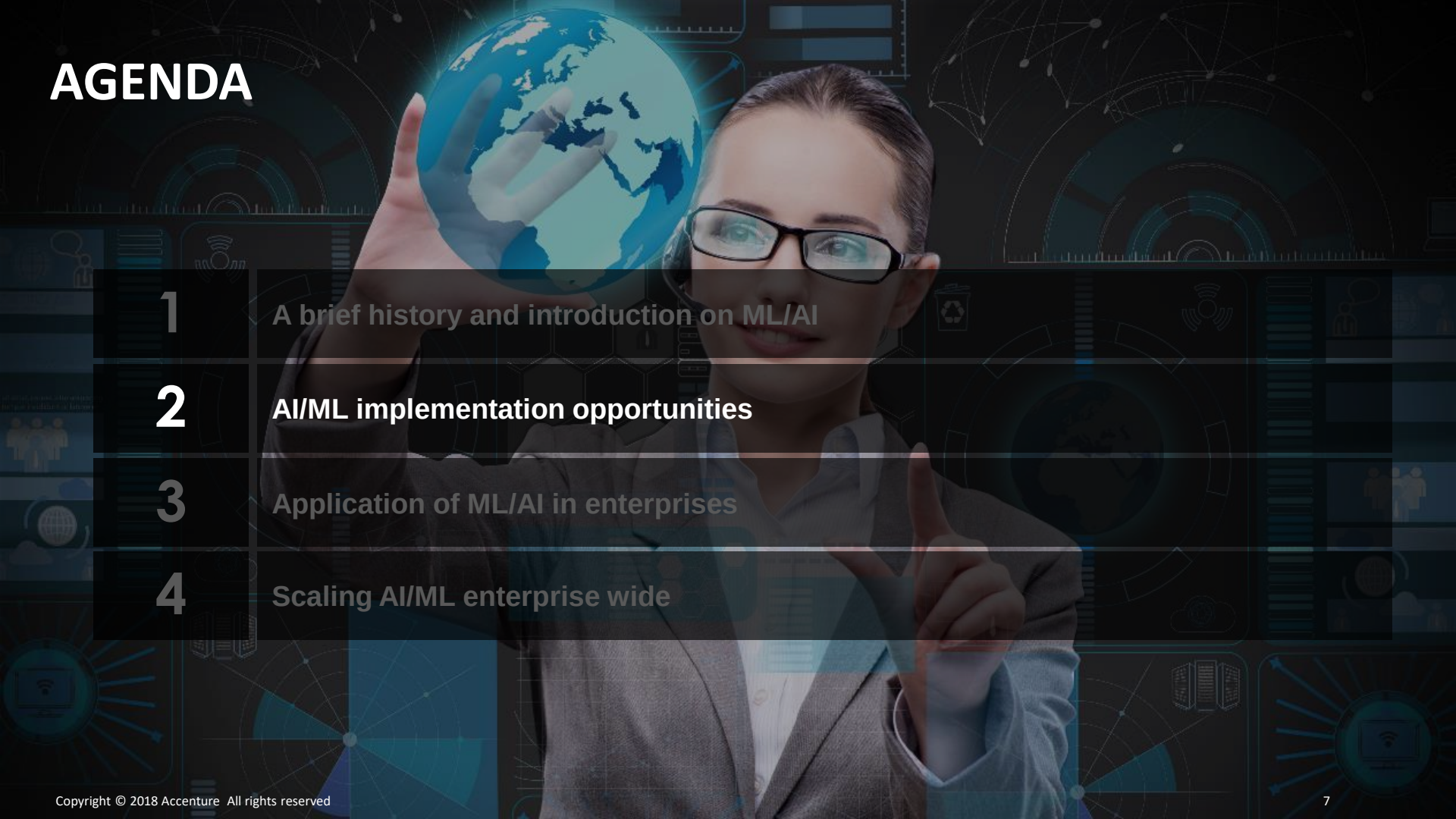
AGENDA



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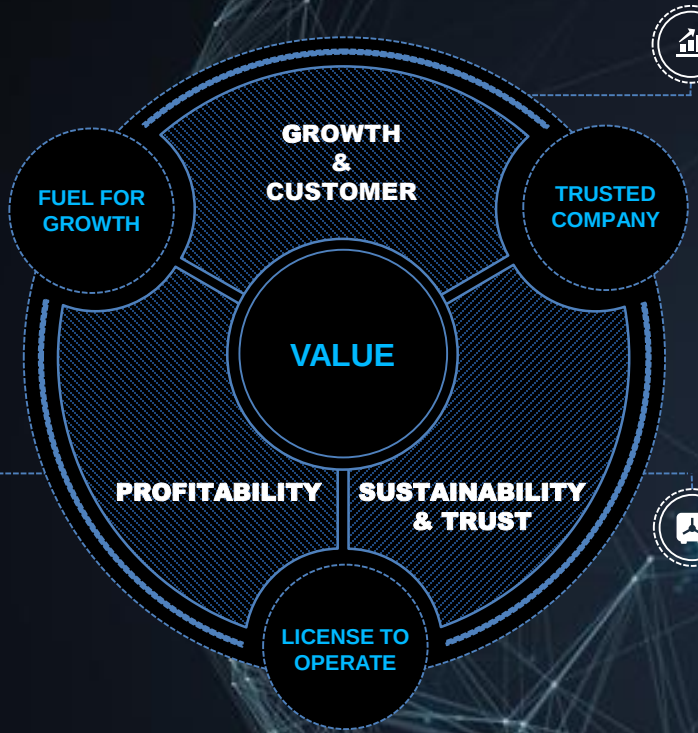
APPLYING AI TO DRIVE ENTERPRISE VALUE

AI AFFECTS ALL ASPECTS OF ENTERPRISE STRATEGY – DRIVING SIGNIFICANT AND GAME CHANGING SUSTAINABLE VALUE

AI is a catalyst to all three core and interrelated aspects of Enterprise value and competitiveness



GROWTH & CUSTOMER

PROFITABILITY

SUSTAINABILITY & TRUST

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FIVE LEVERS TO CREATE VALUE FROM AI

EACH AI VALUE LEVER DELIVERS SPECIFIC AND TANGIBLE BENEFITS TO THE ENTERPRISE

INTELLIGENT AUTOMATION

Cognitive capabilities on top of automation technologies with the following abilities: self learn, autonomous, reactive, and proactive.

ENHANCED JUDGEMENT

Leverage AI capabilities to augment Human intelligence on core Human-driven Processes.

ENHANCED INTERACTION

Deliver Superior experience to customers and users based on hyper-personalization and curation of real-time information.

INTELLIGENT PRODUCTS

AI is enabling a new class of products and services – applying AI into new and innovative products, services, and new business models.

RESPONSIBLE AI

Build trust within the organization through the use of AI (e.g., compliance, transparency) and how AI is used.

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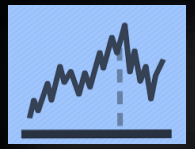
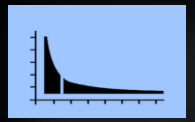
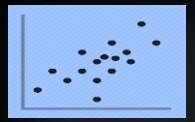
AI APPLICATIONS FROM DATA'S POV

	Example Use Cases
 Time Series	Predictive Maintenance
 Long Tail distributions	Fraud/Anomaly detection
 Complex co-relations	Recommender system

