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The technology trends helping SMBs grow into the future

A guide for accelerating growth using social media, mobile solutions, the internet of things, and artificial intelligence

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The challenge: getting from technobabble to true business value

For years, marketers prepared us for today's reality. Our world is digital. If you use a Fitbit to enhance your exercise routine, or ask Amazon's Alexa who won the World Series in 1952 (the New York Yankees), or use your phone to post vacation pictures on Facebook, you're using digital technologies to enrich your personal life.

Applying this same combination of digital technologies – including mobile solutions and apps, social media, artificial intelligence (AI) and the internet of things (IoT) – to work-related tasks can seem more complex. And while this is true, it's not impossible.

You're not alone in your quest to figure out how to use these technologies to grow your business. Large and small, businesses around the world are racing to put these new capabilities to work. According to The SMB Group 2017 Digital Transformation study, over 70 percent of small- and medium-sized businesses (SMBs) say they are familiar with digital transformation.[1] The challenge facing many of them is knowing how to implement these technologies in a way that can help their businesses grow.

Add to these challenges the number of vendors and solutions to choose from, and knowing where to begin can be confusing, if not completely overwhelming.

It's time to skip the technobabble and bring clarity to the confusion. In this guide, you'll get everything you need to make the same digital technologies you love using in your personal life work for your business. This guide outlines how to take advantage of these innovations to grow your business. Inside, you'll find expert advice and case studies from SMBs leading the charge, as well as tips and tools for adopting and optimizing digital technologies in your business.

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The technology trends helping SMBs grow into the future

Social Media

Applications and platforms that allow people to share information, ideas, career interests, and other forms of expression via virtual communities and networks.

Mobile Solutions & Apps

Online services and applications made available on smartphones and tablets.

Artificial Intelligence

Computer systems that can perform tasks typically done by humans like visual perception, speech recognition, analysis, decision-making, and translation.

Internet of Things

Everyday objects that send and receive data via the internet.

Don't get distracted by bright, shiny objects

Figuring out what technologies to invest in can be the biggest challenge you face in beginning your digital journey. Laurie McCabe, partner and co-founder of The SMB Group, recommends first asking the question, "Where will I get the biggest bang for the buck?"[2]

Once you have your answer, McCabe suggests taking a step back from the technology. "It's important to not get distracted by bright, shiny objects," she says.[2] By clearly defining what you want to achieve with the technology, it is easier to get past the technobabble to figure out exactly what you need.

Some common business goals that SMBs want to address with digital technologies include[2]:

- Attracting new customers

- Improving employee productivity

- Streamlining physical operations

- Reducing costs

- Responding to rising customer expectations

- Keeping up with competitive pressures

- Managing regulatory compliance

- Attracting new employees

- Increasing focus on customers

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Prepare yourself and your team to take on new technologies

Once you decide on your business goals, the next step is to prepare yourself and your team to face the challenges that come with adopting new technologies.[2]

Choose the right solutions	Use trusted partners to help with integration	Test new technologies	Take a cloud–first approach	Manage change
Challenge: With the vast array of possible solutions and vendors, it's hard to know what's right for the business.	Challenge: We need solutions that integrate with the business processes and technologies we already have in place.	Challenge: Our budget for new technology is tight.	Challenge: New technology deployments are complicated and time consuming.	Challenge: This is a huge cultural shift for us; not everyone is on board with the idea.
Suggestion: Evaluate the solutions with the goals your company wants to achieve as context for your decisions.	Suggestion: Get help from a business partner you trust and take advantage of solutions they already offer. Technology vendors, marketing firms, payments providers, and accountants are a great place to start.	Suggestion: Start small, test technologies, and phase them into the business. Consider revenue-generating and savings opportunities when evaluating projects. Examples include expanding to new markets, opening new sales channels, reducing operating costs, and improving security.	Suggestion: Choose cloud-based infrastructure and business solutions to speed deployments, minimize maintenance costs, increase data storage capacity, and take advantage of advanced capabilities like AI and analytic insights.	Suggestion: Recognize that it is no longer business as usual. Plan time for people to get up to speed with new technologies. Include hands-on training as part of the implementation process.

Source: February 2, 2018 interview with Laurie McCabe at The SMB Group.

