

2020 Outlook

How to take control of tech innovation in 2020

The business challenges, risks and strategic steps



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How to take control of tech innovation in 2020

In the past, many organizations thought that technology could be used either by them or against them. But moving forward, it's both.

In a growing range of markets, "Everybody needs to innovate, to stay ahead of others that are disrupting their market – predominantly through technology," said Grant Thornton Advisory Services Principal [Roy Nicholson](#).

Even the technology innovations that are already underway might need to pivot this year. Organizations must adapt to a mix of changing factors with a combination of proven steps and evolving approaches. To choose the right approach for you, you need to understand the changing technologies, challenges and risks.

Evolving technologies

Nicholson said that "One reason why companies are able to disrupt through technology is because the barriers of entry for starting up a new industry or product are significantly lower." He noted that key technologies have not only lowered these barriers, they have accelerated the pace of innovation as competitors move ahead. In [Forbes](#), Bernard Marr listed seven technologies that will disrupt banking and financial services in 2020.

Seven technologies

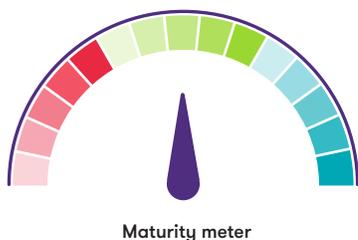
Grant Thornton specialists have analyzed the seven below, assigning each one a "maturity meter" that generally indicates how ready the technology is for organizations to successfully implement in 2020.



1 Artificial intelligence (AI)

In the realm of banking and finance, organizations are often using AI to power customer service chatbots, voice interfaces and after-hours customer transactions. In the back office, AI analytics helps organizations improve their lending decisions, automations, security and fraud detection. When applied to big data, it can even help drive decisions about business strategy and risks.

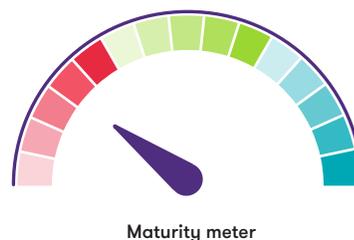
But, compared to most other emerging technologies, AI requires more [up-front investment](#) and has a longer development cycle before it yields returns. “You need your house in order,” said Grant Thornton Business Applications senior manager Jeff Silverman. “You need your descriptive and diagnostic analytics in order before you try to feed the beast of machine learning. Garbage in is garbage out.” That means many mid-market companies are still finding ways to make strategic and practical investments. It’s important to be sure that these investments will yield a truly differentiating result – given the advanced nature of AI solutions, it’s easy to fixate on simply completing or implementing a solution that ultimately doesn’t help differentiate your brand in the market.



2 Blockchain

Our [blockchain podcast series](#) outlines how blockchain can serve a range of functions in smart contracts, intercompany transactions, enterprise resource planning (ERP), cryptocurrencies and more. These solutions can use blockchain technology to track and transfer assets, permanently recording payments and other transactions in a secure and transparent system. That’s why blockchain has the power to streamline and lower the cost of loans and other transactions, by removing the need for third-party intermediaries and manual processing.

As described in our [blockchain FAQ](#), organizations should consider using blockchain in transactional systems if traditional databases will not provide enough trust (among participants) or resilience (for the transactional systems). The greater security of a blockchain solution comes at a price, since traditional databases usually offer faster processing.



3 Big data

Big data is about analyzing data with more velocity, volume, value, variety and veracity than traditional systems could achieve – the “V’s of big data.” Companies are increasingly likely to see data as an asset, whether they analyze their own data or import third-party data. By defining a clear data strategy, establishing data trust and implementing a data culture companies create the foundation for advanced analytics that can reveal customer behaviors, market trends, business inefficiencies or other important issues.



More than half of respondents in a recent survey say data analytics is the #1 skill they want to develop with the finance function.



