The quick and practical guide to digital business automation

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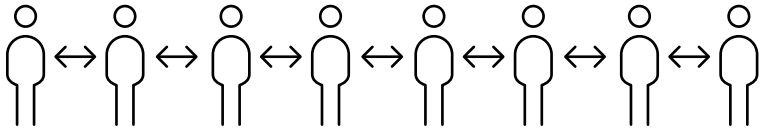
In 2017, a large claims department of a major insurer still used a 100 percent manual, paper-based system to process claims. From reporting claims to writing checks, the whole process required at least one human action at each step. An entire segment of the business had missed the automation revolution.



Should you care?

Businesses can stick with the same manual operations that started 20 or 30 years ago despite advances in automation technologies and operate at a “good enough” level. Whether you should care depends on whether your company can thrive in a world where automation enables competitors to be easier and faster to work with than you.

Why this guide?

The automation revolution is like the Industrial Revolution, far-reaching, inconsistent in growth, sometimes messy and inevitable. It’s gone beyond creating efficiency and cutting costs. And companies in nearly every industry are using it to help drive growth.

Whatever you think about automation, it’s bigger now, permeating every type of work. As a CEO, CIO or COO, or someone with similar interests, you’ll need to master what automation can and can’t do for your business.

Use this guide to help you get to the truth about the urgency, the value, the opportunities and the limitations related to automating work. This guide also provides tips for choosing the right technology solutions.

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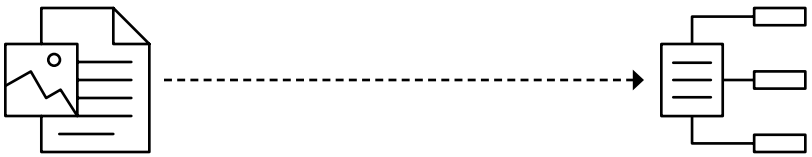
Chapter 1

Automating work: What it means and why it matters

If you bought a house 10 or 20 years ago, applying for a mortgage likely took around a month. The process required you to complete stacks of paper forms and field a few dozen calls and left you wondering when you'd be approved and what your rate would be. Today, you have other options.

Next generation mortgage companies offer applications with slick interfaces that you can use from virtually anywhere—built on a foundation that automates the heavily regulated process from start to finish.

Not surprisingly, customers often choose these apps for the convenience, immediacy and transparency made possible by automation—alerts programmed into the system, connections to data from credit-monitoring companies and lenders, workflows designed to eliminate unnecessary steps and more.



Automating work means the ability to offer a better experience at speed and scale. It means looking at the big picture: the multi-stage, multi-task processes that when done manually are slow, costly and frustrating for your business and customers.

The old mortgage process

- Complete stacks of paper forms
- Field dozens of phone calls
- Wait weeks for approval, final rates and signing

Mortgages today with apps

- Get options for loan amounts, interest rates and payoff periods within minutes
- Receive updates on progress of the loan as needed
- Save time with communication—only speak with a person in exceptional circumstances

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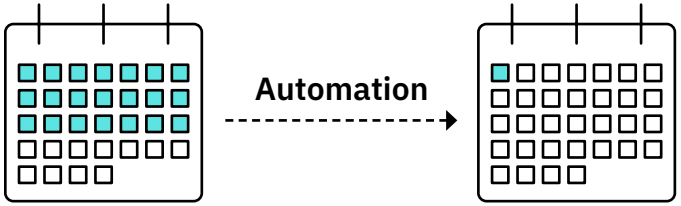
The business value of automation

Let's return to that insurance company example in the introduction. Customers needed claims settled quickly, but the department took up to three weeks to process a claim. Given the many industry regulations and conditions, automation was a significant commitment. But the company invested the time and money.

The result: The time to process a claim dropped from three weeks to a single day.



There are plenty of automation case studies with proofs like this. But that isn't always enough to justify a purchase or gain buy-in for new products.

Efficiency versus business transformation

In the past, a lot of arguments for automation came down to simple ROI calculations, largely targeting cost savings—if our firm invests $1 million to automate this slice of our operations and we save $1.5 million, then it's a good value for the business. Simple.

However, calculating ROI is more challenging for larger-scale automation projects—the transformational ones targeting growth as opposed to cost savings.

While automation can be one of the best ways to drive revenue growth by improving speed, scale and customer experience, changing how a business operates involves tangible and intangible elements whose results can't always be measured independently. This makes it harder to quantify the amount of growth that can be attributed to automation versus other aspects of the transformation.