It's important to adopt digital technologies

Social Media	Mobile Solutions & Apps	Artificial Intelligence	Internet of Things
Why they are important			
The prevalence of social media has increased the need to engage employees and customers in these channels, to remain top-of-mind.	Mobile devices and mobile apps are now a standard mode of communication.	Consumers expect experiences to be personal in both business-to-consumer (B2C) and business-to-business (B2B) environments.	Smart objects and places are changing the way we work and live.
What you can accomplish using them			
· Build social presence and engagement · Improve customer service · Increase brand awareness · Understand buyer preferences · Personalize buyer and customer experiences · Stay ahead of competitors · Make more informed business decisions	· Improve customer service · Increase brand awareness · Promote employee productivity · Nurture customer loyalty · Speed feedback response times · Simplify the purchase process · Gain anytime, anywhere access to data that facilitates faster business decisions	· Automate routine back-office tasks and other business processes · Predict buyer preferences · Promote employee productivity · Improve customer service · Lower administrative costs · Answer customer and employee questions more quickly · Market and sell to targeted groups of buyers with ease	· Facilitate teamwork using collaboration tools like automated whiteboards · Lower operating costs using smart utilities · Collect and analyze business process data using sensors · Simplify and speed the management and maintenance of machines using sensors

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Meet the experts

Jack is a senior financial services executive with 20+ years' experience in payments with a focus on business strategy, revenue optimization, business development, contract negotiations, and marketing.

Jack Funda | Commercial Strategy Executive Emeritus | Worldpay

Jennifer advocates for entrepreneurs and uses her experience as a small business owner to foster relationships with partners and alliances that give SMBs the flexibility to choose their own path for adopting and using cloud accounting.

Jennifer Warawa | Executive Vice President, Partners, Accountants & Alliances | Sage

Mathew is one of the leading minds on the future of marketing. In his role at Salesforce, he works with the world's most progressive businesses through research, writing, and speaking to help brands see the future of a contextual world.

Mathew Sweezey | Principle of Marketing Insights | Salesforce

Santiago focuses on helping Cisco customers and partners achieve digital success through highly secure, software-defined, automated and intelligent infrastructure platforms.

Santiago Solanas | Vice President South Theatre EMEAR | Cisco

Laurie is a leading expert in SMB technologies and actionable insights in the areas of cloud computing, mobile solutions, business solutions, social networking and collaboration, and managed services.

Laurie McCabe | Partner and Co-Founder | The SMB Group

Social Media

Even for frequent users of Facebook or Twitter, understanding how to use social media to attract customers to your business is no small feat and not obvious, shares Jack Funda, Commercial Strategy Executive Emeritus of global payments processor Worldpay, Inc.

"There are lots of online tools SMBs can take advantage of to make their business easy to discover and make it easy for people to find and interact with you," he says.[3]

Many different types of tools are in the market, some designed to automate business processes and others to manage social engagement.[3] Businesses need to research these tools to determine the right fit. When picking a social solution, look for tools that build loyalty, and retain and engage customers.

"SMBs should look for tools targeted to what's important to their business, attracting and retaining customers," says Funda.[3]

Payment processors like Worldpay are part of a group of technology companies bringing social engagement and marketing tools to market. Funda notes that Worldpay's partnership with Womply is one example of how these tools are coming to market connected with payments.[3]

Womply's Worldpay offering includes both BizShield and Insights. Bizshield is designed to help small businesses monitor customer and competitor social activities. Insights helps small businesses improve performance by expanding the monitoring capabilities of BizShield with a comprehensive dashboard for improved decision-making. Features include reputation defense tools for quickly managing social posts, a customer campaign builder for attracting and retaining customers, and customer feedback, a messaging platform for soliciting comments from customers.

Other common social tools include Hootsuite, Hubspot, Sprout Social, Buffer, Salesforce Social Studio, and Hatch Loyalty.

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Update your website and social profiles

It may seem obvious, but the first step you should take with social media is to give people an interesting and accurate place to visit for more information. Social engagements can happen in a matter of seconds and without warning, so before you start to engage:

· Refresh your website to ensure business, product, and service information is up to date

· Update business profiles on all relevant social sites to ensure information is accurate

Managing your social profiles on Facebook, LinkedIn, and other social sites can be a massive undertaking. Start by updating the most popular sites like Facebook, Instagram, YouTube, and Twitter. Add to these sites local or vertical industry sites specific to your business (e.g., OpenTable and TripAdvisor).

"Attracting customers to your business is no small feat and not obvious. Even SMBs reasonably familiar with social platforms are challenged to figure out how to leverage them to expand and grow their business."

