



# Welcome to the Automation First Era: Your guide to a thriving enterprise in an automated world

In today's digital business environment, companies' margins are getting tighter while customers continue to expect more. Twentieth-century solutions are no longer enough to survive. Only through automating can your business and your employees regain the efficiency, accuracy, and speed needed to thrive in a digital, data-driven world.



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# The “automation first” era: A fundamental reboot of enterprise work




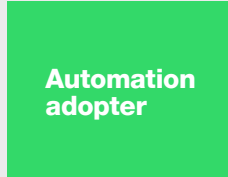




If you grew up in the United States during the 1980s and ‘90s, you probably remember browsing the aisles of your local video store on a Friday night. Video rental stores, like Blockbuster, were the way that American families accessed a wide selection of movies to view at home.

Now, in response to shifts in business practices during the cloud-first era of computing, we have dozens of streaming

services to browse and watch TV shows and movies. Video stores have mostly disappeared as companies embraced new technological trends that provided customers with a more convenient viewing experience.

All technological eras have winners and losers: businesses that adapt to change and thrive, and businesses that resist and struggle. Just like Blockbuster, as other forms

of non-digital consumption became digitized, seemingly strong and steady businesses got displaced. They were displaced by businesses that embraced the disruptive emerging technology to offer a service that better fit customer and business needs. With each new technological era (the internet era, mobile era, and cloud era), certain companies invested heavily in new strategies that embraced the technology, so they could thrive.

	Internet First	Mobile First	Cloud First	Automation First
Thriving				
Struggling				

## The automation first mindset:

Seeking automation solutions first when designing, improving, or transforming a work process. If it can be automated, it should be automated

Today, we’ve entered a new era in technology — one we refer to as the *automation first era*. One of the biggest challenges that businesses face in this era is how to make the most out of digital transformation.

Digital transformation has been on the corporate agenda for years, but widespread transformation has been difficult. Robotic Process Automation (RPA) is a technology that focuses on empowering business users, drives automation, and breaks through current conventional thinking. It allows an organization to think about how to apply automation across the enterprise. When a business does that, it can uncover new and exciting opportunities to gain a competitive advantage because opportunities abound at every corner of an organization.

To achieve this state, there are a few critical requirements:

1. An automation first mindset that challenges the status quo of work and evaluates the most effective human/robot combination to tackle a job
2. A team of people ready to help drive automation initiatives
3. The most intuitive automation platform that is:
  - Open and free
  - Enhanced by AI components that continuously learn and improve
  - Nurtured by a network that allows you, your employees, and your community to learn and develop skills for the automation first era
  - Robust and meets the requirements of the enterprise – featuring high availability, scalability, security, and compatibility.

# A history of technological disruption in the enterprise

**Automation is changing the world around us** in ways that reshape some of our daily routines, sometimes so subtly we're not even aware. Work is no exception.

In fact, when the McKinsey Global Institute released a report in 2013 highlighting the 12 technologies that would change life, business, and the global economy, the automation of knowledge work was listed alongside disruptive technologies like 3D printing, mobile internet, and cloud technology.

Today, we know that these technologies drive business transformation. Automation in the industrial sector is nothing new, but automation in the sector of knowledge work is. In fact it's more than new. Now, being able to automate knowledge work is a viable and scalable enterprise solution.

In 2018, a global survey of approximately 1,300 businesses showed 75% of the respondents expressed their companies were already embarking on some sort of process automation. This is a trend that will only increase.

RPA utilizes pragmatic artificial intelligence (AI) to drive process automation and digitization.<sup>1</sup> It's key to automating the vast range of knowledge work carried out in today's digital environment.

Robotic process automation is the next disruptive technology in a series of enterprise technologies that revolutionized business. When each of these technologies arrived, companies invested heavily in them to open new business horizons and reach goals more efficiently. Think about the ways the technologies listed to the

right of the page changed the playing field for organizations. Remember the earlier chart about thriving and struggling businesses? When these technologies emerged, winning companies went all in, and those that did not adapt, lagged behind.

## Why is the automation first era now?

Technology supporting automation isn't new, but **how they're being combined to drive RPA and AI integration is what defines the automation first era.** This new approach to integrating automation into core business practices has emerged now because:

- Businesses having a greater knowledge of their processes due to the **business**

**process optimization (BPO) movement.** To outsource, businesses mapped out workflows and tasks, and often for the first time.

- **Vast amounts of data are now available for processing** because of technological innovations such as **low-cost cloud at scale** and the explosion of big data. These factors have led to a renaissance of **artificial intelligence** that is pushing the borders of process automation.
- **Improved computer vision capabilities** have enabled process automation platforms to read the screen and interact with the UI elements.

With better process mapping, the advent of computer vision, and the fast growth of AI, the automation first era is here. How will your business adapt?

## The history of technology: Six eras

**Mainframe:** enhanced computational and transactional capabilities for governments, large businesses, and research organizations

**Personal computer (PC):** expanded the power of computers from institutions to the broader population and smaller businesses

**Graphical User Interface (GUI):** made computers more intuitive, enabling less computer-savvy individuals to use computers, extending usage further in business and society

**Internet:** connected the vast network of computer users

**Mobile:** brought the power of the internet to our fingertips

**Cloud:** created vast troves of data that enabled the boom in AI capabilities

<sup>1</sup> AI can be generally described in one of two broad types: pragmatic AI or general AI. Pragmatic AI is AI which solves specific customer needs and delivers immediate ROI, whereas General AI (also at times called pure AI) is theoretical.



The automation first era is here. How will your business adapt?

# Rethink how you work and thrive in the automation first era

An automation first mindset means you examine the work your team is doing and determine which tasks need a human involved and which tasks robots could perform. It's important to examine work from a top-down approach and a bottom-up approach.