For big data, the potential value continues to grow, the barriers to entry are getting lower and the cost of data acquisition and storage is decreasing – companies that don't have years of historical data can often purchase industry and customer data from third-party vendors or industry experts. As a result, big data is one of the more mature technologies on this list, and [companies continue to prioritize their big data investments](#) even in tough economic times. In fact, our [2019 CFO survey](#) found that most respondents listed data analytics as the top skill they wanted to develop within the finance function. Big data can help you make [strategic business decisions](#) with greater speed and confidence, and there are many proven or pre-developed solutions for your finance, marketing, sales, supply chain, operations, and other needs.

4 Robotic process automation (RPA)

RPA is about efficiency – it's the term applied to solutions that replace time-consuming or error-prone manual processes with software automation. Almost any industry includes administrative tasks or other opportunities where [RPA](#) can yield quick returns.

RPA can, for instance, automatically process common support requests, insurance claims, mortgages or credit card applications. These automations can be implemented as part of a [large multi-function solution](#), or they can be developed as [individual applications](#), depending on enterprise needs, budget and scope.



Maturity meter



Maturity meter

5 Cloud computing

Cloud computing, where software and data reside on remote servers that organizations access over a network connection, has been part of commercially available offerings for more than a dozen years. Cloud solutions were initially attractive because they helped organizations control the overhead of maintaining and upgrading their own on-premises hardware and software. But cloud solutions now provide value on many more fronts and are easier to integrate with the growing range of other cloud-based capabilities, online interfaces and mobile apps. The need to modernize business applications in the workplace is driving more organizations to develop and execute a cloud strategy, as cloud solutions will become the default configuration for even more organizations in the coming year.

Much has been written about how to [migrate](#), [maintain](#) and [protect](#) software and data in the cloud. Many organizations have already undergone cloud adoption, while others have been ushered into cloud solutions as their providers discontinued on-premises software in favor of subscription-based cloud software. Every solution may not be a fit to reside in the cloud, and cloud migrations can be a significant undertaking – the cost of cloud enablement can sometime be a hurdle. But organizations that have put off hiring resources and developing enablement strategies may find themselves running short of time as more vendors continue to encourage cloud migrations.



Maturity meter

6 Chatbots

Gartner says that chatbots will handle [85%](#) of customer service interactions in 2020. Typically powered by AI, chatbot interfaces can save customers significant time they would have spent using email, FAQs or forums, and they can save organizations significant service center costs. As technology and individual solutions improve, chatbots can answer increasingly difficult or even subjective questions.

For organizations that need to save costs over traditional service centers, or improve customer experiences over online FAQs and forums, it's worth considering how a chatbot solution could yield returns. One related benefit is that chatbots provide a ready way to gather information about your customer's needs and questions, letting you track the impact of changes that you've made and even [personalize communications](#) to build customer loyalty.



Maturity meter

7 Cyber security and resilience

As businesses adapt to comply with the General Data Protection Regulation ([GDPR](#)) and the California Consumer Protection Act ([CCPA](#)), data privacy and [cybersecurity](#) issues are now worthy of [C-suite](#) attention. These issues, along with identity and access management ([IAM](#)), will continue to factor into enterprise decisions about technology and innovation in 2020.



While it's critical to keep protective systems, practices and education up to date across your enterprise, it's also important to develop contingency plans in the case of a data breach. That way, your company is prepared to quickly identify and limit the damage from such a breach, and can better prioritize the threats that would be most damaging. Every company can and should ensure that it has flexible and current systems not only for cybersecurity, but also for data protection and IAM.



Maturity meter

How can companies use innovative technology in a way that will truly build the bottom line? Start by looking at the biggest business challenges where tech can fuel innovative solutions.

Changing business challenges

Organizations need to understand their evolving technology options, then consider their most pressing business challenges as they plan or revise their technology initiatives.

1 Customer demands increasingly drive strategy

Leaders of both [private](#) and [public](#) organizations are recognizing the importance of customer preferences and needs. More than just a factor in customer interfaces, customer demands are now increasingly important as a guide for organizational strategies. Nicholson said organizations need to shift to “building your business around an understanding of customer needs for your products, which might require new technology-enabled services.” And technology solutions are a primary channel for reaching, engaging and retaining your customers.

