FUZZY LABS Woodhurst

Navigating AI in Financial Services

a Woodhurst Blueprint© for building artificial intelligence capabilities

Contents

Preface

Artificial Intelligence has captivated people and businesses across the world because of the infinite technological advancements it promises. From finding the best route home based on travel data to detecting, in real time, fraud patterns that are invisible to a human – AI is becoming a ubiquitous technology in the digital age.

AI enables machines to learn from experience, to ingest incomprehensible amounts of data and identify patterns and nuanced insights that can help solve complex problems. It can improve market predictions. It can power self-driving cars. It's been beating us at chess since 1989. But the breadth of business benefits are still being uncovered. The Woodhurst and Fuzzy Labs teams want to demonstrate how financial institutions can experiment across different AI projects.

This white-paper will firstly cover why AI is capturing the attention of businesses worldwide, and present how it can offer better products and services at a fraction of the cost.

Secondly, it will look at the specifics of what AI can bring to Financial Services, including enhancing the customer experience, improving the ability to fight financial crime, automating manual processes and mitigating risk by increasing regulatory compliance.

Thirdly, we discuss how to create an environment that will allow an AI project to thrive by identifying the key capabilities a business should embrace if they wish to realise the technology's full potential.

Finally, we present the AI Blueprint© – a framework that can guide businesses to experiment and employ AI technology in a way that best suits their needs.

Ultimately, we want to empower businesses to feel confident that they can benefit from AI technology. This paper is a guide to explore ways to adopt AI, as well as to provide a realistic approach for how to kickstart the process.

Why is everyone talking about AI?

Artificial intelligence is everywhere.

Your maps app determines the best route for your journey based on real time traffic and travel data. Photos are automatically tagged based on their content so you can search using keywords. Fitness trackers give us tailored advice and smart assistants are embedded in our homes.

Businesses are using AI to create better customer experiences. Tech companies like Amazon have based their growth strategy around the technology. Amazon say that without AI "Amazon.com couldn't grow its business, improve its customer experience and selection, and optimize its logistic speed and quality". While most banks wouldn't class themselves as tech companies, their appetite for using AI to add value to their products and services is stronger than ever.

The success of challenger banks and FinTechs, who have placed AI at the heart of their growth strategy, has demonstrated that consumers respond positively when technology makes their financial lives easier. By being technology-driven, it's possible to be more efficient while providing a superior customer experience. Research in AI dates back to the early 1950s, but more recently it's worked its way into all sorts of consumer applications. What's changed in the past decade? It's down to four things:

1. **Vast cloud-based computing power at a relatively low cost**
2. **The availability of large quantities of data that can be used to train AI models**
3. **AI-as-a-service: pre-trained models made available by the major cloud providers that can get you started with minimal effort**
4. **Enhancements in mobile computing that allow people to interact with AI through smartphones, watches and smart home devices**

According to a survey[1], 50% of financial institutions (FIs) hope to achieve cost savings or productivity improvements from AI projects. Another source shows that 80% of FIs are investing in AI projects[2]. If this level of investment is sustained, it's only a matter of time before AI underpins all core products and services provided by a financial institution.

[1] https://www2.deloitte.com/us/en/insights/industry/financial-services/artificial-intelligence-ai-financial-services-frontrunners.html

[2] https://www.sas.com/en_gb/customers/rbs.html

Now

The majority of the organisation is engaged in repetitive, low value tasks

▾ Low Value Tasks

▴ High Value Tasks

Future

AI tackles the low value tasks which allows humans to focus on high value tasks for which they're uniquely equipped

▾ Low Value Tasks

▴ High Value Tasks

Key takeaways

01.
AI is already ubiquitous in our daily lives; from making it easy to search through photos to giving us personalised health advice based on data from our watch

