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FINANCIAL SERVICES TECH

Future Tech 20: The Technologies That Will Make the Financial Services Success Stories of 2023

Technology will be the key differentiator for bottom-line growth in the financial services industry in 2023. Over 50% of firms plan to increase investment in next-generation technologies such as AI, blockchain and cloud computing over the next two years. Here are the 20 technologies behind the industry's success stories of the near future.

73%

of enterprise transformations fail to scale effectively enough to produce a sustained return on investment.

Everest Group, 2018

FUTURE TECH 1

Augmented reality

1.*

- Augmented reality (AR) usage is growing at an astonishing rate, with AR users set to grow from 800 million in 2021 to 1.73 billion by 2024.

- The Commonwealth Bank of Australia was early to explore virtually enhanced reality. Its "home finder" application allows customers to view key information on properties by looking at them through a lens. The app is only available for iPhone, but we will soon see similar uses for the AR goggles and glasses that companies like Meta are counting on for their next phase of innovation.

- Future applications of AR within the financial services industry are limitless, for example, virtual trading and payments, data visualisation, biometric security, and customer service apps. It’s not just customers who will benefit either. AR is set to revolutionise the world of employee training with augmented solutions to learning, with huge implications for employee wellbeing.

2.*

"You only have to look at the growing popularity of Buy Now Pay Later to see that payment decisions are no longer driven solely by rewards. And, with Visa and Mastercard recently active in both the BNPL and A2A space, perhaps the real question now is how long it'll take before [buy-now-pay-later] cards become the 'alternative' payment method."

Siamac Rezaiezadeh, Product Marketing at GoCardless

FUTURE TECH 2

Buy now, pay later

- Labelled the ‘future of millennial finance’, buy now, pay later (BNPL) enables consumers to pay off purchases in instalments, with the under 30’s use of BNPL doubling since 2019. BNPL loans are expected to finance 13% of all online transactions by 2025.

- Solutions such as Klarna and PayPal are becoming widely accepted in retail, with the latter generating $3.5 billion of sales from over 7 million consumers.

- As authorities put measures in place to regulate the fast-growing BNPL sector, traditional lenders will have a window of opportunity to catch up on the FinTech companies that are ahead of the curve in this market, as they attempt to grapple with new regulation. Though traditional financial services institutions may have been slow to move in on the BNPL market initially, one thing they excel at is adapting quickly to regulatory contraints.

FUTURE TECH 3

Blockchain technology

3.*

- The blockchain market is set to grow from $4.9 Billion in 2021 to $67.4 Billion by 2026, with banks such as JP Morgan and Goldman Sachs investing in development.

- The use cases of blockchains are many but the overarching benefits include the reduction of risk, real-time authentication, and enhanced consumer participation. As a distributed but immutable record of interactions, a blockchain can- as many financial services do- act as a secure 'middleman' between interacting parties. Its automated nature promises to streamline processes and reduce inefficiencies.

- Blockchain has vast implications for timely inter-party processes in the financial services, for example, contract creation and settlement, identity verification, and know-your-customer (KYC) procedures. The notion that the technology could eliminate time inefficiencies in such processes is just one reason it is considered a justifiably attractive investment.

"It is vital for the financial services industry to innovate and to investigate new technologies to improve their products and services. If the incumbents don't change their offering and innovate, newcomers will disrupt their business."

- Mark van Rijmenam, founder of Datafloq

FUTURE TECH 4

Foreign exchange solutions

4.*

- With increased opportunities available for smaller businesses, cross-border payment flow is set to exceed $156 trillion by the end of 2022, with the global foreign exchange market expected to grow at an annual rate of 7.5% between 2021-2026.

- SMEs are struggling with Foreign Exchange (Forex) solutions designed for enterprise businesses. Technology products embedded with currency exchange, such as OpenPayd and Stripe are starting to address the gap.

- Cross-border payments were transformed by digital for consumers. Over the next few years, far larger players will bring their budgets to bear on technologies that could transform this core business-to-business (B2B) service market.

