EPAM CONTINUUM

WHITE PAPER

Optimization and Digital Transformation: How Banks Can Leverage Technology to Control Costs and Automate Processes

Contents

Executive Summary

The financial services landscape is currently in a period of major flux, with forces of change pressing in from many angles. Retail banks must adapt to a radically evolving technology landscape as they grapple with advancements in artificial intelligence (AI), machine learning (ML) and a myriad of other new products and services pushed to market by FinTech competitors and other non-banking digital innovators (Apple, Google, etc.).

Simultaneously, expectations around the experience banks provide to customers — both digital and in-person at a branch — are rapidly shifting, a notion explored at length in our most recent Consumer Banking Report.

All the while, banks must contend with a challenging economic environment that places them under increasing pressure as they try to protect the bottom line while continuing to deliver the quality and range of services customers expect.

It's clear that many banks need to take direct and deliberate steps to significantly revise their technology stacks and operational processes as they look to control costs in the present, optimize their near-term revenue flows and position themselves for future growth. We see automation as a key tool to reduce the cost of critical processes. However, automation itself often requires modernization and transformation of the underlying technology landscape. If done correctly, this transformation has the potential to help banks build a competitive advantage over their peers.

Given the sweeping changes this optimization can require, it should come as no surprise that success is the product of careful planning and execution. To assist you in your own optimization journey, we'll provide a broad roadmap as to how it should be approached and deeper insight into the technologies and philosophies that should be involved. In doing so, we'll explore:

01 **The key drivers of bank costs and where automation can help in reducing them**

02 **An intelligent approach to automating those processes**

03 **The importance of data science**

04 **The role of personalization in banking**

05 **The areas in which banks should invest to make automation a reality**

By the conclusion of this white paper, you will walk away with a clear understanding of the benefits automation can bring to your organization. More importantly, you should also gain an awareness of the complexities that must be taken into consideration to successfully achieve those benefits.

Where do Bank Costs Originate and What Processes are Eligible for Automation?

At the highest level, the drivers of costs for retail banks can be broken down into a handful of broad categories: labor, technology, compliance, real estate, interest (cost of business), marketing and advertising and operational costs.

From this list, both compliance and operational costs are two areas that often have heavy dependence on manual processing by bank staff or outsourced vendors, leading to increased labor costs. By reducing the number of staff involved in compliance and operational processes, such as regulatory monitoring and reporting, risk management, customer service and transaction processing, banks can make substantial reductions in labor expenses and optimize their overall cost structure.

In addition, the technology banks utilize drives costs through the necessary development processes and maintenance of infrastructure, investment in research and development and ongoing upgrades and enhancements that are necessary to remain competitive and meet customer needs. This is traditionally a resource-intensive domain that is rapidly changing beyond recognition — for example, the automation of testing/deployment and the increasing use of cloud platforms can significantly reduce costly manual efforts and inputs.

Customer service in particular is a critical and often differentiating capability that is both required by regulators and a key driver of satisfaction and customer retention. It is also a service that historically has been provided to customers exclusively by people, either remotely or in person in branches.

The continued rise and advancement of technologies, such as robotic process automation (RPA), artificial intelligence (AI)/ machine learning (ML) and conversational AI, are enabling ever more powerful automated service solutions represented by virtual assistants and agents.

Most recently, the growing hype and excitement around ChatGPT and similar large language model (LLM)-based tools is threatening to fundamentally change how customers interact, or expect to interact, with banks and other service providers.

By reducing the human effort required across these various bank processes, significant savings can be realized. However, there is clearly a necessary investment required to achieve these benefits. In the following sections, we explore the scale and nature of these changes as well as some of the underlying technologies that enable transformational productivity improvements.

An Intelligent Approach to Automating Processes

In today's challenging economic environment, financial institutions (FIs) are seeking ways to reduce costs and streamline processes. Automation technologies, such as RPA, workflow orchestration and various forms of AI, can help FIs achieve these objectives. However, an intelligent approach to automation is essential to ensure that these technologies deliver the desired outcomes.

Digital First

To achieve an intelligent approach to automation, FIs must prioritize digital interactions with their customers by redesigning their processes to be "digital first." This involves creating workflows that offer convenient and streamlined services, such as online account opening, mobile banking and e-signatures. By prioritizing digital processes, FIs can reduce the costs associated with manual processes, including paperwork and mailing.

According to our most recent Consumer Banking Report, which surveyed over 26,000 retail bank customers, 32% of respondents from around the globe had to visit physical branches because digital options weren't available. This highlights the importance of FIs prioritizing digital processes in their automation efforts to improve the customer experience and reduce costs.