## Top-down approach

If it can be fully automated, it should be fully automated—or does it require a blend of humans and robots working together? Starting with a centralized top-down approach, **there are four steps that can help you get started thinking in a way that incorporates automation.**

- 1. Identify potential automations** (UiPath heat-maps, process discovery and planning software can help)
- 2. Rank tasks by time and frequency of occurrence** for highest ROI
- 3. Identify the core jobs to be done** and your desired outcomes
- 4. If you automate it, do problems go away?** If not,

find the most efficient mix of humans and robots

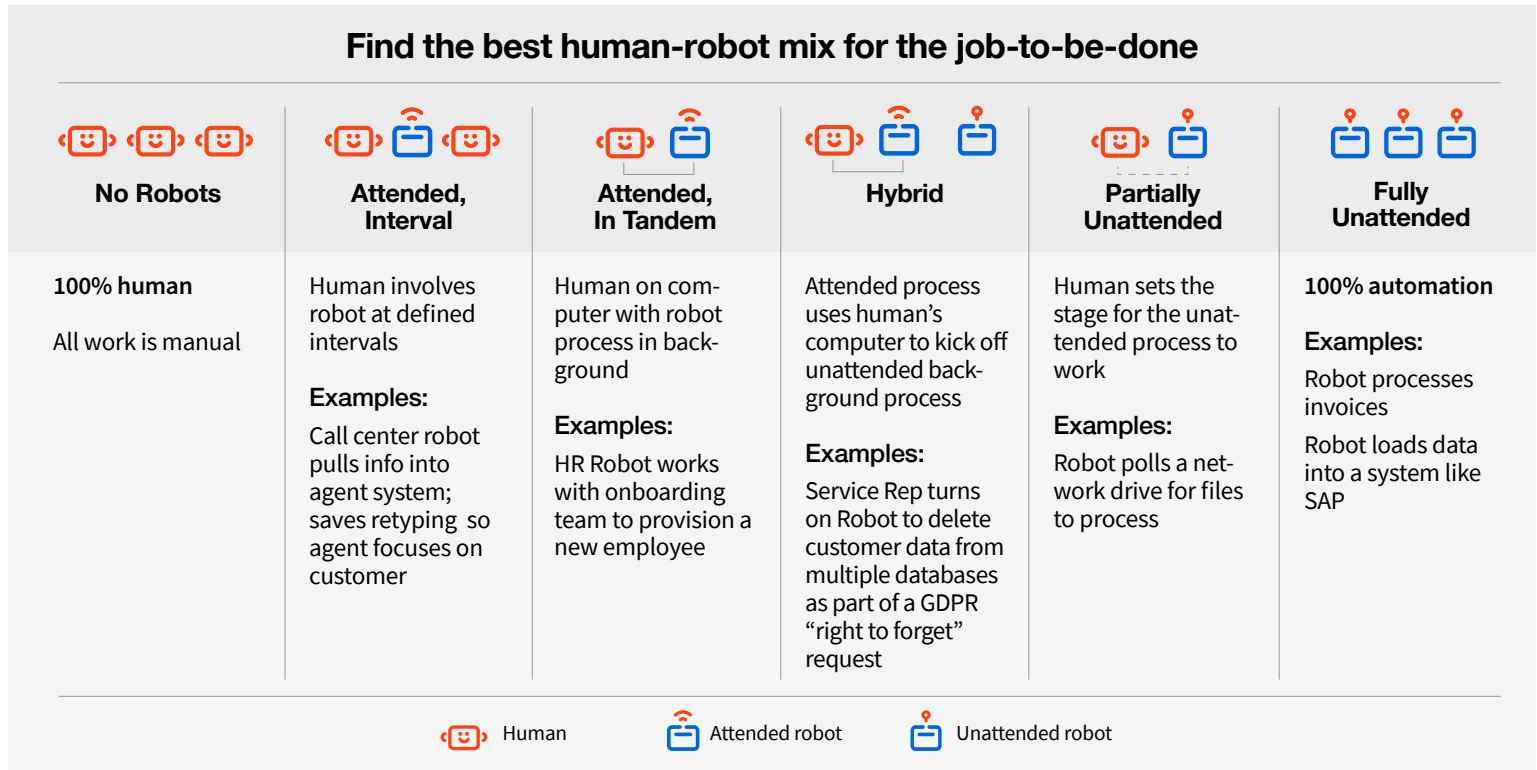
Your automation team should be looking at key processes and identifying which ones are the most time-consuming and have the greatest volume. UiPath industry and domain heat maps, process mining, and planning tools can help. The

next step is to determine which process will return the greatest ROI. Once you've identified your company's strategic goals for jobs to be done, it's about rebooting work. Take a look at the chart below for an example of how work will be reconstructed in the automated workplace. Tasks exist on a spectrum from human-specific

work to robot-specific work and a variety of combinations between these two poles.

## Bottom-up approach

The automation first mindset also embraces an approach that enables your workforce to identify the parts of their job that can be automated.



By enabling “a robot for every person,” you harness the power of automation to reach the long tail of work that isn’t well-known to a centralized automation team. One person’s mundane task may not have high ROI, but across the enterprise, all the work that becomes automated adds up. What would the impact be if your workforce could free up 20% of their time by having a robot do the routine work for them? That’s the power of an automation first mindset.

The benefit of software robots is that you can program them to do the repetitive and rules-based digital tasks, and they perform them better than humans — with greater speed and greater accuracy. This frees people up to do the work that robots can’t do as well. Additionally, machine learning can help to provide decision making and results based on huge amounts of data — something not practical nor possible for humans.

To understand a bottom-up approach consider caseworkers. Oftentimes, caseworkers rely on retrieving particular data from hundreds of documents to make

decisions on a particular case — a time-consuming process. With automation, however, caseworkers can program software robots to scan documents using a glossary of terms, and the software robot can speedily pull up the best information for a caseworker to do the ensuing evaluation of the data. This type of knowledge work — retrieving data, manipulating spreadsheets, and sorting through and prioritizing emails — are all types of automation that a ROC might not have oversight on, and that employees can drive to maximize their time on the tasks more demanding of human attention.

The chart to the right shows how the bottom-up approach compliments a more centralized top-down approach in terms of the percentage of organizational tasks each approach can touch.

This is one example of how automation takes work typically done solely by humans, shifts the routine parts of that work to software robots, and allows the human workers to do less grunt work and more human work.

