How Automation Will Change the Future of Work in Financial Services

Published 21 December 2022 - ID G00780296 - 19 min read

By Analyst(s): Laurie Shotton

Initiatives: Financial Services Digital Business Strategy and Innovation

Banks and insurers continue to accelerate their adoption of automation that is transforming work, and challenging HR and talent management. CIOs can use this research to address the organizational challenges of implementing new enterprise automation tools in the workplace.

Overview

Impacts

- Automation is an ongoing journey that is expected to cause a seismic shift in financial services jobs, reducing repeatable, task-based roles (such as new business administrators), driving autonomous processing, and increasing automation management roles.
- Automation technologies and vendor offerings continue to advance providing a toolbox of technologies, requiring new skills requirements in configuration, AI, testing, ethics, compliance and business continuity that financial services institutions (FSIs) must build from the ground up.
- Machine-augmented work will cause a cultural shift in how people work and leverage technology in financial services.

Recommendations

CIOs responsible for driving automation change leadership in financial services technology modernization and transformation should:

- Scale gradually with automation by first prototyping automation options with a small set of processes and technologies that are relevant to multiple stakeholders, before embarking on enterprisewide automation.

- Identify those roles that are vulnerable to elimination because of automation (FSIs have numerous data entry and repetitive tasks ripe for automation) and the emerging skills that will be needed. Later, work with HR to create a comprehensive reskilling plan.
- Build a roadmap for future jobs with organizational peers that recategorizes work tasks based on who is performing them (such as humans, technology or technology-enabled augmented humans). Appreciate the role of humans in empathy and engagement and incorporate that into the roadmap.

Introduction

Banks, investment firms and insurance companies share a common problem — accumulated legacy and supporting systems — many of which are outdated and duplicate functionality. Mergers and acquisitions, "greenfield" system deployments, failure to decommission, and expansions into new product lines and territories have only exacerbated the problem. Systems are often disparate and disconnected, requiring financial services staff to perform highly manual, repetitive, mundane tasks to manage end-to-end processes.

Many banks and insurers are turning to automation to resolve these inherent system challenges. However, automation is an evolving journey with many unknowns. Technology advancements offer a real promise to:

- Reduce IT and operational costs allocated to run the business (currently at 65% and 67% in insurance and banking, respectively) by reducing overlaps and inefficiencies
- Increase productivity
- Shrink errors
- Augment workers [1]

These actions will add agility and accuracy, increase revenue, and drive customer satisfaction. Gartner's

2021 Employee Technology Survey [2] reveals that insurers and banks alike are already seeing the value of automation technologies:

- Sixty-one percent of employees who use artificial intelligence (AI) technologies for their work said these technologies were deployed in their business area in the last 24 months.
- Seventy-four percent of employees who have experienced using automation technologies said these technologies helped them do their job better.
- Sixty-five percent of automation technologies users said these technologies removed repetitive tasks that added less value.

However, the survey also uncovered potential consequences to these automation-related changes. This highlighted that automation impacts are not always positive and insurers and banks alike will need to prepare for certain challenges from their employees.

- One of the major fears that employees feel from automation technologies is the change in their job role. Between employees or their team members moving to a new role or reduced satisfaction in doing their job, only 24% of employees experienced no change as a result of automation implementation.
- Twenty-two percent of employees wonder if they will still have a job if tasks are automated.