Leveraging structured external data sources is an essential component of a digital-first approach to automation. By integrating data from external sources such as credit bureaus, social media platforms and public records, FIs can gain insights into customers' financial behavior, preferences and risk profiles. This can help FIs tailor their products and services to better meet customers' needs, improving customer satisfaction, driving retention and brand advocacy.

Using external data sources can help FIs optimize their compliance with regulatory requirements such as anti-money laundering (AML) and know-your-customer (KYC) rules. By integrating external data sources into their workflows, FIs can automate these compliance procedures, reducing the costs and risks associated with manual compliance and increasing the speed of the compliance processes themselves, in turn providing a better customer experience.

Workflow Orchestration

Intelligent automation also involves implementing workflow orchestration, which automates the flow of work across different systems and departments within an FI. This includes automating tasks such as loan processing, account opening and customer due diligence (which is explored more in-depth below). By streamlining workflows and automating manual processes, FIs can reduce costs associated with labor and errors while improving service speed and accuracy.

Explicitly defining business process orchestration logic using a business process management (BPM) tool makes it easier for FIs to adapt to new processes, bundle products and leverage external services. With a BPM tool, FIs can model and automate their business processes, making it easier to modify them as needed to accommodate changes in the business environment. While banks were among the early adopters of BPM, they have not yet fully embraced the latest innovations in this space, such as the emergence of lightweight open BPMN engines and the incorporation of serverless and low-code-enabled architectures.

In addition, we still see many banks maintaining multiple copies of data due to poor system integration. This results in data quality loss, inconsistencies and errors that can lead to problems for customers or operations, which then require costly manual tasks to resolve.

FIs can improve their efficiency and customer experience by adopting new best practices in workflow orchestration, BPM and data integration. While FIs are familiar with these concepts, there is still room for improvement. By evolving their practices and embracing the latest innovations, FIs can reduce costs, improve compliance and better meet the needs of their customers.

Leveraging the FinTech Ecosystem

Leveraging the FinTech ecosystem is an important part of an intelligent automation strategy. This ecosystem includes a range of companies that provide specialized technologies and services to the financial industry at large. By partnering with FinTechs, FIs can access cutting-edge technologies, such as blockchain, ML and biometrics, without having to invest in building these capabilities in-house. This can reduce the costs associated with technology development while providing FIs with access to innovative solutions that can improve their services.

As an example, in recent years the fields of digital onboarding and KYC has seen significant innovation, thanks to the contributions of numerous FinTech companies. These FinTechs have optimized the Identity and Verification (ID&V) process by employing advanced technologies, resulting in a more secure, streamlined experience with reduced dropouts and manual tasks.

Some noteworthy examples of FinTech innovations in digital onboarding and KYC include:

ELECTRONIC IDENTITY VERIFICATION (EIDV)

FinTechs have developed advanced eIDV solutions that leverage ML and AI to verify a customer's identity by cross-referencing their information against various databases and sources. This technology enables FIs to perform identity checks in real-time, reducing delays and improving the overall onboarding experience.

RISK-BASED ASSESSMENTS

FinTechs have created advanced analytics platforms that enable FIs to perform risk-based assessments during the onboarding process. These platforms analyze customer data to identify potential risk factors, such as politically exposed persons (PEPs), sanctions or adverse media, allowing FIs to make more informed decisions when approving or rejecting new clients.

VIDEO IDENTIFICATION

Some FinTech companies have developed video-identification solutions that allow customers to verify their identity via live video calls. Without the need for input by a representative, the customer can be identified. This method not only saves costs but also reduces the likelihood of dropouts.

SEAMLESS INTEGRATION

Many FinTechs offer APIs and SDKs that allow FIs to easily integrate digital onboarding and KYC solutions into their existing systems. This enables a more streamlined onboarding process, again resulting in reduced manual tasks and a better customer experience.

By leveraging these innovative FinTech solutions, financial institutions can transform their digital onboarding and KYC processes. This not only leads to increased security and compliance but also enhances customer satisfaction by providing a more efficient and user-friendly experience.

Other interesting areas where FinTech companies can support banks include:

PAYMENTS

FinTechs can provide banks with advanced payment processing solutions, including faster payment systems, cross-border transactions and mobile wallets. These solutions can lower transaction costs, reduce processing times and offer customers a more seamless and convenient payment experience.