5.*

"There is potential to better channel and incentivise investment in technology areas that have the greatest future emissions reduction potential."

- PwC, State of Climate Tech 2021 Report

FUTURE TECH 5

Climate technology

- Climate technology (ClimaTech/cleantech) - technology that addresses our impact on climate change – is a burgeoning market. Reports indicate that 6/10 technology start-ups in the UK are currently focused on creating green tech.

- The potential for carbon reduction in the financial services industry is not an opportunity. It's a necessity. Estimates put the industry's annual paper document output at 507 million, equivalent to the deforestation of 50,000 trees each year. An 80% reduction in paper is predicted to save the industry up to £1.3 bn annually.

- Many next-generation technologies such as AI, blockchain, and cloud computing have a greener footprint than their incumbents. Other technologies have arisen to address this emergent green consumerism, such as Joro, which translates spending into a metric for your carbon footprint. As awareness of environmental issues grows, ESG will continue to rise on the agenda. Stakeholders may begin to look at carbon savings when considering technology budgets as a predictor of growth.

FUTURE TECH 6

RegTech

6.*

- RegTech is used to aid financial organisations with compliance, helping them manage their data and implement new governance processes and practices.

- Banks spend a total of $270 billion a year on global compliance expenditure, with an estimated 10–15% of the workforce engaged in compliance processes.

- In the first half of 2021, $4 billion was invested in RegTech companies, with this trajectory set to continue in 2022 and beyond.

"We expect to see other areas of financial services starting to play a bigger role, as RegTech is rapidly being applied in more sectors than the usual retail and compliance space. We also see RegTech playing a more prominent role in the important conversation on sustainable finance and Environmental Social and Corporate Governance (ESG) reporting."

- Pavle Avramovic et al., FCA Future of RegTech Report 2021

7.*

The beauty of embedded finance is that it streamlines financial processes. Before the development of embedded finance or banking, there was usually a gap between a consumer and the company they did business with. (...) Embedded finance companies have found a way to act as the bridge or close the gap between themselves and the consumer.

- Scott Raspa, Head of Marketing, Hydrogen

FUTURE TECH 7

Embedded finance

- The integration of financial services into non-financial platforms will continue to grow in 2022, with 54% of business leaders set to make it a top priority. Embedded finance is set to have an estimated global worth of $7.2 trillion by 2030.

- Embedded finance removes the boundary between banking and other online platforms, offering easy access to in-app payments, lending, and investments. It often relies on the combination of multiple technologies (for example, cloud infrastructure, APIs, and consumer apps) to bring financial products to the point of service within retail processes.

- Integration partners such as Plaid, a secure API provider for open banking, will increasingly be relied on over in-house development. The need for agility will see institutions utilising a patchwork of providers to extend their services. Managing integration providers will initially prove challenging, but this will likely bring about further innovations for a more fluid infrastructure.

FUTURE TECH 8

Artificial intelligence (AI)

8.*

- Banks and other financial organisations are getting serious about AI, and it's no surprise. According to estimates, AI technology promises a potential 22% reduction in operational costs by 2030. This amounts to more than $1 trillion.

- Potential applications of AI include automating loans and insurance underwriting, customer communication such as chatbots and new cybersecurity measures.

- One organisation using AI extensively is the Royal Bank of Canada. They built a private AI cloud in 2020 that can run thousands of simulations and training analysis sessions in record time. It has already enabled the organisation to reduce clients calls and rapidly deliver new applications into its infrastructure.

"Whether in accelerated trading, automated call centres, real-time fraud prevention, or other financial services, AI is helping financial institutions drive the future of finance for their customers and clients."