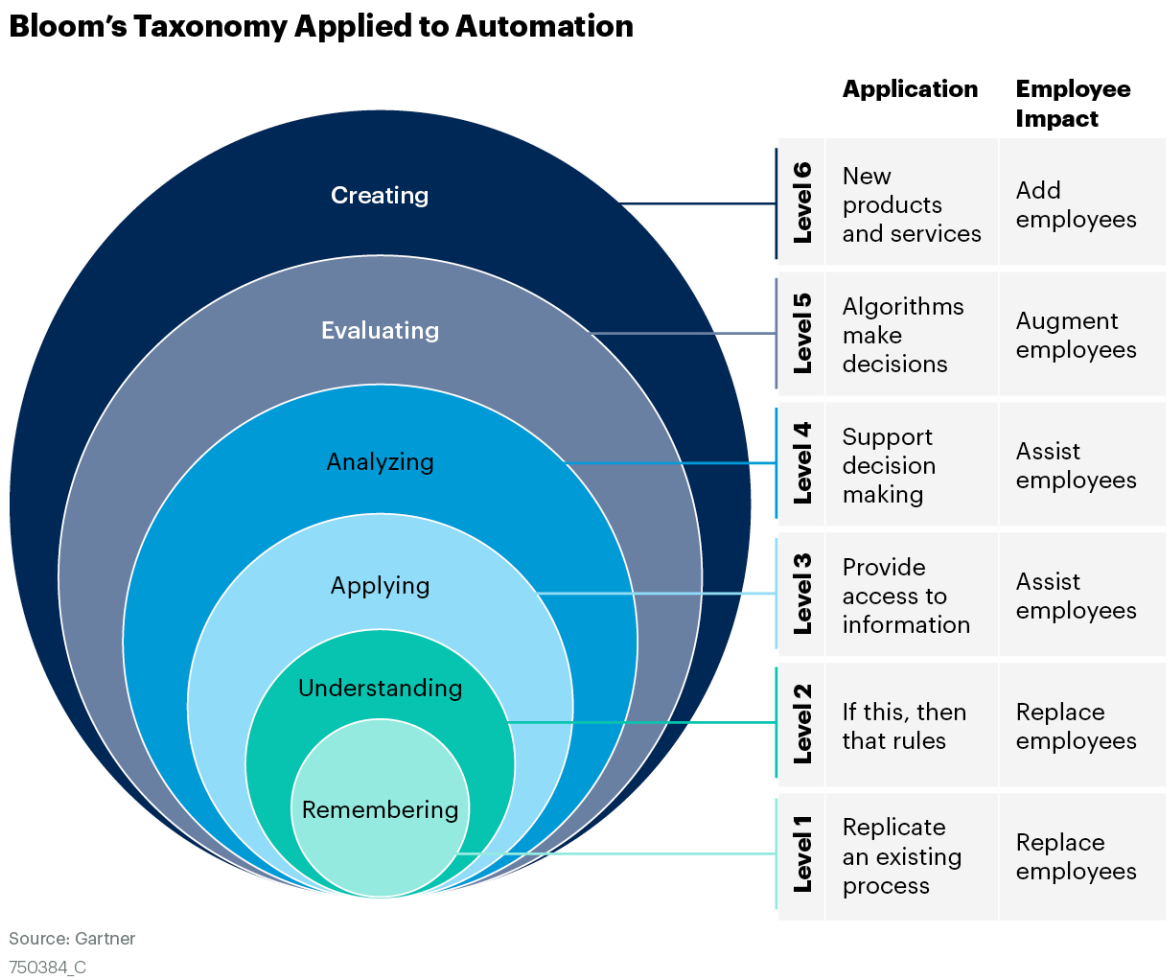
Automation is not impacting back-office operations, but is increasingly impacting front-office staff. Gartner's 2022 Frontline Productivity Survey [3] of frontline employees in retail and commercial banking and wealth management revealed that:

- 76% of frontline employees report that their firm has increased the number of automation technologies used in their role since they began their job, with 26% of frontline employees reporting that that number "significantly increased."

Gartner has applied Bloom's Taxonomy of learning as a framework to help FSI CIOs consider how to apply automation tools. [4] The framework applies automation tools at six different levels, from basic to transformative, and describes each level's workplace impact (see Figure 1). For each level, the communications and learning requirements for employees will vary.

CIOs should use Bloom's framework to categorize the types of tasks that will be replaced, augmented or created based on the automation used and the business outcome to be achieved. [5] Technologies can be aligned to each level, and necessary new skills and retraining can be identified to support the expansion of automation activities.

Figure 1: Bloom's Taxonomy Applied to Automation



- **Level 1 — Remembering:** Tools simply replicate manual processes, removing mundane repetitive robotic tasks from humans and using technology such as robotic process automation (RPA) to complete them.
- **Level 2 — Understanding:** Built-in logic configures or defines rules that can achieve different outcomes, moving easily definable tasks and outcomes from humans to technology.
- **Level 3 — Applying:** At this level, technology facilitates information access by bringing together disparate information from disconnected systems to help employees perform specific tasks.