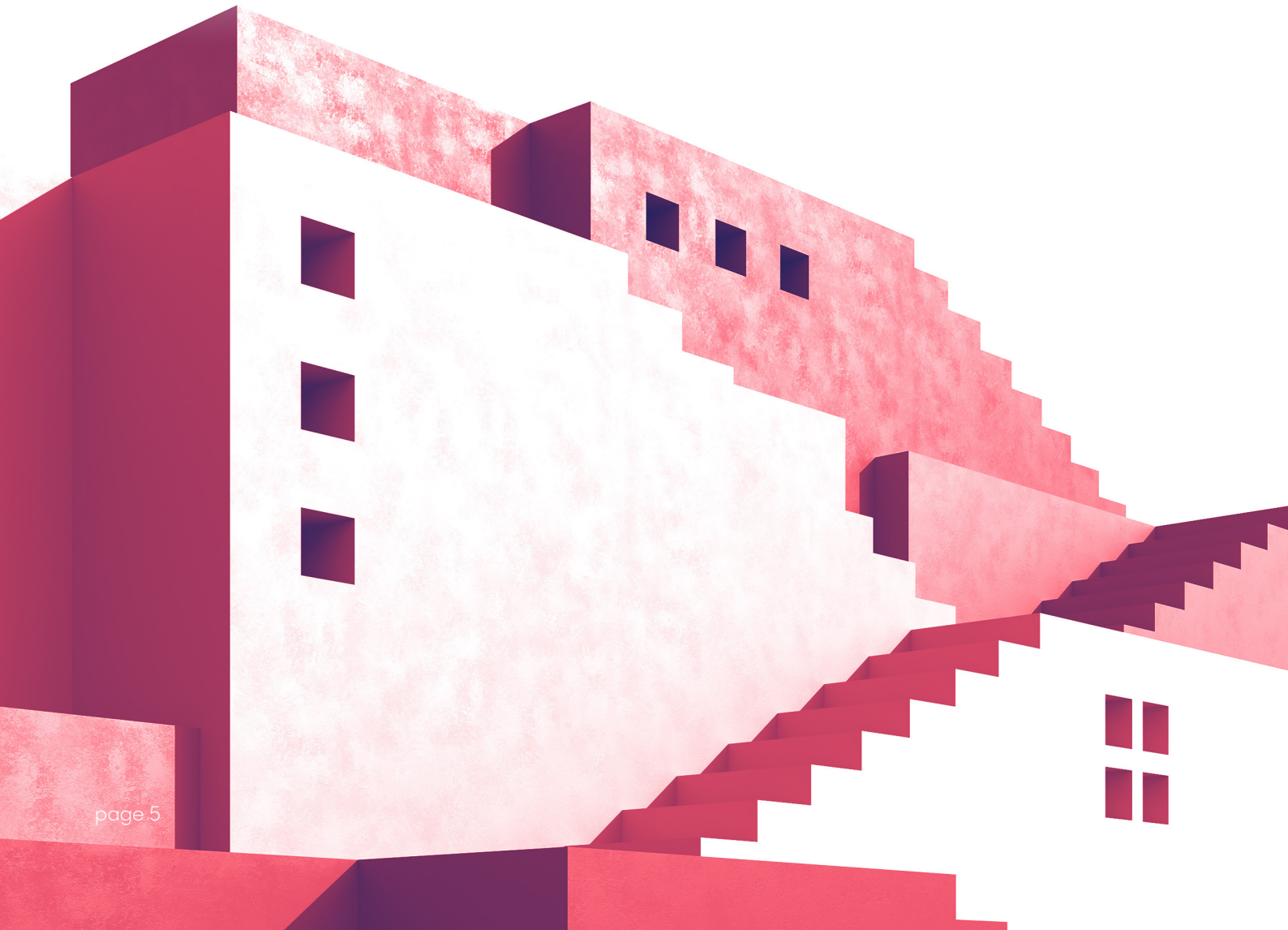
02.
Businesses have a **great opportunity to provide better products, services and customer experience** at a fraction of the price with AI technologies

03.
The **technology already exists!** By partnering with vendors, financial institutions can acquire AI products and services without the large up-front costs of developing them internally

What can AI bring to Financial Services?

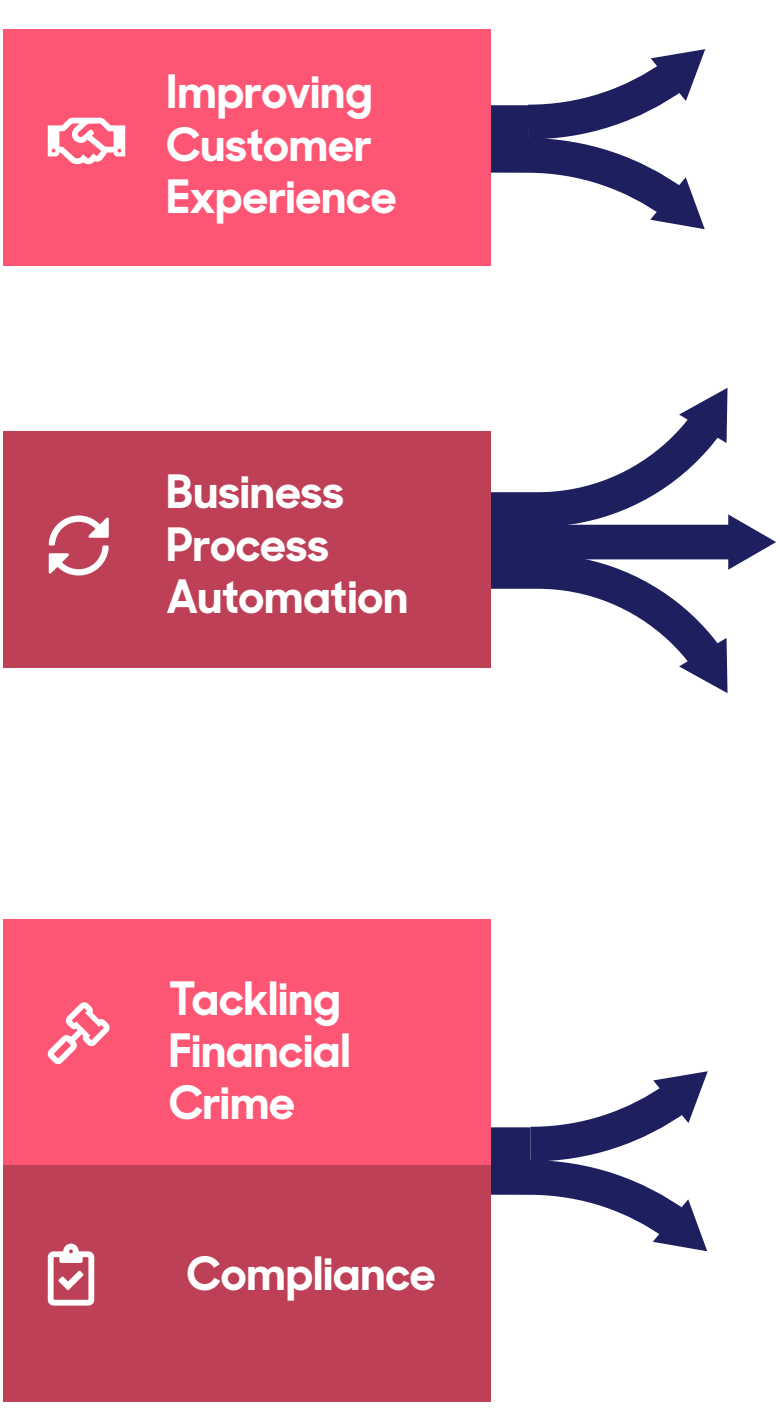
AI offers limitless potential within Financial Services. Over time, there are few areas that it won't touch.