### Here are some key indicators that an automation first mindset exists in a company:

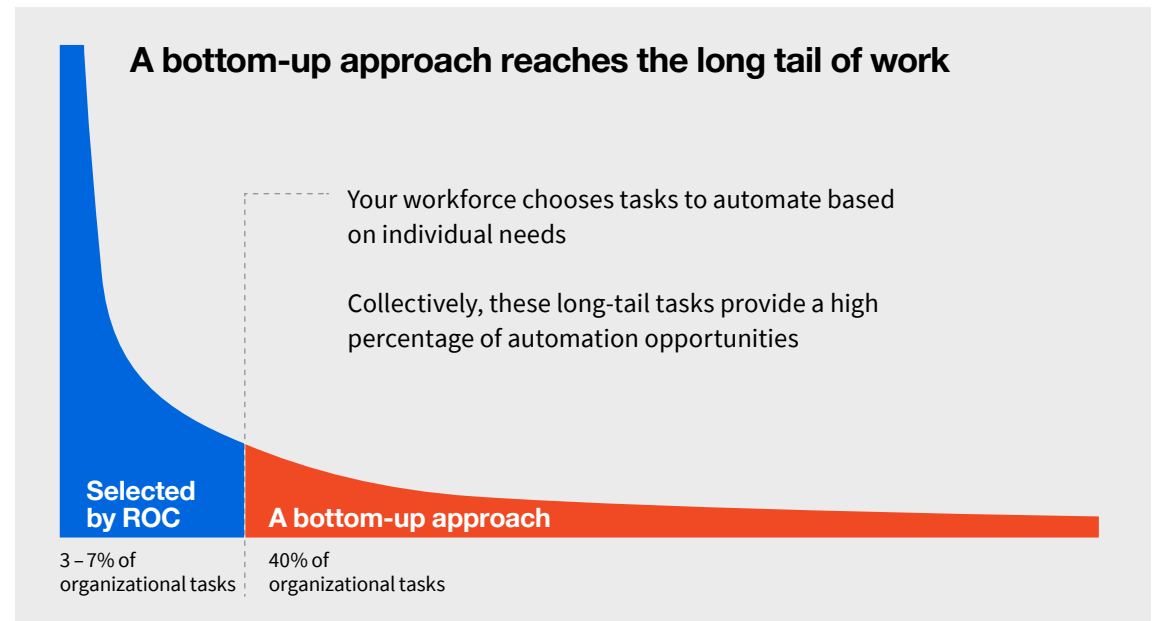
- Requires every senior executive to **have an automation goal and agenda**; includes automation progress and results in reports to its board of directors (potentially an “automation committee”)
- The company has a **Chief Digital Officer or Chief Automation Officer**, who is accountable for driving enterprise-wide automation.
- Operates a **fully functional Robotic Operations Center** with a robust automation pipeline.
- Adopts a combination of a **centralized top-down approach to automation** and an employee-led democratic approach.
- Aims to **improve both operational efficiency and employee experience** at the same time.
- **Manages the psychological implications** from beginning to end; ensures that people who want to have a path forward in an organization will have one.
- **Uses a human-centric change management process** that ensures employees feel valued and safe, and measures engagement and

satisfaction of employees working with robots.

- **Markets to its recruits:** “We want YOU to work with robots”
- **Creates a bridge that integrates critical IT elements** of automation with the business side of the house.

With the human and robotic components in mind, **dare to rethink the way you look at your business goals.**

In the following pages we’ll give you some ways you can get started.



# Move beyond the pilot stage and accelerate the benefits of digital transformation

## RPA drives service commitments to customers at State Auto: an automation first story.

It was on one of those typical, temperate early autumn days back in 2018 in Columbus, Ohio. Greg Tacchetti, the senior vice president and chief information and strategy officer for State Auto Insurance companies, along with Holly Uhl, State Auto's director of operational excellence, hosted some of the UiPath team to discuss their experiences automating within their business. When we sat down, we started at the beginning: How did you hear about RPA? What processes did you automate first?

"We've gone from people not even having heard of RPA to it being one of the most talked about things in our planning meetings," Mr. Tacchetti explained to us.

He had first heard about RPA at a conference a couple years prior to our meeting, and he

was interested in seeing how UiPath could help employees better allocate their time. Mr. Tacchetti, together with Ms. Uhl, started their first RPA pilot back in August 2016 with a non-UiPath automation vendor, and both are honest about its success. It didn't do that well.

Later, they switched to UiPath software and, as of our meeting

**"The biggest question now is how fast can we go?"**

in 2018, State Auto had 36 software robots running and 50 more prepped to launch. They have gone from starting to scaling.

"As each of the business units is planning on how to grow and do it efficiently, the main lever they're pulling right now is

RPA," noted Mr. Tacchetti.

Whether it was their persistence to automate back-office tasks or the fact that they're currently pushing toward having close to a hundred robots in operation, there's something about State Auto's approach that's indicative of how humans approach work today. They're

trying to harness automation technology and all of the AI components

that enhance the capabilities of that technology to take their business further than they could if humans were performing the mundane tasks they handed over to robots.

State Auto's program has drawn attention. In fact, Holly Uhl has been featured in the

**100%**  
accuracy

State Auto's RPA deployments achieved 100% accuracy, saved 30,000 man-hours, and improved their customers' satisfaction

*New York Times'* technology section, discussing State Auto's automation goals and efforts.

"We were hoping to utilize automation to free up people from back-office tasks," she says over the distant noise of chatter and a few thuds. They strategically selected both the claims process and customer service ones because they touched the heart of the company and its customers. "We sell a promise that if you have a claim, we will service that to the fullest."

For Ms. Uhl, automation means speeding up cycle time because the faster you can

solve a claim and maintain the quality of service, the better it is for both the company and the client.

With multiple business units now seeking to harness RPA as part of their solution, Tacchetti elaborates, **"really the biggest question now is how fast can we go?"**

## Take the steps to scale automation in your organization

Tacchetti hit on one of the biggest concerns that companies have when automating. Many of them have done a pilot or pilot programs, sometimes automating up to 50 processes, and they find themselves asking: How can I up the game and really reap the benefits of automation?

**First, take a look at the automation first maturity model found on the following page.** It shows the stages of automation, describes who generally leads the automation efforts during each stage, lays out a general estimate of ROI for each stage, and more.

**Starting — The level where most companies begin.** When a business is in this stage, a few business units may independently start an automation proof of concept and then a pilot. The automations are typically created by early adopters within the department who are trained in automating with one or multiple RPA platforms (citizen developers).

**Scaling** — After the ROI has been established for the robots in the start stage, the business must begin to consolidate automation best practices and have a discussion about scaling. When scaling to 100s of robots, a **mature robotic operations center (ROC) helps standardize automation**, build awareness in the organization, and serve as a center for best practices. Security and governance of scaling operations will be addressed. Automation moves from simply citizen developers to incorporating RPA developers into the automation process. The ROC ensures a top-down approach to automation, whereas the citizen developers can feed the ROC with suggested tasks to be automated, ensuring a bottom-up process is also established.