- Kevin Levitt, Global Business Development, NVIDIA

FUTURE TECH 9

One-click checkout

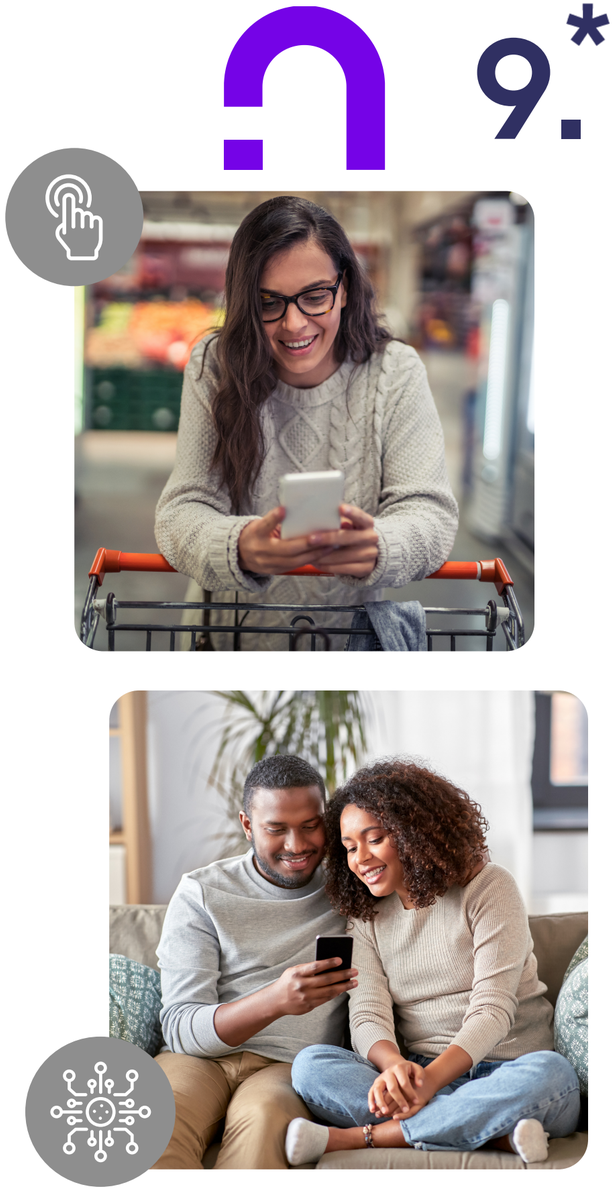
- Offering a frictionless experience, one-click checkout allows individuals to complete transactional processes without repeatedly inputting their details. 37% of adult consumers use mobile one-click checkout at least once a month.

- Financial organisations that align with brands to offer enhanced one-click opportunities could see significant increases in service use and embedded partnerships. 70% of global shoppers currently abandon their online carts before payment due to complex checkout out processes.

- One-click start-ups such as Fast and Stripe have generated significant funding, with the former raising $124 million to date.

"Payment services have fueled the convergence of various industries. Convergence is increasing where there are large, established digital customer bases and where the payment transaction or channel can be used as a connector to, or facilitator for, other services."

- Kai-Christian Klaus, EY Global Payments Senior Advisor



10.*

"Banking and capital markets leaders increasingly recognise that cloud is more than a technology; it is a destination for banks and other financial services firms to store data and applications and access advanced software applications via the internet."

- M. Tang, Digital Transformation Lead, Deloitte

FUTURE TECH 10

Cloud computing

- Cloud computing is a revolutionary development for the financial services industry, allowing organisations to deliver platform-as-a-service models, access new delivery channels, decrease data storage costs, and protect customer data.

- According to a Gartner report, 28% of key IT enterprises will be using cloud capabilities by the end of 22, compared to just 18% in 2018.

- Cloud computing is not a “one and done” transformation. First-party data warehousing is a key part of the overall picture, but firms will need to continue to add cloud-based solutions to their stack as the channels they serve evolve. Insight is key to cloud computing’s significance. As we generate more data, those that succeed will be those best able to use the power of the cloud to harvest it.

- Several industry big-hitters are beginning to migrate services to the cloud, with PayPal recently announcing it is handling all its transactions through Google Cloud.

FUTURE TECH 11

Platform-as-a-service

11.*

- Utilising the cloud to enable platform-as-a-service (PaaS) capabilities allows financial organisations to create customised and adaptable infrastructures, also referred to as banking-as-a-service (BaaS), with firms reporting that BaaS offers them operational cost savings of up to 50%.

