AI IN RETAIL BANKING AND PAYMENTS

OPPORTUNITIES AND PRACTICAL USE CASES





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AI IN RETAIL BANKING AND PAYMENTS Opportunities and practical use cases

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Management Summary

Artificial Intelligence (AI) provides enormous potential to the banking and payments industry, as evidenced by numerous studies. Notably, NVIDIA's research indicates that more than 80% of financial services professionals report that AI contributes to cost reductions and revenue increases. A study by the European Investment Bank anticipates that the adoption of AI could lead to a 30% increase in revenue and a 25% decrease in costs.

The financial services value chain presents a wide array of potential AI applications that can enhance both the back and front office operations, aiming to achieve growth and efficiency goals. Key areas of impact include customer engagement (such as improved customer service), forecasting and predictions (for example, predicting loan defaults), and advanced data and risk management.

However, many companies are still in the early stages of AI adoption, facing challenges in navigating its possibilities and translating them into actionable strategies. A systematic approach is essential for evaluating, prioritizing, planning, and executing AI initiatives.

Establishing an "AI playground" for iterative testing of selected use cases represents a crucial initial step towards leveraging AI. This should encompass both technical infrastructure and a robust compliance framework.

This paper presents a robust framework and hands-on use cases to capture the value of AI, developed from extensive technical and managerial experience and offering a practical starting point for exploring AI's potential. The adoption of AI could lead to a 30 % increase in revenue and a 25 % decrease in costs

Introduction

Even though artificial intelligence (AI) has been around for decades, since end of 2022, various generative AI solutions from both small and large tech firms have been introduced to the public, sparking global excitement. A new era has already been proclaimed in many places and yet most decision-makers are not fully aware of what this means specifically for their business, their individual challenges and how to build competitive advantages based on AI.

This paper not only examines AI's potential along the value chain in retail banking and payments, but also offers practical examples of AI-driven initiatives and outlines a method to transforming the organisation for the age of AI:

- AI's potential in banking and payments is twofold: enhancing revenue growth in customer-centric areas and reducing costs in operational processes. Key implications include personalized solutions, streamlined operations, and sophisticated risk management.
- 2. A structured approach is recommended, involving a thorough assessment of current operations, prioritizing AI use cases, and conducting proof-of-concept tests. This ensures effective AI integration without straining resources.
- 3. AI needs to be woven into the strategic fabric of banks and financial services. This includes aligning AI initiatives with overall corporate strategy, effectively managing AI programs and risks, crafting a supportive infrastructure, and fostering an adaptive workforce and culture.

A specific focus of this paper lies on the presentation of real-life case studies and how they were implemented: from enhancing data extraction and automating report generation to customer-oriented solutions like AI customer support and advanced loan default prediction. These use cases can typically be piloted as proofs of concept in a matter of weeks once the company is "AI-ready" from a regulatory and compliance perspective and has created a versatile "AI playground". A new era has already been proclaimed in many places and yet most decisionmakers are not fully aware of what this means specifically for their business

1 Context a brief overview of AI

Octopus as a Bionic Model for AI

We frequently observe similarities between technological advancements and natural phenomena. Whether it is the Japanese high-speed train (Shinkansen), mirroring the kingfisher's design¹, the "Hook & Loop" fastener, derived from the hooks and loops found on the seeds of the large-fruited burdock lobe², or the echolocation ability of bats, which catalysed the advancement of ultrasound technologies in medicine and navigation³.



Figure 1: Artificial octopus (AI-generated by DALL \cdot E 3)

¹ AskNature. High Speed Train Inspired by the Kingfisher - Innovation.

² Stephens, T. (2007). How a Swiss Invention Hooked the World. SWI Swissinfo.Ch.

³ Earsc. (2021). World from Space: 'How We Use Technology Inspired by Bats to See Water Availability in Fields'.