**Transforming** — This happens when a company has standardized automation processes and laid measures to ensure governance and security over the automation via a ROC, and mundane

work is being shifted to robots. But more importantly, robots have been distributed across the organization to help employees choose their own work to automate. This bottom-up approach is where your organization begins to transform. The C-suite and the board of directors have an automation first mindset and are encouraging all employees to consider how robots can improve their day-to-day tasks. In this stage the ROC will act as the guardian of automation monitoring deployment best practices, serving as a communication center, deploying and monitoring automations generated by the business users.

**Extending** — While the Gigabot economy is **currently still an aspirational phase, we have already started seeing glimpses of this phase emerging in our customer base.** The Gigabot economy is a workforce in which humans and robots work together, independently, across organizational

### A ROC will help standardize automation:

It is a top-down approach that will build awareness in the organization, serve as a center for best practices, and security and governance of scaling operations.

borders and integrated with distributed ledgers. In this phase, you will see robots from one organization able to communicate with robots from another organization, playing an active role in the global supply chain. For

example, the robots in an auto parts supplier handling accounts receivable can work directly with the robots in an auto manufacturer's accounts payable department to process and pay invoices — on their own.

### → What's a citizen developer?

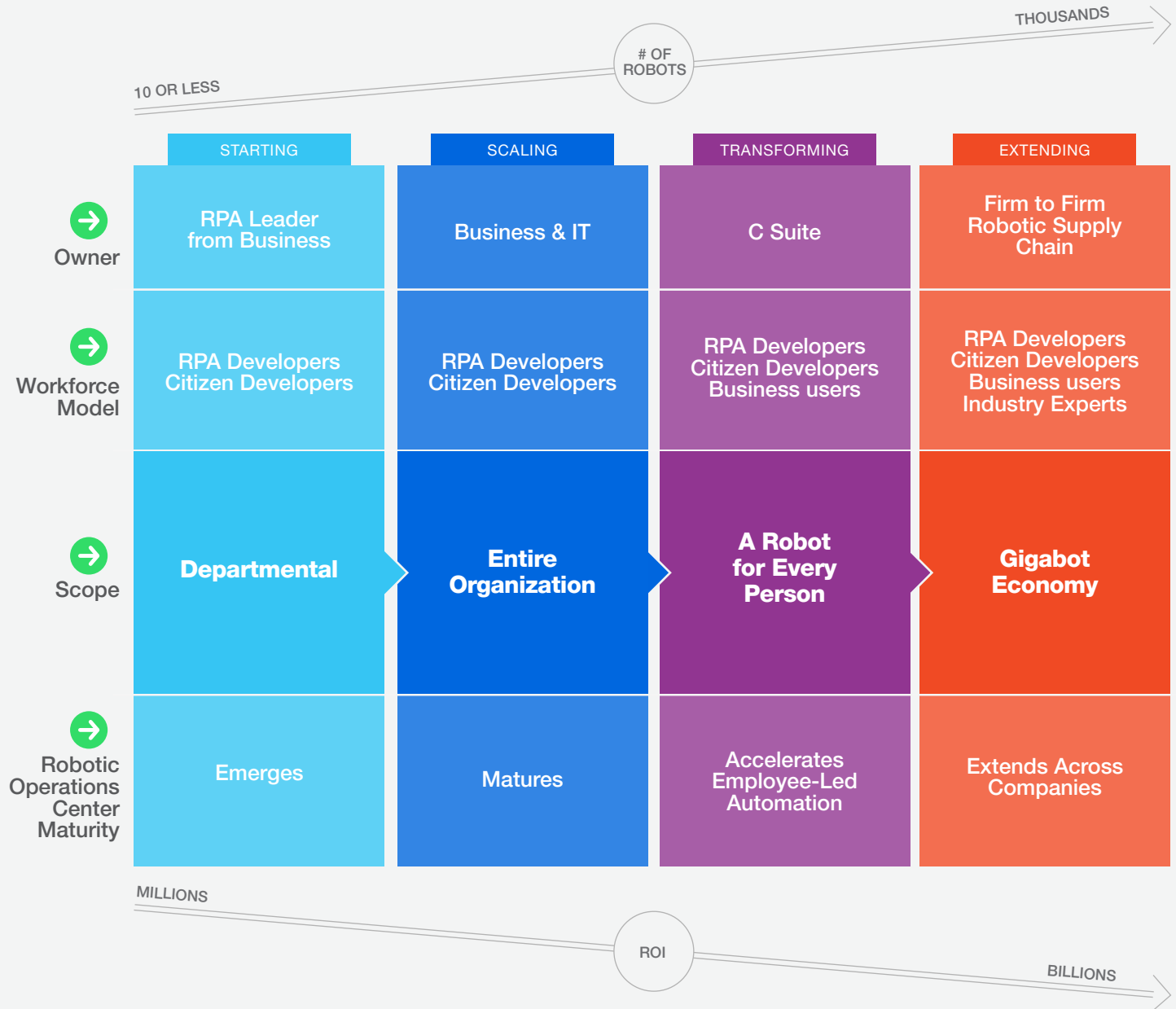
Citizen developers are employees on the business side of the house who are technologically inclined and have a knack for grasping automation skills. In the future all employees will be empowered by software robots, but the citizen developer can perform more complex automation tasks than the average employee.





No matter where you are on the automation maturity model — starting, scaling transforming or extending — UiPath can help.

## The automation first maturity model



## Cross the chasm from scaling to transforming

Looking at the maturity model, it's the gap between the phases between scaling and transforming for which most organizations are trying to find a bridge.

In order to determine ways for an organization to move from pilot to scale, we talked with several UiPath customer support managers, customers, and automation experts. It's important to emphasize that there is no silver bullet that works for all companies. Organizations differ greatly in purpose, size, industry, how they are spread geographically, etc. The characteristics of an organization will impact its priorities as well as the structure of any formalized group of experts working on RPA within the organization. Nonetheless, **there are a few common elements that we found in our conversations central to improving the success of RPA.**

## Cultural best practices of an automation first enterprise

### Drive change in the mindset

The mindset is an outcome-oriented mindset. Leaders should examine the most effective mix of human and robot in order to best meet those outcomes. Jobs to be done should drive automation and avoid automation for automation sake.



### Suggested approach:

Identify the business' key goals, utilize UiPath and partner resources to determine the best processes to automate, and determine the robot-human mix that will deliver ROI for these processes.