With advances in the technology in recent years and the improvements of specific AI tools and models, there are a number of areas of the industry that can reap the benefits of AI almost immediately. almost immediately.



The business capabilities that can be most impacted by the introduction of AI

The AI techniques that will drive the greatest benefit in specific business contexts



Improving customer experience

The rise of challenger banks has demonstrated how technology can drastically improve customer experience. Thirteen million people in the UK use challenger banks today, and that number is set to triple in the coming year. In order to remain competitive, traditional Financial Service providers are turning to emerging technology, including AI, to improve their customer experience.

PERSONALISED ADVICE

In the UK, Metro Bank, one of the initial challengers, uses predictive analytics to help customers manage their finances. Metro's in-app Insights service monitors transaction data in real-time, and uses this to provide personalised advice to their customers.

This type of Personal Financial Management (PFM) capability is the foundation that allows banks to go beyond simple insights and advice, towards the concept of a financial coach in your pocket. This is becoming an AI-enabled reality today.

Fintechs such as Plum and Cleo have coupled a chatbot interface with sophisticated AI technologies to create a digital relationship-driven experience with their users, rather than the transactional-driven one of traditional banks. As competition increases and retail banking moves towards digital interfaces, the battle to own the relationship becomes much more important. The AI financial coach becomes the portal through which all other financial products are used.

IMPROVING CUSTOMER SUPPORT

Nordea have developed Nova2 to enhance their customer support. Their chatbot uses natural language processing to interpret customer queries and give relevant responses. Customer wait times have decreased dramatically and arguably the responses will be better formed and more accurate. Nordea, and other firms that have introduced similar solutions, will be able to redistribute the people previously responsible for chat towards support issues of a more complex or technical nature.

ONBOARDING NEW CUSTOMERS

The traditional experience of opening a new banking product can be drawn out and requires significant effort on the part of the customer. AI is helping to dramatically improve this by streamlining the Know Your Customer (KYC) process. Using image recognition, companies like Onfido can validate a customer's identity in seconds using a combination of a selfie and a photo of an identification document. This simple integration of an existing technology will reduce drop off rates during the product opening journey, speed up the end to end process for the customer and improve overall customer engagement.

Fighting financial crime

Financial crime is a major threat to the UK. The Financial Services industry has invested heavily in systems and innovations that last year prevented £1.6bn being lost to fraud. Despite this, criminals stole £1.2bn in 2018.

AI provides meaningful insights from data that helps to uncover risks and combat financial crime. This enables human experts to focus on high-probability cases rather than processing thousands of false alerts each day.

REAL-TIME FRAUD IDENTIFICATION: AI can identify complex fraud patterns and accurately reduce the number of false positives by leveraging large amounts of data. For example, Citi have developed a payment outlier detection service that identifies payment anomalies before payments are processed. Powered by machine learning, this system constantly re-trains against new data in order to improve its detection capability and reduce false-positives.

AML, TRANSACTION MONITORING AND SANCTIONS SCREENING: Machine learning models can be used to perform analytics and deliver risk scores in real-time.

Vocalink and Pay.UK recently launched an anti money laundering solution for real-time payment systems. Within a few weeks of going live in December 2018, thousands of UK accounts were flagged for further investigation due to suspicious activity – a significant percentage of which were subsequently identified as being involved in money laundering. Multiple, large, well-concealed money laundering rings were uncovered.

HSBC developed an industry-leading anti money laundering system which combines customer and counterparty trade information, transactional data and external insights to detect and disrupt financial crime that may have gone under the radar in the past.

ANTI-BRIBERY, INSIDER TRADING, AND CORRUPTION: AI can identify these forms of financial crime by analysing emails, voice, expense reports and other forms of unstructured data.

In both the public and private sectors, AI could be used to analyse data associated with competitive supplier bids, to identify if corruption could have resulted in one supplier being favoured over another.

Business

A lot of time in financial businesses is spent processing paper documents. A manual review of 12,000 annual commercial credit agreements might take 360,000 hours, but the same volume of documents can be reviewed in just seconds by using optical character recognition and text analysis. We can automate laborious processes by putting AI in the right places:

- **Reconciliation of multiple non digital data sources**
- **Data input and reporting across different, often unconnected systems**
- **Customer account processing including amending direct debits, or opening and closing accounts**

These techniques form part of a larger workflow that reduces overheads by putting tools, processes and applications in a single location. Business process automation streamlines simple, time consuming and repetitive tasks. The result is that people are freed up to work on higher value tasks that involve complex decision making. As AI is applied in more areas of financial business, existing employees can move to those tasks for which humans are uniquely equipped.