Even in the realm of artificial intelligence (AI), there are creatures in the animal kingdom exhibiting comparable characteristics, in this case, the octopus:

- Impressive levels of Intelligence: Octopuses are considered to be one of the most cognitively advanced animals in the world. They can solve complex problems and use tools for specific tasks. AI systems show intelligence by being able to analyse data, recognize patterns, solve problems, and make criteria-based decisions.
- High flexibility: Octopuses are one of the most flexible animals in the world⁴ and can use their tentacles for a variety of tasks, whether it is grasping, camouflage, or movement. AI systems can respond flexibly to new tasks and challenges if they are trained or programmed accordingly.
- Distributed cognition: The nervous system of octopuses is decentralized, meaning that parts of their bodies can function independently⁵. AI systems can be decentralized in a similar way, consisting of multiple networked units or modules that work independently on a set of tasks⁶.

While interest in octopuses has stagnated in recent decades, AI has become much more popular⁷. AI systems can respond flexibly to new tasks and challenges if they are trained or programmed accordingly

⁴ Kennedy, E., Buresch, K. C., Boinapally, P., & Hanlon, R. T. (2020). Octopus arms exhibit exceptional flexibility.

 $^{^{\}scriptscriptstyle 5}$ Carls-Diamante, S. (2022). Where is it like to be an octopus?

⁶ Íñiguez, A. (2017). The Octopus as a Model for Artificial Intelligence -A Multi-Agent Robotic Case Study.

⁷ Google Trends. AI, octopus.

Definition and overview of AI

Back to the technical terms: **AI** is a vast domain within the realm of computer science and technology, dedicated to creating systems and machines capable of executing tasks that traditionally demand human intelligence. Artificial Intelligence splits into **Narrow AI**, focused on particular tasks, and **General AI**, targeting comprehensive cognitive capabilities akin to human intelligence; while Narrow AI is widely used today and focus of this paper, General AI remains nascent, with its realization anticipated to be significantly further in the future⁸.

Taking a closer look at what is already possible today, AI encompasses several interrelated **subfields**, as visualised in Figure 2^{9,10,11}, each with its own objectives and approaches.



Figure 2: Theoretical foundation of AI and subfields

learning and deep learning: Potential resources for the infection clinician.

⁸ Walch, K. (2020). General AI vs. narrow AI comes down to adaptability. TechTarget. ⁹ Adamopoulou, E., & Moussiades, L. (2020). Chatbots: History, technology, and

applications. ®Theodosiou, A. A., & Read, R. C. (2023). Artificial intelligence, machine

 $^{^{11}\}text{Lv},$ Z. (2023). Generative artificial intelligence in the metaverse era.

- Machine learning (ML): A subset of AI that crafts algorithms enabling computers to learn from data, make predictions, and decisions.
- Deep learning (DL): A specialized branch of machine learning utilizing deep neural networks to handle complex data. It excels in tasks like image and speech recognition.
- Generative AI: A specific approach within AI that can span across different applications like Natural Language Processing (NLP) and Computer Vision and often leverages DL techniques. Trained with huge sets of data, it concentrates on generating new content, such as images, text, or audio, akin to human creation.

There is a multitude of different application fields for AI, which are often utilizing ML and DL techniques, e.g.:

- Natural language processing (NLP): Algorithms enabling computers to understand, generate, and communicate in human language, vital for language translation, chatbots, and sentiment analysis. Large language Models (LLMs) like GPT-3 and GPT-4 belong to this field.
- Robotics: Combining AI with mechanical engineering, it births intelligent machines, capable of a wide range of physical tasks, from manufacturing to autonomous navigation.
- Computer vision: This discipline empowers machines to interpret visual data from the world, applied in facial recognition, object detection, and autonomous vehicles.