- The PaaS market is set to grow from $56.2 billion since 2020 to $163.3 billion by 2026, with 85% of banks stating that BaaS will be their primary area of growth.

- SolarisBank and Starling Bank are leading the way in this arena, with the latter opening its APIs to allow other financial services organisations and retailers to use their banking licences to create personalised financial products.

"Platform-as-a-service (PaaS) allows an organisation to leverage key middleware services without having to deal with the complexities of individual hardware and software elements, increasing efficiency."

- Sacha Labourey, CEO, CloudBees

12.*

FUTURE TECH 12

Open-source

- Open-source technology will integrate with the next generation financial services infrastructure, allowing organisations access to previously expensive software and the opportunity to further experiment with technologies like blockchain.

- The open-source service market is predicted to grow by 24% by 2025, with an estimated opportunity to create £7.2bn in revenue. Open-source banking will revolutionise platform development by empowering firms to build on the shoulders of giants. Providers will flourish in this new ecosystem, with new platforms eager to invest in new services they can offer to their customers.

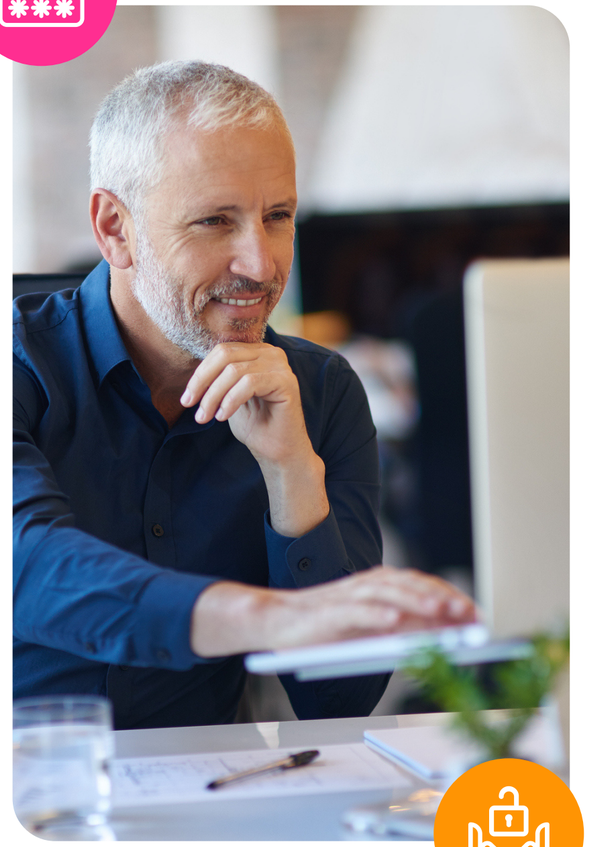
"There are clear benefits to using open-source within the financial services and banking sectors. The collaborative ethos behind open-source, including the community-driven ability for it to be modified and shared, produces faster innovations alongside driving down costs of development and speeding up the time to market."

- Kris Sharma, Financial Services, Broadsuite Media Group

FUTURE TECH 13

Email encryption

13.*



- Financial services firms deal extensively with personal data. Though cyber security training is commonplace, sending open-risk emails (emails containing sensitive documents or data) still occurs. Often, documents are sent by recorded post due to regulatory constraints, even in today's era of digital transformation.

- Encryption protects documents and data in sensitive emails by encoding the contents so that they are only decipherable with the correct keys. There are solutions that utilise two-factor authentication with SMS codes, challenge questions, or integrate with common security certificates like Unipass ID.

- In 2020, 10% of all data breaches occurred within the financial industry, 58% of those involving the loss of personal data. FS email volume has increased by 81% since the start of the Covid-19 pandemic, and with it, the chances of a breach. Email encryption enables organisations to communicate securely, eliminating the risk of working from home and increased reliance on digital technologies.

FUTURE TECH 14

Machine learning

14.*

- An application of AI, 70% of financial firms are already machine learning to predict cash flow events, fine-tune credit scores and detect fraud.

