

THE AI ADVANTAGE

A SIMPLE GUIDE TO ELEVATING YOUR BUSINESS
USING HUMAN & MACHINE INTELLIGENCE



**BY 2021, WORLDWIDE SPENDING ON COGNITIVE &
ARTIFICIAL INTELLIGENCE (AI) SYSTEMS IS EXPECTED TO GROW TO**¹

\$52.2 BILLION.

**TO PUT THAT IN CONTEXT, IN 2017, THE AMOUNT WAS
JUST \$12 BILLION.**

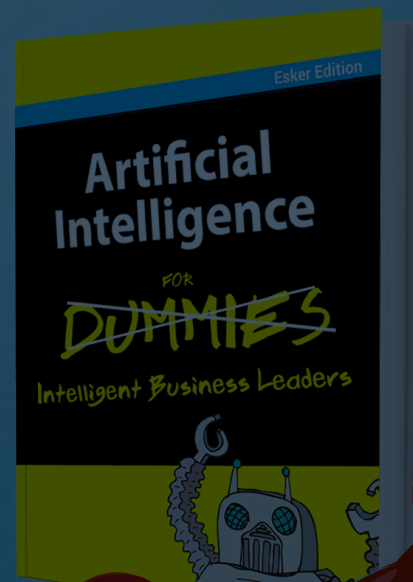
¹ Worldwide Semiannual Cognitive/Artificial Intelligence Systems Spending Guide (2017). IDC.

INTRODUCTION

There's no denying it: The age of AI, or what's often referred to as the "Fourth Industrial Revolution," is already here and, in many ways, just getting warmed up. Businesses eager to create a competitive advantage are recognising that the future is in the intersection of humans and machine intelligence.

That's why we created this guidebook. It's sort of like AI for Dummies ... but for intelligent business leaders like yourself. The ones who just want to better understand what AI is, its implications, and the benefits it brings to essential business processes.

So kick back, relax and enjoy. In just 15ish minutes, you'll know more about AI than your competitors and your business will be better for it.



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DEFINING ARTIFICIAL INTELLIGENCE

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Noun: Artificial Intelligence Noun: AI

According to the Encyclopedia Britannica, Artificial Intelligence is defined as: "the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings ... such as the ability to reason, discover meaning, generalise or learn from past experience."² Essentially, AI is a computer that mimics human intelligence.

HISTORY, HOLLYWOOD & HYSTERIA

Although it seems like a recent phenomenon, AI can be traced all the way back to 1956, when it was founded as an academic discipline. Furthermore, examples of independent-thinking artificial beings have been staples of pop culture for decades — from Mary Shelley's *Frankenstein* (1818) to Stanley Kubrick's *2001: A Space Odyssey* (1968) to James Cameron's *The Terminator* (1984).

In these sinister and sensationalised depictions, the pursuit of AI always seems to end very, very badly for us sentient humans. Fortunately, the real evolution of AI is far less scary and unpredictable.

² "Artificial Intelligence." Copeland, B.J. Encyclopedia Britannica (Last Updated: 2018, May 3) <<https://www.britannica.com/technology/artificial-intelligence>>.



IT'S KIND OF LIKE ...

Think back to when you first learned how to swim. Do you remember all the calculated, contextual inputs that were involved in order to stay afloat? Of course not. But your brain does. Like your brain, AI learns and remembers as it goes, observing what works and what doesn't in order to achieve the desired result.

And that's essentially what AI is: a really good student — minus the emotional and artistic capabilities unique to humans — who's willing and able to learn how.

AI IN OUR DAILY LIVES

We fear what we don't understand so, predictably, the concept of AI in business makes some way. But you may be surprised to learn of all of the AI-driven tools and products that people already use every day to make their lives and jobs easier.



Your ride is on its way. The driver is 11 minutes away.



Time to change your air filter.



