AI Masterclass: Recalibrate Your AI Impact – Insights From 230 AI Use Cases Across Industries

Digital Services

October 2019: Complimentary Abstract / Table of Contents

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Background and scope of the research

Artificial Intelligence has been around for a long time but it is only in the past decade that we have seen an explosive adoption of AI across all industries, functions and geographies. Algorithmic advancement, lower investment costs and the advent of big data together have made it easier for enterprises of all sizes to invest in building AI use cases across different functions of the organization.

AI has seen a diverse adoption across industries, with technology intensive and customer facing industries leading the pack. Enterprises have been using AI to achieve different outcomes as per their needs starting from an intent to increase the overall efficiency and going all the way up to the evolution and advancement of their domain as a whole.

We analyzed 230 large enterprise class AI adoption use cases and in the latter part of the report, we have identified 38 unique use cases of AI across different industries and mapped them on our AI impact framework.

In this market report, we analyzed 230 AI use cases for Forbes top 50 leading enterprises to identify AI adoption trends and future investment areas.

4Es of AI impact framework   Framework for AI adoption

Scope of this report:

Geography
Global

Industry
Pan industries with a focus on five major industries, BFSI, healthcare and lifesciences, manufacturing, CPG & retail and technology & communication

Companies
Market activity, investments and use cases of the Forbes top 50 global enterprises

Use cases
230 large enterprise class AI adoption use cases have been analyzed in this report

Source: Everest Group (2019)

Artificial Intelligence is the overarching theme that forms a part of every enterprise strategy to realize increased business impact across

Defining Artificial intelligence

Artificial Intelligence | Ability of a machine to perform cognitive* functions and replicate the functioning of the human brain

Different functions of the human brain

- Perception
- Problem solving
- Communication
- Memory
- Reasoning
- Decision-making
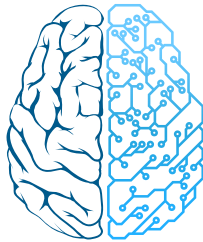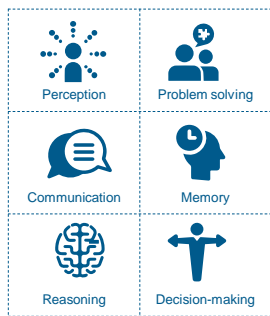
Types of Artificial Intelligence

We have been able to achieve artificial narrow intelligence, wherein AI systems are focused on one specific task and are able to replicate human functioning in that particular task only

Artificial Narrow Intelligence

Machine intelligence working well only within a specific domain for which they are built (also known as weak AI)
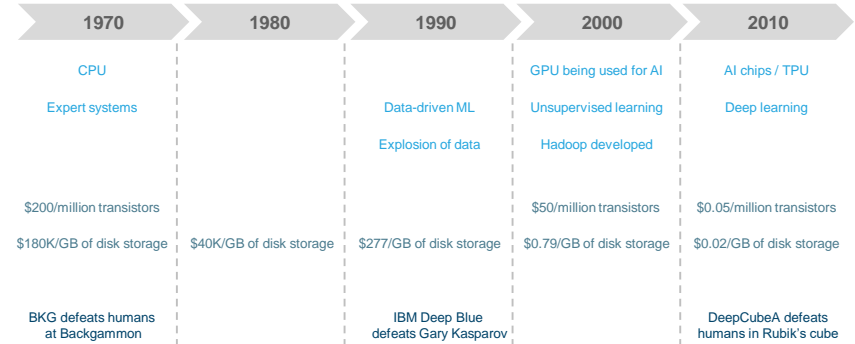
Artificial General Intelligence

Machine intelligence matching up to human intelligence in a variety of tasks and problems (also known as strong AI)

Artificial Super Intelligence

Machine intelligence not just matching up but also surpassing human intelligence in every domain
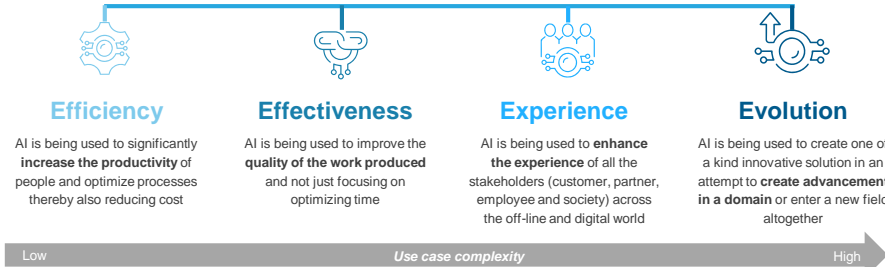
What led to the explosion of AI as we know it
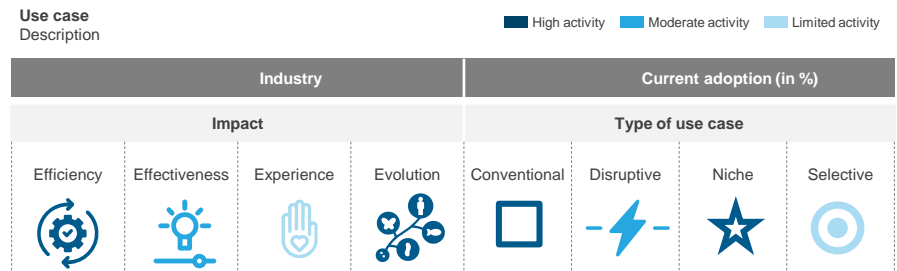
$1 Lower costs + **Tech advancement** + **Milestones**

