The Broadridge Next-Gen Technology Adoption Survey

Financial services leaders are taking steps to gain a clear advantage.
As firms accelerate technology plans for 2021 and beyond, one thing is clear: What you do next matters most.

The results are clear: Using next-gen technologies can significantly boost performance and profitability. As this study shows, leaders are accelerating their investments in The ABCDs of Innovation®—AI, blockchain, the Cloud and digital—and moving further ahead of their competitors.

This comprehensive global Broadridge study provides an evidence-based roadmap to help guide financial firms in responding to the most pressing question of the day: What should I do next?

Gain insights gleaned from interviews with C-level executives from 1,000 financial institutions around the globe.

- See WHAT is the opportunity: The technologies and use cases that have the greatest impact today and tomorrow.
- Find out WHERE industry peers are innovating.
- Learn HOW to do it: The organizational, process and resource approaches that drive results.

**BENEFIT FROM A CLEAR VIEW:**
- Find out how innovators are overcoming hurdles to adoption.
- Learn new capabilities firms need to stay competitive.
- Understand how firms are adapting their approaches to technology-driven innovation.

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Setting the Stage

Global study highlights opportunities across every sector.

Broadridge partnered with ESI ThoughtLab to conduct a robust phone-based survey of senior financial services executives. Fielded in late 2020, this study was designed to yield both quantitative and qualitative insights from:

1,000 Senior Executives
- 85% C-suite, 15% C-minus 1 executives
- Representing Asia-Pacific, EMEA, North America
- All with a solid understanding of the use of next-gen technologies at their firms

Eight Financial Sectors
- Universal bank/full-service financial institution
- Broker-dealer
- Commercial or investment bank
- Investment/asset manager
- Hedge fund
- Insurance company
- Private equity/private debt
- Wealth manager

See methodology for more detail >>

Deep dive into The ABCDs of Innovation*

- Artificial intelligence (AI)
- Blockchain
- The Cloud
- Digital
This Broadridge study focuses on the role and impact of four next-gen technologies that we call The ABCDs of Innovation®.

**ARTIFICIAL INTELLIGENCE**
AI includes robotic process automation (RPA), machine learning, deep learning, natural language processing, digital assistants and computer vision.

**BLOCKCHAIN**
Blockchain-distributed ledgers provide shared, replicated and synchronized data, ensuring a single source of truth, typically in a peer-to-peer network.

**THE CLOUD**
The Cloud includes Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS) and open API Cloud platforms.

**DIGITAL**
Digital interaction uses digital technologies to change the way firms do things, such as digitizing customer and employee experiences, workflows and operations, while improving decision-making through data and intelligence.
Next-gen technology Leaders are moving rapidly.

Broadridge developed The ABCDs of Innovation Maturity Framework™ to categorize firms as either a Beginner, Implementer, Advancer or Leader, based on two key dimensions:

1. Progress made in implementing next-gen technologies.
2. Effectiveness of these applications in driving business performance.

***THE ABCDS OF INNOVATION MATURITY FRAMEWORK™***

<table>
<thead>
<tr>
<th>Maturity level</th>
<th>Percentage of firms surveyed who reached each level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginner</td>
<td>21%</td>
</tr>
<tr>
<td>Implementer</td>
<td>34%</td>
</tr>
<tr>
<td>Advancer</td>
<td>28%</td>
</tr>
<tr>
<td>Leader</td>
<td>17%</td>
</tr>
</tbody>
</table>

SEE APPENDIX FOR MORE DETAIL >>
The value of next-gen technologies

The evidence is clear. Firms can gain significant financial and strategic benefits from next-gen technologies—and Leaders are widening the gap. It’s critical to avoid being left behind. This starts with an understanding of how to accelerate adoption.

IMPACT ON PERFORMANCE AND PROFITABILITY
Nearly all financial firms see value in next-gen technologies. Most consider them important/very important to their business performance and strategic future.

IMPORANT OF NEXT-GEN TECHNOLOGIES FOR DRIVING BUSINESS PERFORMANCE AND STRATEGIC TRANSFORMATION

Business Performance*
Strategic Transformation

Very important 30%
Important 49%
Somewhat important 15%
Moderately important 23%
Insufficiently important 8%

FINANCIAL BENEFITS DERIVED FROM NEXT-GEN TECHNOLOGIES

Revenue
 Leader 4.04%
Non-leader 1.74%
Profit Margin
 Leader 2.55%
Non-leader 1.25%
Costs
 Leader -2.47% to -2.78%
Non-leader

*1% said "not that important"

With an annual profit of $1B, a 2.55% increase represents an additional $25.5M in profits.

DRIVING PROFITABILITY
Firms are also reporting significant year-over-year financial returns on their next-gen technology investments. Both Leaders and Non-leaders said they had achieved substantial cost savings in 2020 through use of next-gen technologies, while Leaders reported much larger revenue gains.
The Benefits: Financial, operational and strategic opportunities

Next-gen technologies drive a host of benefits today and tomorrow.

% FOR WHOM NEXT-GEN TECHNOLOGIES ARE CREATING VALUE THROUGH...