EXAMPLES INCLUDE:



RIDESHARING APPS
(Uber, Lyft, Gett)



VIRTUAL ASSISTANTS
(Siri, Cortana, Alexa)



NAVIGATION APPS
(Google Maps, Apple Maps, Waze)



STREAMING MEDIA SERVICES
(Netflix, Hulu, Spotify, Pandora)



SOCIAL NETWORKING
(Facebook, Pinterest, Snapchat)



SMART HOME DEVICES
(Nest, Amazon Echo, Google Home)

61% OF BUSINESS LEADERS

EXPECT THE SHARE OF ROLES REQUIRING COLLABORATION WITH AI TO INCREASE IN THE NEXT THREE YEARS.³

³ Knickrehm, Mark. Shook, Ellyn. Reworking the Revolution, 2018. Accenture.



AI'S ROLE IN BUSINESS

AI has the rep of a cold, complicated and impersonal technology. But what smart companies are discovering is that, when used strategically, AI has a very personal, harmonising and outcome-driven effect throughout an enterprise. When used as the primary interface between customers and employees, AI serves three main functions:

01 MAKES IT EASIER FOR YOUR TEAM TO DO THEIR JOBS.

- Removes daily burden of repetitive, low-value tasks
- Frees up time to focus on core, business-building activities
- Improves internal process efficiency with AI-based analytics
- Faster & simpler onboarding

02 MAKES IT EASIER FOR OTHERS TO DO BUSINESS WITH YOU.

- Reduces errors & bottlenecks
- Improves accountability & transparency in interactions
- Increases availability/flexibility of support & service teams
- More self-service options

03 MAKES IT EASIER TO BE A SUCCESSFUL BUSINESS.

- Improves scalability & simplifies IT landscape
- Helps attract & retain talent
- Boosts customer satisfaction
- Generates new business opportunities & revenue

THE HUMAN/AI PARTNERSHIP

Perhaps you're thinking that this whole AI in business idea sounds nice and all, but there has to be a catch. People will lose their jobs, management will lose control over their processes and we'll all eventually lose our souls on account of The Robot Uprising. Once again — don't despair — but the reality is far less dramatic.

WORKING SMARTER, NOT HARDER

When it comes to AI business solutions, it's not a bots vs. people job competition; rather, it's a true partnership allowing you to be a better employee, better business partner, etc. Yes, some roles will disappear, but only those centered around data-centric, rules-based and easily repeatable tasks. What's more, AI is a positive catalyst for helping new roles emerge and existing ones to evolve.

Case in point: The Director of Customer Service at Amerock Hardware had this to say when discussing her experience with an AI-driven automation solution:

"INSTEAD OF FOCUSING ON DATA ENTRY, OUR STAFF IS ABLE TO WORK ON TASKS LIKE PROACTIVE OUTBOUND CALLING TO ENSURE A POSITIVE CUSTOMER EXPERIENCE AND INCREASE REVENUE."



WANT TO LEARN MORE?
Read the full Amerock Hardware [case study](#)



BUSINESS PROCESSES IMPACTED

In the context of business, AI-driven automation solutions refer to technology specifically designed to streamline the order-to-cash (O2C) and purchase-to-pay (P2P) cycles. Below are some of the common processes within those cycles that AI is known to work its magic.



ORDER-TO-CASH

- Customer Information Management
- Order Management
- Claims Management
- Invoice Compliance & Delivery
- Collections Management
- Payment & Supply Chain Financing



PURCHASE-TO-PAY

- Supplier Information Management
- Contract Management
- Procurement
- AP Automation
- Expense Management
- Payment & Supply Chain Financing

IN THE NEXT FIVE YEARS (2018-2022), INVESTMENT IN AI AND
HUMAN-MACHINE COLLABORATION IS ESTIMATED TO

**BOOST REVENUES
BY 38%⁴.**

⁴ Knickrehm, Mark. Shook, Ellyn. Reworking the Revolution, 2018. Accenture.

MAKEUP OF A BEST-IN-CLASS SOLUTION

As the awareness of AI increases so, too, has the number of emerging solutions, systems and startups centered around AI's innovation in business. However, not all AI platforms are created equal. To achieve the greatest possible value, one must understand the multitude of related technologies and how they fit into robust O2C and P2P automation solutions.

