

Artificial intelligence for SMEs

Getting started with practical applications of AI

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AI is increasingly a part of how businesses stay competitive. Companies are now using AI to predict customer behavior, automate rote tasks, personalise customer experiences, improve go-to-market strategies, manage supply chains and more. Some are leveraging AI across multiple functions to achieve goals such as more efficient operations or superior customer service.

AI-powered technology isn't just for large enterprises. Many SMEs are already enjoying the benefits of AI through the applications they're using — even though they might not realize that the technology itself is intelligent. QuickBooks, for example, can automatically categorize expenses for customers because it has AI embedded in its software.

In a Vistage UK-IRL survey of 360 SME leaders, 14.4% of respondents said that they are currently leveraging AI in their business, with 6.4% using it for business operations and 67.5% for customer engagement. Less than a quarter (22%) of respondents say they believe AI is among the technologies that will have the greatest impact on their business in the next year.

Laurie McCabe, co-founder and partner of SMB Group, Inc., believes that AI can bring value to any SME, regardless of its size or industry. "There is no business that can't get value from this," she says. "Every SME should understand that the efficiency and insight that AI brings can be a huge differentiator for their business."

If you're a leader of an SME, that doesn't mean that you can simply "buy AI" in an effort to modernize your business. Rather, you should first consider whether AI can help you execute on your core business strategy, automate manual tasks for your employees or answer key questions for your business. You should also consider how to realistically integrate this into your business, given the financial implications and technical risks.

This report offers a roadmap for getting started.

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Expert Insight



Marco Casalaina

Vice president of product management, Einstein at Salesforce

AI has unleashed the Fourth Industrial Revolution

"There have been seismic changes in the last 200 years or so that have changed how humanity operates. The First Industrial Revolution was steam. The Second Industrial Revolution was electricity. And about 40 or 50 years ago, computation became the Third Industrial Revolution. Now, the Fourth Industrial Revolution is intelligence — and, more than that, embedded intelligence.

"Concepts of artificial intelligence have been around, more or less, since the 1950s — or even since the 1930s, if you consider notions of statistical regression. But what has changed in the last few years is the increasing ability of mobile devices, paired with the increasing availability of computers and storage, to embed intelligence into the applications that we use every day. Now, you use intelligence all the time without thinking about it.

"It's a subtler revolution than people may think. Intelligence is just being injected into what you do every day."

Part I: The fundamentals of artificial intelligence

What, exactly, is artificial intelligence? It is the theory and development of computers to perform tasks that normally require human intelligence, such as visual perception, speech recognition and decision-making. Artificial intelligence makes it possible for machines to process massive amounts of data in order to identify patterns, glean insights and take action based on those insights.

"AI is the science of building a system that can gather the data that you're already collecting, and then take action on that data," says McCabe, who cites a home-monitoring device (called Nest) as an example. "Nest is basically gathering data about the conditions in your home and taking action based on that data."

A subset of AI, machine learning, uses algorithms that enable computers to "learn" and improve as they process more and more data. "Machine learning is really about the algorithms that adapt and learn from data," says McCabe. One example might be a hotel group that uses data about guests (e.g., where they live and work, what type of rooms they typically book, when they take vacations) to predict whether they will stay at a certain hotel.

To be clear, AI is different from business intelligence (BI). BI looks at data and tells you what happened in the past and what the future would look like based on those patterns. AI looks at data and tells you why things happened the way they did, what will happen in the future and what you can do about it. With BI, you can determine which customers you want to look at. With AI, you can begin to understand how you want to interact with those customers. AI plus BI equals the customer experience.

Descriptive, predictive and prescriptive analytics

Understanding the value of BI versus AI

Analytics level	Type	Answers the question	Example
Descriptive analytics	KPIs/metrics	What happened?	A company had great sales results in Winchester last quarter. Descriptive analytics can explain what happened.
Predictive analytics	Business intelligence	What will happen going forward?	A company lost a lot of customers in Croydon last quarter. Predictive analytics can help a company identify other customers in Croydon that they might lose so they can focus on retaining them.
Prescriptive analytics	Artificial intelligence	What would happen if I took a particular action?	A company wants to find out what would happen if they offered a different pricing model to at-risk customers in Glasgow. Prescriptive analytics could show the company whether that would actually retain those customers, and how many. Once the results were known, rules could be put into place to automatically offer customers in Glasgow the most successful pricing model.