<table>
<thead>
<tr>
<th>Financial</th>
<th>Now</th>
<th>Expected in two years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decreased costs</td>
<td>67%</td>
<td>56%</td>
</tr>
<tr>
<td>Increased revenue</td>
<td>55%</td>
<td>51%</td>
</tr>
<tr>
<td>Improved profitability</td>
<td>62%</td>
<td>42%</td>
</tr>
<tr>
<td>Greater shareholder value</td>
<td>44%</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operational</th>
<th>Now</th>
<th>Expected in two years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerated time to market</td>
<td>60%</td>
<td>55%</td>
</tr>
<tr>
<td>Better risk management</td>
<td>40%</td>
<td>39%</td>
</tr>
<tr>
<td>Improved staff engagement</td>
<td>39%</td>
<td>37%</td>
</tr>
<tr>
<td>Better customer experience</td>
<td>36%</td>
<td>30%</td>
</tr>
<tr>
<td>Faster product creation</td>
<td>39%</td>
<td>29%</td>
</tr>
<tr>
<td>Enhanced customer analysis</td>
<td>30%</td>
<td>25%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic</th>
<th>Now</th>
<th>Expected in two years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better decision-making</td>
<td>45%</td>
<td>46%</td>
</tr>
<tr>
<td>Greater market share</td>
<td>33%</td>
<td>40%</td>
</tr>
<tr>
<td>Global expansion, scale</td>
<td>32%</td>
<td>36%</td>
</tr>
<tr>
<td>Greater innovation</td>
<td>50%</td>
<td>31%</td>
</tr>
<tr>
<td>New business models</td>
<td>31%</td>
<td>28%</td>
</tr>
<tr>
<td>Stronger reputation</td>
<td>46%</td>
<td>22%</td>
</tr>
</tbody>
</table>
WHERE INDUSTRY PEERS ARE INNOVATING

The widening gap

Leaders are realizing greater returns from next-gen technologies—and accelerating their investments. As they launch new solutions, enhance existing ones, and tap into new markets, segments and revenue streams, others will find it increasingly difficult to catch up.
Three ways Leaders are accelerating adoption

1. PACE OF CHANGE
In the face of the pandemic, most Leaders are accelerating the pace of their next-gen technology strategies, while most Non-leaders are slowing down. Those in the early maturity stages are most likely to be decelerating.

2. SPENDING LEVELS
On average, firms will increase next-gen technology spend from 11.8% to 15.7% of IT spend by 2023, with Leaders planning to increase to almost 20%.

3. TALENT
Leaders will continue to outpace their counterparts in accessing and developing talent. They are also more likely to outsource work on emerging technologies and purchase solutions from third-party Fintech providers.

The reason: Skills in areas such as AI and data science are in high demand, making it hard to recruit for these roles. It is also vital to combine a deep domain knowledge of industry processes with an understanding of how complex next-gen technologies work, and what is possible. By leveraging the wider ecosystem, firms can benefit from highly skilled, experienced personnel with deep industry expertise, while mutualizing the costs and risks of technology innovation.

<table>
<thead>
<tr>
<th>% PLANNING OVER THE NEXT TWO YEARS TO...</th>
<th>Leaders</th>
<th>Non-leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outsource work on next-gen technologies</td>
<td>59%</td>
<td>37%</td>
</tr>
<tr>
<td>Work together with academic institutions</td>
<td>55%</td>
<td>49%</td>
</tr>
<tr>
<td>Recruit new talent from outside</td>
<td>55%</td>
<td>37%</td>
</tr>
<tr>
<td>Improve staff skills through training</td>
<td>52%</td>
<td>44%</td>
</tr>
<tr>
<td>Purchase solutions and services from Fintech providers</td>
<td>48%</td>
<td>45%</td>
</tr>
<tr>
<td>Take stake in firms with next-gen technologies expertise</td>
<td>41%</td>
<td>41%</td>
</tr>
<tr>
<td>Partner with firms with next-gen technologies expertise</td>
<td>41%</td>
<td>28%</td>
</tr>
</tbody>
</table>
Prudent planning

Action is required. But firms can’t prioritize everything at once. This study provides an evidence-based roadmap that helps firms understand why and how to be strategic about where they invest their time and resources.

WE’VE UNCOVERED SPECIFIC INSIGHTS TO HELP SENIOR EXECUTIVES GET IT RIGHT

• The state of each next-gen technology: AI, blockchain, the Cloud and digital.
• The benefits being derived across different organizational functions.
• Where and how different financial services sectors are placing their bets on next-gen technologies.

“While digital adoption was on the rise in financial services, the pandemic has dramatically accelerated this trend, as firms have shifted their mindset and adapted their business models, leveraging next-gen technologies to drive transformation and results.

Winners in this new operating environment will have a clear vision of how technology will transform the industry in the years to come, and they will collaborate with a broad ecosystem of external partners and service providers to drive innovation. Whether it’s accelerating the adoption of new technologies like AI, blockchain, the Cloud and digital, or transforming your business—what you do next matters most”.

CHRIS PERRY, PRESIDENT, BROADRIDGE
The state of play

**THE CLOUD**

**The Cloud** is the must-have among next-gen technologies, with 78% of firms reporting that they are at mid- to advanced-stage implementation. The Cloud often underpins the other technologies. With the ability to rapidly scale computing and storage needs, it supports increased volumes and remote working protocols as well as facilitating agility and innovation.

**DIGITAL**

**Digital** implementation is also in the advanced stages at many Leader and Non-leader firms. Firms are applying digital to improve the customer experience, digitize workflows and processes, and gain insights from data and intelligence that drive strategic decision-making.

**AI**

**AI** is being used more selectively. Firms may be underestimating the breadth of potential for this valuable technology.

**BLOCKCHAIN**

**Blockchain** is being used most selectively of all by a smaller percentage of firms than the other technologies. However, it is starting to gain momentum as networks grow.

Note: Next-gen technologies ranked in order of percent of adoption
The Cloud: A catalyst for change

The Cloud is quickly becoming ubiquitous. It allows firms to centralize the huge volumes of data created by digitization across organizational silos and to leverage advanced data analytics and AI tools. It also supports agile working methods, enabling firms to scale and innovate more rapidly and future-proof their businesses against changing regulations and evolving customer demands.

More firms are using the Cloud across more functions than other next-gen technologies, including:

% USING THE CLOUD FOR...