Compliance

Regulatory compliance in the Financial Services sector is a complex and challenging area. Risk comes in many other forms, particularly financial fraud, money laundering and other financial crimes, and when tackling these sources of risk it's critical to bring together a diverse range of data sources in order to look for patterns and anomalies.

While regulation can act as a barrier to the adoption of emerging technology, by the same token AI can be beneficial in making compliance simpler and safer:

- **Automating repetitive tasks can reduce the scope for human error that would otherwise expose the business to increased risk**
- **Intelligence-driven compliance assessment can continuously assess compliance by using vulnerability scans, transaction logs, and customer service records**
- **Entity resolution is used to connect disparate data sources to uncover risk, possible fraud, and to check regulatory compliance. By breaking down data silos through intelligent linking we gain a single view of customer activity**

Key takeaways

01.
AI can deliver an **enhanced customer experience** – it can give customers personalised advice, tailored support, targeted products and rapidly improve onboarding times

02.
AI **reduces the threat of financial crime in the digital age** – it accurately analyses data at speed, which can revolutionise fraud tracking, AML and transaction monitoring capabilities

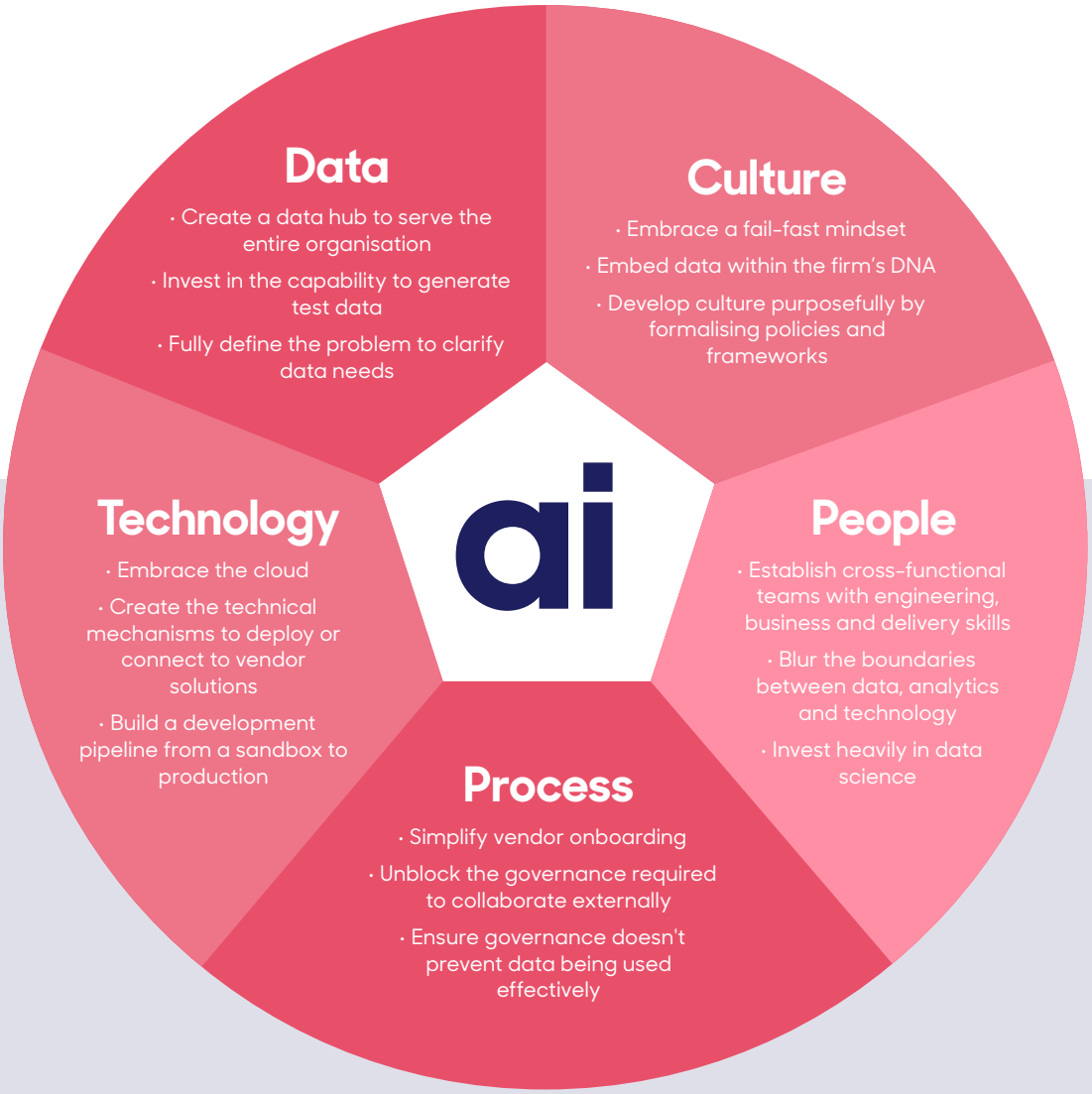
03.
Process automation will significantly reduce manual overheads, automate reporting, update consumer information and provide quicker decision making tools

04.
AI can help banks **mitigate risk and improve compliance** through its ability to review large amounts of data in real time to detect patterns and anomalies

Allowing AI to thrive

Artificial Intelligence can be applied across a range of scenarios, but it needs a supportive organisational environment to be implemented successfully.