FRAUD DETECTION AND PREVENTION

FinTech firms offer AI-driven tools that can help banks identify and prevent fraud by analyzing transaction data for unusual patterns, detecting anomalies and flagging suspicious activities in real time. This can significantly reduce financial losses due to fraud and enhance overall security.

LENDING AND CREDIT SCORING

FinTech companies can support banks in streamlining their lending processes and improving credit risk assessments using alternative data sources and ML algorithms. This can lead to more accurate credit decisions, reduced defaults and increased access to credit for underserved segments of the population.

REGULATORY COMPLIANCE AND REPORTING:

FinTech solutions can simplify compliance and reporting tasks for banks by automating data collection, monitoring and reporting processes. This can help banks more effectively manage their regulatory obligations, reduce the risk of non-compliance and save time and resources.

By focusing on these crucial areas, FinTech companies can play a vital role in supporting banks' optimization efforts, enabling them to remain agile, cost-effective and customer-centric.

Streamlined Data Management and Innovation with AI

Although banks fundamentally process data, there remains ample room for optimizing banking processes by streamlining data management and harnessing innovative technologies. Among the numerous ways banks can derive greater benefits from data, it's worth exploring two key trends in banking:

01

DATA PRODUCT DEVELOPMENT

Banks have adopted streaming streaming platforms such as Kafka, implemented data lakes (often multiple), utilized ML for fraud analysis and started implementing data meshes. However, only a few banks have effectively rationalized their data efforts.

Traditionally, IT attempted to bring all data assets and uniform set of technological capabilities together to solve known business problems. This approach of "Once we have the data, the business will come," had a tendency to result in business-sponsored data proliferation and siloed adaptations of technologies and processes to address specific use cases.

To truly unlock valuable data insights and drive innovation and growth, banks need a more holistic, business-oriented solution to managing their data. Specific business use cases are necessary to define data and technology requirements and how they are leveraged within the organization.

This combination of use cases and data/technology requirements forms the basis of a bank's Data Product, which combines required data assets, purpose-specific technologies, governance, and measurable outcomes to achieve expected business results more effectively and transparently.

Moreover, developing Data Products in response to specific business use cases establishes a repeatable, well-governed and efficient framework for organization-wide Data Product development – often referred to as the Data Factory. A combination of Data Product development mentality with enterprise-wide socialization of available Data Products and self-service capabilities enables organizations to foster data-driven decision-making, enhance collaboration and unlock valuable insights that can be leveraged to optimize banking operations. In other words, Data Product development moves a bank's data out of compartmentalized silos to an organizational-wide level of transparency and accessibility.

02

LEVERAGING AI FOR ENHANCED PRODUCTIVITY IN BANKING

AI can greatly enhance productivity in banks thanks in part to the rapid developments of generative AI models like ChatGPT. By automating routine tasks, streamlining customer support and improving decision-making processes, these technologies empower bank employees to work more efficiently. For example, AI-driven chatbots, powered by LLMs, can deliver instant responses to routine customer inquiries, allowing human agents to focus on more complex issues.

Additionally, AI and ML algorithms can be used to analyze customer feedback and data, helping banks tailor their services, products and messaging to meet customer needs. This results in increased overall productivity and heightened customer satisfaction.

Several use cases illustrate the potential of generative AI to support banking operations, including:

CUSTOMER SERVICE

Generative AI revolutionizes customer service by offering real-time support via chatbots, efficiently addressing customer queries, complaints and requests for information.

FRAUD DETECTION

By analyzing vast amounts of transaction data, AI models assist banks in identifying suspicious patterns, detecting fraud, safeguarding customer assets and minimizing fraud-related losses.

LOAN ORIGINATION

Generative AI and ML-based algorithms can support streamlining the complex loan origination process by automating tasks, such as data collection, clarifying credit score analysis and loan application processing, benefiting both customers and bank employees.

WEALTH MANAGEMENT

By analyzing customer data, generative AI models — combined with other AI and ML techniques — enable banks to estimate risk tolerance for their clients and suggest pre-defined investment strategies aligned to individual financial goals, thus enhancing wealth management services.

COMPLIANCE

Generative AI models, used with other analytical AI tools and ML models, can support banks in transaction monitoring, analyzing potential compliance violations, ensuring adherence to regulatory requirements and preventing costly fines and penalties.

It's crucial to note that all generative AI models should generally serve as an assistive tool and not act solely as decision makers. While the technology is not flawless, it can significantly boost productivity when used in tandem with knowledgeable banking professionals.