But it can be done. You can build a business case for automation that lays out expected quantifiable and unquantifiable benefits.

Example of tangible and intangible benefits from automation

A large retail banking organization manages most of its consumer lending processes through automation software. With automation, it eliminated manual review of 80 percent of the loans. Staff only needs to review loans with exceptions.

This measurable increase in efficiency is just part of the automation ROI story, however. For the bank, it was an opportunity to:

Manage growth
The bank had acquired many branches from another bank. Automation allowed it to handle the augmented workload without increasing employees.

Remove a layer of implicit human bias
Automation helped to increase compliance with non-discrimination regulations and improve the customer experience overall.

"Eliminating manual loan review for 80% of all loan applications adds up to hundreds of thousands of hours saved each year, for an estimated productivity benefit of nearly $8.3 million."

– The Total Economic Impact™ Of The IBM Automation Platform For Digital Business, a commissioned study conducted by Forrester Consulting, March 2019

Even though some benefits aren't a simple calculation, the following questions can help focus your investment and align measurable key performance indicators (KPIs).

1. Will automation make it easier for customers to do business with me? Customers won't choose, or stick with, a difficult and time-consuming process if an easier, faster process is available.

2. Will automation drive growth? A key benefit of automation is the ability to easily scale. If you can attract and retain new customers, then your automation investment will achieve higher returns for you.

3. Will automation reduce costs? This question gets closest to easily quantifiable ROI. Cost reduction is often achieved through automation. But remember that you may get even more value from a better, more modern system that increases revenue for an overall net benefit.

4. Will automation help reduce errors and improve consistency? Errors are expensive, but you can't always compute their costs. Greater consistency and reduced errors have significant value, even if your number isn't exact.

5. Will automation make compliance easier? You must comply with regulations, so if automation can reduce the resources you need for compliance, then you have a business win.

Sidebar

Seven realities of automating work

1. **Automation success depends on the ability to focus on the right business drivers.** The importance and impact of automation is less about the technology you use, whether it's robotic process automation (RPA), automated decision management or artificial intelligence (AI). It's more about how and why you run your business. If you don't have the right focus, it's unlikely that automation will make the difference you want.

2. **Automation can enable you to offer customers more choices than you did before.** This variety is often an order of magnitude higher than on a less automated system, without stressing the system. Think about ride-sharing apps. They're worldwide, and they offer different levels of service for different price points. And it's all built on the same digital automated system. You can add as many choices as you need—just keep adding it to the automation.

3. **Automation is one of the best ways to achieve scale.** Like choice, if you want to achieve significant reach, then you need automation. The large retail banking organization, mentioned earlier, is a good example of scalability—serving more customers without hiring more employees.

4. **It'll be hard to avoid automation if you want your business to grow.** It's not a fad. For some companies and industries, it's essential. The things you do often, and the ones that noticeably improve customer or employee experience, are the primary candidates for driving growth with automation.

5. **Automation isn't the big launch, it's an incremental development.** Sometimes companies treat big software developments like the opening of a new building. A big announcement and ceremony happens, everyone gets invited to use the offerings, and then people get back to business.

   Automation developments don't work that way. You'll find that the first deployment is frequently a learning experience. And while you're getting the first piece right, you'll start developing the next, growing and improving your system as you learn what works.

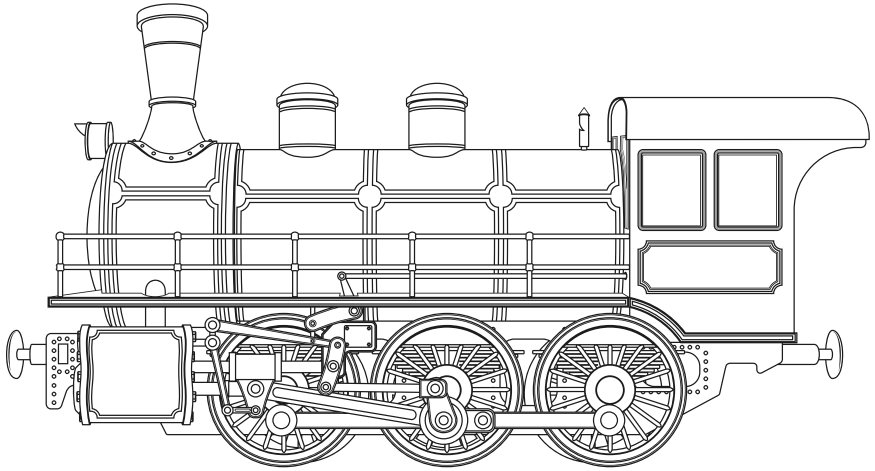
6. **You can automate a lot more than you think you can.** You may find that once you've automated one process, three or four different processes that connect to the first will be automation targets. It's like learning a foundational skill that allows you to learn related skills more easily.