Part II: Artificial intelligence in action

For most companies today, the real value of AI comes from its ability to “do the grunt work for you,” says Casalaina. “In sales, it does the grunt work of finding opportunities and forecasting. In service, it interacts with customers and handles long-running processes. In marketing, it handles targeting. In e-commerce, it handles product recommendation. So it really cuts across everything that a business does today.”

In operations, AI helps companies with everything from performing preventative maintenance to solving problems on the production line to optimizing settings on machines.

“We are legal advisers in the specific area of IP and it’s unlikely that our role will be completely replaced by AI any time soon” explains Stephen Blake, Managing Partner of Marks & Clerk LLP. “Many aspects of our business and the advice we provide to our clients rely on experience built up over many years and all of our patent attorneys have a degree in a technical subject; replacing that background knowledge with a machine will be extremely difficult. Where we are able to use AI is in providing tools to assist our attorneys in some of the more routine aspects of the job such as analysis and processing of documents to identify and extract information.”

MDs and CEOs share their plans and predictions.

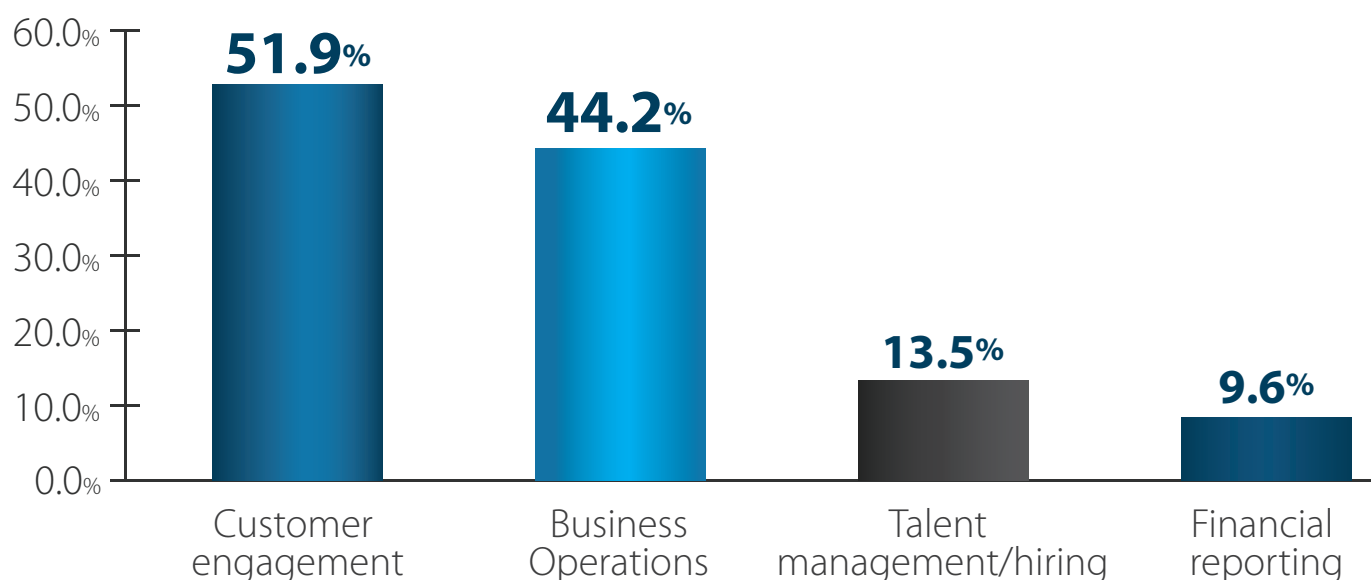
75.1% of SME leaders plan to invest in business software or business applications in the next 12 months, with customer relations management applications leading at 41.5%.