There are, of course, additional areas where data can optimize banking operations, such as credit risk assessment, marketing campaigns and operational efficiency, among others. The key is to recognize the potential of data and harness it effectively to unlock new possibilities and drive growth in the banking sector.

RPA: Streamlining Banking Operations for Immediate Impact

While RPA might be considered a patchwork solution compared to a more future-proof approach described in the paragraphs above, it remains a valuable short-term option for banks seeking to streamline manual tasks and improve efficiency, especially when paired with AI for intelligent process automation. When a future-proof approach is not immediately feasible, RPA can serve as an effective stopgap measure to optimize processes and reduce costs, while laying the groundwork for more comprehensive digital transformation strategies.

RPA enables banks to automate rules-based tasks traditionally handled by employees, allowing them to focus on more strategic and value-added activities. As a technology capable of automating repetitive, manual tasks, RPA offers numerous benefits, including quick implementation, scalability, seamless integration with legacy systems, low maintenance and cost-effectiveness.

Implementing RPA in banking can lead to significant improvements in various operational areas, including:

CUSTOMER ONBOARDING

RPA can automate the gathering and verification of personal and financial data during the onboarding process, streamlining the overall experience for both clients and bank employees.

COMPLIANCE

RPA can efficiently collect data from various sources to help banks maintain regulatory compliance, reducing the time and costs associated with manual data gathering and analysis.

LOAN PROCESSING

By automating tasks like underwriting and validation, RPA can increase the efficiency of loan administration processes, speeding up loan processing times and enhancing the customer experience.

CUSTOMER SERVICE

RPA-powered chatbots can handle routine customer queries, such as account balance inquiries and transaction status checks, reducing wait times and improving overall customer satisfaction.

ACCOUNTS PAYABLE

RPA can streamline the handling of paper-based invoices, automating tasks like data retrieval, error checking and payment initiation, ultimately simplifying the accounts payable process and ensuring audit trail compliance.

By deploying RPA, banks can significantly reduce manual labor, streamline processes and realize cost savings in a relatively short timeframe. RPA's ability to work with legacy systems minimizes disruption to ongoing workflows, allowing banks to focus on more strategic initiatives.

It's important to view RPA as a complementary solution alongside the other solutions listed in this white paper, as part of a larger digital transformation effort in the banking industry, rather than as a standalone long-term strategy. This approach ensures that banks can address immediate challenges while continuing to progress toward more future-proof strategies

Data Science and Advanced Analytics

While much of the spotlight is focused on the novel LLMs that power tools such as ChatGPT, more traditional data science approaches have been used in the financial services industry for quite some time and offer formidable tools for banks looking to optimize certain processes.

Data science typically refers to the methodology and algorithms from the fields of AI, ML, computer science and advanced statistics methods applied to large datasets in order to gain useful insights. To put it another way, by applying advanced analytics models to large data sets, banks can derive actionable new understandings of their customers, processes and operations to better understand how to make these more efficient.

A prerequisite for creating these advanced analytics models is a well-designed data warehousing solution. In the financial services industry, the results of these models are deployed through various channels such as online and mobile banking solutions, CRM and other business insight systems.

The creation of advanced analytics models can be done manually, but it is possible to speed up this process using automated machine learning (AutoML) software. There are also cloud-native systems that automate not only the process of model creation, but also the deployment, monitoring and updating of these models. Such examples include AWS SageMaker, Google Cloud Vertex AI and Microsoft Azure ML. It should be noted that there are situations in which automation may not be desirable or may even be at odds with some regulatory compliance standards (i.e., some risk models).

There are many possible applications of data science models in the financial services industry that could result in better customer insight. Often the goal of such insight is to offer the right product to the right customer at the right time using the right channel — this is often referred to as personalization. Personalization can reduce customer friction by proposing product offers that are more likely to be accepted. This way the financial institution shapes the customer journey in a frictionless manner, in turn helping to optimize the institution's revenue. And by broadening the customers' share of wallet, customers are less likely to leave the bank, helping to optimize the organization's attrition rate.

Beyond personalization, data science models can be used to reduce the full-time equivalency count of customer service representatives and increase their efficiency and satisfaction through better sales hit ratios. Some of the technical approaches include customer lifetime value estimation and creating personalized offers based on propensity/affinity models in order to identify products that are likely to be purchased by particular clients.

Another related approach is client segmentation and micro-segmentation, which allows a financial institution to identify groups of clients that exhibit similar behavior within each group but different behaviors between groups. By doing so, the financial institution can better target the products they offer clients, rather than offering products indiscriminately. Real-time analytics and transaction-based insights typically yield high hit ratios and thus produce reliable sales leads.