- Financial organisations are expecting to further apply machine learning in the next few years, improving anti-money laundering (AML) processes, algorithm training, automated trading and advisory services.

- The global machine learning market is set to reach $8.8 billion by the end of 2022, having grown at an annual rate of 43.6% since 2017.

"As the financial services industry continues to leverage machine learning and predictive analytics, the volume of data these firms generate and store is ballooning. Protecting that data, other sensitive assets, and business operations will only become more challenging. Firms will have to adopt new security technologies that can mitigate their security and compliance risk."

- Grainne McKeever, Marketing and Communications Consultant at Imperva

15.*

FUTURE TECH 15

Chatbots

- Chatbot use in mid-sized banks grew from 4-13% in 2021, with banking-related chatbot interactions set to grow an overall 3,1505% between 2019-2023.

- Chatbots have multiple advantages for first-call customer service, including faster response times and better data access than customer services agents. Most importantly, chatbots save resources and impact the bottom line. By 2023, they are set to save employees 826 million customer-facing hours.

- A reported 80% of financial institutions are aware of the benefits chatbots bring and are intending to increase day-to-day implementation, with PayPal being one company leading the way with a Facebook Messenger chatbot.

FUTURE TECH 16

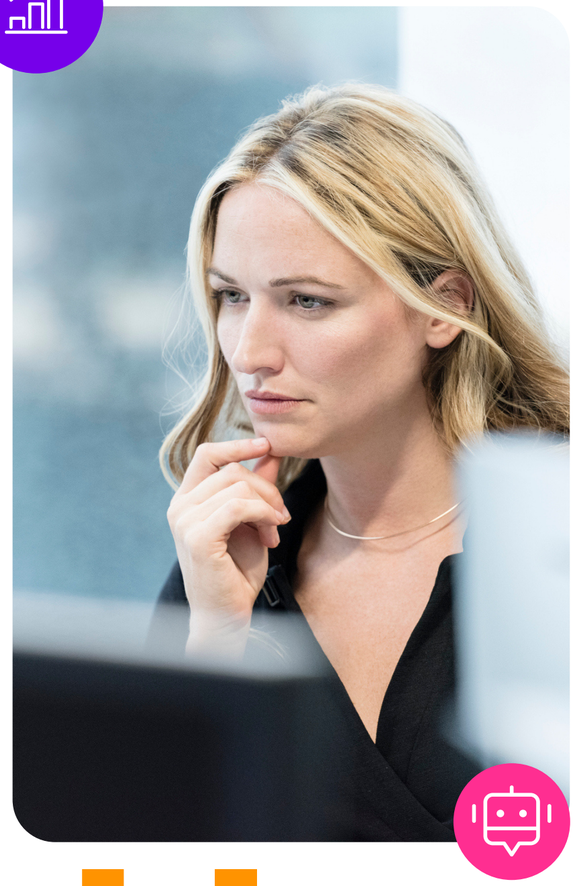
Robotic process automation (RPA)

16.*

- Robotic Process Automation (RPA) is the next stage in automation software, assisting financial services companies with improving customer service, increasing productivity and reducing human error.

- In the next year, 49% of banking and investment CIOs and 44% of Insurance CIOs are planning to increase investment in automation.

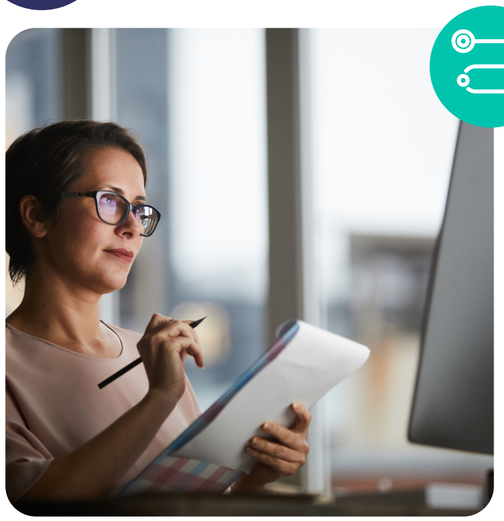
- Research shows banking RPA software is set to grow to $900 million by the end of 2022, with the global RPA market reaching $6.9 billion by 2025.