Large language Models handle various language tasks without task-specific programming

2 Far-reaching potential of AI in banking and payments

In financial services, AI is already firmly entrenched

Relevance of AI in today's financial service industry

Surveys assessing the applicability of AI in the business landscape often reveal divergent viewpoints. A 2023 Bitkom survey across diverse economic sectors in Germany, found that 68% of the companies participating viewed AI as the most pivotal technology for the future. However, a striking contrast emerged when over 80% of respondents acknowledged being latecomers or missing out entirely on AI adoption. Furthermore, 74% of these companies expressed their intention to invest in AI capabilities in 2024 or beyond, with only 15% currently implementing AI solutions effectively.¹²



Figure 3: Which of the following areas is currently using AI solutions in your organization? (excluding China)^{13}



Figure 4: What use cases is your company exploring for generative AI and LLMs? (excluding China)^{13}



Figure 5: Prioritised opportunity areas for AI along the value chain in banking and payments

This highlights the considerable untapped potential of AI, which many companies are struggling to harness efficiently. Conversely, the financial services sector presents a different scenario, with AI already firmly entrenched. A survey by NVIDIA, involving 400 global financial services professionals, showed that merely 25% of companies in this sector consider themselves to be trailing in AI adoption.

Remarkably, 80% reported that AI was contributing to increased sales and cost reduction. The primary domains of AI application in financial services encompass risk management, portfolio optimization, and fraud detection. Additionally, in the realm of Generative AI and LLMs, the current focus centres on report generation, customer engagement, and the generation of synthetic data.¹³

Opportunity areas for AI along the value chain

The transformative potential of AI unfolds in a dual capacity: Firstly, increasing revenue growth in customer-centric areas such as product management, client engagement, and customer relationship management. Concurrently, it drives higher efficiency in underlying processes, including operations & execution, as well as risk & compliance. AI is outlining a path towards customer-focused growth and cost-efficient operations

¹² Wintergerst, R. (2023). Künstliche Intelligenz - Wo steht die deutsche Wirtschaft?
¹³ NVIDIA (2024). State of AI in Financial Services: 2024 Trends.

According to the European Investment Bank (2021), AI holds considerable promise in the banking sector: "In banking, it has been estimated that AI could increase banks' revenues by as much as 30% and potentially reduce their costs by 25% or more."¹⁴ This highlights AI's strategic value in the payments sector, outlining a path toward customer-focused growth and cost-efficient operations. The adoption of AI across these dimensions signals a future marked by innovation, operational efficiency, and enduring success.

Drawing from the opportunity areas depicted in Figure 5 and the use cases outlined in the AI opportunity map (Figure 6), three key potentials for financial services institutions emerge:

Potential 1: Tailored growth

AI empowers organizations to create highly personalized solutions through the utilization of data-driven insights. Customized solutions not only boost customer loyalty but also sharpen a company's competitive advantage, leading to higher revenues. Furthermore, AI-driven strategies in customer engagement refine personal relationship management, achieving this with impressive cost-efficiency.

Potential 2: Streamlined operations and cost efficiency

AI offers advantages that go beyond enhancing customer interactions, significantly improving operational efficiency on the back end. By incorporating automation and refining processes, AI leads to increased efficiency and substantial cost savings. This allows for the strategic reallocation of resources towards innovation and other critical investments, thereby creating a significant competitive advantage.

Potential 3: Sophisticated Risk Management and Regulatory Compliance

AI is increasingly recognized as an essential tool for real-time risk detection and adherence to regulatory compliance. It allows organizations to proactively identify and mitigate risks, thus ensuring regulatory compliance and protecting both financial stability and reputation.

¹⁴ European Investment Bank. (2021). Artificial intelligence, blockchain and the future of Europe: How disruptive technologies create opportunities for a green and digital economy.

AI opportunity map



3 Exploring AI

four practical use cases in banking and payments

When discussing AI use cases, the sheer volume of possibilities can be daunting. Therefore, it is always essential to discuss AI in the most tangible terms. To make AI more approachable, this report will illustrate its practical applications through real-life examples. Together, DataArt and Arkwright can provide the required experience that is needed to leverage unlocked potentials of AI quickly and effectively for financial service providers.