Advanced analytics methods can also be employed to increase the quality of credit risk models, or score cards, resulting in better identification of customers that are likely to default, but might otherwise have been offered a loan under previous models. On the opposite side of that coin, these models can also help identify those who are likely to pay their loans but would not have been given a loan under the previous models. This would result in lower non-performing loan ratios, which consequently could help lower loan interest rates and therefore lead to larger lending volumes or otherwise deliver higher margins. It should be noted that in either use case, banks need to be extremely vigilant of bias in their results and explainability may be required by regulators, which is discussed in further detail, below.

Another important application of advanced analytics models is the development of churn and soft-churn prediction models that can be deployed to alert for potential revenue losses.

Besides models designed to be applied on a customer level, data science methods can be used by the financial institution to estimate the overall need of existing and potential products, for risk estimation on an institutional level, market trend predictions and more.

In addition, financial institutions can use advanced analytics to deploy efficient and reliable anti-fraud systems. Blocking fraudulent transactions and actively alerting customers to potential fraud cases should increase customer trust in their financial institution's competence, whereas avoiding false positives can reduce customer dissatisfaction.

Finally, advanced analytics-based systems are becoming more common in the onboarding process, especially for KYC compliance.

ML- and AI-based models are typically not as intuitive as the older methods based on statistical (or regression-based) approaches. As such, it's important to ensure the explainability and fairness (and in some cases it is even required) of these models. Recent advances in the ML/AI methodology have led to creating widely accepted methods and frameworks for explainability to help ensure the fairness of these models.

Personalization in Banking

Personalization not only improves customer experiences, but it is also a financial imperative. One of the main drawbacks to automation in banking is the diminishment of the human touch, particularly when dealing directly with customers.

The introduction of ATMs in the late 1970s and 1980s, internet banking in the 2000s and mobile apps in the 2010s have resulted in banking customers steadily moving away from dealing with bank employees directly. In 2009, the US banking system hit a peak of 85,566 branches, but by 2021 the number had reduced to 72,534, or a decline of 15%. In the same period, the number of bank branches in the EU reduced from 221,240 to 138,290 or a reduction of 38%.

While 85% of the 26,000 customers in eight countries we surveyed late last year report to have gone to the branch at least once a year, 31% of them use their bank's mobile bank app every single day. The COVID-19 pandemic further disengaged bank customers from their banks. In 2019, former Citigroup CEO Michael Corbat noted that Citi is "very conscious around not being the dumb utility — being very conscious about not giving away unconsciously the client-customer ownership that's there." This sentiment is echoed throughout the hallways of banks worldwide.

OF THE 26,000 CUSTOMERS WE SURVEYED:

85%

have gone to their bank's branch at least once a year

31%

use their bank's mobile app every single day

Why is Personalization Important in Retail Banking?

The importance of personalization in banking cannot be overstated. Personalization is seen as the main way that the human touch, or its facsimile, can remain in a world of automated banking experiences. From a financial standpoint, keeping customers happy with the bank is both a cost-reduction and a revenue play.

Personalization isn't a single application, but rather a collection of practices that demonstrates to the customer that they aren't just a number, and that the bank is listening to them. Customers are more likely to remain loyal to a bank that offers personalized services. While banking retention rates are generally high (e.g., studies show that the average retention rate for financial services in the US is 78%), each point of customer attrition represents 1–2% of net income loss. Further, the average cost of a new customer is $500.

Personalization doesn't just reduce attrition but could be a revenue generator as well. For example, 47% of banking consumers we surveyed last year told us that they are willing to pay for personalized financial advice and guidance, an obvious inroad to generating revenue from an unmet need for banks willing to make the necessary investments in personalization.

Types of Personalization in Retail Banking

There are several ways in which banks can personalize their services to meet the needs of individual customers. Some examples include:

CONTEXTUAL OFFERS AND ADVICE

Bank of Ireland aims to provide customers "with relevant, timely services, and less friction through the use of real-time data and predictive engines." In 2018, Colin Kane, former Director of Customer Analytics at Bank of Ireland said, "The future of banking will be defined by financial players who can accurately meet the needs of customers depending on what's happening in their lives."

DIGITAL EXPERIENCE PERSONALIZATION

With $2 billion in assets, Credit Union of Texas leverages "Salesforce for lead tracking and ROI attribution, Salesforce Audience Studio for segmentation and for creating the personalized website experiences using all the data." The data from Salesforce is then used to render different experiences through the credit union's CMS, Sitecore.