"Defining internal control and governance for finance robotics programs is essential: Clearly delineate responsibilities between bot development, bot operations and bot outputs to yield full utilisation of finance robotics and cost savings."

- Joey Mixon, Director, Advisory, Gartner

17.*



FUTURE TECH 17

Big data and analytics

- Collecting and analysing big data holds the key to carrying out important tasks within the financial services industry, including market segmentation, customer behaviour prediction, service personalisation, and fraud detection.

- 60% of financial institutions believe that big data analytics offer them a competitive advantage, with 90% stating that big data initiatives will determine which companies come out on top.

- Big data analytics in banking is expected to see annual growth of 22.97% between 2021-2026.

"We can now get access to very different types of data to make better decisions in almost any function. But this will require different skill sets, and everyone in the organization will need to adapt."

- Julien Courbe, US Financial Services Advisory Leader, PwC

FUTURE TECH 18

Voice banking

18.*

- Voice banking is set to become the newest technology to hit the FS industry, enabling customers to carry out financial activities such as logging in, activating cards, making transfers, and paying bills without lifting a finger.

- Voice banking will leverage virtual assistants such as Siri and Alexa, of which there are an estimated 4.2 billion worldwide. This number is forecast to double by 2024. Tapping into these devices will give financial services firms the ability to develop more personalised experiences for their customers, in turn empowering consumers to take a more participative relationship in financial products.

- 44% of surveyed customers have expressed an interest in using voice assistants for routine bank operations, with voice shopping expected to amount to 10% of all mobile e-commerce transactions this year.

"The rapid shift in consumer behaviour and expectations, the potential for improving loyalty scores, and the economics of cost savings all provide the business case for embracing voice as a new and integrated distribution channel."

- Julien Courbe, US FS Leader, PwC

FUTURE TECH 19

Biometrics

19.*

- The market surrounding biometrics - the measurement of physiological characteristics such as fingerprints and facial features - is forecast to be worth $104,959.6 Million by 2028, growing at an annual rate of 15%.

- Customer authentication within financial services is costly and time-consuming, with the top 10% of global financial institutions spending $100 million annually on KYC and due diligence procedures.

- Biometrics offers more accurate identification capabilities to prevent fraud, increase security in mobile banking, and reduce IT and customer support costs due to password reset requests.

"Consumers are eager for a future where opening a bank or brokerage account doesn't require three forms of cumbersome identity checks and passwords containing every letter of the alphabet."

- Dr. Jau Huang, CEO, Cyberlink

FUTURE TECH 20

Two-factor authentication

20.*

- Two-factor authentication (2FA) has become commonplace in the last few years, with 79% of surveyed individuals saying they used 2FA in 2021, compared to 28% in 2017. This number is set to grow further in 2022, with financial organisations rolling 2FA out for more of their front-end services.

- 30% of internet users have become victims of security breaches due to weak passwords. 2FA provides customers with an extra layer of protection. It will form an important pillar of cybersecurity policies for consumer applications, preventing fraud and reducing the pressure on customer support.

Mailock email encryption uses 2-factor authentication to protect sensitive emails and attachments from falling into the wrong hands.

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Is your firm focused on the right technologies to keep up with the pace of change? Use the Future Tech 20 to revisit your transformation strategy and refine it for success.

If you need help with your digital transformation, contact us at Beyond Encryption. We empower financial services organisations to communicate digitally, securely, and compliantly. We're protecting communications throughout the financial services industry, connecting advisers, providers, platforms, and third-party services through our secure email solution, Mailock. Get in touch today to see how our team could support you to secure your digital communications.

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Mailock email encryption makes it easy to digitise sensitive communications and maintain full protection and compliance with regulatory standards. Using AES-256 encryption and 2-factor authentication, Mailock empowers businesses to exchange documents with customers, partners, and colleagues using email, without opening their communications up to the risk of a cyber incident.

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