Source: June 2018 Vistage UK-IRL members opinion survey n=360

Real-world applications of AI

How SMEs are currently using AI across different areas and functions

Among the 14.4% of SMEs leveraging AI, most are using it to improve customer engagement, followed by business operations.



Source: June 2018 Vistage UK-IRL members opinion survey

Base: SMEs using AI in their business, n=52

Real-world applications of AI continued

Business Operations

Applications	Use case
<ul style="list-style-type: none">• Predict wear and tear on machinery• Perform preventative maintenance based on predictive analytics• Predict demand for new inventory• Automate routine tasks• Prescribe solutions• Manage process control• Apply control-loop decision-making• Upgrade old equipment with sensors and automation capabilities	<p>A manufacturing firm wants to identify what machines are not running and why they're not running. It uses an AI-powered application to collect data from every point in the manufacturing process — from the point where raw materials are brought in to when finished goods are shipped — and to flag when something happens in the middle of the process. It helps answer the question: <i>How does the inefficiency of one machine affect everything else in this process, and how do we fix it?</i></p>

"Most business processes involve some degree of mapping inputs to outputs, which is where machine learning/artificial intelligence techniques excel. With the right dataset for training, these techniques can have extremely wide applicability."

David Robinson
Partner, Marks & Clerk LLP

Customer Engagement: Sales and Marketing

Applications	Use case
<ul style="list-style-type: none">• Identify leads and opportunities• Forecast sales• Capture sales activities and log customer data• Suggest next-best actions and recommended email responses• Deliver the right content to the right people at the right time through the right channel• Determine likelihood of opening an email	<p>A small medical device company wants its sales team to spend less time searching for sales leads and more time meeting with prospective clients in the field. It invests in an application that can target and predict which prospects are most likely to convert into customers so that the sales team knows where to direct its energy.</p>

"For almost every business that I've talked to, marketing targeting tends to be the on-ramp onto AI. That is usually the path of least resistance to get into AI. It's a place where you can get some pretty decent ROI fairly quickly."

Marco Casalaina
Vice president of product management, Einstein at Salesforce

Real-world applications of AI continued

Customer Engagement: Service

Applications	Use case
<ul style="list-style-type: none"> • Manage basic customer inquiries • Classify and route customer service cases • Recommend solutions and knowledge articles • Facilitate self-service communities and automated assistants 	<p>An e-commerce company wants to improve the speed and quality of its customer service and engagement. It purchases a chat bot — an agent-like assistant powered by machine learning — to answer customer questions quickly. This gives support agents more time to provide one-on-one support to customers and solve difficult customer problems. In turn, customer satisfaction increases and the company sees higher revenue retention.</p>

“Someone once said, I’m very happy to see out of the box thinking; I just want to see some evidence of thinking inside the box first.’ AI is the same, it is great to have Artificial Intelligence, but to use it, you need some evidence of intelligence in the first place. What problems are you trying to solve? What is your strategy? What are you trying to achieve?”

Russell Beck
Vistage UK-IRL Speaker

Talent Management

Applications	Use case
<ul style="list-style-type: none"> • Provide better information to HR decision-makers • Capture data from recruiting processes to inform future hiring • Target the right candidates at the right time • Write better job postings • Discover passive job seekers and target them with personalized messages at the right time 	<p>An HR team is struggling to manage its workload and find the right candidates for top positions. To improve the efficiency of its processes, it starts using an AI-powered assistant to schedule interviews with candidates, and then uses an intelligent application to automatically find and rank candidates according to their credentials and qualifications.</p>

“If you’re looking to hire a greater marketer, there are applications that can help you identify the characteristics that separate the top 20% of marketers from the other 80% of marketers. Then, when you go search for new talent, you might realize, ‘Wow, maybe I’ve been paying attention to the wrong things when I interview these people.’ Other applications can help protect against unconscious bias in making hiring decisions.”

Laurie McCabe
Co-founder and Partner, SMB Group, Inc.