The examples illustrate the following:

- The substantial enhancement of customer support efficiency through artificial intelligence
- The predictive capabilities of AI in forecasting consumer finance credit defaults
- The automation of annual report generation utilizing AI technologies
- The improvement of organizational data management speed and reliability with AI integration



Figure 7: Case studies

Practical AI Use Cases



USE CASE 1: Enhancing banking customer support with AI-powered virtual assistants

This strategic deployment of AI in banking customer support has made the client's business more dynamic and responsive, leading to significant gains in customer satisfaction and loyalty. The solution serves as a compelling case for other financial institutions to follow suit, showcasing the scalability and effectiveness of AI in the banking sector.

70-80% of incoming calls are now efficiently managed by virtual assistants

Client Profile:

A prominent retail bank was flooded with customer inquiries, causing extensive wait times and a substantial workload for support staff. These challenges not only impacted the cost-efficiency of operations but also affected client satisfaction levels.

Challenge and Solution:

Facing the digital era's demands, the bank recognized the need to upgrade its customer support to accommodate the growing volume of routine banking inquiries, such as balance checks, transaction queries, and account updates.

AI Integration for Customer Support:

An AI-powered virtual assistant capable of automating responses to frequently asked banking questions was developed. This solution hinged on the implementation of conversational AI, which was expected to reshape the customer support paradigm by facilitating quick and reliable self-service options.

Outcome Highlights:

- Virtual assistants now competently manage basic banking queries such as balance inquiries and serve a broad range of customer preferences from text-based to voice-enabled communication based on NLP technology
- The service operates 24/7, delivering swift response times as low as 7-8 seconds, ensuring consistently prompt support throughout all hours
- Approximately 70-80% of incoming calls are now efficiently managed by virtual assistants, freeing up customer service representatives to address more complex issues, thereby improving the overall service standard and boosting customer satisfaction



Figure 8: Schematic overview of the AI-powered Virtual Assistant solution

Practical AI Use Cases



The versatile architecture boosts ROI through technological scalability

USE CASE 2: Loan default prediction prototype

For a leading credit organization familiar with supplying point-of-sale (POS) financing and other credit products, developing an intuitive loan default prediction system has become imperative in navigating the risks inherent in a rapidly evolving digital credit landscape.

Client Profile:

An established credit provider excelling in offering POS, cash, and revolving loans through a wide-reaching online and brick-and-mortar distribution network. With a business model initially rooted in POS financing, they have successfully grown their services to encompass a full suite of consumer credit products tailored to the financially diverse needs of their customer base.

Challenge and solution:

Predicting loan defaults is a complex process requiring an acute analysis of customer behavior and myriad data points. To tackle this issue, a sophisticated machine-learning engine was designed to absorb and analyze data from a myriad of alternative data sources to predict loan defaults nuancedly and accurately.

ML Pipeline Design:

The proprietary ML pipeline seamlessly merges disparate data, streamlines the preparation process, and engages in parallel feature generation. The pipeline's depth can be adjusted to enhance complexity where needed, generating a range of descriptive features instrumental in credit risk analysis.

Advanced Predictive Modeling:

By leveraging powerful tree-based algorithms, the solution delivers precise assessments of client default risks, significantly mitigating potential credit losses. This model serves as a versatile framework, readily adaptable across diverse datasets, projects, and financial challenges faced by the organization.

Outcome Highlights:

- The predictive model delivers detailed risk assessments with customizable features for tailored risk profiling and a versatile architecture that boosts ROI through technological scalability
- The solution incorporates modern technologies such as LightGBM, Hyperopt, and SHAP for efficiency, optimized performance, and transparent explanations of predictions, therefore enhancing the organization's capabilities for proactive risk management
- Designed for flexibility, the solution supports both on-premises and cloud deployment, offering a robust framework for navigating the complexities of retail banking credit risk



Practical AI Use Cases



USE CASE 3: Streamlining report generation in the finance sector with generative AI

The technical implementation helped the client to successfully enhance their reporting function, making it more agile and accurate. This development demonstrates the capability of Generative AI to improve traditionally manual processes in the financial industry.