7. **Automation is never all or nothing.** Every business has some automation, and no business is fully automated. You'll decide how much automation you need now and later to meet business objectives.

Chapter 2

Where can you usefully apply automation?

"One of the greatest improvements that has been made upon [the steam engine], since it was first invented, was ... the discovery of a boy who wanted to save his own labor."



In his 1776 book *The Wealth of Nations*, Adam Smith wrote about a little boy who had a job working a valve on a steam engine. The boy found that if he attached a string from the valve's handle to another part of the engine, the valve would open and close on its own, and then he could go play.

Automation has come a long way since 1776, but good automation still uses the best features of technology to save human labor for more productive use. The difference is the range of work that can be automated.

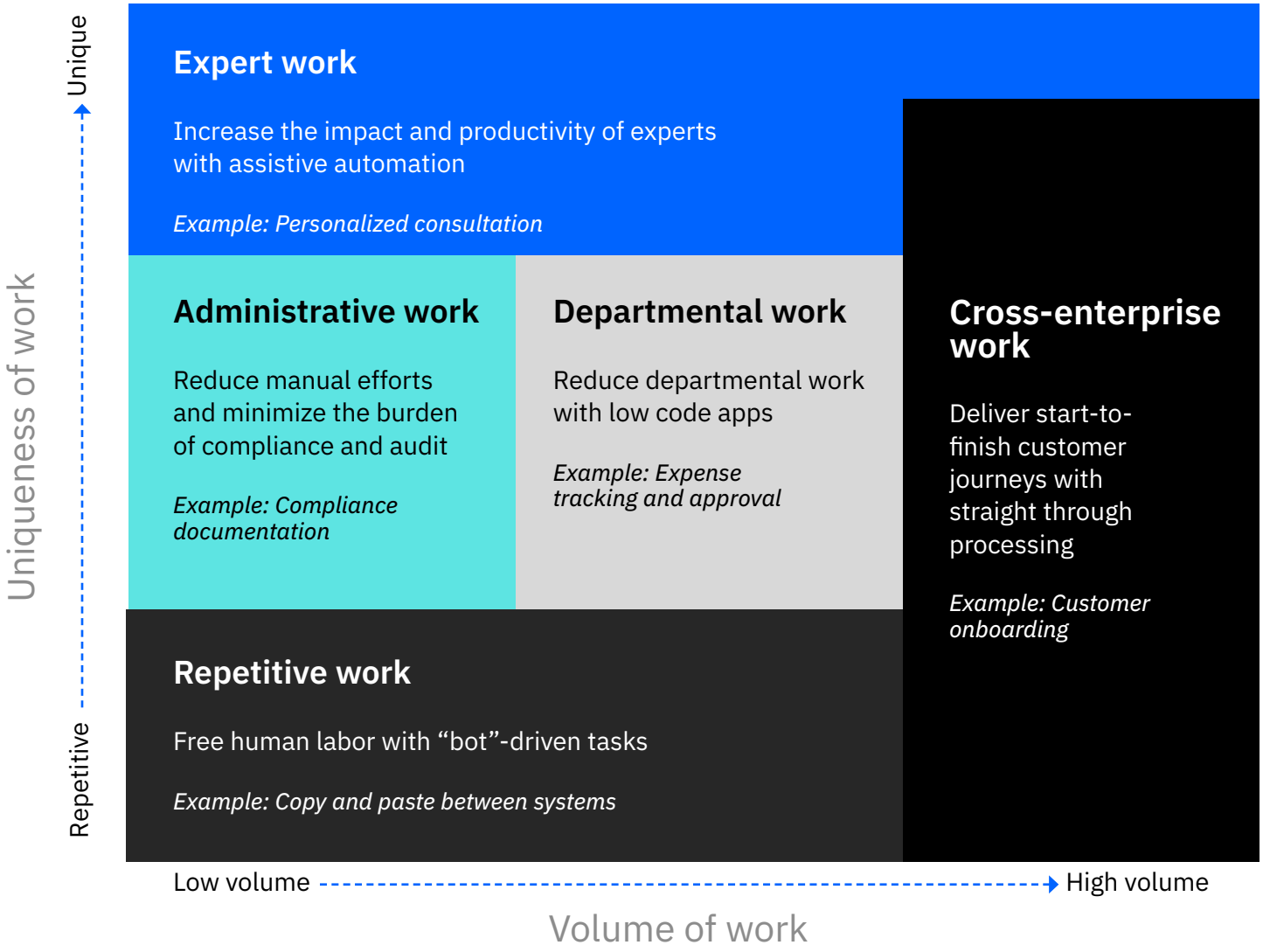
The spectrum of work and automation

Every business has tasks that range from the simple and repetitive to the complex and unique. And you can usefully apply automation in virtually all types of work.

