

The Robots Are Here

How AI and ML Automation Solutions Can Solve Business Problems

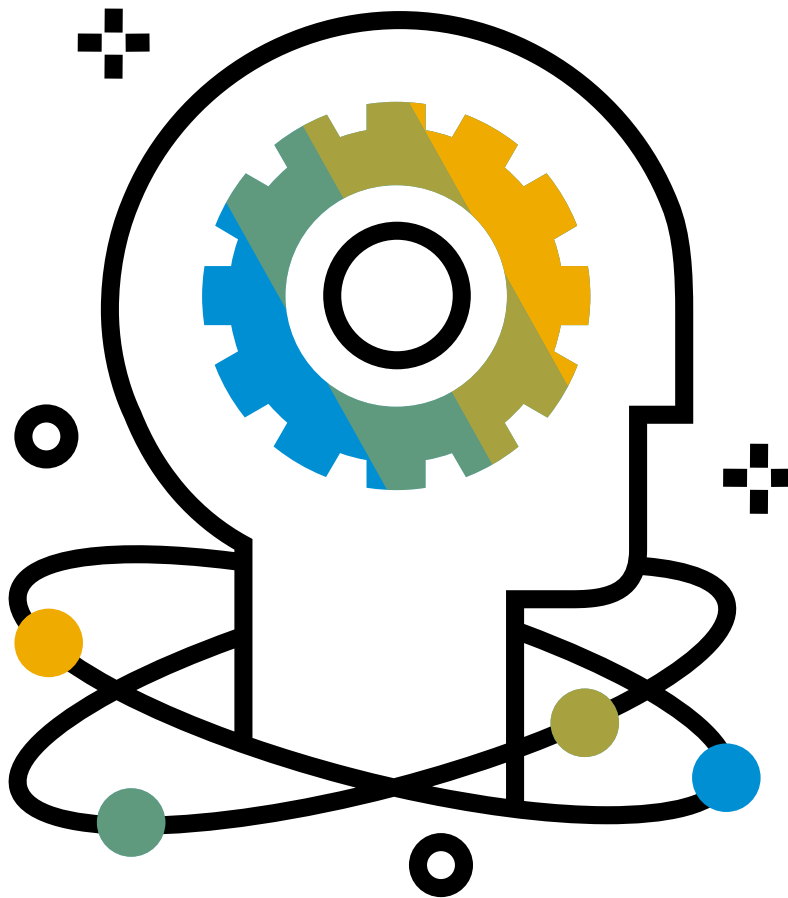
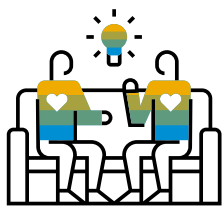


Table of Contents

- 4** A Catalyst for Change
- 7** A Symbiotic Relationship
- 8** Some Organizations Struggle to Adopt AI Technologies Effectively
- 9** The Fast Path to Leveraging Intelligent Technologies
- 10** What to Consider When Thinking About AI and ML Solutions
- 12** SAP Concur Solutions Can Help

In 2018 we published a paper called **The Robots are Coming**. Over just a few years, they've not only arrived, but the ubiquity of artificial intelligence (AI) and machine learning (ML) is shaping our attitudes and expectations about managing risk and compliance, business optimization, and employee experiences.



“**86%** of executives say the pandemic has forced their organization to become more open to experimentation and quick shifts in strategy.”

The Economist Group

Introduction

Organizations of all sizes struggle to adopt AI and ML automation into their operations, and smaller organizations are concerned that such cutting-edge technologies are too complex or costly for them.

The science-fiction version of computers that think like people is still far off, but ML algorithms (a subset and practical application of AI) is what most people mean when they talk about AI today. Often grouped, AI and ML coupled with machine sensors, chatbots, business process automation, blockchain, internet of things (IoT), and other cutting-edge technology represent what SAP collectively calls 'intelligent technologies.' Literature and movies abound with pop culture clichés of computers taking over the world. In reality, AI and ML technology help us conquer the complexity of an increasingly globalized and digitalized world, even during the most challenging times.