- **Level 4 — Analyzing:** Automation at this level consumes vast quantities of data, identifies patterns and provides insights that surpass human capabilities, augmenting employees and enabling them to reach more in-depth, accurate decisions.
- **Level 5 — Evaluating:** Learning capabilities can analyze the data, outcomes and insights, and continuously improve the decisions to drive greater levels of efficiency and grow revenue. At this level, findings can either augment or propose decision-making outcomes and, in some cases, automatically enact the results.
- **Level 6 — Creating:** Greater insights can identify different trends and data groupings that could highlight new product and service opportunities to increase revenue and growth.

The combination of people and technology can enrich and invigorate the workplace, raising productivity across the organization. But this can happen only if FSI CIOs first prioritize customer and employee impacts, using Bloom's framework to:

- Categorize jobs that will be replaced, augmented or created based on specific automation technology and desired business outcomes.
- Align technologies to each taxonomy level.
- Identify new skills and retraining needed to support expanded automation.

Impacts and Recommendations

Automation Is Expected to Increase Jobs, but There Will Be a Seismic Shift in Job Roles

There is no doubt that automation leads to a reduction in certain manual jobs, and in financial services, a significant proportion of business and IT tasks across the value chain requires high degrees of manual intervention. Thus, making them ripe for automation; however new jobs will be needed. Automation initiatives thus far have shown that, in most cases, people will still be needed to:

- Train, configure, manage and test automation tools
- Establish governance
- Ensure compliance

- Set ethical standards

These are skills that FSIs must build from the ground up. This does not mean, however, that every person whose job is eliminated will be able to take on a new, higher-level, automation-related role, primarily due to skills or knowledge gaps or both. But simply hiring externally is not a viable holistic strategy. These roles are in high demand, and external hiring negates the inherent value that current staff have — institutional knowledge of how the organization operates. If this knowledge is refactored to new desired roles, then these people will be a greater asset than recruiting externally. However, it is important to realize that these role shifts may not be simple. A person whose job is focused on basic operational tasks cannot necessarily become a person able to manage or program bots.

Automation tools are not a stopgap only for rote tasks, though. When combining simpler tools, such as RPA with AI and machine learning, and by making use of wider data sources, technology can fulfill and augment higher cognitive tasks. All of this means a massive reshuffling of a company's workforce. Employees must move to new positions; people will be hired externally and current employees will leave or need new skills training.

By applying Bloom's Taxonomy again, it clarifies what kind of reshuffling will occur based on the tasks and processes that are automated. Table 1 explains the types of tasks that automation can support or replace at each of Bloom's six levels, and provides examples in banking and insurance.

Table 1: Bloom's Taxonomy, Examples

(Enlarged table in Appendix)

Bloom's Description	Impact	Banking Example	Insurance Example
Level 1 — Remembering	Employees are replaced as existing processes are replicated and specific tasks within the process are automated.	Rekey information from paper forms or from one system to another for loan processing.	Avoiding manual renewal processing for a large group scheme from a structured Microsoft Excel file.
Level 2 — Understanding	Employees may be replaced for processes where "if this, then that" rules apply.	Automatically determine whether or not to pay overdraft items on a customer's account, instead of relying on branch staff to make manual, and often inconsistent, decisions.	Using automation tools to manage chaser processes and matching required documents for new business and claims processes, and placing the case in a user's work queue once all the information is complete or an escalation is needed.
Level 3 — Applying	Employees are assisted by receiving access to information that helps them work quickly and effectively.	Pull data from multiple systems to provide a single customer view to branch and contact center agents, relationship managers and financial advisors, saving employees from logging in multiple times or toggling to different systems.	Using technologies to extract financial data from multiple core policy administration systems, amalgamate the data into a common format and start reconciliation against the general ledger, leaving the finance person to act on the findings.
Level 4 — Analyzing	Employees are assisted by implementing automation tools that help them make decisions.	Automation can be used to support loan decisions by gathering and analyzing data from multiple sources, like credit scoring entities and tax authorities, saving employees time and highlighting critical data.	Using predictive analytics based on internal and external sources to forecast potential policy lapses, allowing customers to intervene before a lapse occurs.
Level 5 — Evaluating	Employees are augmented on more-complex decisions.	Location analysis that determines where to add or close branches or offices requires dozens of data points and can take months for an analyst or team of analysts to evaluate. AI and machine learning can provide the most logical choices and potential outcomes to employees.	Using natural language processing (NLP) to review commercial insurance contracts to evaluate a claim and derive validity and claim value, followed by invoking the transaction via an RPA bot without manual intervention.
Level 6 — Creating	Employees are added when automation tools are used to the highest potential to create new products and services.	Bring a new, competitive commercial loan product to market by making decisions and closing loans faster than current offers.	Understanding data more deeply, enabling insurers to move insurance products from a "commodity" to a personalized product offering.