If an organisation wants to take advantage of AI, it must review its entire operating model to ensure it is set up for success. Elements of the right behaviours, policies, tools and practices will already be in place, but these should be shaped further to create a conducive environment for AI implementations.



Woodhurst

Culture

Success happens in organisations whose culture embraces innovation, promotes an experimental, fail-fast mindset and harnesses the creative flair of its people. But it's not easy to foster this environment. Financial targets don't lend themselves to technology investments that might not see an immediate return; performance targets don't tend to reward "failures"; and governance processes don't make it easy to liberate projects from the bounds of bureaucracy or allow them to proceed at pace.

Without a strong culture the notion of incremental, iterative development is unworkable. The entire organisation must be enabled to trial new technology in a controlled manner by defining the phases of innovative change, pegging specific outputs to each phase and introducing regular goal-oriented checkpoints to control progression through the project.

The right culture ensures that:

- **People are not fearful of spending time, money and energy on projects that might not work, but people are also not frivolous and careless with innovation budgets**
- **Those making financial and personal targets appreciate that real, impactful change requires investment over time**
- **The stigma around failure is removed and replaced with a celebration of learning in a safe environment**

These ideas and policies can be formalised within an overarching innovation framework, set at the top of the organisation. By defining the bounds of each development phase, streamlining governance steps and building the right capabilities internally, organisational expectations will be set appropriately and everyone will be empowered to effect change.

This, coupled with an investment to train the entire organisation in data science, cloud technologies and customer-driven value propositions will give people the knowledge, tools and environment that allow AI projects to thrive, but also the rigour required to take a service, product or process live within a bank.

People

The organisation can sow the seeds of a culture, but it's the people that cultivate it and allow it to blossom. For an AI project to produce fantastic results, firms need a blend of engineering, delivery and business skills. The boundaries between data, analytics and technology need to be broken down and the organisation needs to work to develop core capabilities everywhere, across everyone.

- **Engineering:** Software developers, data scientists and cloud engineers will form the backbone of any AI project. These people will breathe life into the organisation, often bringing great experiences and insight from the tech giants or nimble start-ups. People with these capabilities need to be incentivised to join the organisation. Banks can offer interesting, cutting-edge projects, open up the technology that is available to work with and provide a cultural and financial package that rivals the largest tech firms.
- **Delivery:** The importance of a set of strong delivery leads cannot be overstated. A business case will still need to be managed, a plan will need to be adhered to, and stakeholders across the organisation need to be well informed about the aims and progress of the project. Experienced change professionals will be rife across the organisation, but they need to flip from an "old-school" mentality of project delivery to one that embraces and enables agile, digital change.
- **Business:** Artificial Intelligence solutions need to be built from well-analysed, well defined business requirements – for which a subject-matter expert from the business is essential. This is someone who can analyse underlying data, understands the impacted business processes, and who knows the target market for a particular product. The organisation has to allow these 'Run the Bank' roles to engage in innovative change projects and suitably reward their performance for doing so.

Most firms will have been on this journey for a number of years, but there is still a heavy reliance on flexible resources rather than building the internal capability required to ingrain expertise within the organisation, and there is an adherence to "old-world" organisational structures and departments. To truly flourish and excel at AI implementations across the organisation, skills and capabilities need to be developed within and ideally right across the business.

Process

Too often financial institutions are hamstrung by internal processes which aim to control how projects are executed, but more frequently place blockers in the way of progress, particularly where new technologies are concerned.

With the advent of AI and other complementary technologies - cloud computing, big data analytics - it's vitally important that governance, procurement and legal processes are enablers rather than hindrances.

We've seen first-hand where process has stepped in the way of progress, and some of the measures that firms have taken to make positive changes.

- **Vendor Onboarding:** Procurement teams within banks are often criticised for their bureaucratic, burdensome processes. To enable projects to proceed at pace, the organisation needs to come together to find a way to streamline the onboarding process in the most efficient and controlled manner. This is especially important where less established start-ups offering innovative solutions are concerned.
- **IT Security:** The firm's IT security policies must allow third party solutions to either be deployed internally or hosted externally and securely connected to. The process must remain aligned to the business' risk appetite but must not act as a blocker to AI engagements.
- **Data Management:** In a data environment recently dominated by GDPR, there must be controls around how data is shared within and outside the organisation. When starting an AI project you need to think about the data required and whether there are going to be any issues using that data in a way that is was not initially intended for. Each project should be able to rely on a robust data governance model and the controls it imposes to prevent compliance issues from unintended consequences of data use.

Where processes are not currently conducive to AI development, a dialogue should be opened between the areas of the organisation that own or input into the process to collaboratively initiate a change. Once agreed, senior process owners should champion the changes and continually monitor their effectiveness as AI projects are embarked upon.

Technology

If data is the lifeblood of an AI solution, technology is the heart that keeps the blood pumping.

The science behind AI and ML algorithms hasn't changed dramatically in the last 30 years – it is the advent of cheap, scalable computing power hosted in the Cloud that is driving the conversation around AI today.

Banks, therefore, need to embrace Cloud technology and set the business up in the right way to use Cloud computing as effectively as possible.