ESKER'S CORE AI EXPERTISE

Esker's AI Engine is built on a set of technologies designed to mimic human intelligence, combining machine learning and deep learning capabilities to manage and analyse both structured and unstructured data from the most complex business processes.

Esker's core AI expertise includes:

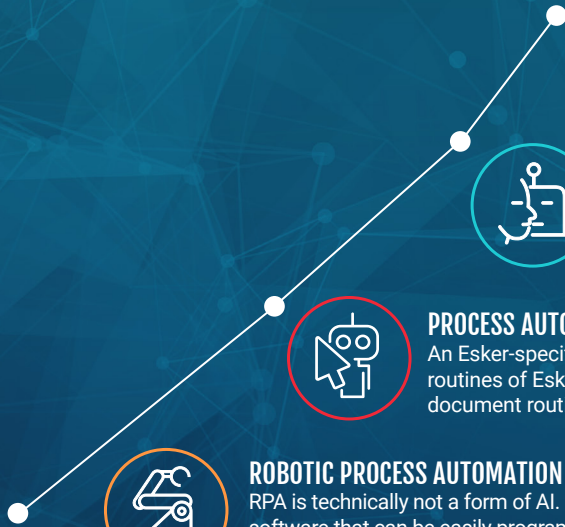
- Document & Image Recognition
- Content Recognition
- Analytics & Reporting



ESKER'S AI TIMELINE

Guided by our 30+ years of field experience and inspired by the tight partnership between humans and intelligent machines, Esker offers its users an array of rich and diverse AI technologies – all elegantly embedded within our suite of O2C and P2P solutions.

BUSINESS IMPACT



ROBOTIC PROCESS AUTOMATION (RPA)

RPA is technically not a form of AI. Much like a vehicle's cruise control or an aircraft's auto-pilot mode, RPA refers to software that can be easily programmed to do basic human tasks. The difference is, RPA doesn't "learn" on its own and only works with structured data. Nevertheless, RPA tools offer benefits across applications, including: data transfer and posting, data checks, reporting, automated data collection, and more.



PROCESS AUTOMATION

An Esker-specific term that describes a set of intelligent technologies that improve the daily routines of Esker users (e.g., language and currency detection, built-in recognition, automated document routing, etc.).



MACHINE LEARNING

A type of AI technology that uses algorithms to parse data, evaluate what users do on documents and data fields, and apply what was learned to make "informed" decisions. This includes functions like auto-learning, auto-fill and auto-correct, along with providing alerts on deviations.



A subset of machine learning composed of algorithms that permits software to train itself to perform tasks by exposing multi-layered neural networks to vast amounts of data. Automated tasks include image recognition and analysis, predictive analysis and big data analysis.

AI TECHNOLOGIES

AI IN ACTION



EXAMPLE: PROCESS AUTOMATION

NEW INVOICE ARRIVES

Let's say your company receives a Purchase Order (PO) invoice. This is the first time Esker's AI solution has seen a PO invoice from this particular vendor.

Using a specific matching algorithm, Esker's AI Engine automatically searches for the vendor and a pattern corresponding to a PO number.

AUTOMATED DATA RECONCILIATION

Once identified, Esker looks for corresponding open PO lines in the PO database and matches them to the invoice based on total invoice amount. Expected invoice lines (from PO) are displayed and the amounts and quantities are set to their expected values.

Order No.	4500000001	Fax	+1 1133557799
Invoice No.	INV00001	Giro No.	888-9999
Document Date	6/11/2018	Bank	World Wide Bank
Due Date		Account No.	99-99-888
		Purchaser	Richard Lum
Payment Terms	Current Month		
Shipment Method	Cost Insurance and Freight		
Prices Including Tax	No		

Reference	Description	Unit of Measure	Unit Cost	Discount %	Amount
1-0001	Laptop 14", 4Go RAM, HDD 320Gb	Quantity: 1.00	1,200.00		1,200.00
1-0004	Screen 24", Full HD, Black	1.00	200.00		200.00
1-0002	Screen 24", Full HD, White	1.00	200.00		200.00

AI IN ACTION



EXAMPLE: MACHINE LEARNING

Line Item	Description	Quantity	Total	Unit
1	14001100	5.00	220.00	PC
2	PK1102	3.00	29.45	PC

NEW ORDER ARRIVES

Imagine a scenario where a customer sends in an order for the first time. The header data was captured but essential line item data was missing.