Expert Insight

**David Robinson**

Partner at Marks & Clerk LLP

Implementing AI in Your Customer Solutions: Patenting Inventions

AI inventions are generally implemented in software and many believe that obtaining patent protection for computer-implemented inventions in Europe is not possible. This belief is, however, incorrect and it is possible to obtain patent protection in Europe for inventions relating to AI. This is reflected in the large increase in the number of filings that the European Patent Office has received in recent years.

The European Patent Office has issued guidelines on what inventions can be protected. For many companies, their inventions in this field will be possible to protect. The guidelines are clear that an AI invention relating to a technical application or a technical implementation can be protected. Whilst this leaves open the question of what is “technical”, existing case law in the general software field provides strong guidance. Applications such as image processing, speech processing, fault detection, medical analysis and control of a process outside of a computer, amongst many other areas, have long been held to be “technical” in Europe.

Part III: Recommendations for SMEs

Vistage research revealed that very few SMEs have leaders dedicated to IT. Furthermore, most of them are IT generalists — versus data scientists who know how to seamlessly integrate AI into their businesses.

The good news is, your company doesn't need a team of data scientists to gain access to, or value from, AI. “Intelligence is built into a lot of business applications now,” explains Casalaina. “You can use it if you know where it is.”

McCabe agrees. “No matter what CRM you use, those applications are all building AI and machine learning into solutions,” she says. “And those solutions keep learning from the information that is entered into the system, so they can start to predict patterns.”

Manufacturers don't need to replace their old equipment in order to access AI or machine learning, either. Instead, they can use instrumentation to upgrade that equipment and automate processes.

To begin reaping these benefits, experts recommend focusing on the steps in these four categories.

1. Strategy

Consider your strategy first. Instead of looking for ways to bring AI into your business, look for ways to use AI to execute your business strategy. “You can't bolt on artificial intelligence and machine learning,” says McCabe. “You have to look at your strategy and say, ‘How can the vendors that I work with help me do the strategic things that will help me really grow? How do I use these applications to successfully execute my strategy?’”

Identify the yes/no questions that are important to your business. Practical AI usually starts with a yes or no question, says Casalaina. “Find the yes or no question that matters to your business and that you would like to predict going forward,” he explains. “It's usually something that you're already reporting on your BI, like ‘Will we win the deal?’”

Expert Insight

**Laurie McCabe**

Co-founder and Partner,
SMB Group, Inc.

If you find it hard to prioritize technology investments, you're not alone.

"SMEs have limited budgets and typically lack technology expertise. They also have other things competing for their money besides IT — whether it's lorries, new furniture or hiring people. When they look at the 2.5% or so of their total budget that might go to IT, they want to make sure they spend it on something that will give them the best bang for their buck.

"Seeing a direct connection between the investment and the return is critical. For example, investing in new sales and marketing applications is usually a high priority, because they know if they can do a better job of engaging prospects and working with clients, they can make more money. Internet of Things (IoT) is also becoming a hot area, because they can easily see how an IoT solution can, for instance, help them to control physical systems and save money on heating, cooling, lighting and other utilities. Those kinds of things are really attractive to SMEs."

2. Data management

Look for an area where you have a lot of data already.

Without the right amount of data, AI isn't going to work for you. "You have to look for areas where you have data sufficiency to add intelligence," says Casalaina. "If you have a list of 100,000 email addresses, you need to target your marketing or if you have 100,000 leads, you need lead scoring."

Clean up your data. If you aren't already using a CRM system, your data is probably spread all over the place — in spreadsheets, emails, marketing systems and more. You've got to clean up this data and get it organized in order to be ready for AI. McCabe explains, "If you have data in all these different places, you have to take a step back and say, 'I don't want to bake in the mess that I've already created with a new solution. I want to get the solution off with a better recipe.'"

Treat data as your most valuable resource. Establish a system that effectively collects the data that you care about. Beck explains "The CEO of Netscape said 'if we have data let's look at the data. If all we have is opinion, let's go with mine.' If it is important, it gets measured. It is hard to underestimate the importance of data; data is the new currency.