A benefit of Cloud technology is that the largest platforms – Amazon Web Services, Google Cloud and Microsoft Azure – offer access to a range of open-source AI technologies as part of their service.

Many banks have embarked on the journey towards Cloud computing, but they are not yet at the point where any project, within any team in the bank, can quickly spin up a development environment to test a hypothesis with readily available AI enabled applications. This is the vision that banks should be aiming for today.

In the absence of full adoption, banks can at least ensure they have a structured technology pipeline moving from a development sandbox to a secure, highly controlled production infrastructure, with states in between that allow development to take place with a varying level of control. Engineers can then develop and test solutions in a controlled manner, building out the algorithms, microservices and APIs required to connect to existing infrastructure and data sources. This interoperability will allow teams across the bank to benefit from a single AI solution.

Where a vendor AI solution is being tested and ultimately implemented within the bank, the technology needs to allow third party applications to be hosted within internal environments, or provide a secure pattern to connect to them. Keeping the number of vendors to a minimum will help to maintain an efficient process and strong governance. To do this effectively each AI project needs to make their solution available to be used across the bank, and to create commercial constructs with vendors that allow for engagement by multiple teams, departments and geographies.

Data

Artificial Intelligence solutions are nothing without data, and banks certainly have a lot of it. The challenge is around quality rather than quantity, and an inability to identify and really harness the types of data needed to design, build and develop an effective AI solution.

There are several capabilities financial institutions can build that will serve the organisation well when executing AI projects, and a number of steps that can be taken within the project itself.

Firstly, banks need a centralised data hub. This should include a data model that rationalises data points across the organisation - transactional, personal, risk, financial, digital usage, product and external data sets. The hub can be built upon a cloud-based architecture that allows data to be identified, accessed and manipulated as a particular business area sees fit. We fully appreciate that this is no small task so it should be an ongoing exercise that lays the foundation not just for AI projects, but for nearly all change initiatives across the bank.

A hub for production data will allow the business to analyse how an AI solution can be applied and will provide historic data that will be used to train AI models. But crucially it is unlikely to be suitable for the early phases of an AI project due to data controls that need to be adhered to in development environments.

During development, the organisation will want high quality, robust test data that can be used without restrictions in sandbox and test environments. The capability to produce and harvest high quality test data can be purchased through a supplier or developed as a function to speed up the rate at which the business can quickly test their hypotheses in a low risk manner.

With the ability to easily source the right quality and quantity of both test and production data, each individual project then needs to consider how it will prepare and use that data for its specific use case.

Up front analysis of the problem at hand, the end goal and the available data is essential to developing and implementing an effective AI solution. Ultimately the data determines what the algorithm does.

To do this, project teams should analyse, prepare and constantly monitor the data for their AI solution.

- **Analyse:** You need to fully scrutinise which data points will be required to prove the hypothesis and then build an accurate, scalable AI model. In a world of data proliferation, you also need to challenge yourself to identify the right data points. Consider the potential impact that your own inherent biases, or biases inherent within the data, will have on your selection and work to mitigate against that. Consider the bounds of data privacy and whether the data you select will be used in an ethical manner. Full analysis of these considerations at the start of the project will ensure that the end product – whether it is a new feature, process, service or other – will most closely meet its intended aim.

- **Prepare:** Once the right data points have been selected you need to ensure that it is of the right quality. Review the data set in detail, identify the key features that will be used for the model and work to resolve any data quality issues at the source. Due to legalities around GDPR and data controls put in place within the organisation, consider the classification of your data and the masking techniques required to ensure no sensitive information is unnecessarily shared - particularly where a vendor solution is being used.

- **Constantly Monitor:** During each phase and crucially once the model has been implemented, ensure its performance is constantly monitored – it cannot be assumed that once the model is in place it will run without issues. Over time the quality of data received by the model may reduce or changes to the data set could adversely affect the model's output. These problems would most likely reside under the surface so the business owner of the solution should regularly review the data inputs and the model outputs to ensure it continues to meet the intended aim.

Key takeaways

01.
Businesses need to foster a **culture that embraces innovation**, is willing to test new ideas, learns from failures and promotes creativity amongst its staff

02.
Assemble **cross-functional, multi-disciplinary teams** with a blend of engineering, delivery and business skills to avoid silos and deliver more quickly

03.
AI technology is **only as good as the data** it is trained on - build a centralised data hub and ensure data is of a high quality

04.
Utilise **cloud technology** as a platform for AI solutions

The AI Blueprint©

The AI Blueprint© provides a framework within which an AI project can take place successfully.