Jack Funda | Commercial Strategy Executive Emeritus | Worldpay

Build a buyer frenzy with social engagement

When, how, and where consumers buy products and services changes almost daily. Social media is at the forefront of this global transformation. Channels such as Facebook, LinkedIn, and YouTube long ago stopped being destinations where people simply go to create connections and post pictures while on vacation. Today these are the channels through which businesses must spark a buyer frenzy.

Social media should play an important role in your plans for reaching customers. According to the 2017 Global Web Index Quarterly Report, 94 percent of digital consumers ages 16 to 64 have an account on a social platform. Active digital consumers spend one of every three minutes on social networking, and 78 percent of this networking activity takes place on mobile devices.[4]

WOMPLY

Boost your reputation

Engage your customers

Monitor your business

Engagement

Not publishing or posting information

Personalize the experience

The explosion and volume of social channels and mobile devices has increased the number of messages and amount of information consumers must manage. Just like you, your customers filter (e.g., delete and unsubscribe) messages they consider noise. They want to get to the most relevant messages, quickly. The average person deletes 48 percent of the emails they receive daily. This activity represents only five minutes of their day.[4]

Using engagement to personalize buyer experiences can prevent your messages from being perceived as noise. Mathew Sweezey, Principle of Marketing Insights at Salesforce, the cloud-based CRM platform, says that engagement is an SMB imperative for success.[5] Salesforce is rated as the number one CRM according to Gartner and IDC.

"Small businesses with smaller budgets need to use social engagement – discussions – as a way to become top of mind," Sweezey says. "They can't afford to spend money on old approaches, publishing content on channels rather than driving engagement. It doesn't create the value needed to become top of mind."[5]

The key is to use social media to start a two-way dialog with customers – and avoid sending only "push" communications and messages. If you are successful at engaging your customers, it's likely they'll follow your brand.

Katie Young, Senior Trends Analyst from Global Web Index, explains that social media is a key consumer touchpoint and an essential channel for brands looking to increase their following.[6] According to their research, four in ten internet users share they are following their favorite brands.[6]

Global Top **10**

Source: Global Web Index: Social Flagship Report, Q1 2017

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"Small businesses with smaller budgets need to use engagement – discussions – as a way to become top of mind to buyers."

Mathew Sweezey | Principle of Marketing Insights | Salesforce

SMBs leading the charge

Hatch Loyalty and Customer Engagement

What They Do: Digital customer loyalty app

Location: Chicago, Illinois

Business Issue: Attracting and retaining customers

Solution: Salesforce Social Studio

Results: Provides the ability to prioritize sales activities and ensure the app is successful with the merchant

Seafood Kitchen

What They Do: Restaurant

Location: Jacksonville, Florida

Business Issue: Competition

Solution: Womply

Results: Keeps customers coming back by monitoring and managing online reviews, addressing issues quickly, and letting customers know how much they are valued

Mobile

People expect businesses to engage with them digitally – and via mobile apps. Of the four technology trends we've identified as instrumental in digital transformation, mobile adoption is the most mature. In the past, it may have seemed like a marketing ploy to push product sales. Now, it is a reality.

"Be aware: today it is a reality that business models and customer experiences are enabled digitally," warns Santiago Solanas, Vice President of South Theatre EMEAR for Cisco, a network and security solutions provider.[7]

Mobile devices will continue to be the go-to method people use to research and purchase products and services. A 2017 Global System for Mobile Communication Association (GSMA) research study on the mobile economy estimates that there will be 5.7 billion mobile subscribers globally by 2020, up from 4.8 billion in 2016.[8] Mobile apps will continue to dominate how buyers do everything from manage their finances and entertain themselves, to get directions and stay organized.

Where smartphone usage dominates

77%

55%

65% EUROPE

NORTH AMERICA

LATIN AMERICA

(Source: The Mobile Economy, GSMA 2017)

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Apps are a mandate

The dominance of social media increases the use of mobile devices as people become less reliant on laptops and PCs to stay connected and informed.[8] AI and IoT will only increase this reliance on mobile devices and apps. So you'll also want to make it a top priority in your digital transformation.

One way to do this is to create an app specific to your business and your customers' needs. Consider it your mobile mandate. Mobile apps are widely used to facilitate product and service education, ordering and returns.

Companies are also building apps to create more convenient customer service experiences, with easy access to digital versions of help manuals and frequently asked questions (FAQs). Marketers are using apps to cut through the noise in other digital channels and get consumers to buy more stuff.