USER CORRECTS ERROR

The user makes the necessary correction to the order by filling in the gaps (e.g., line items and possibly changes to the total amount that was not captured correctly).

ESKER REMEMBERS

Esker learns automatically from those changes so that the next time the same customer sends an order, the system will know how to extract info based on the layout – adapting to potential small tweaks along the way.



AI IN ACTION

EXAMPLE: MACHINE LEARNING

BATCH OF INVOICES ARRIVE

In this example, a batch of supplier invoices arrive into accounts payable (AP). It's the first time Esker's AI solution has seen this batch of invoices.

ESKER IDENTIFIES

After training itself through the application of multi-layered neural networks, Esker automatically recognises and suggests a split for the batch of invoices sent into the system – despite the fact that some invoices are multiple pages.

USER VERIFIES

A user or power user then verifies the split is correct, selects "Ok" and invoices are split and placed in a queue for AP verification.



CUSTOMER RESULTS

As much as we like diving into the technical weeds of how AI works in a business environment, the end results are what really matter to users. Below is just a small sample of impressive business benefits Esker customers have achieved over the years thanks to our AI solutions.

ASSA ABLOY

SAVED **\$250k ANNUALLY**
THANKS TO A
30% REDUCTION IN
ORDER ENTRY ERRORS



REDUCED ORDER ENTRY TIME
BY **OVER 80%**; FROM 30 MINS.
FOR LARGE COMPLEX ORDERS
DOWN TO 5 MINS



armtec

ACCELERATED AVERAGE
AP INVOICE PROCESSING
SPEEDS **BY 50%**



REDUCED DAYS PAST DUE
FROM **23 DOWN TO 9.4 DAYS**
VIA INCREASED PRODUCTION
OF TRACK ANALYSTS



GAINED AN **ADDITIONAL \$29k**
IN ADDITIONAL DISCOUNTS IN
JUST 6 MONTHS **THANKS TO**
NEW AP EFFICIENCIES

CONCLUSION & KEY TAKEAWAYS

A red robotic hand is shown in the upper right corner, holding a magnifying glass over a document. The background is a dark blue gradient with faint, glowing lines suggesting a network or data flow.

In closing, here are a few things every business should consider before exploring the idea of transitioning to AI-driven automation solutions further.

AI IS ALL ABOUT MAXIMISING DATA.

Solutions powered by AI feed off of data, and in return, equip businesses with the necessary data for improving speed, accuracy, productivity and predictive analytics. As long as organisational data continues to be vastly underutilised, AI business solutions are a huge value-add to those who employ them.

AI ISN'T A MAGIC WAND.

The upside is hard to argue, but using AI solutions doesn't guarantee instantaneous benefits to your business. AI works best when its employed with a specific objective in mind, backed by a full commitment to resources, and managed by users who are highly adaptable, as processes will inevitably change.

AI IS A COOPERATIVE TECHNOLOGY.

AI is not packaged or sold as an individual solution. Rather, it's an added feature that brings new levels of intelligence to O2C and P2P processes. Going largely unnoticed in the background of the solution, AI tirelessly performs tasks that would otherwise be sapping your team's time and productivity.

AI IS SUSTAINABLE.

When an employee leaves or moves to another position in the company, a lot of valuable learned knowledge goes with them — not with AI. All the intricate knowledge that AI technology learns is automatically retained, providing companies with a superior solution in terms of sustainability.

AI ISN'T SOMETHING TO FEAR.

If you're tickled by the darker, more cynical side of AI, that's what series like Netflix's Black Mirror are for. With AI-driven automation solutions, however, there are no shocking twists. It's a tool that makes doing business easy while making your company easy to do business with. Simple as that.



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