Cost and time for report creation were cut significantly through enhanced extraction and verification methods

Client Profile:

The client, a specialist in proxy solicitation and corporate governance, faced the challenge of time-intensive manual processes in preparing, distributing, and managing annual reports across the financial sector.

Challenge and solution:

The advancement in technology prompted the client to explore options for optimizing these tasks. Eager to modernize, they sought a solution to reduce both the time taken and the resources spent on these manual processes.

Generative AI Integration for Report Generation:

To tackle this issue, a comprehensive automation strategy was developed to revolutionize the process of generating annual reports. The solution utilized Generative AI technology to serve a broad spectrum of financial establishments, creating an efficient reporting system.

Outcome Highlights:

- The need for human intervention in the report generation was drastically reduced, while accuracy and reliability of outputs were enhanced, leading to an overall boost in efficiency
- Cost and time for report creation were cut significantly through enhanced extraction and verification methods
- The newly developed system facilitated immediate responses to document-based inquiries, speeding up question handling and boosting user engagement.



Figure 10: Schematic overview illustrating the streamlined report generation using Generative AI $% \left[{\left[{{{\rm{ST}}} \right]_{\rm{TT}}} \right]$

Practical AI Use Cases



The AI-enhanced solution increases data reliability by 15%

USE CASE 4: Advancing data management with AI-enhanced Smart Data Extraction

This solution is specifically designed to empower financial service institutions with advanced technology to process and mine their data troves for actionable intelligence, redefining the paradigm of data management within the sector.

Client Profile:

Financial institutions are in a constant quest to derive insights from their extensive and complex datasets. Thus, the core challenge for these enterprises is the extraction and integration of structured information from a large number of data sources for seamless inclusion in their operational pipelines.

Challenge and solution:

As the volume and variety of unstructured data continue to grow - spanning free-form documents, social media interactions, and email correspondences - the urgency for robust and intelligent parsing tools becomes integral to enable decisive action and workflow automation. This challenge is compounded by data that is often dispersed across several repositories, where key semantic connections might not be immediately evident.

In response to this challenge, an advanced solution that integrates the functionality of ChatGPT with the existing intelligent document processing model was developed. This integration transcends the conventional market solutions, which typically depend on rigid templates and static document formats. Unlike these traditional approaches, the AI-driven method uncovers and interprets the semantic content hidden within any form of unstructured data, empowering financial institutions with an unprecedented level of analytical depth and flexibility.

Smart Data Extraction Capabilities:

The enhanced system, DP-ML (IDP Accelerator) with GPT API integration, uses NLP techniques to contextually interpret text, identify entities, and extract pertinent facts, events, and relations. It skilfully transforms unstructured data into structured, actionable formats, addressing major data processing challenges.

Outcome Highlights:

- The smart NLP deployment enhances data accuracy and streamlines the transformation of unstructured to structured data, while facilitating large-scale data governance and compliance
- The solution increases data reliability by 15% and provides enriched datasets and strategic insights for product development and customer segmentation
- Additionally, the solution enables smart data extraction for tasks like loan applications and contract reviews, enhances churn analysis and predictive modelling for customer retention





4 Capturing the value of AI

Timings are highly dependent of the existing "playground" and legal abilities of the organisation In the recent chapter, we presented tangible examples of AI applications. But how can you unlock this potential in your own company and, more importantly, where should you start?

To fully harness the potential of AI while maintaining a balanced risk-opportunity ratio, a blend of both business and technological expertise is essential. Effective management of resources and technological know-how is key to avoiding costly and prolonged investment efforts. This approach allows for the quick realisation of tangible efficiencies and revenue opportunities. The importance of these competencies varies throughout a project's lifecycle; thus, it is advisable to rely on established partnerships for a comprehensive solution. Adopting this approach, enterprises can rapidly develop and implement AI proofs of concept (PoCs), e.g., for the use cases outlined in chapter 3, often within a few weeks. Timings are highly dependent of the existing "playground" and legal abilities of the organisation. A fast entry into the AI landscape enables businesses to experiment effectively, which is a vital step for uncovering the individual AI potential.