Collect data that will inform decision-making. Whilst data is important, the right data is essential. Beck explains, to be useful data needs to be consistent, accurate, accessible and meaningful. Bad data will make even the most sophisticated AI system produce rubbish! You get out what you put in."

3. Technology and systems

Look for AI in your applications. Check to see if the applications or systems that you're currently using — or considering investing in — have already incorporated AI. "You have to make sure that your vendor is making it easier for you to get more insight that can improve your business," says McCabe.

Ask for help. Don't be afraid to ask your suppliers to guide you through this process. "If you do not know the question, then ask your suppliers, what do their systems do? What are they capable of? What problems can they solve? AI is a tool and as with any tool, it has to have a purpose, otherwise it is useless" says Beck.

Use your applications to identify trends and opportunities.

Your applications can probably work harder for your business than you think. "Look for anything that might signal, 'Huh, here's something that I could use to better market my business or save money or whatever,'" says McCabe. "Or, 'Here's a red flag that the system is surfacing that can hurt my business if I don't address it.'"

Look for repetitive tasks that you can automate. These would be low-value functions that people do every day and spend a lot of time doing. Think about whether an application could take the time and aggravation out of completing those tasks by performing them automatically.

Consider upgrading your old equipment with new sensors that can gather data analytics. But recognize that this process involves a certain level of customization. "There is no one-size-fits-all solution," says Beck. "But, AI is extremely good at some things. Typically these things revolve around spotting patterns, joining the dots, spotting trends in volumes of data that humans just simply could not see. AI can quite literally see the wood for the trees."

58.5% of SME leaders think advanced technology will impact their business in the next year.

- **56.4% said connected devices or Internet of Things is a technology that would have the greatest impact.**
- **38.2% believe that AI would have the greatest impact.**

Source: June 2018 Vistage UK-IRL members opinion survey, n = 360

Expert Insight



Russell Beck

Vistage UK-IRL Speaker and
Head of Consulting &
Collaboration,
Impellam Group

There's no need to be afraid of AI

Like the buzz words of Internet of Things (IoT), 'big data' and other various 'game changing solutions' that have been before and will come in the future, AI is just a term. It promises to change the world and impact everything we do. Maybe it will, maybe it won't, but like other game-changers listed, AI is not going away anytime - if ever.

AI is a tool much like any other business tool we have. The difference this time is the way in which it harnesses mammoth amounts of data to learn and from that apply itself to your situation. Typically, the solutions AI solves tend to be specific and niche – built as a solution for a defined problem, and when you couple copious amounts of data with a niche problem, AI is unbeatable. That is why, today, AI is already better at spotting potentially cancerous dark spots on an X-ray than a human. A human may, at best, take 10 seconds to look at an x-ray to 'see the pattern'; AI could look at tens of thousands in the same time – thus processing faster, but also learning faster.

4. Expertise

Don't try to manually implement AI. Companies that manually implement AI have a very high failure rate, says Casalaina. "People don't realize how difficult it can be to do this manually," he notes. "All of the steps that you have to go through — preparing the data, gathering the data from different places, creating the model, using algorithms and scoring, and then putting it back into the system that people are using — are actually more difficult than people realize."

Best practise is only best practise for your business. You may want to consider working with an expert if you want to use AI to inform your company's decision-making processes. To an extent, it is irrelevant what other people are doing. Beck's advice is never copy. "Be influenced and learn from other businesses - but do not copy. Your business is unique, thus what will work for you is likely to be different to what works for other people. The beauty of AI systems is that they learn and tailor themselves to individual circumstances, but notwithstanding that, just because others are doing AI does not mean you should. It is all down to what problem are you trying to solve; what questions do you want to answer; what is your strategy? If you do not know the answers of these questions no amount of AI will help you.

Expect to make continual adjustments. Beck's final comment; "AI answers questions, but be prepared that the answers may not be what you expect."