### Build awareness

Building awareness and setting the right tone for both target groups (leadership and employees) can generate enthusiasm, accelerate your automation journey, ensure buy-in, and prevent potential rejection of the new technology or unjustified fears.



### Suggested approach:

Show proof of concepts (POCs) and ROIs by creating videos or reading material and demonstrate those at brown bag lunches or with help from internal marketing or communication teams. Proactively discuss automation opportunities.

### Build a bridge between IT & business stakeholders

Automation should be led by both business and IT. Business units provide unique insight into the process, and IT provides infrastructure, governance, and other necessary solutions.



### Suggested approach:

Build awareness among leadership; they are crucial in breaking down organizational silos. Build awareness with business units to set the tone and socialize automation in a way that will encourage cooperation.

### Engage others in leadership

Engaged leadership plays a decisive role in an automation first mindset. When leadership understands, they accelerate and improve the process. Leaders generate pipeline, bridge silos, and facilitate a successful ROC.



### Suggested approach:

Build awareness among leadership. Show them a POC, a video of automation, and make the case of how automation is part of the solution to save money, reduce risk, ensure compliance, and reach organizational goals.

### Never stop learning

Once one process has been automated, another can benefit from that. Having a centralized unit (or multiple) where experiences are documented and shared reduces duplicate work and enhances the speed and success of an RPA deployment.



### Suggested approach:

Maintain centralized or semi-centralized documentation of automation deployments and store them with your ROC. Take advantage of knowledge external to your business by joining UiPath Go! and UiPath Connect! — the UiPath marketplace for automations and developer online network, respectively.

*Continued on next page*

In the era sometimes referred to as the Fourth Industrial Revolution, businesses have to confront the fear of technological unemployment, anticipate the future of work, and build a roadmap to transform their workforce into one that strikes the right balance between the human employee *and* robotic capabilities.

## Operational best practices of an automation first enterprise

### Governance structure & security compliance

As your business' automation journey matures, it's essential to determine how you prioritize automation requests and how those can link the automation with ROI. Having a good governance ensures business units comply with company policies, avoid duplication, and accelerate automation.



### Suggested approach:

Bring business and IT stakeholders together to discuss your business' goals and objectives. Establish a ROC as a central point for stakeholders involved in decision-making and creating policy surrounding governance. Work with IT to ensure user controls and security compliance.

### Identify the right processes to automate

After the pilot phase you're faced with the question: What next? In order to scale, you must generate a healthy pipeline of ideas for future automation, which can later be prioritized by your ROC to ensure they meet standards and link up with organizational goals.



### Suggested approach:

Train business analysts to find the most suitable processes, and be alert for processes that are well-documented; look for highly repetitive computer-based processes. If business units or sub-organizations have gone through business process management (BPM) or Lean transformations, these are great places to start.

### Empower employee-led, bottom-up automation

Citizen Developers (CDs) are employees who are trained in determining what to automate quickly without a lot of overhead, creating a healthy automation pipeline. Deploy attended robots that do not require programming across business users' desktops to assist them in their day to day tasks.



### Suggested approach:

Set up a CD Program. Having a ROC is critical in developing this role, because it captures best practices and creates a standardized development framework for CDs. Use UiPath online developer material to train business analysts on RPA tools. Establish the process flow (building robots, approvals, QA, etc.).

### Harness the skills and expertise of others

The best automations sometimes require external expertise. When an organization needs extra help, UiPath has a vast **ecosystem of partners** that can train your team, provide technological solutions, and ensure automation success.



### Suggested approach:

Take advantage of the existing knowledge base and expansive partner ecosystem available within the UiPath community. There are things employees can automate best, and there are things partners will automate better. Ensure your success by tapping into that resource.

### Establish a Robotic Operations Center (ROC)

A formalized central unit can facilitate the development, testing, and deployment of your robots to save money and free up staff to do more value-added work. Your ROC will be central in scaling automation to help your business thrive.



### Suggested approach:

Create a formalized ROC to help your business perform all the above-mentioned continuous steps and ensure that automation becomes part of your business' DNA as we move deeper into the automation first era.

## Build a team to solve an enterprise-wide challenge

There are countless stories of teams taking on challenges that would otherwise be insurmountable when faced alone. You may have seen this on some of the most celebrated TV shows over the past couple of years. The young adults of Hawkins, Indiana, for example, were only able to rescue their friend from the Upside Down in *Stranger Things* by banding together and relying on each other's strengths. Similarly, the Starks were only able to defeat their toughest foes by teaming up as a family and with other alliances in the HBO show *Game*

*of Thrones*. Tough journeys call for good teams, and your business will need a team to help perform all the steps listed above to ensure you can scale.

For RPA, it's no different. **You need a team with certain personalities or roles in order to help your organization mature.** At UiPath, we call it your robotic operations center or ROC. Granted, various companies across the globe have given this team different names: RPA COE, Automation Centers, etc. The main point is developing a core group of folks

with certain skillsets who will help you tackle the challenges of scaling RPA.

While gathering a team might sound intimidating, chances are if you've started an RPA pilot within your company, some of these personalities already exist. **Building a ROC means bringing these folks together to invest resources that benefit the entire organization,** and if all the personalities don't already exist, it doesn't mean you can't start a ROC. Trusted external partners or UiPath training courses can help

your organization prepare the necessary roles for a successful robotic operations center.

It's also important to note that the **The RPA Sponsor, RPA Champions and RPA Change Manager** listed on the following page are crucial for following the best practices needed for a business to mature their automation initiatives. The sponsor, champion, and change manager play central roles in building awareness of the technology and ensuring other senior leaders are engaged in efforts to drive change in the

mindset. Further, they can guarantee that when they set up a ROC, it brings in both the business side and the IT side, while making certain that automation includes a continuous learning plan and a way to educate employees to ensure citizen developers emerge.

You've got the automation first mindset, the appropriate team, but you also need the most intuitive, user-friendly, and accessible platform to help you reach your automation goals. This is where UiPath comes in.

### Robotic Operations Center ROC: Key responsibilities:

Establish	Document	Identify	Inform/leaders	Inform/employees	Train
Establishing governance and security over automations within the organization	Documenting and maintaining an automation library and creating lessons learned and best practices from automation throughout the organization	Identifying the organization's key business goals and developing an automation strategy that can support those goals	Engaging leadership to ensure institutional barriers are removed and will optimize the automation strategy, helping the organization achieve its key goals	Building awareness among all employees so that employees will embrace the technology and participate in employee-led automation	Creating training opportunities for employees and promoting citizen developer training to enhance the success of the employee driven approach

### You're all set

An automation first mindset, the appropriate team, and **an intuitive, user-friendly, and accessible platform** will help you reach your automation goals for the next technological era. Learn more about how to choose the best platform on page 16.