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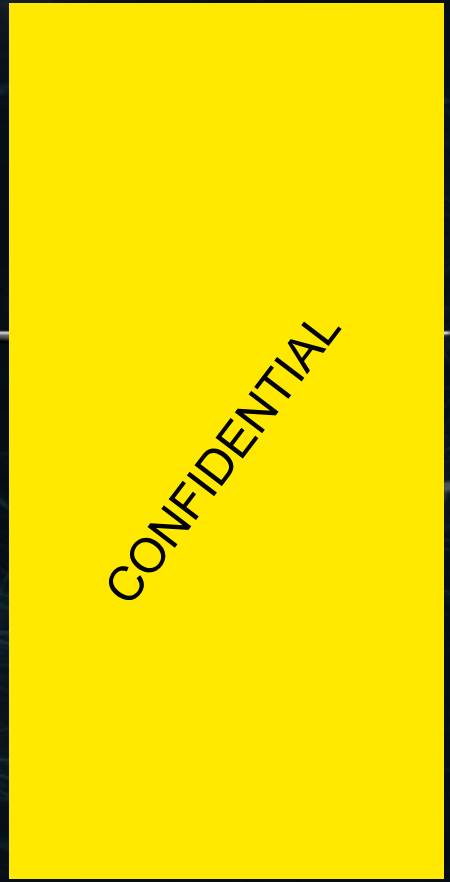
SMART SERVICE ORCHESTRATION AROUND LIFE EVENTS USING AI

Together with the client, we set up a branded innovation hub.

The new brand and what it stood let us challenge the status quo - a new way to collaborate.

The Hub now has a physical and digital space that invites collaboration within and cross sector. In the future, the hub will work as a catalyst for the rest of the public sector.



4 live prototypes from concepts to implementation, created together with the advanced technology skills of our Liquid Studio.

- ***Data Driven Leadership***
- ***The Future of Customer Self Service***
- ***Human Centric ….. Journey***
- ***Vital & Living …..***

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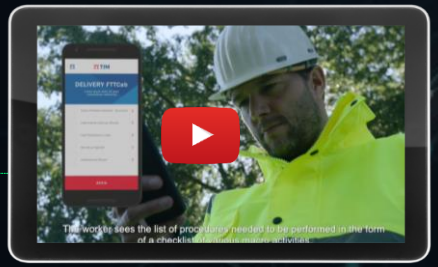
KURT RUSSELL
THE CHRISTMAS CHRONICLES
WATCH NOW | NETFLIX
Nasdaq
NYPD

EXAMPLES FROM ACCENTURE AI IMPLEMENTATIONS

Telecom Italia
Mobile instructions for field engineers



Airbus civil
Quality check (100% precision rate)

Alliander
On site intervention

ASML
Step-by-step instruction for production

KPN
Datacenter support with instructions, coaching and asset checking

Philips Healthcare
Data live on augmented reality

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AI POWERED QUALITY CONTROL – CERAMIC