See chart on next page

Where can you usefully apply automation?

The following graphic shows five types of work common to most organizations.



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Where can you usefully apply automation?

You can apply automation to drive the right outcomes for each style of work.

Automating work is about remixing work—blending automated and human processes—to fuel growth and free people to work on the things that can't be automated.

Work type	Repetitive work	Administrative work	Departmental work	Expert work	Cross-enterprise work
What is it?	Routine, low-skill, repeatable tasks that don't require human judgment, but can create human issues such as high error rate and low morale. Examples: – Clerical work – Copy-paste input – Manual data entry *Automation should help to improve the accuracy and speed of routine work by supplementing people with bots.*	Supports other work in core business operations. This work is high stakes but usually moderate skill. Examples: – Compliance – Documentation for various regulatory system *Automation should help to reduce the burden of paperwork and regulatory compliance by digitizing and managing various types of documentation.*	Keeps the department running but usually doesn't touch the core business product. Example: – Expense tracking and approval *Automation should help to reduce departmental work with low code apps that handle processes that otherwise would involve hard-to-manage documents and spreadsheets sent over email.*	Requires human judgment. Automation can remove the routine aspects of work and make experts more effective by keeping track of important details and putting necessary data at their fingertips. Example: – Personalized consultation *Automation should help to increase the productivity of experts by assisting them with deeper insights and recommendations for action.*	Multiple departments are involved in run-the-business work. Examples: – Processing insurance claims – Approving loans *Automation should help to deliver start-to-finish customer experiences with straight through processing. It should enable the integration of individual business operations from across the enterprise into one process that feels simple and bespoke to the customer.*

Note: No matter how much automation you deploy in your processes, human expertise, creativity and interpersonal skills will be needed. For example, your automations can encounter exceptions, and you'll need human expertise to handle them. Exceptions occur even when the goal of automation is to minimize them and maximize straight through processing that never gets touched by a human. Plus, without humans, who would design and update your automation?

Chapter 3

What does automation success look like?

Successful automation isn't singular—it doesn't come from one project or solution. It's an iterative process that adapts with your changing business needs.

Successfully automated companies often share the following markers:

- They focus on the needs of their customers.
- They recognize the importance of scalability while still being able to offer each customer a personalized experience.
- They keep the automation system as flexible as they can by building on an extensible platform and keeping good alignment between business and IT.
- They've taken everything that can be made efficient and made it efficient.

To get to successful automation, recognize that it's a process, and it doesn't happen with a big bang. Also, you'll probably need some of the following capabilities, depending on the type of work you want to automate to drive growth:

- Automating tasks with robotics
- Sharing, managing and collaborating on content
- Designing and managing start-to-finish workflows
- Automating decisions with business rules
- Capturing and extracting data from documents

What's likely to stand in your way?

Automation isn't a quick and easy process. The following choices can create pitfalls:

1. Trying to do it all at once. As we noted earlier, trying to address all of your automation goals with one big launch can lead to trouble. By going incrementally and making continuous improvements, you give yourself room to experiment and then fix what didn't work.

2. Thinking packaged apps are going to solve all of your problems. Packaged apps that promise to deliver automation in one box might fit some of your needs. The challenge arises when you try to use them for problems they aren't good at solving.

3. Forgetting to engage business and IT people together, early enough. When you're doing automation, not committing fully to business and IT alignment can hurt your efforts.

- Business needs to get IT in the room from the beginning as a reality check—to help ensure costs, timelines and project scope are realistic.

- IT can help to prevent purchase mistakes. For example, an IT expert in a meeting with a technology vendor can flag promises that are too good to be true.

Chapter 4

Where to start?

If you want to invest in automation technology, it's commonly recommended that you start with a pilot that can deliver rapid results, with minimal implementation risks. This approach helps make a strong case for scaling up, but consider adding the following recommendations:

- **Pick a not-insignificant but not mission-critical project.** Find something that will be worth the effort and will demonstrate value when completed. But don't pick something that can break everything.