2 Employee experiences become an enabler for your future

Organizations are becoming increasingly competitive for the most valuable job candidates and internal resources. As organizations continually adapt and streamline their processes, their long-term success depends on acquiring and keeping the high-performing employees who will drive differentiating solutions. So, organizations need to pay more attention to the experiences that they offer to employees as well as customers, and technology can be critical.

"You need people that are dynamic continual learners - you need people that can readily adapt and learn new ways of doing things."

**Roy Nicholson, Principal,
Grant Thornton Advisory Services**

"It's important to consider providing an environment that attracts talent that might be a completely different demographic from what you historically have had in the organization," Nicholson said. "And you need people that are dynamic continual learners – you need people that can readily adapt and learn new ways of doing things." He added, "Having a strong [corporate culture](#), and a culture of innovation, is essential. Almost every organization is looking at giving employees a better experience in the workplace, with modern business and collaboration tools to operate more efficiently."

3 Enterprise efficiency becomes more accessible and essential

Increased efficiency has been an ongoing theme for many organizations in recent years, and technology continues to provide increasingly viable alternatives. Organizations should consider automation in particular, as they respond to [disruptions](#) or streamline [audits](#) and other standard processes.

"Operating efficiencies are being achieved through more automation by leveraging technologies like intelligent character recognition, RPA, machine learning and more," Nicholson said. While these capabilities might not have been readily accessible in the past, new packaged solutions and new functional capabilities mean that they can be employed in more situations with less initial investment.

4 Data visibility becomes its own business goal

As more organizations bring their digital future into focus, it's increasingly important for them to do more than just acquire data for individual software solutions – they need to actually see and understand data across the enterprise.

"Having visibility into how your current business is operating means getting the data to the right people, at the right time, to make informed decisions. It's reporting and decision making through data," Nicholson said. [Data management](#) is now becoming an enterprise-wide priority for organizations of all sizes because it's about more than enabling one solution – it's enabling the potential of new solutions and the future of the organization.

5 Digital foundations need to be more flexible

The most fundamental challenge has been around for decades, and yet its options and solutions continue to evolve. From small solutions to large [enterprise-wide platforms](#), the question of when and how to migrate data yields different answers every year. "If you think about the mid-market, a lot of companies aren't digital yet – they're still operating in a paper-based world,"





Nicholson said. But, companies that were initially slow to begin a digital transformation have started to make [fast progress](#). “The pace at which they’re catching up and the rate at which they’re investing in modernizing are quite phenomenal,” said Grant Thornton Strategy and Transformation Managing Principal and Leader Chris Smith. What’s changing is that the process of becoming [digital](#) evolves with every new solution and new means of digitizing information. For organizations that finally digitize processes this year, it will be important to consider streamlining the process with intelligent character recognition, automation and, most importantly, a data map that ensures digitized data will be a flexible resource for future solutions.

Emerging technology risks

As organizations evaluate the technologies that they can employ and the challenges that they need to meet, they also need to consider the risks that can emerge with technology implementation.

So, what’s the biggest emerging risk? It’s the risk of waiting too long.

1 Waiting

What is the right time for technological innovation? “I’ve actually been having that conversation in various roles over the last six or seven years,” Nicholson said, and the conversation can take many forms. “At a software company, it was ‘How long can we wait to pivot from being an on-prem software provider to a software-as-a-service provider?’ It was always the magic question, and I think organizations have to get away from thinking ‘How long do I have?’ to ‘I need to get this done as soon as possible.’”

2 The speed of change adoption, versus the speed of change

“When organizations have been around, and have been very successful, for a while, they might have a senior workforce where change is hard,” Nicholson said. He added that the general awareness of a need for change has grown at many organizations, but people often don’t translate that to a need for them to change their own work. “That means change management is a critical consideration, to answer ‘Why do I need to do this?’”

3 The burden of legacy maintenance

“From the technology side, a lot of organizations have a lot of legacy systems that they are responsible for managing,” Nicholson said. “They need to pivot from spending 80 percent of the IT budget on keeping the lights on, to rationalizing or reducing that spend and focusing more on innovation within the group.” As these systems continue to age, the options for manufacturer and third-party support will become less available and more expensive.