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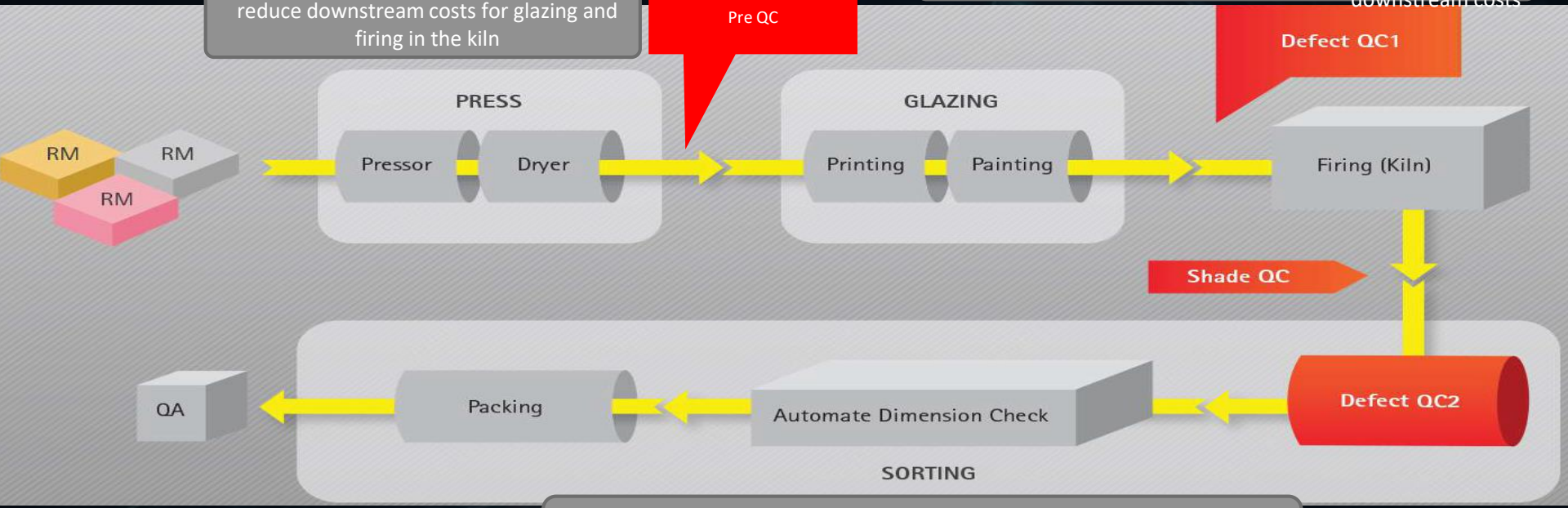
AI POWERED QUALITY CONTROL – CERAMIC

Pre-glazing QC: Early detection can help reduce downstream costs for glazing and firing in the kiln

QC1: Defect rate is significantly under-detected. Early detection can reduce cost of firing the kiln along with downstream costs



Shade QC: Changes in shade are detected based on inspection every hour
Continuous monitoring of shade on all tiles can reduce customer complaints due to shade variation

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VALUE FROM QC ACROSS THE PROCESS

MACHINE VISION

Acquire Video

Load Images

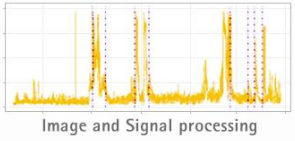
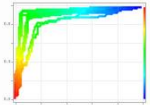


Image and Signal processing

Defect detection



ROC Curve

Analyse & Process Images

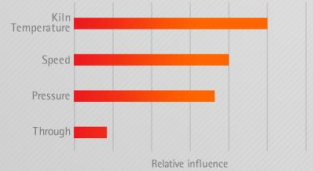
Based on the machine vision analytics output, the alert 'Identified defect' is triggered for action to be taken