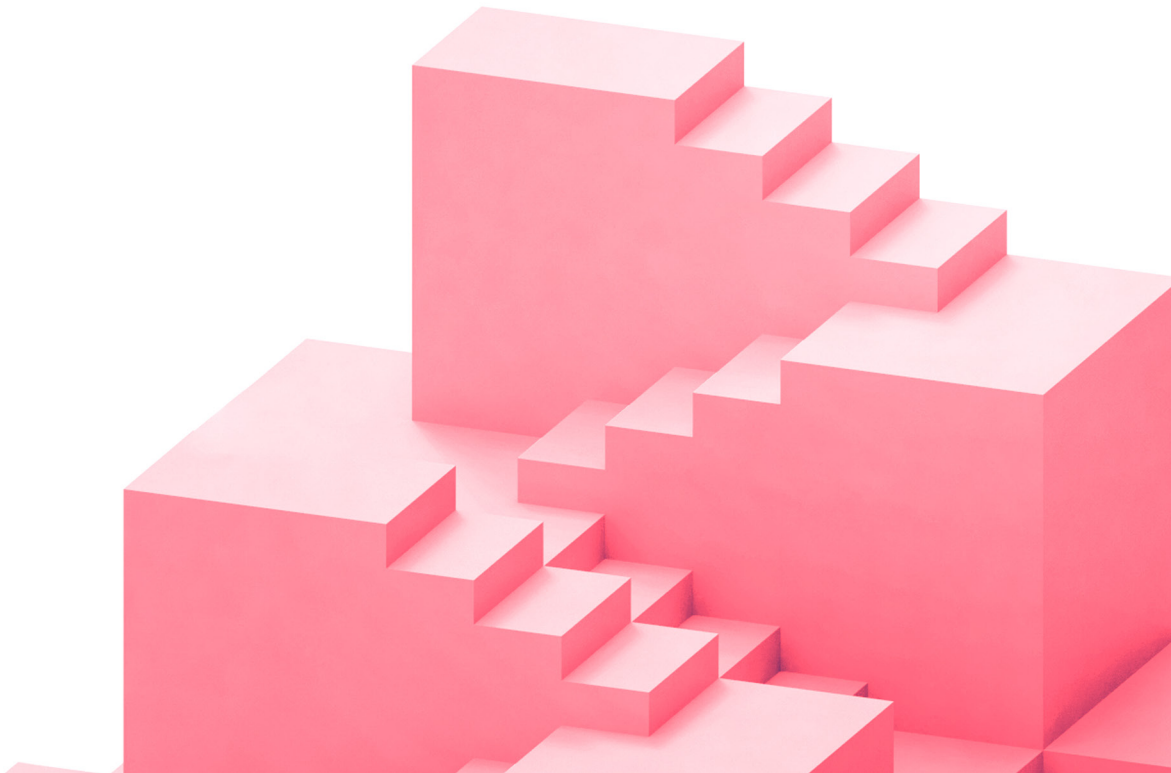
Whether you are simply testing a hypothesis with a short, time-boxed experiment, executing a Proof of Concept with a new technology vendor, or implementing an end to end AI solution that was developed in house, the Blueprint© provides a practical framework to keep the project on track and avoid the common pitfalls many stumble into. This isn't about creating a rigid, formal project methodology that must be adhered to; it is about creating a framework that can be flexibly applied to many different scenarios.

We have broken down the Blueprint© into three simple phases - most use cases will traverse across each of these in some way, even if the project doesn't get to full implementation and operationalisation:

1. Assessment: where you ensure the organisation's vision for AI is clearly and realistically understood and the ability to deliver on this vision is assessed

2. Inception: the preparatory phase when AI models and systems are conceived and the team and tooling are put into place

3. Development: through a process of iteration the AI solution and technical infrastructure are built and embedded within the organisation



Assessment

Evaluation

Summary

- **Clarify problem statement**
- **Understand data and technical landscape**
- **Review solution options**
- **Assess costs and benefits**

Deliverables

- Problem Statement definition
- Solution recommendations
- High level business case
- Delivery roadmap and approach

Approvals

- Business sponsor

Inception

Preparation

Summary

- **Workshop to define solution requirements**
- **Define and establish cross-functional team**
- **Set up project tooling**
- **Begin governance process**

Deliverables

- Agreed and prioritised epics and user stories
- Agreed Product Roadmap
- Refined business case and delivery plan

Approvals

- Legal, risk and compliance
- IT security
- Procurement
- Business sponsor and users

Development

Iteration

Summary

- **Develop features through iterative sprints**
- **Regular showcases to demo functionality**
- **Regular releases to controlled user groups**

Deliverables

- Validated and tested MVP AI tool
- Agreed support model for post-implementation
- Revised Product Roadmap

Approvals

- Business sponsor and users
- Solution architecture

Operationalise

Summary

- **Regular communications across the business**
- **End user or support staff tool training**
- **Technical support processes tested and in place**

Deliverables

- Product documentation and guidance
- Alerting, monitoring and issue management processes
- KPIs and feedback mechanism defined

Approvals

- Service and change management
- Business sponsor and users

Assessment

The scale of the Assessment phase will differ depending on the use case being evaluated, but in all instances it is prudent to delve further into the problem at hand to better understand:

- **The specific problem statement and some initial hypotheses about how AI could help**
- **The availability and quality of data that will be required to build the AI solution**
- **The current state of the technical capabilities within the business and the Architectural Runway needed to support the project**
- **The best AI solution for the business' needs – whether developed internally or procured externally**
- **The challenges that the project is most likely to encounter, and the ways in which these can be tackled**
- **The anticipated high-level cost of the project and the ongoing benefit that the AI solution will bring to the organisation once it is implemented**
- **A rough delivery roadmap that provides an overview of key target milestones and the development approach, always appreciating the effort required to implement and operationalise an AI solution**

With a focused set of outcomes and the availability of key people across the business, this phase can generally be executed in two weeks. As the complexity of the business problem increases, so should the rigour and time spent during this initial Assessment phase to properly set expectations and identify what will really be required to deliver an effective AI solution. If the technology and resource capability allows, this could include a short, time-boxed "experiment" using readily available AI tools and test data to quickly validate some of the assumptions on which the business case is built.