PAYMENT INSIGHTS

Belgian financial services company, KBC Group leverages the Personetics AI platform to "create ongoing insights and recommendations for customers." Karin Van Hoecke, General Manager (Digital) Transformation and Data at KBC, says "Exceeding customer expectations of KBC Mobile is what excites our team. One way of achieving this is through saving time and money. For example: getting a quick heads-up to check if a double payment was intended. Or a notification when you received a payment, in the likes of a tax return. Each time we are able to provide such relevant information, it may give a small, but tangible benefit to the customers' life and add to his or her personal financial insight."

SMART PAYMENT MANAGEMENT TOOLS

Dutch bank ABN AMRO has partnered with Denmark-based FinTech Subaio to provide their customers with payment management tools. In 2020, they collaborated to give ABN AMRO customers the "ability to see all of their recurring payments in one place." In 2021, they expanded their partnership to allow customers to manage a deceased relative's recurring payments, including subscriptions, loans and insurance.

The problem with most of these examples are that they are single use cases. The Credit Union of Texas example is closer to a customer journey approach to personalization that brings a few use cases together. Organizations should define a personalization strategy that combines product, service, communication and channel personalization into integrated automated customer journeys that can include person-to-person experiences through traditional channels.

In a recent blog post, we gave an example of what a full personalization experience could look like. In this hypothetical example, Toyota used the data they already had from Lauren and Mark to automate the identification of triggers to make an offer. The offer was personalized based on their search, as was the method to make that offer. The offer also included an automated approval of a loan based on Toyota's relationship with the couple. The example also illustrates how banks can be entirely disintermediated from an opportunity by other organizations, in this case a car manufacturer, limiting their ability to generate additional revenues.

The Augmented Banker

Personalization isn't limited to self-service and automated experiences. Increasingly, automation tools are used to augment the personal experience from bankers out on the road to branch staff or the contact center, resulting in hyper-personalization.

AI can also make the live agent call more efficient and personalized by automating identification, reason for call and the interaction itself. If the AI engine identifies what the call is about, it can arm the call center agent with actions to take without the agent having to search a knowledge base, website or seek direction from a supervisor. AI engines can aggregate information from multiple systems and give agents prompts with recommended responses. These capabilities aren't theoretical, call-center-as-a-service (CCaaS) vendors like 8x8, Cisco and Five9 provide these capabilities today.

AI can also help agents by analyzing caller sentiment, using voice analytics and providing suggestions to deliver immediate results backed with human empathy. Speech analytics technologies are also available today from Voicebase, CallMiner, Verint and other vendors.

The importance of arming contact center agents with such tools are clear. According to a survey from Oracle: "96% of customers will take an action that hurts an organization's profits as a result of a single bad experience." Over 60% of respondents said they would move to another company. While this survey wasn't specific to banking, it should inform how we approach the customer experience.

AI tools aren't limited to contact centers. CRMs are now equipped with AI engines that can deliver personalized content across all customer interactions including in-person experiences. For example, Salesforce's Next Best Action capabilities can give a banker the ability to deliver optimal recommendations "at the point of maximum impact." Further, it can also connect those recommendations to an automation engine.

How Banks Can Implement Personalization at Scale

Earlier this year, we wrote a blog that covers our point of view on how a bank can approach personalization. We noted:

> Personalization occurs when there is understanding of the customer, relevant content is ready to be presented, a decision engine is employed to match the content and the customer need and there is a way to present the personalization in context.

To be able to execute on such a vision, an organization should build a program that tackles the separate parts that make up this vision and takes deliberate steps towards realizing it. The process starts with defining the organization's goals, forges alignment throughout the organization, assesses existing capabilities and drafts "a pragmatic year one and year two roadmap" towards the goals.

The Bottom Line on Personalization

As we have seen in many industries, organizations can build better relationships with their customers through contextual and real-time personalization. Research by Epsilon found that 80% of consumers are more likely to make a purchase when brands offer personalized experiences. Further, there is true ROI behind personalization. An article by *Adweek* notes that "personalization can reduce acquisition costs by as much as 50%, lift revenues by 5–15% and increase marketing spend efficiency by 10–30%." However, the trick to make personalization work is a deliberate approach toward making it a core competency for the organization. Is your organization ready to take the personalization journey?