- **Begin with an end in mind.** Make sure that first project is a front- or back-office operation—that's important to the business—for which you've mapped out the desired state or experience.

Work is often messy and organic, and change impacts it in ways you can't anticipate. Focus on how each project serves your overall automation goal. Then, you have a roadmap to get through rough spots and continue to make progress.

It's a good idea to look at the leaders in your industry—especially those leaders who are growing fast—to see what's possible. Keep in mind you're looking at the totality of their work, which may include dozens of individual automation projects that add up to a transformative approach.

So, pick one or two projects as a starting point. The key is to make each project individually valuable, knowing that as they build and interconnect, the benefit can be exponential.

Six questions to help you decide where to start

In a large business, you might have dozens of potential automation projects, which means choosing where to start can be paralyzing. The following questions aren't exhaustive, but they can help you and your team focus on the right starting point:

1. How quickly do you respond to customer requests?

2. How does your customer experience compare to other leaders in the industry, including your born-digital competitors?

3. Do your employees spend a significant portion of time doing manual work that could be automated?

4. Do your competitors offer more products and services targeted at specific niches in the market than you?

5. Can you rapidly modify your front- and back-end software applications as customer expectations and government regulations change?

6. What percentage of customer transactions result in exceptions that must be manually processed?

Chapter 5

What are your solution options?

If you're ready to start shopping for an automation solution, you basically have the following four options, which many companies mix and match:

1. You can write all code from scratch.

- ***Pros:*** You own and control everything.
- ***Cons:*** It becomes a black box, where the business side doesn't have any visibility or understanding of the code. This option requires a lot of IT expertise and time to understand what the code does and to make any changes.

2. You can buy a collection of point applications.

- ***Pros:*** You can select from a wide variety of vendors.
- ***Cons:*** You act as the integrator as you buy different automation applications from different companies. The products don't always work well with each other, and there's no underlying foundation for things like analytics.

3. You can buy packaged apps.

- ***Pros:*** This option is ready made, and some niche apps fill specific needs, such as billing or digital marketing.
- ***Cons:*** If your business doesn't fit the mold of the packaged app, it's not going to do all the things you want it to do. Packaged apps don't have lots of flexibility, so you have to work within their limits.

4. You can adopt an automation platform.

- ***Pros:*** This option is an integrated set of foundational applications with which you can build any automation solution.
- ***Cons:*** You don't get to choose a different vendor for every application. With this option, you're dependent on a single vendor for support across the platform.

Sidebar AI and automation

Applying artificial intelligence (AI) directly to automation is still in the early stages, but it won't be for long. It's a good idea to start figuring out how to apply AI to your automation projects and take the opportunity to experiment and build skills before your competition does.

The following are three examples of how leading companies are using it:

1. **Using AI in automation to improve the quality of decision-making.** For example, insurers want to know the probability of a claim being fraudulent, even when there's no easily discernible evidence of fraud. The AI system can be trained over time to become more effective at identifying fraud, helping the company to pay claims faster and at the same time reduce risk.

   Consider two similar claims for a medical procedure in which both claims conform to all the insurance policy's rules.

First insurance claim example
- AI detects no concerning pattern
- The company can pay the first claim without incurring the time and cost of more investigation—thus increasing customer satisfaction and reducing costs

Second insurance claim example
- AI detects a hidden pattern that indicates a suspicion of fraud
- The company can send the second claim for further review

2. **Using AI in automation for intelligent data capture.** For example, a company needs to standardize invoice data—from multiple, random formats—without human involvement. Using data capture with AI, the system "knows" which numbers and fields on each invoice represent each required piece of information, such as item number, quantity, unit price, discount percentage, state tax and total price.

3. **Using AI in automation to detect and act on hidden patterns in the data collected by operational systems.** This "operational data" provides new insights not provided by traditional data sources. Consider a product development application where hidden insights signal that changes to a specific part have a high likelihood of resulting in a production delay. These hidden implications can be based on a complex web of interdependencies that couldn't have been uncovered without AI.

   Operational data can provide insights in virtually every industry by helping to answer such questions as:
   - How long did it take to open a new account (and why)?
   - How often did I miss my SLA (and why)?
   - How much rework was required (and why)?

   You can improve automation by using these unique insights to accelerate customer-facing processes, shorten delivery times and reduce rework.

Chapter 6

What IBM offers

IBM® offers an automation platform built on a common analytics layer that gives you insights into your operational data and productivity.