4 The need for new organizational structures

Many of today’s technology initiatives don’t fit within the responsibilities of traditional organizational structures. In fact, our 2019 CFO survey found that almost half of respondents expect technology to impact their business model and workforce. That means you must determine the right structure, teams and responsibilities to drive the initiative, asking:

- Who owns this effort?
- Where do we put this effort within the organization’s hierarchy and reporting structure?
- Is this effort a silo group, or how is it organized?
- Is this effort part of an existing business, or a separate business?
- What are the skills needed to drive this transformation?

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5 The need for projects to succeed (or fail) quickly

The most basic risk might be that your investment into a new technology product or service offering doesn't pay off.

"That goes back to the importance of [trying something quickly](#) – getting to a minimal viable product and quickly ascertaining whether it's going to be a success," Nicholson said.

"With new technologies, organizations pilot one bot and experiment to keep the portfolio moving in the right direction; this might result in some fails that provide learning opportunities... There has to be more experimentation with this technology, a willingness to fail at times," said Grant Thornton Business Consulting Principal Chris Stephenson.

6 The greater damage that can come with greater power

Assuming that an organization's technology initiative succeeds, the organization will likely have a solution that plays a key business role by providing product offerings, driving powerful efficiencies or informing business decisions. "With increased power and speed comes the potential for increased impact if there is a problem," Nicholson notes. He noted that organizations need to be especially careful about using the power of machine learning to accelerate decision making and action. Appropriate governance mechanisms need to be put in place to manage the risks associated with the rapid and automated decision-making capabilities of these underlying technologies.

Proven steps and evolving approaches

Technologies, challenges and risks continue to evolve, but technology initiatives can achieve success with a combination of proven steps and evolving approaches.

Once you understand the changing technologies, business challenges and risks, you can form a strategy that helps you turn innovative technology into a business advantage.

1 Choose your approach

- New efficiencies
- New products
- New acquisitions and partnerships

2 Manage risk and change

3 Evaluate success

1 Choose your approach

To achieve the most value, your approach to technology innovation should address your most pressing needs while considering your unique risks. That can lead you to a technology initiative which drives new efficiencies, creates new products or acquires new partners.

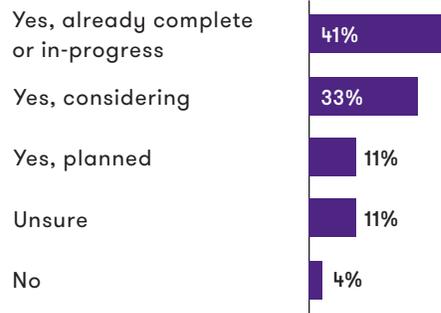
New efficiencies

Many organizations begin new technology explorations with an internal focus. This gives the organization a chance to develop in-house technology expertise as well as a chance to cost-justify future expansion into a technology.

“Organizations set up functions to really innovate internally before looking more at the external innovation. They ask ‘How can we apply technology internally, in the short term, to fund innovation in the future?’ You can use technology to optimize your current business in parallel to looking at potential new business opportunities,” Nicholson said.

Our [2019 CIO Survey Report](#) showed that most CIOs have automation initiatives implemented, in process or under consideration. Often, internal initiatives use automation to drive efficiencies that free up cash to invest in more strategic new business models or services. But these initiatives can also apply technologies to unique challenges within a company’s standard processes. For instance, a manufacturer might use a blockchain solution to help streamline its supply chain transactions and make it easier to integrate new suppliers and sellers.

Plans to deploy automation software in the next 2-3 years



New products

Organizations can also use technology to help expand their offerings. “Many organizations have been looking to offer more services around their products,” Nicholson said. “And what we’re seeing is that technology is a key platform upon which those services can be built.”

Nicholson highlighted life sciences, where “drug manufacturers and medical device manufacturers can no longer rely on just selling a product. They have to offer services around their products that make them more sticky going forward.”

