What CEOs Need to Know About
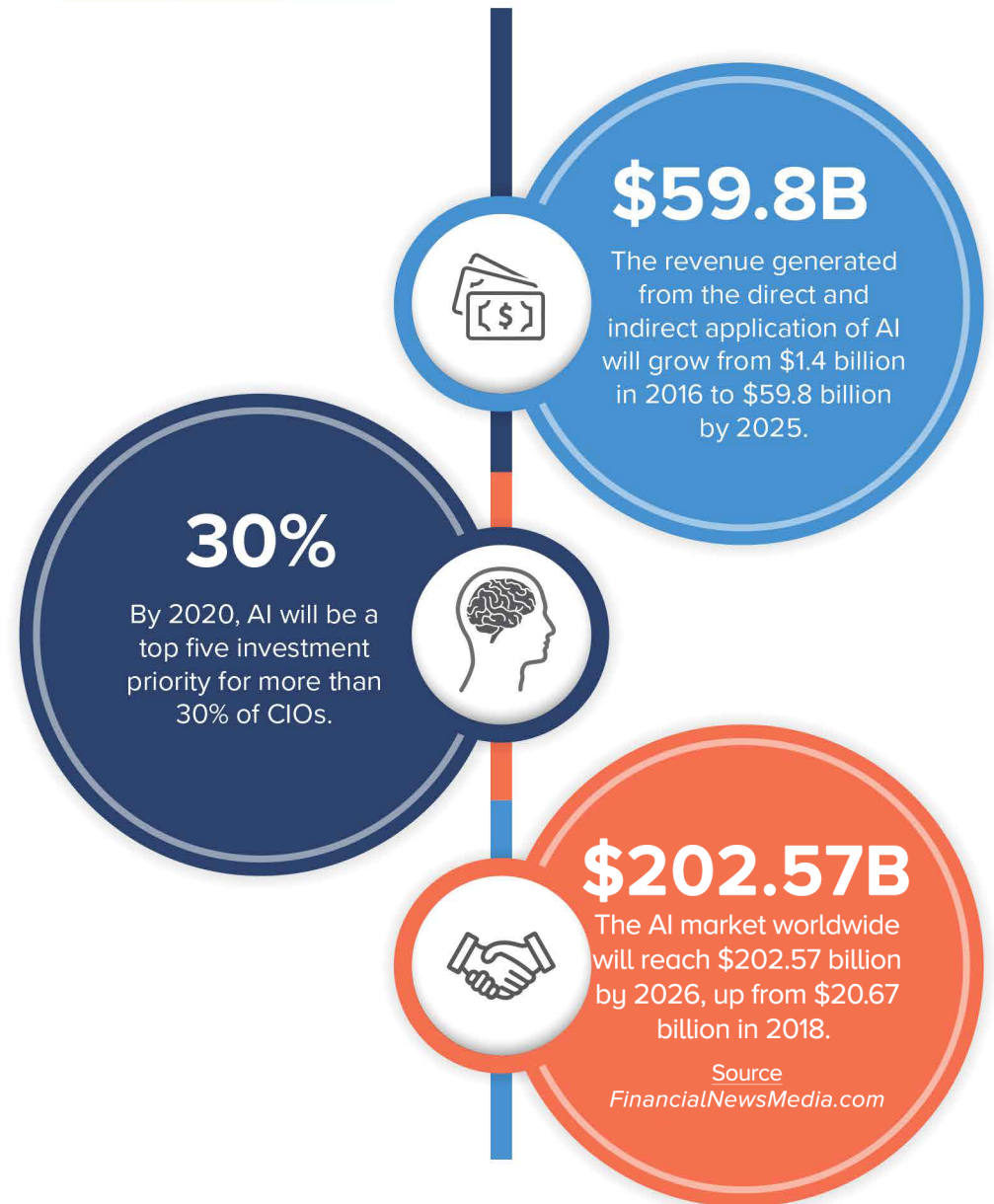# ARTIFICIAL INTELLIGENCE

10Pearls

INTRODUCTION

Artificial Intelligence (AI) is at an inflection point.

Technologies that seemed futuristic just a few years ago are now maturing and demonstrating value. **Over the next two years, we'll see the use of AI across industries accelerate.** Early adopters will gain market share and out-pace their competitors.

This primer explores how AI is empowering businesses right now and provides an overview of the data and insights you need to make the smartest investments for your company.

Investment in AI is picking up steam

$59.8B
The revenue generated from the direct and indirect application of AI will grow from $1.4 billion in 2016 to $59.8 billion by 2025.

30%
By 2020, AI will be a top five investment priority for more than 30% of CIOs.

$202.57B
The AI market worldwide will reach $202.57 billion by 2026, up from $20.67 billion in 2018.