Where to Invest to Make Automation a Reality

In the previous parts of this white paper, we have discussed the drivers of automation (Part I), its benefits, the role of personalization and the importance of integrating AI in various banking functions. In this final part, we aim to provide guidance on key investment areas for banks to successfully implement automation and create a seamless, personalized customer experience.

01

INFRASTRUCTURE MODERNIZATION

As mentioned in Part II, legacy systems can hinder the adoption of automation. To overcome this challenge, financial institutions need to invest in modernizing their infrastructure, including embracing cloud-based technologies, upgrading legacy systems and implementing API-driven architectures. As we have outlined a multi-step approach for automation in Part II, banks should choose wisely to ensure seamless integration of automated solutions, like AI-powered personalization tools discussed in Part IV and improve overall efficiency, security and scalability.

02

DATA MANAGEMENT AND ANALYTICS

Data plays a crucial role in automation and personalization, as highlighted in Part III. Banks need to invest in robust data management systems and advanced analytics tools to make sense of the vast amounts of data they possess. This will enable them to gain valuable insights, make informed decisions and improve the accuracy of their predictive models, leading to better personalization and customer experiences.

03

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

As explored in Parts II and III, AI and ML technologies are essential for the successful implementation of automation in the financial industry. These technologies can be utilized in various aspects of banking, including credit risk assessment, fraud detection, customer service and personalization. Banks should allocate resources for researching and developing in-house AI/ML solutions or partnering with specialized vendors to stay ahead in the rapidly evolving landscape.

04

RPA

RPA, as described in Part II, helps streamline repetitive and time-consuming tasks, improving operational efficiency and reducing human errors. Banks should invest in RPA solutions to automate routine processes, such as account opening, loan processing and customer onboarding. This will not only save time and costs but also allow employees to focus on more strategic and value-added tasks.

05

DIGITAL CUSTOMER EXPERIENCE

Building upon the importance of personalization and the steep decline in branches as described in Part IV, investing in digital customer experience becomes crucial. This includes enhancing mobile and online banking platforms, implementing AI-powered chatbots for customer support and leveraging advanced analytics for personalization. By prioritizing digital customer experiences, banks can increase customer satisfaction, loyalty and ultimately, revenue.

06

COLLABORATION AND PARTNERSHIPS

Finally, banks should be open to collaborating with FinTech startups and other technology providers to accelerate their automation journey. By forming strategic partnerships, banks can gain access to innovative solutions and expertise that may not be available in-house. This collaborative approach can help banks better leverage AI and personalization tools discussed in Parts III and IV, as well as address potential challenges while ensuring the smooth adoption of automation.

In conclusion, investing in these key areas will not only help banks automate their processes but also future proof their business in an increasingly competitive landscape. By embracing automation and following the insights provided in this whitepaper, financial institutions can enhance efficiency, reduce costs and deliver superior customer experiences, positioning themselves for long-term success.

Putting It All Together

As discussed throughout this report, rapid shifts in economic conditions — whether driven by changing interest rates, contraction of the global economy, pandemics, supply chain issues or any combination thereof — often force banks to evaluate how they can control costs and manage their expenses.

More often than not, this can lead to a "turtling" effect as banks hunker down, reduce overhead costs, scale back on investments in their technology stacks and take even more drastic measures. However, such an approach fails to position the organization for the periods of growth that tend to follow contracting or stagnating economic conditions. This approach can leave a bank at a competitive disadvantage against its peers with the foresight to invest in the technology necessary to automate certain processes and optimize others for growth.

Consumer expectations around the products and services they expect from their banks — from personalized financial guidance, to seamless interactions with contact centers, to faster loan approval and account opening experiences — means failing to make these sorts of investments could result in a competitive disadvantage.

As with any complex transformation journey, the first step is understanding the full scope of the automation and optimization landscape and assessing where your organization currently stands, a task easier said than done. Understandably, many banks may not possess the inhouse skilling and expertise required to undertake this assessment alone.