Detect Defects & Raise Alerts

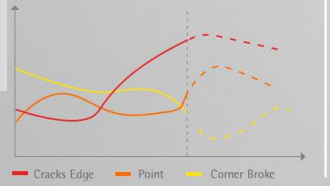
ACT IDENTIFICATION

Grade Portion

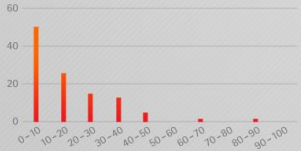
Key Impacting Parameters



Defect Trends



Histogram of Shade Variation



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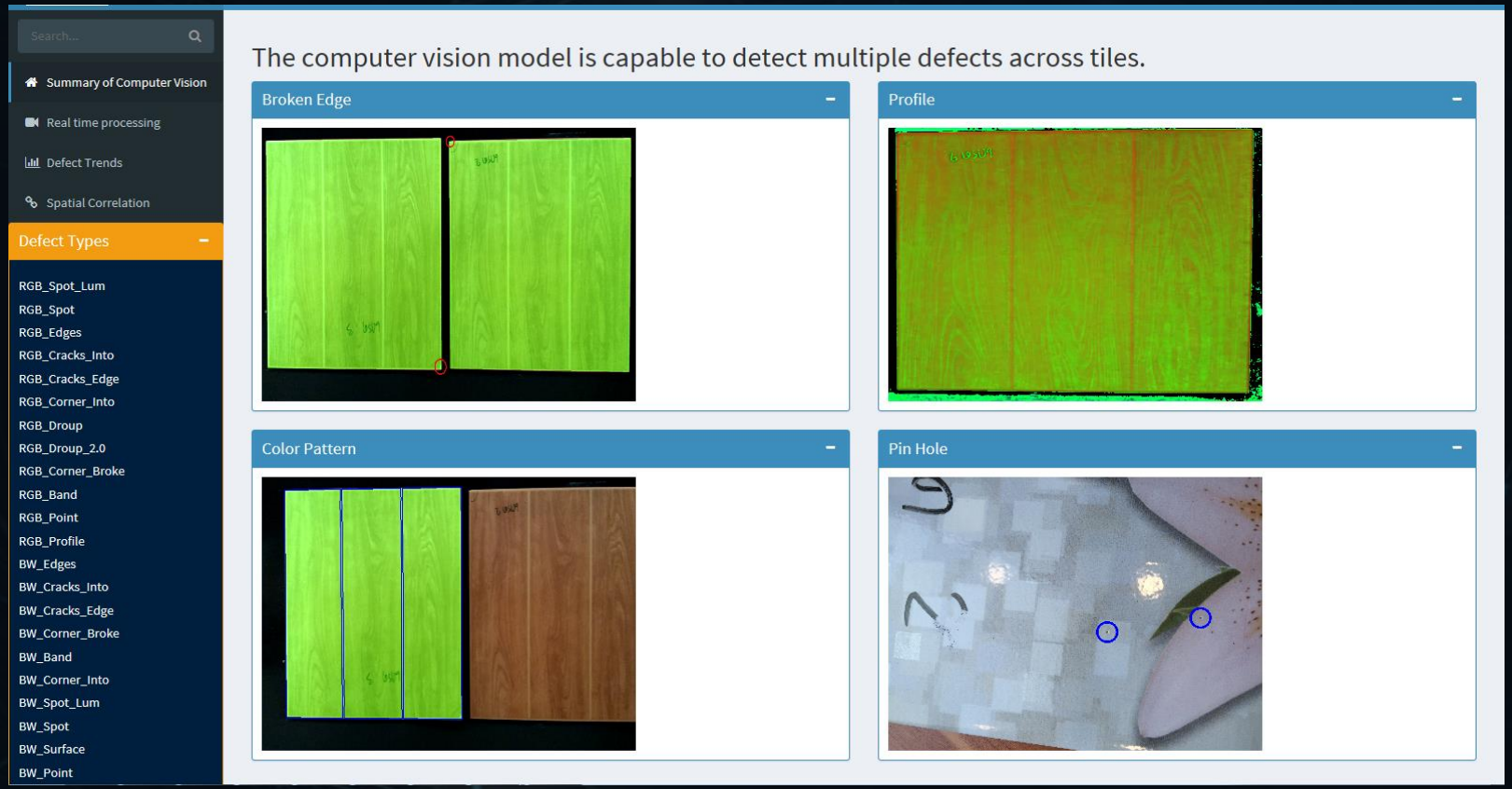
AI POWERED QUALITY CONTROL – CERAMIC