- Sales, business and product development: 68%
- Human resources: 67%
- Customer management and communications: 66%
- IT infrastructure, data management, privacy: 65%
- Operations, supply chain, procurement: 64%
- Trading, transactions, loans: 54%

“The Cloud has simplified the process of analyzing hundreds of terabytes of financial data, allowing us to conduct data manipulations in one minute instead of days.”

HEAD OF DIVISION AT A EUROPEAN INVESTMENT MANAGER

THE BIGGEST GAPS?

When it comes to Cloud-based implementations, Leaders are outpacing Non-leaders, particularly in IT and data management.

THE CLOUD: LEADERS VS NON-LEADERS

Percentage point difference (Top 3)

- IT and data management: 18%
- Human resources: 12%
- Trading and transactions: 11%
Digital: Putting the power of data to work

Digital follows the Cloud in implementation levels, with two-thirds of firms at the mid- to advanced-implementation stage. Like the Cloud, it’s a big priority for many firms for the next two years.

It is used by more firms than other next-gen technologies for strategic planning/decision making, marketing/client analysis/distribution, and customer management and communications. It is also used by most firms for IT infrastructure/data management and privacy.

% USING DIGITAL TECHNOLOGIES FOR...

<table>
<thead>
<tr>
<th>Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic planning, decision making</td>
<td>61%</td>
</tr>
<tr>
<td>IT infrastructure, data management, privacy</td>
<td>60%</td>
</tr>
<tr>
<td>Customer management and communications</td>
<td>54%</td>
</tr>
<tr>
<td>Marketing, client analysis, distribution</td>
<td>51%</td>
</tr>
<tr>
<td>Trading, transactions, loans</td>
<td>49%</td>
</tr>
<tr>
<td>Portfolio management, investment</td>
<td>31%</td>
</tr>
</tbody>
</table>

“Using digital initiatives, our business model has been diversified in terms of product propositions and online banking channels.”

CHIEF INVESTMENT OFFICER AT AN ASIA-PACIFIC COMMERCIAL/INVESTMENT BANK

THE BIGGEST GAPS?
The greatest adoption gaps between Leaders and Non-Leaders lie in areas of customer interaction. Focusing on digital applications for customer management and communications, sales, product development, marketing and client analysis may promise the greatest efficiencies and returns.

DIGITAL: LEADERS VS NON-LEADERS
Percentage point difference (Top 3)

- 21% Customer management and communications
- 16% Sales and product
- 15% Marketing, client analysis

“Digital technologies help our business model to operate through multiple platforms and increase our visibility for clients.”

CHIEF MARKETING OFFICER AT A US INSURANCE COMPANY
AI: Accelerating data-driven insight

AI adds unparalleled efficiency to data processing and analysis. Yet only a quarter of all firms have reached mid- to advanced-stage implementation of AI. These firms are concentrated among three sectors: universal banks (53%), insurance (42%) and commercial banks (38%).

AI is used more than other next-gen technologies for portfolio management and investment and for security, risk, underwriting, and claims. These specialized functions require the ability to crunch large amounts of data quickly—and accurately—to make better predictions, become more proactive and enhance decision-making.

% USING AI FOR...

- Security, risk, underwriting, claims: 39%
- Portfolio management, investment: 35%
- Customer management and communications: 33%
- Trading, transactions, loans: 32%
- IT infrastructure, data management, privacy: 32%
- Marketing, client analysis, distribution: 30%

“AI technologies can successfully perform labor-intensive and sensitive tasks with a reduction in error, resulting in increased efficiency.”

CHIEF CUSTOMER CARE/EXPERIENCE OFFICER AT A US HEDGE FUND

“AI-based analysis provides predictive capabilities and plays a big role in our investment decisions and minimizing risk.”

CHIEF EXECUTIVE OFFICER AT AN ASIA-PACIFIC COMMERCIAL/INVESTMENT BANK

TAKE THE LONG VIEW

AI is often more complex to implement, than other solutions, requiring greater control of data and infrastructure. However, firms that recognize its potential should continue to experiment as they advance other technologies. This can set the stage for smoother AI implementations down the road and allow firms to leverage more sophisticated AI techniques.

THE BIGGEST GAPS?

Adoption gaps for AI between Leaders and Non-leaders are most pronounced in areas where enormous volumes of data are involved. AI allows firms to spot trends and patterns that are imperceptible to the human eye, enhancing trading and business strategy, improving insights into customer needs, and increasing the ability to manage risk.

AI: LEADERS VS NON-LEADERS

Percentage point difference (Top 3)

- Trading and transactions: 43%
- Customer management and communications: 39%
- Security and risk management: 35%
Blockchain: Gathering momentum

Blockchain and Distributed Ledger Technology (DLT) are gathering momentum as firms start to see quantifiable benefits. While only 15% of firms have reached mid-to-advanced level here, and 20% see it as a high/very high priority, we expect usage and investment to grow as more firms move from the pilot stage to real-world platforms.

As with AI, blockchain is used most for portfolio management and investment and in security, risk, underwriting, and claims. Benefits include cost savings, lower friction and reduced operational risk across a range of processes.

% USING BLOCKCHAIN FOR...

- Portfolio management, analysis, and investment decisions: 23%
- Security, risk, fraud, underwriting, claims management, finance, reporting, and auditing: 23%
- Operations, supply chain, procurement: 16%
- IT infrastructure, operations, and data management, security, and privacy: 14%

“Blockchain is transitioning from the experimental model to a business-case-centered model, leading to further projects going to the development stage where cost reductions or operating efficiencies can be generated by more than 70% of implementations.”

CHIEF TECHNOLOGY OFFICER AT A EUROPEAN COMMERCIAL/INVESTMENT BANK

“Blockchain has enabled transactions to be settled directly and enables us to keep track of them better than existing protocols.”