This is where it can prove beneficial to work alongside a trusted partner, who understands how to help your bank optimize for growth and build a lasting competitive advantage. Need support applying these lessons to your bank's optimization transformation strategy? Contact us, today. sales@epam.com

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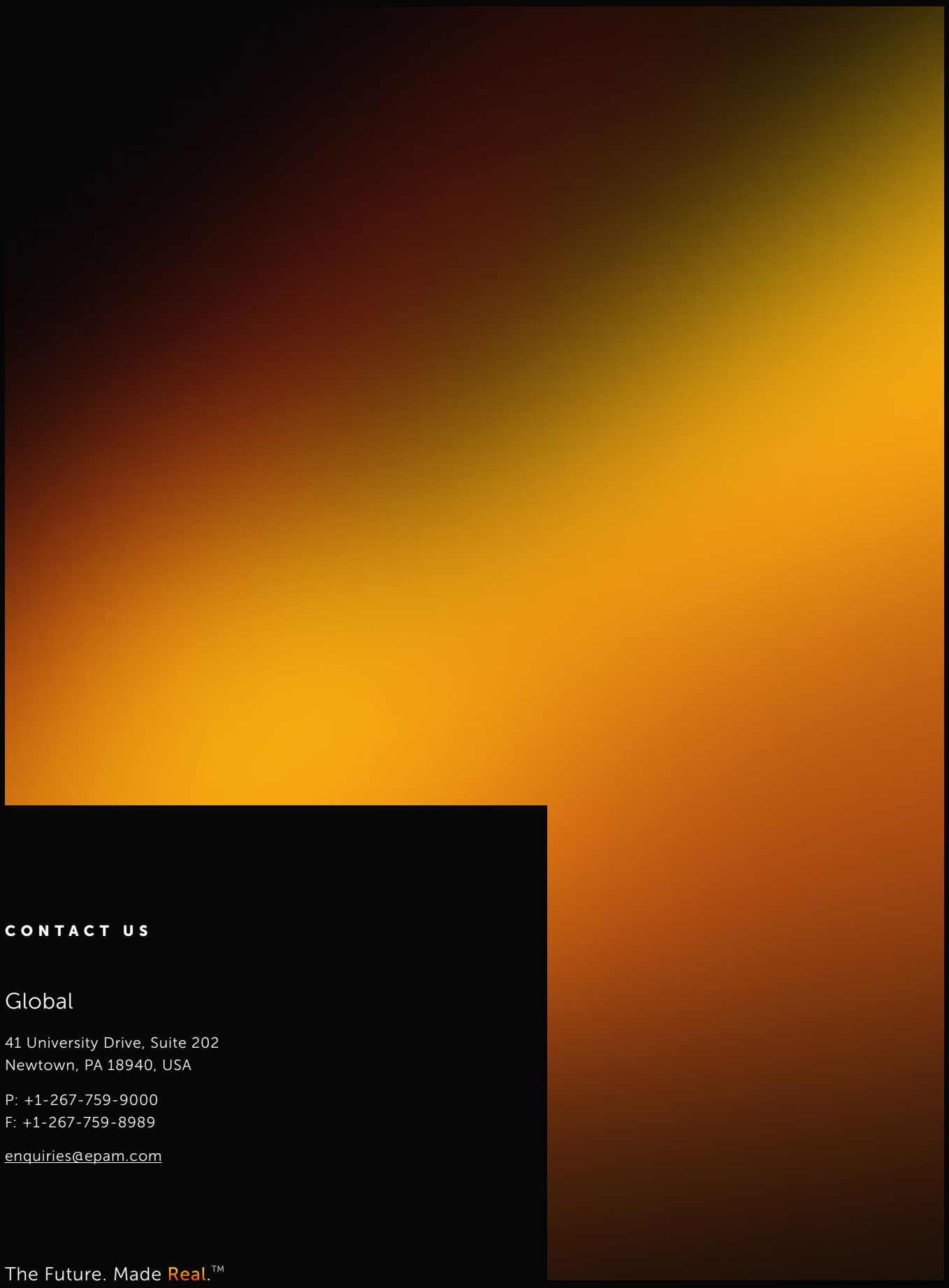
Through its innovative strategy; integrated advisory, consulting, and design capabilities; and unique 'Engineering DNA,' EPAM's globally deployed hybrid teams help make the future real for clients and communities around the world by powering better enterprise, education and health platforms that connect people, optimize experiences, and improve people's lives. In 2021, EPAM was added to the S&P 500 and included among the list of Forbes Global 2000 companies.

Selected by Newsweek as a 2021, 2022 and 2023 Most Loved Workplace, EPAM's global multidisciplinary teams serve customers in more than 50 countries across six continents.

As a recognized leader, EPAM is listed among the top 15 companies in Information Technology Services on the Fortune 1000 and ranked four times as the top IT services company on Fortune's 100 Fastest Growing Companies list. EPAM is also listed among Ad Age's top 25 World's Largest Agency Companies for three consecutive years, and Consulting Magazine named EPAM Continuum a top 20 Fastest Growing Firm.

Learn more at www.epam.com and follow EPAM on Twitter and LinkedIn.



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