Apps can also drive website traffic. iOS devices drive 59 percent of global website traffic, and Android devices drive 41 percent.[8] Traditional marketing that pushes messages and images to prospects and customers via in-store promotions and email campaigns won't give your business the exposure it needs to potential buyers or the ability to delight customers in today's market. Again, engagement and availability are key. Your customers want information tailored for them, on hand, when they want it and need it.

Don't make the mistake of thinking the value you'll derive from developing an app will only be among a small segment of your employees and buyers. A 2016 "Think with Google" questionnaire revealed that smartphone users between the ages of 16 to 64 have 35 apps installed on their devices, on average. And they use more than half of these apps at least once a week.[9]

"It's more important than ever to remember that in addition to being a business enabler, digital technologies, including those on mobile devices, deliver experiences to customers."

Santiago Solanas | Vice President South Theatre EMEAR | Cisco

Nurture your network and infrastructure to delight your customers

A customer's experience with your mobile app or mobile services is how they will perceive your business.

"It's more important than ever to remember that in addition to being a business enabler, digital technologies, including those on mobile devices, deliver experiences to customers," notes Solanas.[7]

The experience a customer has with your mobile app or technology can impact the reviews you get on social media. The quality of a mobile experience is important in all industries, but even more critical in industries like retail and hospitality. Solanas explains that the quality of a review can be dependent on whether a customer perceives that experience to have been secure, fast and not "funky."[7]

The quality of the mobile experience you create depends upon your network and security technologies. Look for solutions that offer the capacity to grow bandwidth as needed, and offer cloud storage. Mobile device security is also important, as mobile devices and apps are increasingly becoming a target of cybercriminals.

Cisco offers a variety of solutions designed to drive the passions of SMBs. The Cisco suite of offerings focus on supporting SMBs with enhanced collaboration, building better customer and employee connections, faster computing, tightening security, and simplifying customer support. Visit Cisco for more information about their solutions for small- and mid-sized businesses.

Cisco small business products

World-class networking, simple security, one-stop collaboration, a streamlined data center: get everything you need to power your growing business.

Networking

Deploy your network faster and more efficiently with cloud-managed or on-device managed switches.

Switches, wireless, and routers

Security

Protect your business. Prevent, detect, and mitigate security threats.
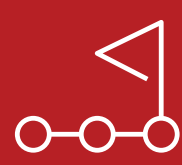
Security solutions

Collaboration

Engage everywhere. Exchange ideas and build stronger relationships.

Voice and conferencing

Process

Get computing, storage, connectivity, and unified management with the simplicity of hyperconverged infrastructure.

Data center

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Get to market quickly with help from partners

Too often in small- and mid-sized businesses, network and infrastructure needs get bootstrapped to other infrastructure priorities. Issues that arise are viewed to be the responsibility of the IT department, notes Solanas.[7] The rise of digital engagement – with employees and customers – makes it vital that these operational considerations take a more prominent role in your organization.

"Be honest with yourself about whether your team has the resources to get to market fast," adds Solanas. "If not, secure the help of advisors, alliances or partners that can help you take action quickly." [7]

In terms of apps, you can either build your own or buy one that already exists. Before launching your own mobile app, find out if your current software and service providers have a solution that's already integrated with the technology you use. This will be your fastest route to developing and bringing an app to market, and you'll gain the resources and expertise of larger organizations.

To help ensure the app will become a key digital enabler for your business, engage a technology partner when evaluating your choices and to assist with development work. In a world where device types continue to expand and network adoption varies, deciding what to launch in an app and how to present it to customers can be complicated. A trusted technology partner can assist with these challenges, as well as building and testing your app.

SMBs leading the charge

Industry: Pharmaceutical Company

Size: 250 employees

Location: Mayfield Village, Ohio

Business Issue: Managing large, digital files globally

Solution: Cisco HyperFlex infrastructure, which hosts virtual workstations for high-end graphics applications

Results: Improved engineer productivity, with the ability to work on conveyor designs from anywhere in the world

Industry: Retail Health and Wellness Products

Size: 200 employees

Location: Boston, Massachusetts

Business Issue: Secure, mobile-ready payments

Solution: Worldpay

Results: Simplified and more secure customer payment transactions using Apple Pay

Artificial intelligence

When you hear the term, "artificial intelligence" (AI), do you instantly smile and think, "I've got that"? Perhaps you've used Amazon's Alexa, Apple's Siri, or Microsoft's Cortana. The truth is that these products are more akin to scripted, voice-activated personal assistants. But the networks behind them use AI extensively to sort, search, and provide the information and entertainment you've requested.