Source
FinancialNewsMedia.com

10Pearls

DEFINING THE BUZZWORDS

Though many terms referring to components of AI are used interchangeably, there are key differences.

Artificial Intelligence generally refers to technologies that are able to carry out tasks in a "smart" or human-like manner.

Natural Language Processing (NLP) is a type of artificial intelligence that allows systems to understand language and interact with users through speech or text (i.e. chatbots, Siri, etc.).

Machine Learning is an application of AI in which technologies analyze and learn from large data sets and use their learnings to improve their own performance—whether that's more accurately forecasting the weather or providing more tailored news feeds.

Deep Learning is a subset of machine learning that relies on deep neural networks, complex computing systems (modeled on the human brain) that can be trained to recognize patterns and interpret data.

How is AI being used today?

Predicting behavior and outcomes
(Personalized recommendations, detecting and minimizing fraud)

Image and object recognition
(Detecting flaws on a production line, analysis of brain scans)

Rapid analysis and insight-gathering
(In-depth market analysis, audience segmentation)

Natural language processing, speech recognition and generation
(Chatbots, virtual assistants)

Robotics and automated vehicles
(Autonomous production lines, warehouse assistants)

10Pearls

AI IN BUSINESS

AI will impact every business across all industries.

While AI might initially conjure images of sentient robots, for most business leaders, **AI will take the form of everyday technologies** that help them:

- Better understand customer needs

- Create more engaging customer experience

- Optimize workforce productivity

Many AI technologies are yet to be widely implemented, but early adopters are already seeing results. **In fact, 30% of early AI adopters say they've achieved revenue increases by leveraging AI** in their efforts to gain market share or expand product lines.

58% of executives report that their organizations have embedded at least one AI capability into a process or product in at least one function or business unit.

84% of C-suite executives believe they must leverage AI to achieve their growth objectives

Sources: IBM

10Pearls

AI'S CAPABILITIES AND APPLICATIONS

Artificial intelligence could help your business unlock new levels of productivity and differentiate from your competitors.

Some of the most powerful AI systems analyze huge amounts of data in order to **identify and classify patterns, probabilistically predict outcomes, and operate unsupervised.**

Harnessing these capabilities, organizations will use AI to:

- Create advanced automated interactions with people

- Automate administrative processes

- Improve sales and marketing strategies

- Power smarter machinery, vehicles, and structures

The following pages explore each of these applications.

Case Study: Netflix

Netflix has reportedly saved $1 billion by personalizing its content and automating its recommendations. The company uses artificial intelligence to:

- Automate video compression and optimize viewing across devices and locations

- Collect data about viewing habits to make more tailored content recommendations

- Predict content popularity to determine how much to pay content producers

# MORE POWERFUL AUTOMATED INTERACTIONS

AI will help companies deliver better customer experiences and support.

Many company leaders are already funneling their resources toward customer-facing channels: **57% of business leaders consider customer experience the biggest benefit of AI, and 46% said marketing and sales departments are evaluating the adoption of AI systems.**

Through NLP (Natural Language Processing) businesses can create advanced automated interactions with their customers in the form of:

- Next generation conversational IVR

- Chatbots / Automated help systems

- Virtual Private Assistants

AI can reduce the time it takes to respond to customers. AI-enabled technology can also generate a near-infinite number of personalized messages. Chatbots and virtual customer assistants serve external clients directly while some organizations use AI to support internal processes, such as internal decision-making.

HELLO!
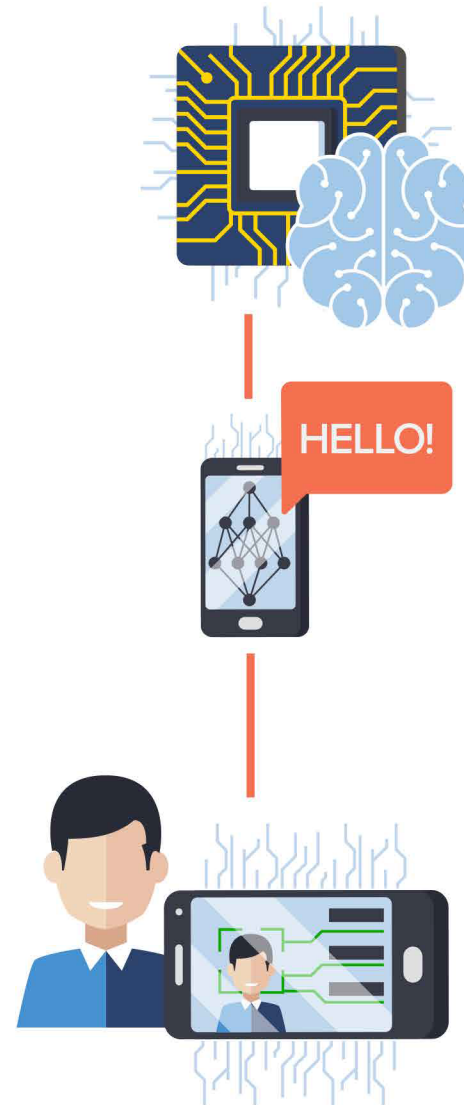
By 2020
50% of all searches will be via voice technology.