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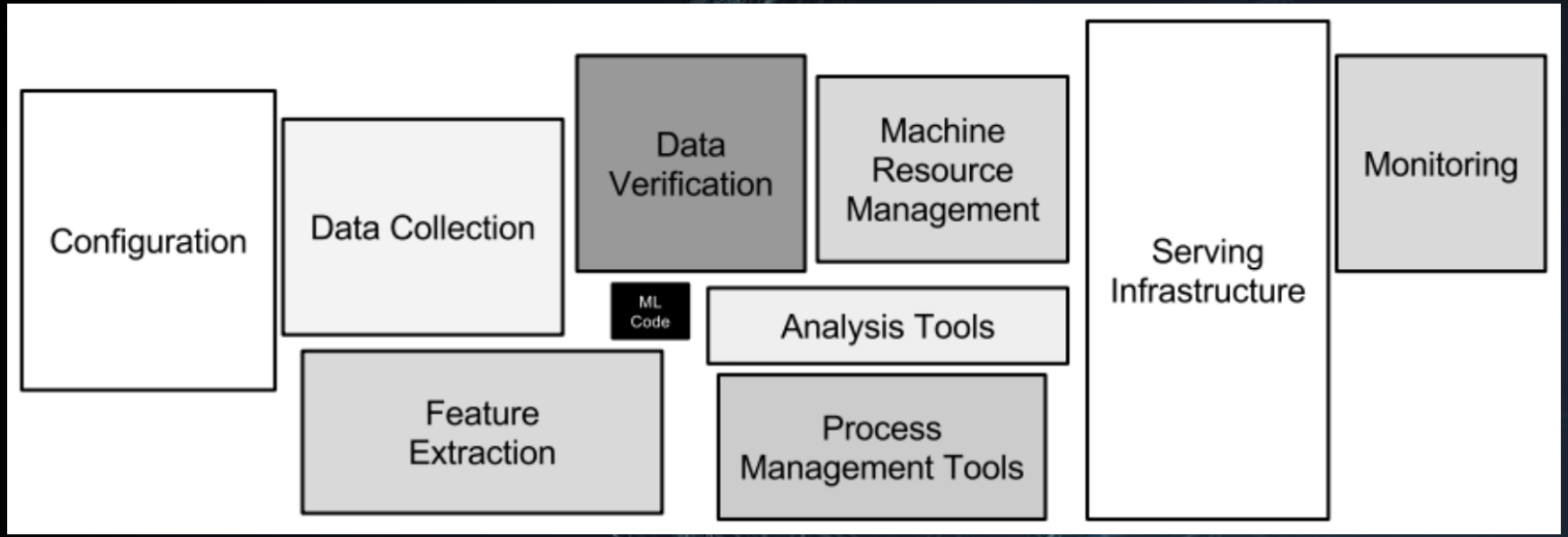
AI/ML IS LOT MORE THAN CODE



Source: Hidden Technical Debt in Machine Learning Systems
Sculley et. al. Google

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KEY TO SCALING AI ADOPTION ENTERPRISE WIDE

- AI/ML Vision & Strategy
- Assessment & Value Targeting
- Operating Model Design & Deployment
- Data & Technology Methodology
- Change Adoption & Journey Management