In actuality, you've likely been using AI for a while without even knowing it. Spam filters, predictive search terms, Facebook-recommended news, online shopping recommendations, and virtual assistants are all other examples of AI.[16] Half of adults that participated in a Pegasystems study about AI revealed they had been interacting with AI without even recognizing it.[15]

The use of AI in our personal lives is creating a lot of interest in understanding how AI can best be applied in business. Many businesses are still trying to figure it out. The global organizations pioneering AI adoption are focusing on three specific areas of the business – business processes, business analytics, and the engagement of prospects and customers.[15,16]

As an SMB, what's the best way for you to get started with AI?

The SMB landscape has moved beyond merely operating in a paperless world, to truly understanding how key business pieces fit together. AI plays a pivotal role in helping small- and mid-sized companies connect the dots among key business operations such as workforce management, payroll, and financial forecasting. The best place for SMBs to start embracing AI is to get in the cloud

Today, vendors offer many cloud solutions designed specifically for SMBs. These low-cost solutions make it easy to transition to or start a business in the cloud. Yet, as small businesses begin to scale, many outgrow SMB cloud software and are faced with a serious challenge of integrating critical data and onboarding teams and customers onto a new system that's conducive to the complexity of their business. SaaS providers are picking up on this, and improving their offerings so businesses of any size can use their product.

That's the concept behind the Sage Business Cloud. By storing business data in the cloud, business can start small using a single business solution (e.g., accounting, payments, payroll, or human capital management), and quickly adjust needs as the business grows, without having to change to a different software. Having data in the cloud will help break down data that exists in silo within HR, finance, and operations - the first step toward embracing AI for business.

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"A lot of small businesses think that technology such as artificial intelligence is too expensive and out of reach for them," Warawa explains. "Sage has taken these technologies, such as our virtual assistant Pegg, and put them in the hands of SMBs."[11]

"The SMB landscape has moved beyond merely operating in a paperless world, to truly understanding how key business pieces fit together, and artificial intelligence plays a pivotal role in this."

Jennifer Warawa* | Executive Vice President, Partners, Accountants & Alliances | Sage

Choose your approach for introducing AI to the business

When making your decision about how to get started with AI, don't think about the technology, think about your business application. AI technologies are often marketed as a single technology application, when in fact there are three distinct types of AI with their own business applications – process automation, cognitive insights, and cognitive engagement.[19]

AI process automation is similar to the business process automation with which we're already familiar. However, AI process automation can consume large amounts of data from multiple sources and trigger specific tasks.

AI cognitive insights can help businesses predict customer buying patterns, analyze product and service quality, or personalize discounts for customers. This type of AI identifies patterns in large volumes of data.

AI cognitive engagement helps businesses engage employees, customers or prospects, and automate mundane back-office tasks like managing expenses. Cognitive engagement tools like chatbots can be an inexpensive way to get started.

As you begin your AI journey, here are some considerations:

· Learn more about AI to better understand the landscape of possibilities

· Ask the technology vendors you currently work with if they offer AI

· Honestly assess your team's technical capabilities to support this transformation

· If you're planning to apply AI to a business process that's a core competency, get help to do this even if you're simply testing out a free software application

· Start small and phase your project

*SMBs approaching the use of artificial intelligence in their businesses will need to select an adoption strategy that works best for them. The approaches outlined in this section of the eBook are not recommendations by Sage or Jennifer Warawa.

At-a-glance – getting started with AI

The following chart lists examples of companies that offer AI technologies that SMBs can use. Keep in mind that the number of providers is not limited to this list, and is constantly changing as new companies emerge and vendors consolidate to take advantage of specific market opportunities.

Artificial intelligence			
Type of AI	**Process automation**	**Cognitive insight**	**Cognitive engagement**
What it does	Automates digital and physical tasks.	Identifies patterns in large volumes of data using machine learning.	Engages employees, customers, or prospects using chatbots, intelligent agents, or machine learning.
Sample business applications	Automates back-office tasks like creating calendar invites, posting receipts to accounting systems, or updating customer service files.	Identifies customer buying patterns; then targets customers with products, services, and discounts.	Answers commonly asked questions using chatbots. Signals a process automation using voice commands with intelligent agents. Makes product and/or service recommendations using machine learning.
Should you try, buy, or build It?	Try it and buy it.	Try it and buy it.	Try it, buy it, or build it.
Examples	Astro, Clara, Slack, Lucy	Lexalytics, Smart Kai, Stackla	Salesforce Einstein, CaliberMind, Zendesk, Sage Pegg, Botsify, Flow XO, ChattyPeople
Where to get help	Marketing, accounting, business intelligence, and other technology software vendors.	Marketing, accounting, business intelligence, and other technology software vendors.	Create your own chabot using software or buy one ready to configure. Software vendors and partners can help when buying or building intelligent agents or machine learning applications.