## Nine key roles you should have on your team to help you scale your organization's automation efforts.

### RPA Sponsor

The sponsor is a person from the business side of the house (as opposed to IT side) who will establish the technology as an enterprise-wide strategic priority and will underwrite corporate resources.

### RPA Business Analyst (BA)

BAs are the projects' subject matter experts located in business operations. They will be in charge of creating the process definitions and process maps used for automation.

### RPA Infrastructure Engineer

is in charge of the infrastructure support for server installations and troubleshooting. The engineer contributes to the completion of the solution architecture for the RPA project. During the implementation phase, they are the ones leading the infrastructure workshops.

### RPA Champions

The champion is an RPA evangelist responsible for ensuring a healthy automation pipeline, while also leading the operational management of the virtual workforce.

### RPA Solution Architect

defines the architecture of the RPA solution and oversees it end-to-end, assisting in both the development and the implementation phases. They select the appropriate set of technological tools and features and ensure the alignment of the solution with enterprise guidelines.

### RPA Supervisor

manages, orchestrates, and controls the virtual workforce as part of the operational environment. Their focus is on continuously improving robotic operational performance and resource allocation by exploiting the advanced reporting and analytical tools within the RPA solution.

### RPA Change Manager

The Change Manager creates the change and communication plan aligned with the deliverables of the project(s). They are a catalyst in the transition process, making sure each stakeholder is well-informed and comfortably tuned to the changes taking place.

### RPA Developer

designs, develops, and tests automation workflows. The developer works side-by-side with the BA to document process details and assists the engagement team in implementing, testing, and maintaining the solution.

### RPA Service Support

acts as the first line of assistance for the RPA solution in deployment.

The RPA Sponsor, RPA Champions and RPA Change Manager are crucial for businesses to mature their automation initiatives.



## Choose the best platform to ensure automation success

### Beyond the business and into the classroom: what RPA courses reveal about the UiPath product

The Brendan Iribe Center for Computer Science and Engineering sits on a corner of the University of Maryland (UMD) Campus in College Park that intersects with the notoriously congested Route One. The building **was named** after the co-founder of Oculus VR after he (Brendan Iribe) made a hefty donation to this university, which he attended before leaving to launch a startup. It's in this large, open building with windy hallways where a senior lecturer at the computer science department Dr. Anwar Mamat has his office. It overlooks the green, tree-canopied fields leading up to University of Maryland's bustling quad.

From here, Dr. Mamat planned a course he conducted this past winter for 40 computer science

students. Its theme: RPA. It was an experimental course, the first of its kind, motivated by Dr. Mamat's personal appreciation for the UiPath platform and by the UiPath Academic Alliance – a program dedicated to preparing future generations of developers who can thrive in an increasingly automated world.

“Personally, I liked it, and I had looked at job application sites,” explained Dr. Mamat, “There were a lot of job descriptions with RPA as a keyword. People are searching for that as a skill.”

The course consisted of nine lectures and an introduction to the UiPath platform through UiPath-provided videos. Students created their own robots to automate tasks of their choosing, and they were

reported to have caught on to the technology quickly.

Like all experiments, however, sometimes the outcomes you hope for are not those you reap. UiPath's ease-of-use that makes it marketable for a very broad audience may have been too easy for computer science students. “Eventually you have to write code, because block-based visual programming can get tedious for highly skilled programmers,” said Dr. Mamat, describing how computer science students would be tempted to add a code that they could “call” or (in layman's terms) invoke a routine through programming specifications.

It makes sense that they wanted to apply more advanced code to the program because it's what they're trained to do.

According to Dr. Mamat, for computer science students, learning RPA could be considered another handy skill to have in their bountiful toolbox; however, it's extremely valuable for students who lack a computer science background and are likely to go on to do business processes that can benefit from automation.

Technology is easy to use for professionals who do not have a computer science

background. Our organization believes that the way to ensure scaled automation is to offer a platform that enables, in an intuitive way, the everyday person who's unfamiliar with code to automate processes. Our vision is to deliver a platform that is open for everyone to use, is supported by a broad network of workforce readiness and learning programs (like the one at UMD), and that uses AI to continuously improve making automation available to everyone who wants it.

Let's take a deeper look into how we're going to do just that.