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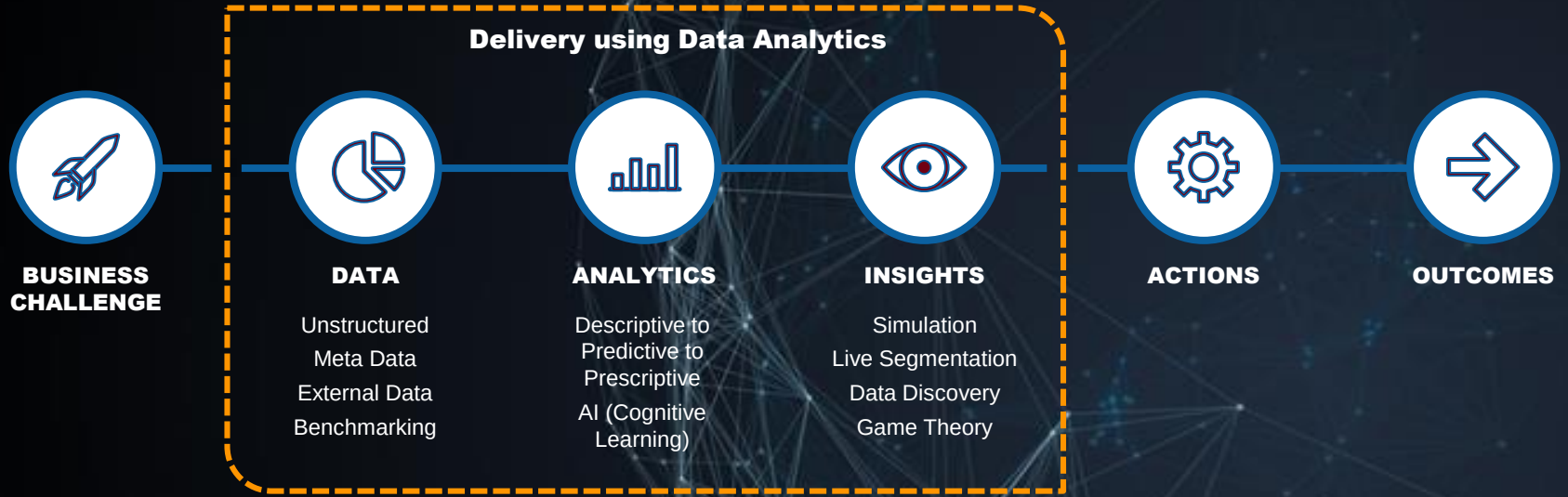
EXECUTIVE COMMITMENT NEEDED TO BECOME A DATA DRIVEN COMPANY



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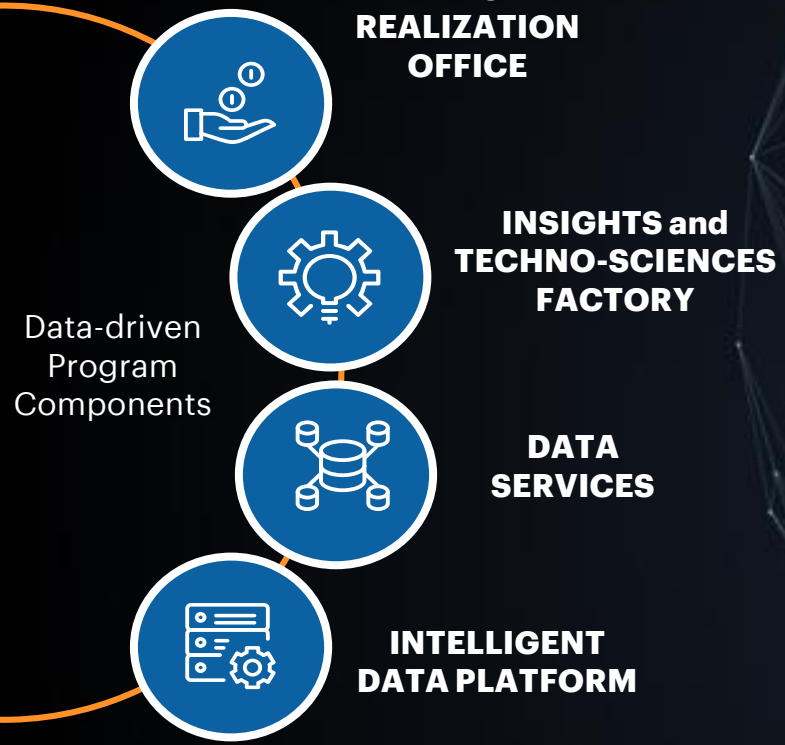
BECOMING A DATA-DRIVEN COMPANY



MAKE A DIFFERENCE AND STAY VALUE FOCUSED:

- Multi-skilled team
- Operative model in the new
- Embrace Innovation Culture

"Uber yourself before you get Kodaked"

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KEY COMPONENTS TO START FOCUSING ON..

1

Data strategy

2

Active Data Governance

3

Architectural Consistency

4

Data Quality

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LETS TALK AI PHILOSOPHY