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Pegg by Sage | Transform accounting jargon into natural language

Pegg

What is Pegg:

Pegg is a smart assistant that helps users cut the burden of administration and enables users to manage everything from money to people by texting or messaging requirements through a familiar style messaging platform, such as Facebook Messenger or Skype. Using Pegg, business owners can ensure expenses are recorded, determine the status of invoices, generate outstanding invoice reminders, and check the overall balance of their business – all in real time from their smartphone or tablet.

Examples:

You can ask Pegg, "Who owes me money?" and the chatbot quickly pulls the data from the Sage Business Cloud. You can find out who owes you, how much they owe you, when the invoice is due, and the quickest way to contact the payee. You can snap a photo of a receipt and Pegg uploads it in the chat and automatically catalogs it in the Sage Business Cloud.

How to get It:

Pegg is built into the Sage Business Cloud platform, but is also available as a smart assistant for Facebook Messenger and Skype.

"Pegg is really exciting; it takes away a lot of the stress of running a business."

Thomas Hewitson | labworks.io

The internet of things

Sensors collecting data, passing it through the cloud for real-time analysis—this is the internet of things (IoT). Communication and network giant Ericsson predicts that by 2022, there will be 29 billion connected devices. Of those, 18 billion will be related to IoT, far surpassing the connectivity of PCs, laptops, tablets, and mobile phones.[10]

There are many practical business applications for IoT. Cities can use IoT solutions to manage parking availability, traffic flow, and road conditions. Environmental sensors powered by IoT can detect earthquakes, weather conditions, snow levels, and air quality. IoT solutions are used in healthcare to monitor patient status and assist in care. Retailers are using the technology to manage supply chain activities including inventory and warehousing. And manufacturing facilities leverage IoT solutions to screen and control air quality and temperature.

> "IoT can specifically help optimize operations across the organization by automating manual data collection and analysis."
>
> **Laurie McCabe** | Partner and Co-Founder | The SMB Group

With the long list of potential applications for IoT, putting it to work for your business may seem inaccessible, costly, or difficult. The truth is, adopting IoT in your business doesn't have to be complicated.

New technological concepts like IoT and related solutions require a new way of thinking than with previous technologies.

"One of the biggest challenges is around the cultural transformation needed to support a digital transformation," Jennifer Warawa, EVP of Partners and Alliances for Sage explains. "Lots of time is invested when companies want to make a transition to the cloud or adopt other new technologies and they often think about just the technology itself, but there's so much that comes with it. It's often a huge challenge to businesses, which can result in them not reaping the benefits."[11]

Warawa advises businesses to think about the promise of the technology and be willing to take a risk.[11]

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Take the IoT risk and make it pay off

The benefits of an IoT deployment will depend on the goals you are trying to achieve and the deployment path you take. Be clear about how your business will benefit from an IoT application. Start small and set realistic goals and test the technology in your business. SMBs with limited resources, budget, and experience can explore a variety of ways to bring IoT into the business.

"IoT can specifically help optimize operations across the organization by automating manual data collection and analysis," notes Laurie McCabe, SMB technology expert, partner, and co-founder of The SMB Group.[2]

Increase your personal productivity – get a personal asistant

If you're brand new to IoT, or just interested in exploring how it works, a great way to get started is to use a personal assistant to organize your work schedule. You may already be familiar with using this type of assistant to play music, search the web, shop online, create lists, and control other smart devices from your phone. Most personal assistants, including Amazon's Alexa, Apple's Siri or Microsoft's Cortana can also manage your calendar, contacts, and emails by accessing Google, Apple and Microsoft applications.

SMBs leading the charge

Industry: Women's shoe heel manufacturer

Size: Small business

Location: Padova, Italy

Business Issue: Collaborating with customers

Solution: Cisco Spark Board

Results: Increased product speed to market

Bring people at work together using connected things

If you want to expose your teams to IoT solutions and improve productivity, collaboration tools that use smart boards are another option. These boards are great for teams that are distributed and need to work together in tight timelines or under high pressure situations.