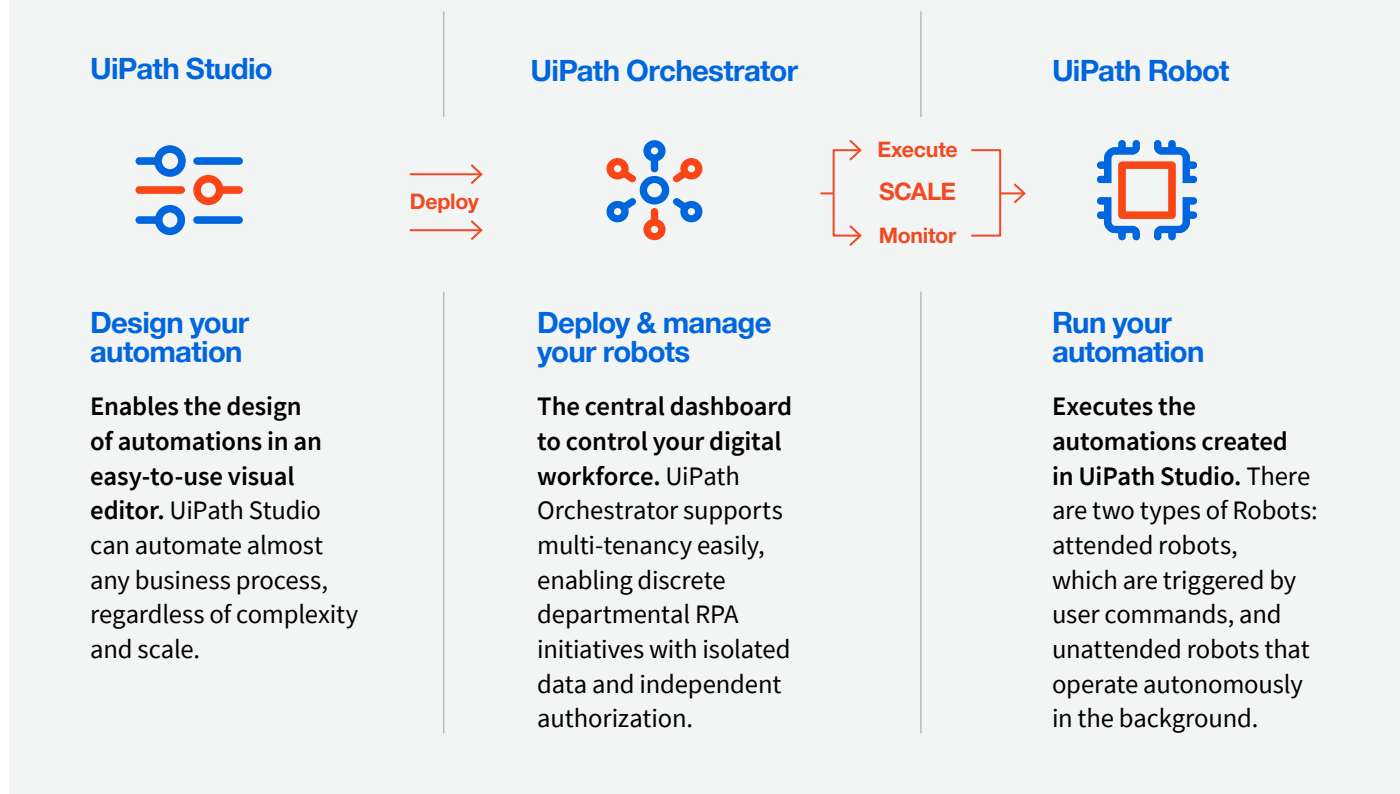


## Our mission: Deliver the platform for an automation first mindset

Having the appropriate mindset for the automation first era, creating the right team to help actualize your business' goals, and taking the necessary steps to ensure automation catches on also requires the right RPA platform. That RPA platform should encapsulate both a vision and technological pillars that will ensure what you begin today will grow and improve down the road.

Further, when choosing the best RPA platform, there are several criteria that you should take into consideration: **governance and security features, a platform's RPA analytical capabilities, the vendor's partnership ecosystem, and many more.** Forrester, for example, has a **30-criteria evaluation system**, by which it measures existing RPA vendors and the platforms they offer. By choosing one of the best rated platforms, you will strengthen your automation efforts.

## Our automation first platform is powered by three robust components



The UiPath platform components work together seamlessly to delivery unmatched, innovative, end-to-end solutions that give you a complete edge in performance, cost, and user experience.

## Our vision

A vision will tell you much about an organization and where its purpose lays, and the UiPath vision is to ensure that everyone has the opportunity to tap into their potential by removing the mundane tasks. Further, three technological pillars at the foundation of the UiPath platform are designed to help you get the most out of your automation.

**The platform harnesses the power of open innovation to maximize everyone's automation initiatives. The AI supporting the platform ensures that your robots are continually learning new skills, and the workforce readiness and learning infrastructure will help you train and skill current employees to ensure quality automation.**

## Core pillars of the UiPath vision

### Open innovation:

crowdsourcing leads to an abundance of ideas and the ability to choose the best solution for your automation challenges. By grounding its platform in open innovation, UiPath does just that.

#### Tap into the power of democratized knowledge!

- The **UiPath Connect!** Platform allows for RPA developers worldwide to connect online with one another, to get inspired, to learn from other developers, and to collaborate on projects.
- Access the world's first RPA marketplace with **UiPath Go!** Here you can download tested and secure RPA components to help you automate your processes.
- Enhance your RPA expertise for free by downloading the **free community version of the UiPath Platform.**
- Take advantage of an extensive **technology and business partner ecosystem** that can help you plan, expand, and excel at automating your industry.

### Robots are learning new skills:

The UiPath platform is enhanced with artificial intelligence components that give robots new capabilities.

#### Embrace pragmatic AI to help solve specific issues in your automation!

- UiPath is continuously investing in **AI skills** to help you automate your complex and cognitive tasks. The core four skills are visual understanding, document understanding, process understanding, and conversational understanding, but thanks to our open architecture partners and customers can easily add their own skills to UiPath.
- **With Drag and Drop AI**, it is easy to deploy AI skills. Simply drag and drop an AI skill into a workflow, and your robots can leverage AI to for smarter automations.
- The upcoming **AI Fabric** framework makes it all possible. Build, manage, deploy and improve your AI models directly in UiPath.

### Workforce readiness and learning:

Leverage our free resources to enhance your internal expertise and connect with well-trained developers.

#### UiPath is committed to providing education resources and skills training for an automation first world.

- Retrain your workforce, or learn new skills yourself with **UiPath Academy**, the online platform geared towards enhancing your RPA expertise. With over 200K Academy members and 114K trained developers across 139 countries we are democratizing automation.
- **The UiPath Academic Alliance** is a growing network of educational programs, academic institutions, and professionals. Combined with our Youth in Automation, Reflection, Inclusion & Diversity, and Automation Skills Programs we are leading the charge in preparing the workforce of tomorrow.



## Confront fears and harness fascinations of automation

The front lines of automation: one RPA developer discusses repetitive work, automation, and fear of job loss.

Bucharest is the sprawling, burly, fast-paced capital of Romania. The city, full of young, well-educated, and multilingual graduates, is a hub for international corporations and **entrepreneurship**. Here is where UiPath RPA technology was born, and here is where we meet a young professional learning about automation, Iris. She sat down to talk with us from an employee's perspective about jobs, RPA, and the fear of job loss in the changing job market.

Iris has a fascinating story. Originally from Porto, Portugal, she moved to Romania during the lingering aftermath of the 2008 financial crisis that carried devastating economic ripples across the world. Moving to Romania was no easy choice.

"I knew I could find a job as a Portuguese speaker there," she explained, recounting getting connected with an international business group that eventually led her to job openings in Romania. "But it's not something you just tell your parents: I'm moving to Romania," Iris elaborated while sharing her parents' fears of her moving for work to a country not too many are very familiar with in Portugal.

In Bucharest, Iris began her first job in an outsourced collections operation for Portuguese-speaking clients, and she slowly began to notice something about her tasks.

"I had to do a lot of reporting, and at one point I realized that there was simply a lot

of copy-and-paste work that I was doing," she said.