Source: Gartner (December 2022)

For more detail on the characteristics of specific automation technologies, see 4 Steps to Automation Success in Financial Services.

To quantify the level of impact on the workforce, FSI CIOs can use this framework to align each taxonomy level to the tasks to be automated in their organization. Identifying the automation opportunities will create a vision of the organization's future workforce, provide insight into what new job opportunities and training will be needed, and enable the organization to measure what can be automated over time.

Recommendations:

- Begin an automation journey by establishing a digital operations center of excellence (COE) and starting with a few simple key processes and technologies. Use Bloom's Taxonomy to map and understand the impact on jobs and skills.
- Start educating IT and business peers and leaders on how automation can affect the institution by using Bloom's framework and Table 1 to align tasks and activities, and outline the workforce impact.
- Start companywide conversations by identifying skills and roles that are niche, diminishing, core and emerging, and then plan training and career paths accordingly.

Technology Advancements in Automation Will Create New Skills Requirements That Must Be Built From the Ground Up

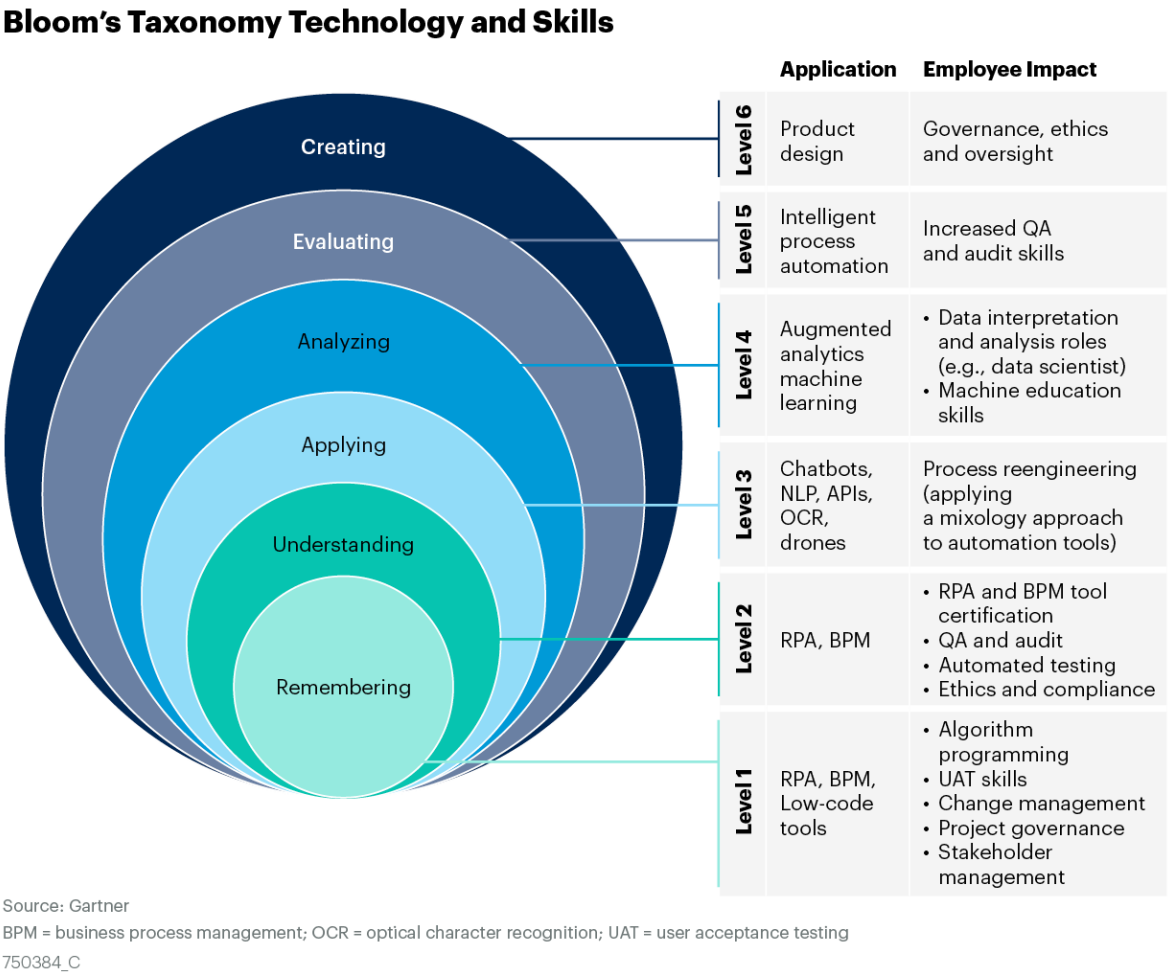
Applying automation technologies is more than just simply replacing vast numbers of employees. New technologies will require new knowledge and skills that will be in short supply. Gartner's future role infographic series highlights the impact of automation on the claims administrator, branch banker and contact center agent (Infographic: Future Role of the Branch Banker in Financial Services, Infographic: The Future Role of the Contact Center Agent in Financial Services and Infographic: The Future Role of the Claims Administrator in Insurance). FSI CIOs must, therefore, be prepared to grow these skills internally and develop a roadmap that matches needed skills with new technologies. CIOs must work with HR and learning and development colleagues to promote new opportunities including:

- A communications plan to teach employees how automation tools will assist and augment their roles.
- Career planning to help employees recognize new opportunities and the data and technology skills needed to achieve them.

Communication and transparency are key. CIOs must work with business leaders to promote career development, both from a formal program perspective and a self-learning approach, to drive forward the skills needed for new roles. Digitally dexterous people with a willingness to learn and develop both technical and nontechnical skills are assets to any organization, particularly those who can combine business knowledge, an appetite to reengineer and automate processes, and some degree of IT skills.

Gartner also uses Bloom's Taxonomy to highlight technologies and skills required at each level (see Figure 2). It is important to realize that each skill builds on the previous level as wider and more disruptive technologies are implemented.

Figure 2: Bloom's Taxonomy Technology and Skills



Source: Gartner
BPM = business process management; OCR = optical character recognition; UAT = user acceptance testing
750384_C

Gartner

As companies make greater inroads into automation, more technologies will be applied that will start analyzing wider data, providing insights and potentially automating more complex tasks. NLP and machine learning will enable wider data analysis that will support complex contract reviews and provide more accurate decisions for processes such as insurance underwriting and claims. However, many organizations are struggling to scale automation initiatives, and as they do, they will identify key skills development areas, so they must shift both operations and IT areas to build out needed skill sets and attributes: [6]

- **Automation engineers** have a mindset that can look at financial services processes and analyze how they can be automated, streamlined and rethought. They have the technical skills to program/define algorithms, as well as the IT disciplines to manage scope and change.
- **Automation testers** provide user acceptance testing and testing disciplines to fully assess the automation tool's impact before production rollout.
- **Automation architects** are responsible for defining automation candidates, overseeing process and workflow design, and owning automation development frameworks.
- Automation managers focus not only on managing teams, but also on managing relationships with peers and business leaders to gain acceptance. Automation managers also need to plan and manage the rollout alongside other IT projects and be aware of wider initiatives that will require rework and testing automation scripts. They also play a key role in defining metrics and aligning them to desired outcomes (see Financial Services CIOs: Apply the Right Metrics to Quantify the Benefits of Automation Investments).
- **Quality assurance and audit** identify guardrails to alert the FSI when a process is going wrong. Even then, it's difficult to identify every potential glitch. Quality assurance (QA) and audit roles will be an essential part of ensuring that automation technologies continue to add value and that incorrect actions can be resolved without a formal disaster recovery.

Everyone who occupies these roles must work in a more agile way, which represents a working practice and cultural shift for many employees in both IT and business operations. Automation teams must have the freedom to test different technologies and vendors, allowing them the time and space to innovate and learn.