The Cisco Spark Board is an example of an integrated collaboration platform. The solution lets teams in different locations collaborate in real time by writing on a shared whiteboard – instantly saving the information to their team space. The application even works with smartphones and tablets for team members collaborating on the go. Other whiteboard solutions include Realtime Board, Whiteboard Fox, and Scribblar.

Del Brenta, a shoe heel manufacturer in Lugano Switzerland, uses Cisco Spark to collaborate with clients around the world when designing and building products. Cisco Spark allows the company to work with clients in real time, cutting down on the confusion that can result when communicating by email.

Lower space or office costs using connected devices

If you want to begin your IoT journey by controlling costs, try connecting security devices and cameras, as well as thermostats and lighting, to your smartphone. This use case for IoT is increasing enough that giants like Google are bringing companies like Nest (purchased in 2014) back into the fold in an effort to bring voice-activated technologies to devices that are already connected.

Nest sells thermostats, doorbells, cameras, and other security devices that can be managed using a mobile app. The thermostat even lets users track energy savings and offers suggestions for reducing energy costs. Energy savings estimates for Nest range from 10-30 percent, although the EPA warns that actual savings can be lower.[12] The U.S. Department of Energy has been more conservative in their savings estimates, stating a savings of 10 percent for a single 7-10 degree setback for eight hours per day.[13]

Improve business processes and product quality with sensor

If you're ready to use IoT to improve a business process, smart sensors that monitor some portion of the process can help improve product quality and output. Sensor applications are particularly useful in manufacturing environments (i.e. for tagging warehouse items and inventory) where supply chain management can be key to lowering costs. Among the sensor types, RFID tags have been around for more than three decades and have a proven track record. Many accounting solutions either have the technologies or integrate to them in order to read RFID tags.

Sensors can also be used to determine environmental conditions. For example, Hahn Family Wines in Napa Valley, California, used IoT to increase the efficiency of the winemaking process. The company's goal was higher output and better quality wines.

In "Wired Wineries: IoT Fine-Tunes Ancient Processes," Techonomy reporter Josh Kampel explains how Hahn Family Wines deployed sensors throughout the vineyard to take in information, like the rain that comes from real clouds, and route that information to computer clouds where the data is stored and analyzed.[14]

Andy Mitchell, the winery's director of viticulture, explains that these sensors provide more precise data about how the vines use water, so he knows when they need more moisture. He adds that the company looks forward to improvements in these systems, so they can also monitor mildew and rot pressure.[14]

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Technology directory

Social media tools and resources

Hatch Loyalty – Personalized loyalty and customer engagement programs for retailers and other businesses. Hatch Loyalty's small business program offers off-the-shelf marketing tools for developing loyalty, automating marketing, campaign management, acquisition, and managing social listings.

Hootsuite – Social media management tools for businesses of all sizes. Manage social presence, brand and reputation; track and post social responses.

Hubspot – Customer relationship management, marketing and sales tools. Organize, track, and nurture leads. Website management and content publishing tools. Personalized messaging based on location, traffic source, device, customer persona and more.

Salesforce Social Studio – Social media marketing tools for listening and engaging customers. Publish content and unite marketing, sales, and service using feedback from campaigns. Includes reporting that is accessible online or via a mobile app.

Sprout Social – Social media management designed to develop strong customer relationships. Plan and manage social publishing, and track key words and hashtags to engage customers with relevant content.

Womply – Reputation management, customer engagement and business monitoring tools for small businesses. Manage social reviews on sites like Google, TripAdvisor and Yelp. Track customers and their spending patterns. Attract new and retain existing customers. Monitor business performance by benchmarking your performance against local competitors.

Mobile and infrastructure tools and resources

Aruba – Mobile device network options for small businesses. A Hewlett Packard Enterprise company, Aruba (arubanetworks.com) offers integrated wired and wireless networks with fast connection times, integrated and automated security for preventing malware viruses, and intrusion detection. Its cloud-based management and growth options offer the flexibility to scale business.

Cisco Small Business Solutions – World-class technology for small business budgets. Site includes a product selector, case studies, and other references for preparing infrastructure to handle digitally engaged customers.

Cisco Medium Business Solutions – Network, data center, security, and collaboration solutions designed for businesses that need to scale quickly to meet rapidly changing business demands. Site includes a product selector, case studies, and other references for getting started.