Joe Galvin

Chief Research Officer,
Vistage

Research perspective

Artificial intelligence is already all around us. While the future of AI is vast and unlimited, the practical applications are just beginning to emerge. There is no question that AI is in your future; it just may not be something for you today.

Early adopters are beginning to realize the benefits of automation and the deep insights harvested from big data. There is no need to become a data scientist or even to hire one. Instead, identify and select business applications that have AI embedded in them. Look for opportunities to automate the routine that will free your people for more creative work.

We're a long way from the Terminator's "Skynet," but the journey has begun.

Contributors



Russell Beck

Vistage UK-IRL Speaker and Head of Consulting, Imbellam Group

Russell is currently Head of Consulting for Impellam group – the largest recruitment services business you have never heard of (despite annual turnover of £2.2bn). Russell leads the thought leadership and engagement with strategic customers for a business that places 125,000 people a week into work. Widely acknowledged as a thought leader in Talent and People Management, Russell brings an unrivalled level of passion and insight to all he does.



Marco Casalaina

Vice President of Product Management, Einstein, Salesforce

Marco S. Casalaina is VP of product management of Salesforce Einstein. He was previously VP of applications at RingCentral, where he ran RingCentral's contact center and collaboration business units. Prior to that he was VP of products at machine learning startup KXEN, which was acquired by SAP AG in 2013. This is, in fact, Marco's second stint at Salesforce — during his first term at Salesforce, from 2005 to 2010, he was one of the original developers of the Service Cloud product, and then its product manager. He holds a bachelor's degree in computer science from Cornell University.



Dr Stephen Blake

Partner, Marks & Clerk LLP

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Marks & Clerk LLP are an intellectual property law firm advising clients on seeking protection for their inventions, trademarks and designs to achieve their business goals. Commercially driven advice that maximises return for the business is key to Marks & Clerk's offering.

David and Stephen are patent attorneys in Marks & Clerk's software practice group. David in particular has significant expertise in advising clients in protection of inventions relating to AI. Stephen has been a Vistage Member since 2017.



Laurie McCabe

Co-founder and Partner, SMB Group, Inc.

Laurie brings more than 25 years of experience in the IT industry to her current role as co-founder and partner of SMB Group. Laurie has built widespread recognition for her insights in the small and medium business technology market. Prior to SMB Group, Laurie worked in analyst roles as a partner at Hurwitz & Associates; vice president of SMB insights and solutions at AMI-Partners; and vice president at Summit Strategies, where her original research of the emerging cloud computing model earned her broad recognition as a thought leader in this area.

**Joe Galvin****Chief Research Officer, Vistage**

As chief research officer for Vistage, Joe Galvin is responsible for providing Vistage members with the most current, compelling and actionable thought leadership on the strategic issues of small and medium sized businesses. Joe is an established thought leader and analyst who has researched and presented to business leaders around the world on customer management, world-class sales performance, and CRM and sales force automation technology.

**Anne Petrik****Director of Research, Vistage**

As director of research, Anne Petrik leads the design, deployment and analysis of member surveys for Vistage, capturing the sentiment and practices of the Vistage CEO community. This analysis, in collaboration with perspectives from experts and partners, helps create insights for SME Business leaders through the thought leadership published by Vistage.

About Vistage Worldwide

Vistage is the world's leading business performance and leadership advancement organization for small and midsize businesses. For more than 60 years, we've been helping CEOs, business owners and senior executives solve their greatest challenges through confidential peer advisory groups and one-to-one executive coaching sessions with accomplished business leaders. Today, more than 23,000 members in 20 countries rely on Vistage to help them make better decisions for their companies, families and communities. The results prove it: Vistage member companies grow 2.2 times faster than average small and midsize U.S. businesses, according to a 2017 study of Dun & Bradstreet data.

Learn more at vistage.co.uk

About Salesforce

Salesforce, the global CRM leader, empowers companies to connect with their customers in a whole new way. Its out-of-the-box solutions let small and midsize businesses find customers, win their business and keep them happy for life. Salesforce lets you easily implement cutting-edge technology and connects to all your systems so you can build closer relationships with customers and grow your business faster than ever.

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