Recommendations:

- Investigate an array of technologies that will increase process efficiency and improve productivity by establishing process automation and reengineering COE.
- Promote an innovation culture by reprioritizing how people are measured and rewarded to allow time and space to innovate.

Machine-Augmented Work Will Cause a Cultural Shift in How People Work and Leverage Technology in FSIs

Whether employees are replaced, assisted or augmented by it, automation will result in organizational upheaval. The networks that employees create will be disrupted as they leave or move to new roles, and day-to-day tasks that support business goals will be performed in new ways. This cultural shift won't happen overnight, but as technologies mature and adoption increases, so will the impact. CIOs will have a strategic role in not only helping the business deal with change management and to communicate and realize the opportunities, but also the disruption it can cause. FSI CIOs should utilize Gartner research and monitor the developments in the market to create early sight of how technology is changing the nature of work within and outside the industry.

While today's FSI work environment focuses primarily on execution (one tool, one job), the new work environment will use automation tools to create an enabled workforce that distributes their tasks among a variety of tools and applications. This allows them to accomplish more (in terms of volume and quality) in their work hours. Moving to this environment will require digital dexterity.

> **Digital dexterity is the ambition and ability to apply technology to improve business outcomes.**

Using Bloom's Taxonomy to understand how automation progresses through the organization helps to see how it will change the nature of work. These changes will be seismic and affect the entire organization, requiring the workforce to have both the ability to adapt and the ambition to do so. Both behaviors and mindsets must change. Here are some examples that highlight the seismic shift and culture change that can arise from augmenting humans.

Example: Lloyds Bank

Since 2016, Lloyds partnered with the startup Pindrop to use its technology to help it identify fraudulent phone calls. [7] The tool identifies 147 different features of a voice during a phone call and creates an "audio fingerprint." By automatically detecting fraudulent calls, it avoids the need for customer service representatives to ask security questions to verify a customer's identity, reducing call times. [8]

Example: Aksigorta

Turkish insurer Aksigorta transformed its claims process by creating automated WhatsApp groups to bring together all relevant parties in its claims process. Adjusters, claims handlers, agencies, repair shops and the customers (with consent) can make appointments and share and validate information. RPA, combined with AI, identifies the documents and photos shared in the group and automatically indexes them to the customer's claims file. The robots also initiate a customer survey at the end of the process to compute the company's Net Promoter Score. The results were impressive:

- Claims handling time went down from 17 days to 12.
- Customer satisfaction improved.
- Aksigorta's market share rose by 40%.
- The project is expected to earn 30 million Turkish lira in savings during the first year of the implementation (see Gartner's 2018 Eye on Innovation Award Winners Unveil Ingenious Technology Initiatives in Financial Services).

What is apparent in the above examples is that employees must be receptive to changing the way they work. They must embrace the technology as a partner that automates and augments decision making to effectively streamline processes, add consistency, reduce errors and improve customer satisfaction. The way that managers operate will need to adapt too, as tasks get split between humans and machines. Managing machines will require different skills and expertise, including QA and auditing the machines' work. The machines will also need their workload to be managed to ensure that they are constantly busy and working on the right tasks.

Recommendations:

- Work with organizational peers to build a roadmap for future jobs for core FSI operational roles, tertiary functions, IT roles and wider enterprise roles that examines the role of humans and technology across the value chain.
- Recategorize tasks based on who or what is performing the work — humans, technology or technology-augmented humans.
- Organize events to introduce employees to the concept of working with robotics, AI and automation technologies. Showcase examples and work with technology partners to create an immersive experience.

- Educate staff on how technology assists and augments different jobs and tasks by developing a communication strategy that presents both FSI and non-FSI use cases.

Evidence

[1] IT Key Metrics Data 2022: Industry Measures — Insurance Analysis and IT Key Metrics Data 2022: Industry Measures — Banking and Financial Services Analysis . .

[2] The **2021 Gartner Employee Technology Survey** was conducted online from November through December 2020 among 963 respondents from the banking and insurance industries, working in organizations with over $50 million in annual revenue from North America, Europe, Latin America and Asia/Pacific. The respondents are the employees who are users of technology — employees working in entry-level positions, midlevel positions and department heads. The survey was developed collaboratively by a team of Gartner analysts and Gartner's Research Data, Analytics and Tools team.