Cisco Catalyst 2960-L Series – Affordable, entry-level enterprise-class switching for branch offices, conventional workspaces, and outside-the-wiring-closet applications. Fanless, 24/48-port, 1 Gigabit Ethernet switch, pre-provisioned, with dashboards and diagnostics for quick-start.

G-Suite – Mobile device management that is easy to set up and manage, so small businesses can get up and running quickly. Available for Windows, Android, and iOS smartphone platforms. Includes security features like screen lock, strong passwords, and flexible device wipe options.

Artificial intelligence tools and resources

Process Automation

Astro – Email management and calendar app for Mac, iOS, Android, Slack, and Amazon Alexa.

Clara – Scheduling assistant that uses email and time preferences to coordinate meetings.

Lucy – Intelligent agent for order processing that converts email PDF orders and converts them to sales orders for enterprise resource planning systems in seconds.

Slack – Collaboration platform that uses machine learning to index email, conversations, and documents. Integrates with apps like Box, Google Drive, Zendesk, Salesforce, and Jira Cloud.

Cognitive Insights

Lexalytics – Sentiment analysis for text including surveys, social media, and more. Solutions can be delivered on-premises, in the cloud, or using an Excel plug-in.

Smart Kai – Combines social automation and machine learning capabilities to simplify social media management.

Stackla – User curated content with social media and geotargeted search capabilities, sentiment and language analysis, data analytics, and optimization assistance. Best for medium-sized organizations.

Cognitive Engagement

Salesforce Einstein – Uses predictive analytics and machine learning to automate actions and responses to customers.

CaliberMind – Centralizes customer data including web, email, and call recordings for a 360-degree view of customers. Uses natural language processing to convert conversations into data that can be analyzed. Integrates with common cloud platforms like Google, Amazon, Microsoft, and Salesforce.

Chatbots

Pegg – Accounting chabot that simplifies managing expenses, receipts, and tracking spending. The more you speak to it, the more it learns about how you run your business. Available for Facebook and Skype.

Botsify – Facebook Messenger platform for creating AI chatbots. Includes plug-in integrations, drag and drop templates, smart AI (query support for users), machine learning, analytics, and human takeover.

Flow XO – Visual editor builds chatbots for multiple platforms. Includes templates, 100 integrations, and an embedded web messenger. Supports both chatbot and human interactions.

ChattyPeople – Bots-in-a-box (pre-built), templates for eCommerce, customer services, and food businesses.

Internet of Things tools and resources

Amazon Alexa – Provides hands-free voice control of activities that range from listening to music and managing a smart home, to managing personal calendars and schedules. Available in English, German, and Japanese on the following operating systems: Fire OS 5.0 or later; iOS 8.0 or later; Android 4.4 or later.

Apple Siri – An intelligent personal assistant available on iOS 5 onward, macOS Sierra onward, tvOS (all versions), and watchOS (all versions) operating systems. Use it to phone or text contacts, query information on the web, schedule events and reminders, and modify device settings. Available in English, Arabic, Chinese (Cantonese, Mandarin), Danish, Dutch, Finnish, French, German, Hebrew, Italian, Japanese, Korean, Malay, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, and Turkish.

Cisco Spark Board – Whiteboard, video, and audio conferencing capabilities to facilitate collaboration with distributed teams. Connects virtual team members through the device of their choice using the Cisco Spark app.

Microsoft Cortana – An intelligent personal assistant created by Microsoft for Windows 10. Works on Windows, iOS, Android, and Xbox OS operating systems. Similar to other devices, it can be used to phone or text contacts, query information on the web, schedule events and reminders, and modify device settings. Available in English, Chinese (Mandarin), French, German, Italian, Japanese, Brazilian Portuguese, and Spanish.

Nest – Smart home technology powered by artificial intelligence. Connected technologies include doorbells, alarms, thermostats, cameras, and smoke detectors.

Realtime Board – Virtual whiteboard and collaboration tools for virtual teams. Integrates with popular cloud storage platforms including Google Drive, Box, Adobe Creative Cloud, and Dropbox, in addition to other third party solutions.

Scribblar – Chat, audio, and virtual whiteboards ideal for educational institutions that want to integrate collaboration into an existing website or learning management system.

Whiteboard Fox – Real-time, virtual whiteboard capabilities used for collaboration. Includes email links for fast access from participants. Compatible with tablets.

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