CHIEF FINANCIAL OFFICER AT A NORTH AMERICAN WEALTH MANAGER

THE VALUE IS IN THE NETWORK

Twenty-two percent of firms say that blockchain is not a priority for them at all—and they may be missing an important opportunity. Blockchain’s benefits will grow exponentially as more firms start to transact on DLT platforms. A blockchain/DLT network can offer better security, greater transparency and more efficient business processes, all of which will grow as more users join a given platform.

THE BIGGEST GAPS?

Adoption gaps between Leaders/Non-leaders for blockchain are most sizable for security and risk.

<table>
<thead>
<tr>
<th>BLOCKCHAIN: LEADERS VS NON-LEADERS</th>
<th>Percentage point difference (Top 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security and risk management</td>
<td>30%</td>
</tr>
<tr>
<td>IT and data management</td>
<td>23%</td>
</tr>
<tr>
<td>Portfolio management</td>
<td>21%</td>
</tr>
</tbody>
</table>
HOW TO DO IT

Ready to accelerate success?

To speed deployment and optimize next-gen technology outcomes, firms are looking to others for insight, experience and expertise.

LEARN FROM OTHER FIRMS, PARTICULARLY THE INDUSTRY LEADERS
Understanding their experiences can help senior executives avoid potential pitfalls in their next-gen technology journey.

RECOGNIZE THE IMPORTANCE OF LOOKING OUTSIDE THE FIRM
The wider ecosystem of partners and external Fintech providers has much to offer—particularly the providers with expertise across multiple next-gen technologies. They’re positioned to help financial firms to understand and optimize their infrastructure, driving savings and efficiencies across multiple technologies and implementations.

Fintech providers can also leverage scale of data-and-network effects, allowing them to create solutions that individual financial institutions are unable to develop themselves.

CAPITALIZE ON THE BIG BENEFIT OF MUTUALIZATION1
By leveraging innovative industry solutions and platforms created by Fintech providers, firms can reduce both costs and risks. Mutualization also allows senior executives to focus their resources on projects that set their firms apart. Fintech solutions can be used for critical but non-differentiating functions (such as back-office processing) as well as next-gen technology integrations. This offers an efficient way to access scarce talent and transform operating models.

WHAT USE CASES ARE MOST RELEVANT TO EACH SECTOR?
- Universal bank >>
- Broker-dealer >>
- Commercial or investment bank >>
- Investment/asset manager >>
- Hedge fund >>
- Insurance company >>
- Private equity/private debt >>
- Wealth manager >>

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1 Mutualization is a model through which participants more quickly gain access to new technologies, scalability and resiliency while saving time, money and risk. They do so by sharing in the benefits of an industry solution provided by a reliable, trusted and independent third party.
Strategies that drive results

Firms take various steps to determine which functions they should target for next-gen technology innovation. Most form teams with deep expertise and rely on pilots, use cases and projected ROI.

The study found that Leaders and Non-leaders take different approaches to preparing for implementation. Leaders are more likely to rigorously analyze and redesign processes prior to pursuing improvement through next-gen technologies.

These firms begin with the business problems they need to solve and metrics they need to improve. This allows them to identify deficient processes that may need to be re-engineered—and better understand the true potential benefit of embedding a new technology.

<table>
<thead>
<tr>
<th>STRATEGIES FOR NEXT-GEN SUCCESS</th>
<th>Leaders</th>
<th>Non-leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our organization forms technical and business teams at the beginning who are deeply familiar with the process under consideration and works with employees to understand their concerns.</td>
<td>72%</td>
<td>68%</td>
</tr>
<tr>
<td>Our organization regularly identifies potential business activities and processes for improvement through next-gen technologies, with specific pilots, use cases and projected ROI.</td>
<td>62%</td>
<td>55%</td>
</tr>
<tr>
<td>Prior to improvement through next-gen technologies, processes are rigorously analyzed and redesigned if needed.</td>
<td>59%</td>
<td>39%</td>
</tr>
<tr>
<td>Our organization analyzes customer needs, expectations and cross-channel behaviors, and what would make the customer experience more rewarding.</td>
<td>30%</td>
<td>22%</td>
</tr>
<tr>
<td>Our organization has no set process to determine which business activities and processes to target for next-gen technology innovation.</td>
<td>30%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Surprisingly, fewer Leaders say they have a set process to determine which business problems to target for next-gen technologies. This suggests that some may be allocating budget to projects without prioritizing projected return and business benefits. A clear methodology can help firms to select the problems with the greatest potential and efficiently allocate scarce resources, thereby maximizing their success.
Step up to the challenges

**FIRMS CITE TWO MAIN SETS OF CHALLENGES IN IMPLEMENTING NEXT-GEN TECHNOLOGIES**

In some cases, Leaders are less likely to cite these issues as challenges. This suggests Leaders have made greater progress in modernizing their IT infrastructure (often through the Cloud) than Non-leaders. Leaders are also more likely to have clear processes for data security, have better control over their data and to have anticipated regulatory issues.