By 2025
AI will drive 95% of all customer interactions and consumers will be unable to distinguish bots from humans.

Sources: Forrester, eMarketer

10Pearls

AUTOMATE ADMINISTRATIVE PROCESSES

The Harvard Business Review found that managers across industries spend 54% of their time on administrative tasks.

In the near future, AI will automate a great deal of this type of work. For most businesses, AI won't replace humans, but rather help employees be more efficient by eliminating the most banal elements of their positions, allowing them to focus on the tasks that require substantive thinking.

For example, companies across industries will use AI to:

- Manage employee schedules

- Screen resumes

- Generate reports

Productivity increases will translate into true financial gains—a 38% profitability boost for most industries, according to Accenture.

78% of managers believe that they will trust the advice of intelligent systems in making business decisions.

86% would like AI to help with monitoring and reporting.

Sources: Harvard Business Review

10Pearls

IMPROVE SALES AND MARKETING STRATEGIES

AI can help companies mine data quickly and efficiently to uncover useful insights.

This hyper-speed creates new ways for companies to predict customer needs and strengthen marketing and sales strategies.

Businesses will use AI to:

- Identify high-potential leads and funnel them to the sales person most likely to close them

- Measure results and incorporate in sights into future campaigns

- Analyze customer feedback to determine the most effective products and services

86%
The use of AI in marketing will increase 53% over the next 2 years.

25%
Half of marketers are already using AI, with more than 25% planning to use it in the next 2 years.

64%
Among marketers who already use AI, 64% say it has greatly increased their overall marketing efficiency.

Sources: Salesforce

10Pearls

POWER SMARTER MACHINERY, VEHICLES, AND STRUCTURES

When we think of smart machines, we tend to think of self-driving cars and drones. However, businesses in all industries, from healthcare to manufacturing to retail, can **leverage smart machines to increase productivity and efficiency.**

Organizations are already using smart robotics to:

- Handle risky or strenuous work

- Deliver medication to patients

- Serve as companions for the elderly

- Restock shelves or find merchandise

- Deliver room service

Many companies will also benefit from smarter roads and structures. Governments across the globe are investing in smart city technology that promises to **ease traffic congestion, increase building efficiency, and minimize the risk of utility outages.**

Case Study: Amazon

Using robots in its warehouses has **cut Amazon's operating expenses by 20%**, translating to roughly **$22 million** in cost savings for each fulfillment center. Amazon could **cut another $800 million** in one-time cost savings once it deploys robots in remaining fulfillment centers.

10Pearls

KNOW THE RISKS

Contrary to sci-fi predictions, AI won't destroy the human race. It does, however, have the potential to damage your reputation.

A number of high-profile AI mishaps have left brands with some explaining to do:

Microsoft's Twitter Bot "Tay" was designed to learn to converse like a human by engaging with Twitter users. Within 24 hours, Tay was tweeting racist, misogynist remarks and had to be shut down.

A security robot patrolling a parking garage injured a toddler in 2016. Another robot made by the same company fell into a fountain at a DC office building earlier this year.

Pokemon Go users noticed that there were few Pokemon locations in primarily African American neighborhoods. It's likely that the creators of the algorithms failed to provide a diverse training set by not spending time in a variety of different neighborhoods.

To reap the rewards of AI without compromising your brand's credibility, work with a development partner with expertise in navigating the risks.

40%

Gartner predicts that 40% of new enterprise applications will include AI technologies by 2021.

HAVE QUESTIONS ABOUT ARTIFICIAL INTELLIGENCE?

Have Questions about How Artificial Intelligence will Impact Your Business?

10Pearls is an end-to-end digital technology partner that specializes in helping businesses modernize, transform, accelerate and digitalize.

To schedule a complimentary discovery call, please email info@10pearls.com

To learn more, visit www.10pearls.com

AARP

PayPal

Decisiv

MBO partners

DC TAXI

HughesNet.

nextel

Coca-Cola

NATIONAL GEOGRAPHIC

amwell

Spectrum

socialradar

MedStar Health

Discovery EDUCATION

Zubie

10Pearls

THANK YOU!

10 Pearls

🌐 www.10pearls.com

🐦 @TenPearls

✉ info@10pearls.com