In her career, Iris had always been pulled between two forces: logic and creativity. This realization sparked something that took her down a path that spoke to both impulses: Iris began learning advanced Excel and taught herself macros using Visual Basic for Applications (VBA) for Excel.

When RPA arrived at her organization, it just made sense. "I didn't have a degree

in IT or any other formal education in programming, but once you learn one programming language, you can grasp the logic more easily," she said.

But this is not unique to Iris; RPA developers often attest to the logic of RPA. Learning how to program a software robot to run automations may take some time and thought, but it tends not to be as challenging as some may fear.

**Iris has been taking RPA**



**Automation first mindset: increased employee engagement**

**developer courses mainly online with UiPath Academy.** Most of the courses she's done in her own free time—evenings and weekends.

There are, she believes, jobs or parts of jobs that will become obsolete, which can be scary. Iris understands that it's up to the employer to decide how they will tackle the future of work as automation becomes increasingly more ubiquitous. She also described the types of new jobs she predicts will emerge.

## This is how you confront fears and fascinations:

Countless think tanks, journalists, economists, historians, futurists, writers, and artists have been pondering how the automation trend will change the way we work. Will governments have to step in to create a basic universal income to alleviate the impact of mass technological unemployment, or are we facing a world where our humanity is enhanced?

Iris hinted at a good point — there are many fears revolving around automation, and mass technological unemployment remains a large one.

Technological unemployment is a term used when a human employee loses their job— for the short term or a longer one — as new technology emerges to replace the tasks that person does. It can refer to a phenomenon facing one person or to larger segments of society.


Debate on the subject can be seen on a spectrum from alarmist to optimist. On one end, the alarmists believe that AI has a unique ability to amplify the job loss effect of

automation, making this wave of automation different than ones we've witnessed in the past (the **Industrial Revolution**, automation in the 1920s and '60s, the advent of the computer in the '80s, etc.). Automation thus poses a unique threat to the human workforce.


On the other end of the spectrum are proponents of automation. Here you can find some historians who point to job creation as a natural result of new technology being created. There are several often-mentioned scenarios to draw upon. The automobile created an array of jobs while putting horse-based transportation jobs out of business. In the United States, enhanced agricultural tools have resulted in a dramatic drop in the percentage of workers in the agricultural sector, yet work emerged in other domains.

The proponents also point to the economic benefits of automation. Some economists and politicians see automation as a means to boost a nation's productivity

## The societal impact of automation



**Job satisfaction increases: 50% of mundane work becomes automated<sup>2</sup>**








**The human workforce grows: 60M net new jobs created by automation<sup>3</sup>**

growth. Productivity growth is particularly important for countries with aging populations because it means that the workforce is able to produce more with the same amount of or fewer people. It also can indicate the potential for **rising wages, corporate profits, or both.**

While predictions on the future of work differ, one thing that most agree on in this debate is that some people will find themselves displaced by emerging technologies like RPA, and displacement is a painful experience for any individual or community that experiences it. Take a look at the chart below

to see one prediction about various types of job skills, and how that will be impacted by automation. The change in the demand for skills can be daunting for employees, job seekers, and employers alike, but the potential impact is fascinating.

### Robots add the equivalent of full-time workers to the workforce

Job skill categories	2002-2016	2016-2030
 <b>Physical + Manual Skills</b>	▲ 3%	▼ 11%
 <b>Basic Cognitive Skills</b>	▲ 1%	▼ 14%
 <b>Higher Cognitive Skills</b>	▲ 9%	▲ 9%
 <b>Social + Emotional Skills</b>	▲ 13%	▲ 26%
 <b>Technological Skills</b>	▲ 27%	▲ 60%

McKinsey Global Institute: Skill Shift Automation And The Future Of The Workforce, May 2018

<sup>2</sup> Deloitte: Automation Is Here To Stay    <sup>3</sup> World Economic Forum: Future Of Jobs Report

## Making the right choices: workforce readiness and education

Given the changing nature of work, there's one thing businesses can do to ensure the best for themselves and their employees: prepare for it. When it comes to process automation, UiPath has initiatives mentioned in the previous section that you and your employees can take advantage of to increase automation skills.

Don't shy away from the topic. Address the changing nature of work head on, and if re-skilling employees and educating your workforce is your path, UiPath will help you get there.

## Final thoughts: automation frees people from the mundane — how will they use that time?

In a *Washington Post* article from 2015, former Post reporter, Ana Swanson, asks us to think about what was the most disruptive technology of the 20th century. From her analysis, it was neither the mainframe nor the PC nor any other on our list, but rather a pantheon of household technologies from the refrigerator to the washing machine and dryer that transformed the modern world. Why? Because prior to these inventions, household work consumed a large percentage of time. According to Swanson, the number of hours that the average household spent in the US “preparing meals, doing laundry and cleaning fell from 58 in 1900 to only 18 hours in 1970,” as a result of household technologies. This number has only continued to decrease.

The number one commodity gained from embracing household technologies has been time, and that time was repurposed on engaging in leisure activities and pursuing professional interests. Similarly,

business are repurposing time by automating repetitive, computer-based tasks, and so can you. When the hours your people spend on mundane tasks start to decrease, what will they spend that extra time doing?

RPA is the key technology that can give your business more time. By shifting the work from humans to robots that is better done by robots, you help give people time and energy to focus on what matters for your business and the customers you serve. Automating the processes that are mundane doesn't just free up their time. It accelerates all the digital transformation efforts you've been working on, and it improves employee experience and customer experience.

As we've examined in this paper, achieving this transformation in your company requires an automation first mindset that provides both centralized and employee-led approaches to automation. This combination of approaches provides the

framework for rebooting work to the most effective human/robot combination to tackle a job. It also requires putting the right people in place to drive automation initiatives. A Robotic Operating Center can help facilitate the centralized and employee-led approaches.

And it all comes together in your automation platform. At UiPath we believe that the core pillars of delivering this platform are an open and free innovation and collaboration strategy, a constant renewal of capabilities as robots learn new skills, and a focus on providing workforce education and readiness to deliver the benefits from the automation first era.

No matter where you are on the automation maturity curve — starting, scaling transforming or extending UiPath can help.

Figure out how much time your business can save with RPA and how that extra time can be used to enhance the services you provide by contacting us.

Let's Continue  
the conversation  
at [UiPath.com](https://UiPath.com)

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