1970	1980	1990	2000	2010
CPU			GPU being used for AI	AI chips / TPU
Expert systems		Data-driven ML	Unsupervised learning	Deep learning
		Explosion of data	Hadoop developed	
$200/million transistors			$50/million transistors	$0.05/million transistors
$180K/GB of disk storage	$40K/GB of disk storage	$277/GB of disk storage	$0.79/GB of disk storage	$0.02/GB of disk storage
BKG defeats humans at Backgammon		IBM Deep Blue defeats Gary Kasparov		DeepCubeA defeats humans in Rubik's cube

Everest Group's AI business impact framework

4E AI business impact framework

Efficiency

AI is being used to significantly **increase the productivity** of people and optimize processes thereby also reducing cost

Effectiveness

AI is being used to improve the **quality of the work produced** and not just focusing on optimizing time

Experience

AI is being used to **enhance the experience** of all the stakeholders (customer, partner, employee and society) across the off-line and digital world

Evolution

AI is being used to create one of a kind innovative solution in an attempt to **create advancement in a domain** or enter a new field altogether

Low ◄─── *Use case complexity* ───► High

Analysis of 230 AI use cases

Use case Description

■ High activity ■ Moderate activity ■ Limited activity

Industry				Current adoption (in %)			
Impact				**Type of use case**			
Efficiency	Effectiveness	Experience	Evolution	Conventional	Disruptive	Niche	Selective

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Research calendar – Digital Services

Flagship Digital Services reports	Release date
Digital Services – Annual Report 2018: Future Operating Model to Scale Digital	July 2018
IoT Services Annual Report 2018	August 2018
IoT Services PEAK Matrix™ Assessment and Market Trends 2018	December 2018
Digital Services PEAK Matrix™ Assessment and Market Trends 2019	December 2018
Digital Interactive Services PEAK Matrix™ Assessment and Market Trends 2019	Q4 2019
Blockchain Services PEAK Matrix ™ Assessment and Market Trends 2020	Q4 2019
Connected Ecosystem Services PEAK Matrix ™ Assessment and Market Trends 2020	Q4 2019

Thematic Digital Services reports	
Design Thinking: Innovation Catalyst for Digital Transformation	July 2017
Enterprise Bots Adoption	July 2017
BigTech Battle: Leading Internet of Things (IoT) Platforms Assessment – A Selection Guide	October 2018
Customer Experience Trailblazers – Experience Spearheading the Digital Economy	February 2019
BigTech Battle: Digital Experience Platforms Assessment – Rise of the Digital Experience Platform	June 2019
**AI Masterclass	Recalibrate Your AI Impact – Insights From 230 AI Use Cases Across Industries**	**October 2019**
Emerging Technology Trailblazers	Q4 2019

Source: Everest Group (2019)

Additional Digital Services research references

The following documents are recommended for additional insights into the topic covered in this report. The recommended documents either provide additional details or complementary content that may be of interest

1. **AI Stands to Make IT Infrastructure Services "Invisible"** (EGR-2018-29-R-2720): About 72% of the enterprises cite IT infrastructure services as a key hurdle in becoming a digital first enterprise. Most enterprises believe their infrastructure services are not moving fast enough to support and drive the future of business. Expectations on infrastructure alignment with business have been around for ages. However, to date, enterprises have not had a meaningful mechanism in place to drive this alignment. "Aware" automation is a concept wherein automation systems are underpinned by AI and analytics, making them conscious of the environment and helping to drive self-configuring, healing, and evolving IT infrastructure services

2. **Scaling Artificial Intelligence Adoption – A Practical IT Guidebook** (EGR-2018-0-V-2734): Artificial Intelligence (AI) is now at the cusp of mainstream enterprise adoption, given a significant number of successful initiatives undertaken by proponents of AI including enterprises, service providers, and technology players. The AI adoption journey is set to fundamentally redefine the role of IT. The IT function will need to work closely with business to establish itself as an enabler, a governor, and the eventual flag bearer for enterprise AI initiatives. Cross-pollination of skills and responsibilities will lead to extensive blurring of lines between business and IT in the long run – an impending change that IT function needs to brace for

3. **Enterprise AI Adoption Playbook** (EGR-2019-33-V-3167): Enterprises are recognizing the value of AI as a competitive differentiator and value creator, and many are already investing in AI. In our recent survey of IT heads of 200 global enterprises, 65% have already invested in some AI project. However, while interest and investment are high, AI is far from pervasive in most enterprises' business strategies. In fact, more than 80% of the enterprise executives told us that they were unable to adopt AI at scale or achieve any significant business outcomes. Lack of talent, poor data management, and misalignment with the business context are some factors that act as barriers to enterprise wide AI adoption. Other issues such as change management and failure in early projects are some other factors that are forcing enterprises to take a highly risk averse approach towards their AI investments.

For more information on this and other research published by Everest Group, please contact us:

Yugal Joshi, Vice President: yugal.joshi@everestgrp.com

Arushi Pandey, Analyst: arushi.pandey@everestgrp.com

Source: Everest Group (2019)

Website: www.everestgrp.com | Phone: +1-214-451-3000 | Email: info@everestgrp.com

About Everest Group

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Dallas (Headquarters)
info@everestgrp.com
+1-214-451-3000

Bangalore
india@everestgrp.com
+91-80-61463500

Delhi
india@everestgrp.com
+91-124-496-1000

London
unitedkingdom@everestgrp.com
+44-207-129-1318

New York
info@everestgrp.com
+1-646-805-4000

Toronto
canada@everestgrp.com
+1-416-388-6765

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