The IBM Automation Platform for Digital Business is an integrated set of flexible capabilities that can help you automate work to drive growth:

1. **Use bots to automate routine human tasks**
   Eliminate copy-and-paste and data entry errors, free employees for higher-value work.

2. **Share, manage and collaborate on content**
   Support instant access to content, connect content to digital business applications, help assure governance and compliance.

3. **Design and manage start-to-finish workflows**
   Choreograph sequences of human and automated activities to improve consistency across processes and cases, increase straight through processing.

4. **Automate decisions with business rules**
   Enable rapid adaptation to change, increase the consistency and auditability of decisions, detect noteworthy situations in real time.

5. **Capture, classify and extract data from content**
   Speed extraction of data, reduce data entry errors, gain insights from unstructured documents.

Learn more about the IBM automation platform

Watch the demo
Using an invoice processing scenario, this five-minute demo shows how integrated platform capabilities work together to help you automate start-to-finish operations.

Get the ROI study
IBM commissioned Forrester Consulting to examine the potential return on investment (ROI) enterprises may realize by implementing the IBM Automation Platform for Digital Business. Read the full benefits and costs analysis.

Schedule a 30-minute consultation with an automation expert

"Forrester's interview with an existing IBM automation platform customer in the banking industry and subsequent financial analysis found that the interviewed organization experienced benefits of nearly $23.9 million over three years ... [with] an ROI of 675% ..."

– The Total Economic Impact™ Of The IBM Automation Platform For Digital Business, a commissioned study conducted by Forrester Consulting, March 2019

Is a platform right for you?

An automation platform can fit any business, but you'll use it differently if you're big versus small, customer-facing versus internal-facing, heavily regulated versus lightly regulated and departmental versus cross-enterprise.

Generally speaking, an automation platform is the right fit for the following criteria:

1. You need some amount of customization, but don't want to have to write code from scratch for everything.
2. You've tried packaged apps, but they're not doing what you need them to do.
3. You need to go to market fast and make changes quickly.
4. You want your capabilities to be integrated rather than disparate products from different vendors.

Automation platforms are designed to provide a complete, interated set of capabilities for automating all types of work. Think of popular office platforms that connect multiple programs together, allowing users to easily mix and match capabilities as needed.

An automation platform can deliver the benefits of other solution options—customization of writing code, fast time to market of packaged apps, best-in-class capabilities of point solutions—in a single, integrated package.

While every user story is a unique and critical starting point in the tech selection process, the following scenarios stand out as likely candidates for a platform solution:

- **Loan origination and servicing**
- **Benefits and eligibility management**
- **Policy underwriting and claims processing**
- **Customer, employee and vendor onboarding**
- **Regulatory and compliance management**
- **Transportation and logistics management**
- **Patient care management**
- **Fraud and risk management**
- **Customer service**
- **Trade finance**

"Platform standardization is expected to open the door for even more automation efforts. Having already invested in IBM Automation Platform for Digital Business, more business managers and leaders can extend the platform to their needs without having to start from scratch."

– The Total Economic Impact™ Of The IBM Automation Platform For Digital Business, a commissioned study conducted by Forrester Consulting, March 2019

Chapter 7

Eight takeaways

1. **It'll be hard to avoid automation if you want your business to grow.** It's not a fad. For many companies and industries, it's essential.

2. **Choosing where to start with automation can take work, but having a plan makes the choices easier.** The things you do often, and the ones that noticeably improve customer or employee experience, are the primary candidates for driving growth with automation.

3. **Automation isn't one big launch, it's an incremental journey.** You'll learn new things each time you extend your automation.

4. **Begin with an end in mind.** Make sure that first project is part of a significant front- or back-office operation for which you've mapped out the desired state or experience.

5. **Automation can make your employees more productive.** You can apply automation to support your people and remix work—blending automated and human processes—in a way that drives growth without hiring more staff.

6. **Complex work needs integrated automation.** Cross-enterprise work, such as loan origination, claims processing and transportation logistics, creates complex challenges. Using integrated automation to streamline those operations can result in significant benefits.

7. **Automation enables scalability, and scalability enables growth.** Scale means numbers, such as more customers and more units moved. But through the lens of automation, scale also means options, more loan types, more policy types, more destinations, more choices. When you provide more options, you can reach customers who hadn't considered buying from you before.

8. **AI is starting to transform automation.** Don't wait too long to experiment, to start applying artificial intelligence (AI) to automation. It's not a make or break feature of successful automation—yet.

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