A CATALYST FOR CHANGE

What has caused such a dramatic change in such a short time? The tempting answer is COVID-19. The challenges of a global pandemic forced businesses to adapt quickly. Suddenly vast swaths of the workforce began working from home, and

digitalization became a high priority. According to The Economist Group, "86% of executives say the pandemic has forced their organization to become more open to experimentation and quick shifts in strategy."¹

More accurately, the recent pandemic is a catalyst, accelerating existing trends. For instance, the trend toward globalization and the need to scale businesses in a complex regulatory environment is not new. Keeping policies up to date and in compliance with regulations in one country can be a full-time job. However, as organizations do business across borders, this task becomes more complex. According to a 2021 analysis by Deloitte, there are 220 regulatory revisions across the world each day.² The job of staying compliant is complex. Additionally, the cost for non-compliance is high in terms of fines or money left on the table when organizations pay taxes they are entitled to reclaim.

Likewise, the push toward business optimization also accelerated. According to The Economist Group, reducing the drag of manual business processes and finding process improvement opportunities remains a top priority with 89% of executives.¹ These executives state that implementing and deploying advanced technologies is key to their business resilience.

1. The Economist Group, 2021: [Ready, Reset, Grow sponsored by SAP Concur](#)

2. Deloitte, 2021: [RegTech Universe 2021](#)

Consequently, organizations are turning to technology solutions that can help automate repetitive and mundane tasks. But that's just a start; leveraging technologies to do jobs designed in a pre-digital age can be a little bit like asking your doctor to take extreme measures to save an infected appendix. Why not just remove it? Mike Koetting, SVP and leader of SAP Concur solutions, says, "we have to start examining the end goals and eliminate vestigial processes designed back when moving paper was the primary way of doing business."

Significant economic disruptions also create an incentive for organizations to rethink how they do business. In the pursuit of more nimble organizations, leaders want to leverage predictive analytics, which relies on managing vast amounts of data. IDC estimates the annual generation of digital data in 2020 was approximately 64 zettabytes (ZB) of data, and will experience a compound annual growth (CAGR) of 23% over the 2020-2025 forecast period. Aside from sounding like a ridiculous, made-up number, each zettabyte is the equivalent of one trillion gigabytes. Still abstract? To make it slightly more concrete, try to picture all the data flowing from every computer, mobile device, and machine sensor in the world each year.³ In layman's terms, it's a crazy amount of data, coming in from too many sources to count, in every way imaginable, and it will more than double in the next five years. Rationalizing all that data into useful information requires serious processing power, and it's the perfect job for data-hungry intelligent technology bots.



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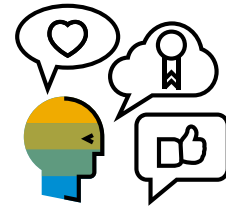
IDC

3. "Data Creation and Replication Will Grow at a Faster Rate Than Installed Storage Capacity, According to the Global DataSphere and StorageSphere Forecasts", IDC Press Release, March 24 2021

Perhaps the most crucial factor driving the need for intelligent technologies today is creating better employee experiences. Our expectations about productivity will only increase. At the same time, we are living through the most stressful and anxiety-filled period in recent history. We have to give people tools that make it easier to do everything we ask them to do while at the same time encouraging a better work-life balance. According to Forrester Research, within two years, 80% of organizations' HR strategies will focus on employee experience as a top priority.⁴

The Robots are Already Here and Making Themselves at Home

The good news is: in just the last few years, friendly AI robots (reared by academics, data scientists, and tech giant research and development teams) have left their nests. They've landed in our homes and even perched themselves on our bodies via smartphones and wearable technology. They are such a welcome part of our everyday lives; we often take them for granted. When is the last time you unfolded a map from the glovebox, curated the CD changer in the trunk of your car, cracked open an encyclopedia, or thumbed through a phonebook? Even the chat function on your utility companies' websites usually starts with an AI bot, then seamlessly routes your question to the right call center human.



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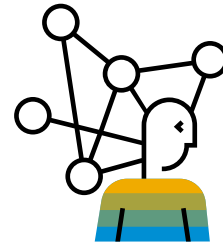
4. Forrester Research, "[Close the Employee Experience Gap](#)"

And today, AI and ML are increasingly becoming tools for IT, finance, accounts payable teams, security, travel managers, and all kinds of business decision-makers. Intelligent technologies are streamlining processes, assisting employees, and freeing people from manual tasks. Both small and large organizations either already leverage intelligent technology into their operations, or they want to.

A SYMBIOTIC RELATIONSHIP

“AI makes humans more human by allowing us to do the things we are really good at,” says A.G. Lambert, SVP of product management at SAP Concur solutions. At the same time, we expect more from AI than humans when it comes to specific tasks, like driving cars.