**EXTERNAL**
- Concerns about data security, privacy and ethical issues: 36% (Leader) vs. 48% (Non-leader)
- Regulatory and compliance constraints: 32% (Leader) vs. 43% (Non-leader)
- Keeping pace with technological change and market shifts: 26% (Leader) vs. 32% (Non-leader)
- Limited access to ecosystem partners and suppliers to work with: 24% (Leader) vs. 10% (Non-leader)
- Limited access to qualified talent and technical skills: 23% (Leader) vs. 8% (Non-leader)

**INTERNAL**
- Inflexible legacy systems and inadequate IT infrastructure: 34% (Leader) vs. 40% (Non-leader)
- Uncertain ROI or lack of clear business case and roadmap: 34% (Leader) vs. 18% (Non-leader)
- Organizational barriers, such as cultural resistance/silo mentality: 22% (Leader) vs. 15% (Non-leader)
- Inadequate data quality and access: 22% (Leader) vs. 32% (Non-leader)
- Insufficient budget/limited investment: 21% (Leader) vs. 41% (Non-leader)

**LESSONS LEARNED**

In addition to asking about challenges, we asked firms what they considered their most important lessons learned. Five lessons were cited far more often by Leaders than Non-leaders:

1. **Make sure your IT infrastructure can fully support next-gen technologies.**
2. **Create a clear business case with expected ROI and track how well you are doing.**
3. **Get control of your data. Make sure data is accessible, formatted and integrated.**
4. **Think like a start-up. Consider how to use technology to rethink business models and strategies.**
5. **Ensure you have top-down and bottom-up alignment and commitment.**

Successful implementations require careful prep work and innovative thinking. Firms should not underestimate the time and effort required in the short term to put these foundational building blocks in place. They ultimately drive enormous value by accelerating innovation.
Combine technology and talent

How do Leaders approach next-gen technology implementations from an organizational vantage point—and what can be learned?

- Leaders are more likely to use a start-up incubator to bring their initiatives to life.
- They are also more likely to assign different executives to lead different next-gen technologies.

While start-up incubators have had mixed results for many firms, they remain popular as method of fostering innovation. Assigning different executives to lead each technology enables Leaders to become skilled in the nuances of specific technologies and the complexity of their implementation. It also gives executives a clear mandate for driving change.

As firms look to develop and strengthen talent and resources for innovation, they often turn to outside Fintech providers, particularly for outsourcing, partnering on and purchasing next-gen solutions.
Accelerating innovation: Don’t go it alone

When applying next-gen technologies, firms tend to take different approaches depending on the complexity of the solutions, either using external providers, building in-house, or a mix of both.

Firms rely more heavily on external providers for AI and blockchain because of the more specialized nature of these technologies. They often require access to large volumes of data and network effects—something that individual financial firms tend not to possess on their own and that external providers can bring to the table. More widely used, less complex solutions, such as the Cloud and digital, are more often managed through a mix of both.

One thing is clear across all next-gen technologies: Relatively few firms, especially Leaders, go it alone. Taking advantage of mutualization and network value is seen as a core component of firms’ innovation strategies.

### APPROACHES TO NEXT-GEN TECHNOLOGY APPLICATIONS

- **AI**
  - **Leader**:
    - Mostly use external providers: 8%
    - Mostly build in-house: 33%
    - Mix of both: 60%
  - **Non-leader**:
    - Mostly use external providers: 20%
    - Mostly build in-house: 33%
    - Mix of both: 47%

- **Blockchain**
  - **Leader**:
    - Mostly use external providers: 25%
    - Mostly build in-house: 5%
    - Mix of both: 70%
  - **Non-leader**:
    - Mostly use external providers: 25%
    - Mostly build in-house: 5%
    - Mix of both: 70%

- **Digital**
  - **Leader**:
    - Mostly use external providers: 24%
    - Mostly build in-house: 35%
    - Mix of both: 41%
  - **Non-leader**:
    - Mostly use external providers: 26%
    - Mostly build in-house: 34%
    - Mix of both: 40%

- **The Cloud**
  - **Leader**:
    - Mostly use external providers: 35%
    - Mostly build in-house: 16%
    - Mix of both: 49%
  - **Non-leader**:
    - Mostly use external providers: 31%
    - Mostly build in-house: 35%
    - Mix of both: 34%
Ready to apply these insights?

Let’s talk. Broadridge helps clients understand and apply next-gen technologies by simplifying the complex to help them be Ready for Next. We call this The ABCDs of Innovation®.

To find out more about how Broadridge is helping clients adopt emerging technologies, view The ABCDs of Innovation® >>
ABOUT THIS STUDY

About the research and survey sample

To understand how financial services companies are adopting the AI, blockchain, the Cloud and digital technologies, where they are investing most, and the returns they are generating, ESI ThoughtLab conducted a comprehensive CATI survey (computer-assisted telephone interviews) on behalf of Broadridge in October-November of 2020 of senior executives at 1,000 companies in eight financial subsectors across 18 countries.

The respondents were primarily C-level (85%) and included the CEO, COO, CFO, CIO, CTO and CHRO, as well as other leaders with a perspective on the use of next-gen technologies. The remainder of the sample included C-level-1 executives, including business unit heads and direct reports into the C-suite. Executives were screened to ensure that they had a sufficient knowledge of the use of these technologies in their firms.

The total assets (sell side)/assets under management (buy side) of companies in the sample ranged from $1 billion to over $500 billion, with an average size of $124.7 billion.

The survey examined next-generation technology investments and performance results and included questions to allow ESI ThoughtLab economists to develop a maturity framework to gauge how advanced companies are in their adoption of emerging technologies.

**RESPONDENTS BY FUNCTION AND TITLE**

<table>
<thead>
<tr>
<th>Function and Title</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>13%</td>
</tr>
<tr>
<td>Technology</td>
<td>19%</td>
</tr>
<tr>
<td>Strategy and innovation</td>
<td>13%</td>
</tr>
<tr>
<td>Finance</td>
<td>7%</td>
</tr>
<tr>
<td>Investment</td>
<td>7%</td>
</tr>
<tr>
<td>Human resources</td>
<td>7%</td>
</tr>
<tr>
<td>Business unit heads</td>
<td>15%</td>
</tr>
</tbody>
</table>