Arkwright and DataArt have a long-standing partnership, merging their expertise in strategy and technology. In our integrated framework (figure 12) we converge the managerial and technical perspectives.

The initial step involves conducting a thorough assessment of current operations to gain complete transparency over existing processes and infrastructure. Based on this foundational understanding, AI use cases are mapped and evaluated along the value chain and various process steps. The overview presented in figure 6 can act as a starting point, while individual capabilities and functions must be considered. Such an evaluation is crucial for prioritizing use cases that offer substantial value with manageable complexity and risk. This strategic approach is necessary to handle the range of application possibilities discussed previously without overburdening the organization.



PoC initiation for further use cases

Figure 12: Methodological approach to unlock the potential of AI in banking and payments

Following this, each prioritized use case will undergo a proof-of-concept (PoC) phase using the established Data, Analysis, Modelling, Architecture (DAMA) approach. The objective here is to showcase functionality and value potential on a limited budget before progressing to the subsequent step of implementation and progressive enhancement of each potential.

By employing this structured and prioritized approach, it enables a successive re-evaluation and phased program management as outlined in step 4. The phased approach focuses on realizing the value derived from the deployment of AI use cases, ensuring a structured and beneficial integration of AI technologies.

5 Organisational transformation for the age of AI

AI tools bring significant benefits but also multiple new risks to banks As the organization continuously prioritizes and iterates on AI use cases, it must also evolve comprehensively to adapt to the AI age. Integrating AI into business operations is no longer a matter of choice, but a necessity for strategic planning. Even more important, the already observed shift away from highly linear end-to-end (E2E) strategic processes will be further intensified by the exceptionally rapid evolutionary cycles of AI. Consequently, all levels of the organisation are challenged to complement their strategic efforts with AI and its potentials in an iterative and evolutionary manner, aligning with a "strategy-as-a-practice" approach.

Strategic alignment	ر بی محکوم AI strategy & program	Risk & compliance	රති හිතිහ Underlying infrastructure	People & culture
Assess impact on corporate strategy Integrate AI effort into planning & resource budgeting Align innovation strategy & efforts	Map & assess potential use cases along value chain Iteratively test via Proof of concept Scale successful AI deployments and use cases	Identify & mitigate related (AI) risks Secure regulatory compliance Consider CSR & ethical implications	Define target data infrastructure to enable use of AI Ensure adequate data availability, quality and storage Carefully manage build /buy / borrow decisions	Strategically plan org structure & new requirements Acquire, transform and train workforce Integrate technological shift into cultural transformation

Figure 13: Integrating AI into the organisation



Strategic alignment - How to align with the overall corporate strategy effectively?

Grasping AI's role in sustaining competitive advantage is vital for strategic planning. Aligning AI initiatives with business strategy and embedding measurable AI objectives into corporate planning are crucial. Choices between developing, acquiring, or partnering for AI capabilities are key to strategic decisions and market positioning.



AI strategy & program - How to prioritise and quickly create value of AI?

The potential of AI tools varies significantly across companies, necessitating each organization to identify AI applications and use cases relevant to their operations. This entails assessing the potential impact and value of these use cases, a process that must evolve with AI's rapid advancements. Banks should adopt an iterative approach, emphasizing the testing of use cases with real data in proofs of concept, as detailed in Chapter 4, before full deployment. Effective AI program management is critical, optimizing investment in various potential use cases.

Risk & compliance - How to create a fully compliant "AI playground"?

AI tools bring significant benefits but also multiple new risks to banks, including data breaches, unpredictable outcomes, and unregulated AI usage. Banks must emphasize robust risk management, ensuring compliance, data privacy and preventing potential AI-related incidents. Additionally, ethical considerations and AI's role in corporate social responsibility (CSR) are paramount, necessitating ongoing review and adaptation to meet changing governance and usage standards.



Underlying infrastructure - How to design the required infrastructure and effectively manage partners?