People drive through red lights and are distracted while driving all the time, but we expect a higher level of performance when a car drives itself. That’s because one of the most promising areas for AI and ML is developing more symbiotic relationships between humans and machines. AI should be better at driving; otherwise, where’s the value? Our expectation is that autonomous or semi-autonomous vehicles will lead to fewer accidents and safer transportation. The point is computers are excellent at some things (constantly keeping their eyes on the road and lightning-fast reflexes), and people are better at others (making decisions about where to go and why). Here’s another way to break it down: computers excel at ‘association’ tasks (if A, then B), they are reasonably good at ‘inference by intervention’ (if you change X, what happens to Y?), but they are not good at what Judea Pearl, Israeli American computer scientist, and philosopher, calls ‘counterfactuals.’⁵



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5. Harvard Business Review, 2021, [When Should You Use AI to Solve Problems](#) and Judea Pearl, 2018 [The Book of Why: The New Science of Cause and Effect](#)

A counterfactual is the creative work of putting together ideas that don't seem related, borrowing from other experiences, or following a hunch. Counterfactual thinking is one of the things that sets us apart from computers, and it also leads to novel ideas and breakthrough concepts. People are also good at 'association' and 'inference by intervention,' but doing it at scale is slow, mind-numbing, and expensive because we get distracted, occasionally employ short-cuts and we literally have a life.

However, navigating the robot/human partnership is a complicated issue. One of the biggest fears is that AI robots would take people's jobs. The economic and employment effects of robots in the workplace are still being studied, but one thing seems clear: the partnership works best when AI robots are helpers. Intelligent technology assistants that allow people to be more productive and comprehensive improves employee experiences by taking on rote tasks that are time-consuming and arduous. In this regard, AI may play out more like the internet phenomenon. Twenty years ago, only a few people had jobs doing "internet stuff." Rapid digitalization, driven by the internet, and the value of having so much information at your command, created millions of jobs that didn't exist before. By 2018 internet-related jobs accounted for 10.1% of US GDP.⁶

Today, the green shoots of recovery look promising, but we are socially responsible for using technology to improve lives in the short term. Indeed, intelligent technologies are ready to help here too. A recent CBS News article reports how Rhode Island uses a century's worth of state employment data, and an AI application to curate jobs for individuals and even suggest training options to help them match current skills to new opportunities.⁷ It will take time to bring people affected by economic downturns back into the workforce. It will require education and reskilling investments from companies, governments, and individuals. Still, this investment will ultimately allow people to focus on things people excel at like: creativity, craftsmanship, analysis, strategy, creating value in new ways, and our robot friends are here to lend a needed hand.

SOME ORGANIZATIONS STRUGGLE TO ADOPT AI TECHNOLOGIES EFFECTIVELY

With all the promise and accelerated demand for AI and ML, putting AI robots to work for your organization is not a slam dunk. According to Forbes, when it comes to AI projects, "about 80% never reach deployment and those that do are only profitable 60% of the time." Why is this? The article goes on to say, "the AI industry is still in the 'craft' stage of development, with expert data scientists and software engineers' hand-tailoring systems to match just a few of their specific [organizational] use cases."⁸ Put another way; it's hard to develop DIY solutions to fit your specific business needs

6. Internet Association, 2020, [IA Industry Indicators – Q2 2020](#)

7. CBS News, 2021: [Out-of-work Rhode Islanders lean on artificial intelligence for career direction](#)

8. Forbes, 2021: [Will 2021 Be The Year That AI Finally Scales?](#)

(even with the AI automation tools from Google, Amazon, Microsoft®, and others) without significant investment and continued commitment. The good news is that intelligent technologies demand more solution providers to incorporate AI and ML into their solutions.

THE FAST PATH TO LEVERAGING INTELLIGENT TECHNOLOGIES

Today, finance and business leaders don't have to decide between developing intelligent technologies themselves, integrating multiple solutions, or doing nothing at all. There is another option. "The journey to AI does not have to be complex, expensive, or chaotic because other companies may have already developed what you need," says Stela Koleva, VP, EMEA Services & Support and Country Director at SAP Concur. The fast path to AI and ML is to leverage the solutions already available, tested, integrated, and used by thousands of other organizations.