Disclaimer: Results of this survey do not represent global findings or the market as a whole, but reflect the sentiments of the respondents and companies surveyed.

[3] The **2022 Gartner Frontline Productivity Survey** was conducted online from January 2022 to March 2021 with 837 respondents from banking and insurance industry, working as frontline employees in North America, Europe and APAC. The respondents of this survey are relationship managers, wealth managers, investment managers, insurance agents, insurance brokers, retail and insurance contact/call center employees, other client-facing roles, and employees who are full-time employees working in organizations with more than $50 million in annual revenue from banking and insurance industry. The survey was developed collaboratively by a team of Gartner analysts and Gartner's Research Data, Analytics and Tools team.

[4] Bloom's Taxonomy, Vanderbilt University Center for Teaching.The framework has been applied by generations of K-12 teachers and college instructors in their teaching. Gartner has adapted this framework for application to automation.

[5] What Happened to Jobs at High Risk of Automation?, Organisation for Economic Co-operation and Development (OECD).

[6] Start Building Your Automation Team Now.

[7] Pindrop Homepage, Pindrop.

[8] Lloyds Uses Google-Backed AI to Detect Phone Fraudsters, CNBC.

Document Revision History

How Automation Will Change the Future of Work in Financial Services - 25 May 2021

How Automation Will Change the Future of Work in Financial Services - 11 November 2019

Recommended by the Author

Some documents may not be available as part of your current Gartner subscription.

Infographic: The Future Role of the Claims Administrator in Insurance

Infographic: Future Role of the Branch Banker in Financial Services

Infographic: The Future Role of the Contact Center Agent in Financial Services

Tool: Banking and Insurance Use Cases to Drive Hyperautomation

Infographic: Hyperautomation Use-Case Prism for Insurance

Tool: AI Use Cases for Banking and Investment Services

Avoiding the 10 Most Common Mistakes in Financial Services Automation

Help Employees Embrace Automation in Financial Services

Tool: Assessment for Prioritizing Hyperautomation Projects in Financial Services

---

Table 1: Bloom's Taxonomy, Examples

Bloom's Description	Impact	Banking Example	Insurance Example
Level 1 — Remembering	Employees are replaced as existing processes are replicated and specific tasks within the process are automated.	Rekey information from paper forms or from one system to another for loan processing.	Avoiding manual renewal processing for a large group scheme from a structured Microsoft Excel file.
Level 2 — Understanding	Employees may be replaced for processes where "if this, then that" rules apply.	Automatically determine whether or not to pay overdraft items on a customer's account, instead of relying on branch staff to make manual, and often inconsistent, decisions.	Using automation tools to manage chaser processes and matching required documents for new business and claims processes, and placing the case in a user's work queue once all the information is complete or an escalation is needed.
Level 3 — Applying	Employees are assisted by receiving access to information that helps them work quickly and effectively.	Pull data from multiple systems to provide a single customer view to branch and contact center agents, relationship managers and financial advisors, saving employees from logging in multiple times or toggling to different systems.	Using technologies to extract financial data from multiple core policy administration systems, amalgamate the data into a common format and start reconciliation against the general ledger, leaving the finance person to act on the findings.
Level 4 — Analyzing	Employees are assisted by implementing automation tools that help them make decisions.	Automation can be used to support loan decisions by gathering and analyzing data from multiple sources, like credit scoring entities and tax	Using predictive analytics based on internal and external sources to forecast potential policy lapses,

		authorities, saving employees time and highlighting critical data.	allowing customers to intervene before a lapse occurs.
Level 5 — Evaluating	Employees are augmented on more-complex decisions.	Location analysis that determines where to add or close branches or offices requires dozens of data points and can take months for an analyst or team of analysts to evaluate. AI and machine learning can provide the most logical choices and potential outcomes to employees.	Using natural language processing (NLP) to review commercial insurance contracts to evaluate a claim and derive validity and claim value, followed by invoking the transaction via an RPA bot without manual intervention.
Level 6 — Creating	Employees are added when automation tools are used to the highest potential to create new products and services.	Bring a new, competitive commercial loan product to market by making decisions and closing loans faster than current offers.	Understanding data more deeply, enabling insurers to move insurance products from a “commodity” to a personalized product offering.

Source: Gartner (December 2022)