**RESPONDENTS BY SUBSECTOR**

<table>
<thead>
<tr>
<th>Subsector</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal Banks</td>
<td>10%</td>
</tr>
<tr>
<td>Broker-Dealer</td>
<td>16%</td>
</tr>
<tr>
<td>Banks</td>
<td>8%</td>
</tr>
<tr>
<td>Asset Manager</td>
<td>17%</td>
</tr>
<tr>
<td>Wealth Manager</td>
<td>16%</td>
</tr>
<tr>
<td>Hedge Funds</td>
<td>6%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>10%</td>
</tr>
<tr>
<td>Insurance</td>
<td>17%</td>
</tr>
</tbody>
</table>
Respondent profile

COUNTRIES

Asia Pacific
- Australia 5%
- China 10%
- Hong Kong 5%
- Japan 8%
- Singapore 5%

Europe
- Belgium 2%
- Denmark 2%
- France 5%
- Germany 5%
- Luxembourg 2%
- Netherlands 4%
- Norway 1%
- Spain 3%
- Sweden 2%
- Switzerland 4%
- UK 4%

North America
- Canada 5%
- US 28%

INDUSTRY SECTORS

Sell side 34%
- Broker-dealer 16%
- Universal bank 10%
- Banks 8%

Buy side 66%
- Insurance 17%
- Asset manager 17%
- Wealth manager 16%
- Private equity 10%
- Hedge fund 6%

INDUSTRY SECTOR COMPOSITION

Universal bank: Full-service financial institutions

Banks: Commercial and investment banks

Insurance firms: Range of types

Asset manager: Institutional asset management firms and those producing mutual funds and ETFs

Wealth manager: Family offices, financial advisory firms, registered financial advisors, private banks, wealth management arms of universal banks

Private equity: Private equity firms and private debt

Hedge fund: Range of types

RESPONDENTS BY REGION

North America 33%
Europe 33%
Asia-Pacific 33%

FIRMS BY ASSET/AUM SIZE

- $1B–$4.9B 19%
- $5B–$24.9B 12%
- $25B–$99.9B 19%
- $100B–$499.9B 25%
- $500B+ 25%
Maturity methodology

An objective of this research was to determine what constitutes leadership in the adoption of the next-gen technologies: AI, blockchain, the Cloud and digital.

To answer this question, Broadridge assessed financial service firms along two key dimensions: (1) progress made on implementing the next-gen technologies and (2) effectiveness of these applications in driving business performance.

Our economists then categorized the organizations into four maturity stages. Just over half of the surveyed companies were either Beginners or Implementers. Advancers accounted for 28% of organizations, and Leaders for 17%.

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**THE ABCDs OF INNOVATION MATURITY FRAMEWORK™**

Our economists categorized each respondent into one of four distinct groups: Beginners, Implementers, Advancers and Leaders. These categories were based on scores across the following criteria:

**Stages of implementation**
1. Not considering or not applicable, 0 points
2. Planning, 1 point
3. Early implementation, 2 points
4. Mid-implementation, 3 points
5. Advanced implementation, 4 points

**Levels of effectiveness**
1. Not effective, 0 points
2. Slightly effective, 1 point
3. Moderately effective, 2 points
4. Highly effective, 3 points
5. Very highly effective, 4 points
6. Too early to tell/don’t know, 0 points

We calculated the average score across the four next-gen technologies for both implementation and effectiveness. The scores were combined to arrive at the overall score. Each respondent was then assigned a maturity level based on that score. Leaders could not have scored “not considering” or “planning stage” for any of the four next-gen technologies.
ADDENDUM

Sector analysis

Universal bank
Broker-dealer
Commercial or investment bank
Investment/asset manager
Hedge fund
Insurance company
Private equity/private debt
Wealth manager
Universal banks and full-service financial institutions

The ABCDs of Innovation Maturity Framework™
Universal banks are the sector furthest along the maturity framework. They are more likely to have scaled adoption across their organizations with multiple next-gen technology use cases.

Financial impact
Making progress in enterprise-wide adoption, they are reporting major performance gains through the use of next-gen technologies.

Most common use cases for next-gen technologies
- **AI:** Security and risk, customer management and communications, and IT infrastructure
- **Blockchain:** Security and risk, portfolio management, operations, and IT infrastructure
- **The Cloud:** Customer management and communications, HR, and sales, business and product development
- **Digital:** Strategic planning, customer management and communications, and IT infrastructure

Most effective use cases for next-gen technologies
% rating next-gen technologies highly/very highly effective for

- **Customer management and communications:** 45%
- **Operations, supply chain and procurement:** 37%
- **Human resources:** 35%
- **IT infrastructure, operations, data management, security and privacy:** 34%
- **Trading, transactions and loans:** 34%

“*Our organization has diversified the business in terms of product portfolio using next-gen technologies.*”

CHIEF FINANCIAL OFFICER/FINANCIAL DIRECTOR AT A U.S. UNIVERSAL BANK

Top 3 priorities in next two years
% citing high/very high priority

- **IT infrastructure:** 53%
- **Marketing:** 47%
- **Customer management and communications:** 45%

Top 3 anticipated benefits in next two years
% citing

- **Decreased costs:** 70%
- **Greater innovation:** 54%
- **More effective risk management:** 52%
The ABCDs of Innovation Maturity Framework™
Broker-dealers fall in the middle of the pack in innovation maturity. Many have multiple next-gen use cases at various stages of deployment.

Most common use cases for next-gen technologies

AI: Portfolio management, security and risk, and customer management and communications
Blockchain: Portfolio management, security and risk, and operations, supply chain and procurement
The Cloud: Sales, business and product development, customer management and communications, and human resources
Digital: IT infrastructure, strategic planning, and customer management and communications

Most effective use cases for next-gen technologies
% rating next-gen technologies highly/very highly effective for

Customer management and communications 42%
Operations, supply chain and procurement 34%
Human resources 34%
Sales, business and product development 31%
Trading, transactions and loans 23%

Financial impact
While making progress with adoption, broker-dealers have scope to use next-gen technologies to drive future revenue gains and cost savings.