AI tools must integrate seamlessly with existing infrastructure, necessitating certain prerequisites for successful technology deployment. Key among these is a solid data infrastructure, ensuring data quality, availability, and secure storage. Equally important is managing vendor relationships, especially given AI's reliance on external partnerships. Continuous evaluation of whether to buy, build, or partner for AI solutions is critical to maintain strategic flexibility and alignment with long-term goals.



People & culture - How to acquire respective workforce & skills with a technology-open culture?

The emergence of new AI tools intensifies the need for banks to evolve their workforce and culture, emphasizing agility, digital skills, and ongoing learning. After assessing AI's potential, banks should adapt their organizational structure and skillset, through both training and hiring. Support functions are crucial in managing technical, functional, and cultural shifts. Employees will transition from direct processing to overseeing AI-driven tasks, highlighting the need for a culture that fosters collaboration and innovation.

Conclusion

Integrating artificial intelligence (AI) into banking and payment systems has become a strategic imperative. This is due to the swift advancement of AI technology and the fact that numerous entities have already begun adopting this innovative technology. Strategic alignment, measurable objectives, and prudent AI program management are essential to succeed. To create an "AI playground", banks must address new risks, ensure robust infrastructure, and foster a culture of playing around as a basis for future differentiation. Step by step, the relevant stakeholders (including regulatory bodies) gain new competencies, which increase the implementation speed for subsequent topics.

Utilising the new possibilities offered by AI represents a unique opportunity to set yourself apart from the competition in the future. This is not just about processing individual tasks more efficiently or analysing large volumes of data, but rather about using resources more effectively across the board: concentrating our own capabilities on what really creates value for your customers and makes the best possible use of human skills - precisely what AI is not (yet) able to do. New possibilities offered by AI represent a unique opportunity to set yourself apart

About Arkwright





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We believe in pragmatism, meticulousness and deep knowledge of the industries in which we operate Arkwright is a leading management consulting firm specializing in strategic advisory services for private corporations, NGOs, investors, and startups. Amongst a number of different industry-dedicated teams, our Digital, Payments, and Digital Banking practice is one of the most experienced globally, positioning Arkwright as a high-end digital financial services and payments specialist strategy boutique.

We serve a diverse clientele, including major financial institutions, central banks, technology providers, institutional investors, internet marketplaces, and media organizations. Arkwright leads and supports in developing digital strategies and transformations, leveraging our global case knowledge, proprietary methodologies, and the extensive hands-on experience of our consultants and industry experts.

We believe in pragmatism, meticulousness and deep knowledge of the industries in which we operate. At the heart of our mission is the development and implementation of enduring performance improvements and growth strategies, in partnership with our clients.

When we founded Arkwright in 1987, we did so with a strong belief that clients' sustained success requires deeper collaboration and a different working model than what we experienced at the time. This belief in deep-rooted, longterm partnerships has been central to our approach and growth. Today, Arkwright is an international consultancy with Nordic roots, operating globally from offices in Hamburg, Oslo, Stockholm, and London, and with additional presence in the Middle East and the US.

For more information, please visit www.arkwright.com or contact our Hamburg Office under +49 (40) 271 6620

About DataArt

Founded in 1997, DataArt is a leading global software engineering firm and the partner for progress in the digital age. Guided by our people-first principle, our worldclass team designs and engineers data-driven, cloud-native solutions that generate immediate and enduring business value. Through our 20+ domain-specific Labs dedicated to R&D and strategic innovation, we work together with our clients to ensure they stay on the leading edge.

Headquartered in New York City, DataArt brings together 5,000+ experts across 30+ locations in the US, Europe, Latin America, India, and the Middle East, with clients including major global brands like Unilever, Priceline, Ocado Technology, Legal & General, and Flutter Entertainment. Recognized as a 2023 Newsweek Most Loved Global Workplace and 12 times as an Inc. 5000 Fastest Growing Private Company, we are proud of our reputation as a great place to work and partner with.

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