So, how do organizations identify a potential new product? “Step one is to strategically identify potential opportunities for adjacent or new markets to enter,” Nicholson said. “The key thing is to know and understand your customer. What are their current pain points? How could you evolve what you’re currently offering them or how you’re interacting with them to improve?” The quickest innovation might be to expand how you meet customer needs for your current products. For instance, Nicholson said that manufacturers could look at how cloud-based technology could help them sell directly to customers, reducing costs and broadening markets. It depends on where the manufacturer sees the right mix of challenge and risk.

How do organizations identify a potential new product?

“Step one is to strategically identify potential opportunities for adjacent or new markets to enter. The key thing is to know and understand your customer. What are their current pain points? How could you evolve what you’re currently offering them or how you’re interacting with them to improve?”

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Grant Thornton Advisory Services**

If you want to create new products empowered by technology, you will likely encounter the challenge of technical talent. In order to succeed, it’s important to call upon people who not only understand the technology, but who are experienced with successfully developing and deploying the technology. “You need to invest in the talent that can quickly assess the opportunity of those technologies, either within your organization internally or for your organization externally,” Nicholson said.

New acquisitions and partnerships

Given the challenge of training or hiring the right technical talent, companies often take a different approach. “It’s common to look at potential acquisitions to accelerate that journey,” Nicholson said.

Mergers and acquisitions can be a quicker way to add experienced talent or even established products that are adjacent to your current offerings. “Then, you have to look at how to effectively optimize and integrate your business around those new products and service offerings,” Nicholson said. “It’s often a combination of acquisition and also establishing a transformation office, digital team or innovation group that is organically leveraging technology to support entry into adjacent markets.”





Even if a company isn't prepared for a merger or acquisition, it can form a partnership that gives it firmer control of an adjacent market or gives it access to new expertise. "I think there's definitely more of an ecosystem fight today than there used to be. So, we've seen some organizations develop tighter partnerships with academia, technology companies or with companies outside of their typical industry," Nicholson said.

2 Manage risk and change

While technological innovation might be different from a traditional project, it still requires that organizations apply some of the same risk management and change management practices – which is something that many organizations don't do. "A lot of organizations that are going through this type of transformation or innovation journey do not have an enterprise risk management program in place," Nicholson said. "It should be a foundational component of their transformation journey – establishing an enterprise risk management program across all areas, for the legacy and future. But, you need an efficient program within that doesn't stifle innovation or employee productivity going forward."

Similarly, organizations need to apply change management standards to their tech innovation efforts. "You have to be able to articulate what is being done, why it is being done and what's in it for the individual. Because, let's face it, all innovations on this journey will affect people, and communication is key," Nicholson said.

3 Evaluate success

One of the hardest parts of technology innovation is to establish, evaluate and communicate "progress" and "success." This can be difficult for efforts that drive secondary goals like building a database of customer data or for efforts that have a long ramp-up before they drive revenue.

So, how will your stakeholders gauge the success of your tech initiative? "It differs based on where an organization is in their growth cycle," Nicholson said. "Larger organizations will be maintaining their bottom line and then looking for growth." A mid-market company might move directly to increasing the top line. For instance, Nicholson recalled a medical device manufacturer that developed a software solution to connect its devices in clinical labs, and help the labs track test samples to improve throughput and manage regulatory risk. "That went directly to increasing the top line, both through differentiating the traditional product and also through revenue from the software solution itself – and they did that within 18 months."

But success isn't always quick or clear. "I think the key thing is getting a minimal viable product out in the market as quickly as you can – getting it in the hands of customers and having them tell you that yes, they like it. Getting that market reinforcement is I think key," Nicholson said.

A culture of technology innovation

Exploring technologies, using them to solve business challenges and celebrating success are all part of forming a culture of technological innovation. And that culture is important, because innovation isn't a one-and-done exercise.

When an organization has an [innovative culture](#), it's part of everyone's job to challenge the way they work and make it better. This helps the organization not only develop new solutions but also drive implementation and adoption. Nicholson said the most effective reward for these programs is often a formal recognition within the organization.

Every innovative effort can ultimately help (or hurt) your culture of innovation. By building this culture, then teaching employees to see the technologies they can apply and challenges that they need to address, you can help foster an environment where innovations with technology arise and succeed.

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