Most effective use cases for next-gen technologies
% rating next-gen technologies highly/very highly effective for

Customer management and communications 42%
Operations, supply chain and procurement 34%
Human resources 34%
Sales, business and product development 31%
Trading, transactions and loans 23%

Conclusion
“Next-gen technologies provide us with the ability to develop new products and offer monetization opportunities.”
CHIEF STRATEGY OFFICER AT AN ASIA-PACIFIC BROKER-DEALER

Top 3 priorities in next two years
% citing high/very high priority

43% IT infrastructure, operations, and data management, security, and privacy
34% Operations, supply chain and procurement
31% Human resources

Top 3 anticipated benefits in next two years
% citing

61% Decreased costs
61% Accelerated time to market
54% Increased revenue and improved profitability
The ABCDs of Innovation Maturity Framework™
Commercial and investment banks are outpaced only by universal banks. They are likely to have scaled adoption across their organizations with multiple next-gen technology use cases.

Financial impact
In addition to having high levels of adoption, they are the closest behind the universal banks in using next-gen technology to drive profits.

Most common use cases for next-gen technologies
- **AI**: Customer management and communications, security and risk, and portfolio management
- **Blockchain**: Security and risk, portfolio management, and operations
- **The Cloud**: Customer management and communications, IT infrastructure, and sales, business and product development
- **Digital**: Strategic planning, customer management and communications, and IT infrastructure

Most effective use cases for next-gen technologies
- **Customer management and communications**: 43%
- **Operations, supply chain and procurement**: 35%
- **Human resources**: 34%
- **Sales, business and product development**: 32%
- **IT infrastructure, operations, data management, security and privacy**: 29%

Top 3 priorities in next two years
- **IT infrastructure, operations, and data management, security and privacy**: 43%
- **Operations, supply chain and procurement**: 34%
- **Human resources**: 31%

Top 3 anticipated benefits in next two years
- **Increased revenue**: 67%
- **Improved profitability**: 67%
- **Decreased costs**: 65%

“We are able to make better financial decisions, protect our assets from fraud and enhance the customer experience through the use of technology.”

CHIEF EXECUTIVE OFFICER AT A U.S. COMMERCIAL BANK
The ABCDs of Innovation Maturity Framework™
More than half of all investment and asset managers are at the early stages of the maturity framework.

Financial impact
Significant performance gains are likely to widen as firms move to the later stages of adoption.

Most common use cases for next-gen technologies
- **AI**: Security and risk, customer management and communications, and trading and financial transactions
- **Blockchain**: Security and risk, portfolio management, and operations
- **The Cloud**: Sales, human resources, and operations
- **Digital**: Customer management and communications, IT infrastructure, and marketing

Top 3 priorities in next two years
% citing high/very high priority
- IT infrastructure: 39%
- Customer management and communications: 38%
- Strategic planning: 37%

Top 3 anticipated benefits in next two years
% citing
- Decreased costs: 70%
- Improved profitability: 67%
- Accelerated time to market: 61%

Most effective use cases for next-gen technologies
% rating next-gen technologies highly/very highly effective for
- Customer management and communications: 38%
- Operations, supply chain and procurement: 35%
- Sales, business and product development: 31%
- Human resources: 30%
- Trading, transactions and loans: 29%

“We have incorporated the use of AI in our financial forecasting tool which stabilizes our decision-making process.”

CHIEF DIGITAL OFFICER AT A EUROPEAN ASSET MANAGEMENT FIRM
**Hedge funds**

**The ABCDs of Innovation Maturity Framework™**
Hedge funds are primarily at the early and middle stages of next-gen technology innovation.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Hedge funds</th>
<th>All other sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginner</td>
<td>23%</td>
<td>18%</td>
</tr>
<tr>
<td>Implementer</td>
<td>37%</td>
<td>37%</td>
</tr>
<tr>
<td>Advancer</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Leader</td>
<td>28%</td>
<td>18%</td>
</tr>
</tbody>
</table>

**Financial impact**
They are already seeing significant performance gains, particularly in driving cost savings.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Hedge funds</th>
<th>All other sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>1.85%</td>
<td>1.43%</td>
</tr>
<tr>
<td>Profit Margin</td>
<td>-3.42%</td>
<td>1.43%</td>
</tr>
</tbody>
</table>

**Most common use cases for next-gen technologies**
- **AI**: Security and risk, portfolio management, and marketing
- **Blockchain**: (Used by few hedge funds) Portfolio management, security and risk, and IT infrastructure
- **The Cloud**: Customer management and communications, IT infrastructure, and operations
- **Digital**: Strategic planning, IT infrastructure, and customer management and communications

**Most effective use cases for next-gen technologies**
% rating next-gen technologies highly/very highly effective for

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Hedge funds</th>
<th>All other sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer management and communications</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>Operations, supply chain and procurement</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>IT infrastructure, operations, data management, security and privacy</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>Portfolio management, analysis, and investment decisions</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Strategic planning, scenario mapping, and decision-making</td>
<td>29%</td>
<td></td>
</tr>
</tbody>
</table>

**Top 3 priorities in next two years**
% citing high/very high priority

<table>
<thead>
<tr>
<th>Priority</th>
<th>% Citing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing</td>
<td>35%</td>
</tr>
<tr>
<td>Customer management and communications</td>
<td>32%</td>
</tr>
<tr>
<td>IT infrastructure, operations, and data management, security, and privacy</td>
<td>32%</td>
</tr>
</tbody>
</table>

**Top 3 anticipated benefits in next two years**
% citing

<table>
<thead>
<tr>
<th>Benefit</th>
<th>% Citing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved profitability</td>
<td>69%</td>
</tr>
<tr>
<td>Decreased costs</td>
<td>68%</td>
</tr>
<tr>
<td>Accelerated time to market</td>
<td>62%</td>
</tr>
</tbody>
</table>

“Implementation of next-gen technologies has brought in exceeding levels of operational efficiency and vastly improved products and services while also helping with market expansion.”