The three-way intersection where common problems, repetitive tasks, and best-in-class solutions intersect is an excellent place to apply AI and ML solutions. In particular, a couple of everyday use cases where intelligent technology robots are already hard at work are:

Mitigating Risk and Compliance in Employee Spend

Many organizations struggle with risk and compliance issues for employee spend like expenses, travel, and invoices. Managing compliance and mitigating risk in these categories is difficult. With so many transactions initiated by a diverse group of people across the organization who are not experts in your spend policy's intricacies, it's easy to make a mistake (or, in some cases, take advantage of the

HOW TO QUICKLY MOVE TO AN AI-ENABLED ORGANIZATION:

- 1** Zero in on busywork, requiring repetitive processes, where there's the possibility of manual error and low job satisfaction.
- 2** Ask yourself, "is this a widespread problem?"
- 3** Take a look at best-in-class partners; chances are they already integrate intelligent technologies into their solutions.

system). Even if everyone is well aware of and trained on your spend policy, what happens when you make a change? Re-enabling your people (which almost everyone needed to do during the pandemic) is hard. Also, you have to: weigh the risk of minor vs. serious violations, handle receipts in different languages and currencies, manage duplicate expenses, and flag potential Foreign Corrupt Practices Act (FCPA) and other anti-corruption violations. Intelligent technologies can streamline changes to policy, embedding new rules into the workflow. AI robots can scan transactions and identify risk and compliance issues that could expose your organization to fines and reputational risks.

Auditing

It's one thing to spot mistakes and potential fraud, but it's even more important to identify spending patterns that may have been happening for years. In fact, according to the Association for Certified Fraud Examiners, typical expense misuse isn't identified until 24 months after it started.⁹ To catch patterns in spend that indicate misuse, you have to look at everything. Who would want to audit every line of every expense? Nobody. That's why auditors usually sample a handful of transactions (maybe 10–20%). However, intelligent robots have no problem looking at every line item, cross-checking them against multiple

databases, faithfully executing each step of the process; and they do it in the blink of an eye. Then, in partnership with people, they serve up exceptions to human auditors who can solve problems instead of finding them.

Managing Taxes

Organizations that do business internationally have a slew of taxes to manage. Goods and Service Tax (GST), Harmonized Sales Tax (HST), and Value Added Taxes (VAT) are all different flavors of consumption taxes used by over 160 countries, each with its own ever-changing rules. Businesses can often reclaim some of the taxes paid on purchases. The hard part is keeping track of all the rules. Businesses, regardless of size, typically manage VAT/GST/HST through people-based or manual solutions, either outsourced or in-house. Some companies choose not to manage reclaims at all, so it's a small wonder that more than half (54%) of VAT taxes go unclaimed.¹⁰ Intelligent technologies, along with embedded tax knowledge, can digitalize the compliance process, automatically checking transactions against local tax regulations and find significant reclaim opportunities.

WHAT TO CONSIDER WHEN THINKING ABOUT AI AND ML SOLUTIONS

Take Advantage of Other Organizations Investments

Best-in-class solutions have the advantage of scale. Lots of customers mean lots of experience helping organizations like yours address some of the same challenges you face. Over time, these

9. Association for Certified Fraud Examiners: 2020: [Report to the Nations 2020 Global Study on Occupational Fraud and Abuse](#)

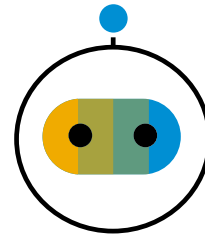
10. Vanson Bourne: 2017, [Connecting the Dots on Travel, Expense and Invoice Spend](#)

solutions develop expertise across a broad set of organizations and industries, and they also become familiar with each's particularities. The more customers best-in-class solutions have, the fewer problems they haven't seen. Additionally, a side effect of scale is vast amounts of data. It takes big data to give AI robots what they need to learn, but it also takes deep human knowledge to tutor AI robots in their machine learning journey. Look for leading solutions in their space, so you can benefit from other's investments, share in their learning, and take advantage of their hard-earned best practices. Best-in-class solutions make enterprise-level capabilities available to organizations of all sizes—the intelligence gleaned from a vast user base across many industries, borders, and use cases become efficiencies everyone can use.

Look for an Extensive Partner Ecosystem and Integrations

No organization thrives as an island, so look for solutions with large, integrated partner ecosystems including partners that bring their specialized intelligent technologies to extend value. It's not enough to ask if a solution has an API—APIs are table stakes—more important is how many and what kinds of other solutions integrate. Solutions with a large archipelago of industry-leading, integrated partners increase the flexibility, choices, and fit for your organization.