CHIEF INVESTMENT OFFICER AT A U.S. HEDGE FUND
## The ABCDs of Innovation Maturity Framework™
Insurance companies are outpaced only by universal, commercial and investment banks in innovation maturity. They are more likely than most sectors to have scaled adoption with multiple next-gen technology use cases.

<table>
<thead>
<tr>
<th>Insurance companies</th>
<th>All other sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginner</td>
<td>16%</td>
</tr>
<tr>
<td>Implementer</td>
<td>30%</td>
</tr>
<tr>
<td>Advancer</td>
<td>33%</td>
</tr>
<tr>
<td>Leader</td>
<td>28%</td>
</tr>
</tbody>
</table>

### Financial impact
Next-gen technologies have provided insurers with significant performance gains, including both cost savings and revenue gains.

- **Revenue**: 2.20%
- **Costs**: -2.98%
- **Profit Margin**: 1.32%

### Most common use cases for next-gen technologies

- **AI**: Security and risk, IT infrastructure, marketing, and portfolio management
- **Blockchain**: Portfolio management, security and risk, and operations
- **The Cloud**: IT infrastructure, customer management and communications, operations, and sales, business and product development
- **Digital**: IT infrastructure, strategic planning, and customer management and communications

### Most effective use cases for next-gen technologies

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer management and communications</td>
<td>44%</td>
</tr>
<tr>
<td>IT infrastructure, operations, data management, security and privacy</td>
<td>38%</td>
</tr>
<tr>
<td>Sales, business and product development</td>
<td>32%</td>
</tr>
<tr>
<td>Operations</td>
<td>31%</td>
</tr>
<tr>
<td>Trading, transactions and loans</td>
<td>28%</td>
</tr>
</tbody>
</table>

### Top 3 priorities in next two years

- **Marketing**: 35%
- **Customer management and communications**: 32%
- **IT infrastructure, operations, and data management, security, and privacy**: 32%

### Top 3 anticipated benefits in next two years

- **Customer management and communications**: 42%
- **IT infrastructure**: 38%
- **Human resources, trading, transactions, loans processing**: 35%

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*“AI technology has improved our claim fraud detection and overall efficiency level.”*  
CHIEF TECHNOLOGY OFFICER AT A EUROPEAN INSURANCE COMPANY
The ABCDs of Innovation Maturity Framework™
Private equity and private debt firms are behind most other financial services sectors in next-gen innovation maturity. Most are in the early stages.

Most effective use cases for next-gen technologies
% rating next-gen technologies highly/very highly effective for

- IT infrastructure, operations, data management, security and privacy: 40%
- Security, risk, fraud, underwriting, claims management: 36%
- Customer management and communications: 35%
- Marketing and client analysis, distribution, and channel management: 33%
- Sales, business and product development: 31%

“AI technology has helped us to make our financial due diligence process more effective.”
CHIEF FINANCIAL OFFICER AT AN ASIA-PACIFIC PRIVATE EQUITY FIRM

Financial impact
While they have scope to increase cost savings through the use of next-gen technologies, they are reporting significant revenue gains.

![Revenue, Costs, Profit Margin Graph]

Most common use cases for next-gen technologies

- **AI**: Security and risk, IT infrastructure, marketing, and portfolio management
- **Blockchain**: Portfolio management, security and risk, and operations
- **The Cloud**: IT infrastructure, customer management and communications, operations and sales, business and product development
- **Digital**: IT infrastructure, strategic planning, and customer management and communications

Top 3 priorities in next two years
% citing high/very high priority

- Customer management and communications: 39%
- IT infrastructure, operations, and data management, security and privacy: 35%
- Operations, supply chain and procurement: 31%

Top 3 anticipated benefits in next two years
% citing

- Decreased costs: 65%
- Accelerated time to market: 60%
- Increased revenue: 57%
The ABCDs of Innovation Maturity Framework™

Wealth managers are among the least advanced sectors in innovation maturity with two-thirds in the early stages of innovation.

Financial impact

While early on in their emerging technology adoption journey, they are seeing significant performance gains, particularly in cost savings.

Most common use cases for next-gen technologies

- **AI**: Security and risk, IT infrastructure, and customer management and communications
- **Blockchain**: (Used by few wealth managers) portfolio management, security and risk, and IT infrastructure
- **The Cloud**: Human resources, customer management and communications, and sales
- **Digital**: IT infrastructure, strategic planning, and marketing

Most effective use cases for next-gen technologies

- **IT infrastructure, operations, data management, security and privacy**: 38%
- **Customer management and communications**: 32%
- **Human resources**: 31%
- **Trading, transactions and loans**: 29%
- **Operations, supply chain and procurement**: 25%

Top 3 priorities in next two years

- **Customer management and communications**: 32%
- **Human resources**: 27%
- **IT infrastructure, operations, and data management, security, and privacy**: 27%

Top 3 anticipated benefits in next two years

- **Decreased costs**: 70%
- **Accelerated time to market**: 59%
- **Improved profitability**: 55%

“Digital technologies help us to build lasting partnerships with clients and provide effective customer service and support.”

CHIEF DIGITAL OFFICER AT AN ASIA PACIFIC WEALTH MANAGEMENT FIRM
Broadridge, a global Fintech leader with over $4.5 billion in revenues and part of the S&P 500® Index, provides communications, technology, data and analytics. We help drive business transformation for our clients with solutions for enriching client engagement, navigating risk, optimizing efficiency and generating revenue growth.

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