Integration is a key factor when using intelligent technologies. Look for solutions that integrate as much of the ecosystem as possible. How does the proposed solution interact with your other financial systems or ERP? How much manual work is required? How much IT support will be you need? Higher levels of integration mean faster data, better visibility, and a more productive and responsive organization.



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The Robot X-Factor

Intelligent technology robots possess an amazing x-factor. They have the power to set you up for the future and help you travel back in time, in a manner of speaking. It's important to think about how you can use intelligent technologies both within a workflow moving forward (ex anti) and mine historical data to reclaim value from past transactions (ex post facto). For instance, when it comes to managing company spend, are requests to spend money compliant with policy? Are you giving employees assistance integrated into mobile apps that let users know if something doesn't look right when they snap a picture of a receipt? Pre-payment is one more point along the expense reimbursement workflow where intelligent technologies can help. AI robots can audit all transactions and flag those with violations, kicking them back to employees for more information, or forwarding them to accounts payable or finance staff for follow-up.

Do you have the human resources to scour years of past data? Reviewing historical data is another strength of intelligent technologies. After expenses and invoices have been processed and paid, there's still an opportunity to learn and save. Historic transactions contain a wealth of insights if you can process the data. AI and ML robots can find trends in spending and identify fraud that may have gone undetected for years (expense reimbursement fraud schemes tend to last two years before

detection and have a median loss per expense reimbursement case of \$33,000).⁸ Also, digging through several years of VAT transactions can unearth a virtual goldmine, identifying opportunities for reclaim.

One Size Does Not Fit All

While you may share the same challenges as other organizations, your operation is unique. For organizations where compliance is a high priority but may lack internal expertise, a managed or outsourced solution may be just the thing. Other companies want a more hands-on approach where they are the end-to-end owners, managing the process with in-house experts. Most commonly, the perfect solution falls somewhere in the middle with a hybrid of a managed solution supporting internal stakeholders. The ideal fit for your organization probably means a more bespoke approach that offers just the right mix of assistance and ownership.

SAP CONCUR SOLUTIONS CAN HELP

SAP Concur solutions help customers embed intelligent technologies to help them manage company spend, end-to-end. We're leading the industry to think about spend enablement, settlement, and oversight and control differently. Mike Koetting puts it this way: "creating expense reports isn't the goal. The goal is to settle the employee purchases as efficiently as possible. Acknowledging that this is what organizations

8. Forbes, 2021: [Will 2021 Be The Year That AI Finally Scales?](#)

actually need to do—in a guided, compliant, and controlled way—is transformative because it means our ambition is not creating the expense report which writes itself; it's about innovating settlement solutions.” Koetting adds, “with this reframe, we can imagine a future where writing an expense report, can be removed altogether” and intelligent technologies are a driving force behind rethinking employee spend management.

With over 25 years in the travel and expense management space, SAP Concur solutions manage and automate transactions across geographies and industries for more than 46 thousand customers of all sizes, supporting over 71 million end users booking travel and processing expenses. In 2020, our customers included 75% of Fortune 100 and 500 companies. Additionally, we offer services in the top 10 countries for business travel, with solutions localized for 33 countries and delivered in 28 languages. SAP Concur is well known for its focus on employee experience with the industry's highest ratings.¹¹ Plus, RISE with SAP is our latest investment to help customers accelerate the adoption of intelligent technologies.¹² We're to help customers run their best with ERP applications that already touch 77% of global transaction revenue.¹³



“Creating expense reports isn't the goal. The goal is to settle the employee purchases as efficiently as possible.”

Mike Koetting, SVP and leader of SAP Concur solutions

11. 4.7 iOS App Store rating for the Concur mobile app, G2Crowd: 4/5-star rating

12. SAP, 2021: [RISE with SAP](#)

13. SAP, 2020: [Fact Sheet](#)

ABOUT SAP CONCUR

SAP® Concur® is the world's leading brand for integrated travel, expense, and invoice management solutions, driven by a relentless pursuit to simplify and automate these everyday processes. The highly-rated SAP Concur mobile app guides employees through business trips, charges are directly populated into expense reports, and invoice approvals are automated. By integrating near real-time data and using AI to analyze transactions, businesses can see what they're spending and avoid possible blind spots in the budget. SAP Concur solutions help eliminate yesterday's tedious tasks, make today's work easier, and support businesses to run at their best. Learn more at concur.com.sg or at the SAP Concur [blog](#).

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