Given the agile nature of AI projects, the transition between delivery phases does not need a formal governance gate. However, the analysis produced during this evaluation period should be used to secure senior sponsorship and justify the funding needed to establish a project team and begin developing a solution.

Inception

An Inception phase helps to lay the foundations for iterative development and regular, incremental releases of the solution.

A representative set of stakeholders - technical, design, business users, business SMEs, delivery leads, senior executives – should delve into the business problem in detail to draw out the key user journeys, epics and user stories that will define the product.

These requirements can be prioritised to understand what the business considers as the Minimum Viable Product (MVP) that can be introduced to users. This MVP will allow the project to quickly deliver value and source feedback that can inform future product iterations.

Once the Product Roadmap takes shape a project team can be established to execute that vision. Ideally this will be a cross-functional, co-located team with representation from Design, Engineering, Testing and Delivery. Depending on the nature of the change these roles could be shared across teams, but in an ideal world they would be focused on a specific delivery.

Finally, the Inception phase can be used to begin the process to secure governance approvals. Roles and responsibilities will differ across organisations, but in general the following functions should be engaged early in the project lifecycle:

- **IT and Data Security**
- **2nd Line of Defence functions such as Risk, Legal and Compliance**
- **Procurement and Vendor Management (where a 3rd party solution is being used)**

Ideally "project champions" will be assigned from each function to form an ongoing relationship with the project team and ease the burden of governance approvals. Some development can begin in parallel to these preparatory phases, particularly where this validates the solution and tests initial assumptions, but before development sprints start in earnest we'd encourage firms to ensure they have:

- **A strong understanding of the business problem and prioritised solution requirements**
- **Business sponsorship and engagement from control functions across the bank**
- **An agreed delivery approach with target milestones to keep the project honest**
- **A high-level business case for change**

Development: Iteration

The development of an AI solution doesn't need to be dramatically different to any other digital change – develop in sprints, regularly releasing changes to end users. The intricacy is in the effort required to train the underlying AI model. This requires an approach that allows data to be processed and analysed securely across the development lifecycle.

Using common terms that are often misunderstood or inconsistently applied, we recommend that the business considers four development sub-phases: Experiment, Proof of Value, Pilot and Implementation.

- **Experiment:** An experiment tests a hypothesis quickly and at low cost. The solution can be validated in a sandbox development environment using test data.
- **Proof of Value:** Where the Experiment answers the question, "will my process be improved by this technology?", the Proof of Value phase asks, "how greatly will the business benefit from this technology?". The tool can also be trained for and tested against more business scenarios in a controlled way.
- **Pilot:** The pilot tests whether the solution can stand up to the scrutiny of real users, real data sets, and high volumes. The realistic nature of the pilot allows the business to understand what will be required to make a full roll out viable, and the introduction of real data can further support model training and enhancement.
- **Implementation:** An MVP can be rolled out across the desired user base once it is proven to be accurate across the target use cases. This process must be carefully managed in line with the guidance in our "Operationalise" section.

Regardless of how the project embraces these sub-phases, some principles hold true:

- **Iterate and improve:** this process emphasises that the solution is constantly reviewed, tweaked and improved, and that the underlying AI model is gradually validated and enhanced.
- **Show success early on:** regular showcases will spread success stories about the project and build the business appetite needed for wide scale implementation.
- **Demonstrate business value throughout:** it's important to continually validate the business case, garner business buy-in for the solution, and secure the ongoing approval of senior stakeholders.

Development: Operationalise

Introducing new technology within a bank is never easy, and it becomes much harder when that technology could result in the augmentation of business roles.

The effort involved in the full implementation of any technological change should never be underestimated. The business must be prepared for a commitment of time, money and people to introduce the solution, embed it within the organisation and put in place an operational structure that supports it over time.

The communication strategy associated with the change should be thorough and broad, and any necessary training of end users or supporting roles should be performed as early as possible. The business must be comfortable and accepting of the changes being introduced. Including business users during the design and development process will help, but this should be considered in addition to regular, clear and consistent communications, rather than in place of it.

The organisation also needs to consider a number of questions to understand how the solution will be supported once it has gone live:

- **If something goes wrong, who is responsible for resolving it?**
- **How will the existing support functions in the organisation be alerted about technical issues with the solution?**
- **Who will fund and delivery product, process or service enhancements?**

A detailed and practical support model needs to be established prior to implementation, and it should be proven to work before the solution is introduced to the full user group. The Pilot is a great opportunity to test the effectiveness of the tool and the business' ability to support it, both technically and operationally.

Finally, the change should be closely monitored, based on agreed metrics and success criteria, to understand its true impact. Continuous improvement is essential to ensure that the change continues to evolve over time, rather than stagnating and requiring another wholesale transformation in several years' time. The Product Owner needs to carefully manage and execute against an ongoing Product Roadmap – an AI solution will continue to learn and improve over time.

Key takeaways

01.
There is no **"one-size-fits-all" approach** – businesses who want to adopt AI technologies with a path to success can use the AI Blueprint© as **a flexible framework** that can be adapted to suit their specific needs

02.
The first stage in the framework is a thorough **assessment of the problem** the AI technology needs to solve

03.
Building an MVP is critical to testing the feasibility, viability and desirability of the product or service

04.
A **phased, structured and constantly monitored project** is the best way to deliver the solution and demonstrate business value

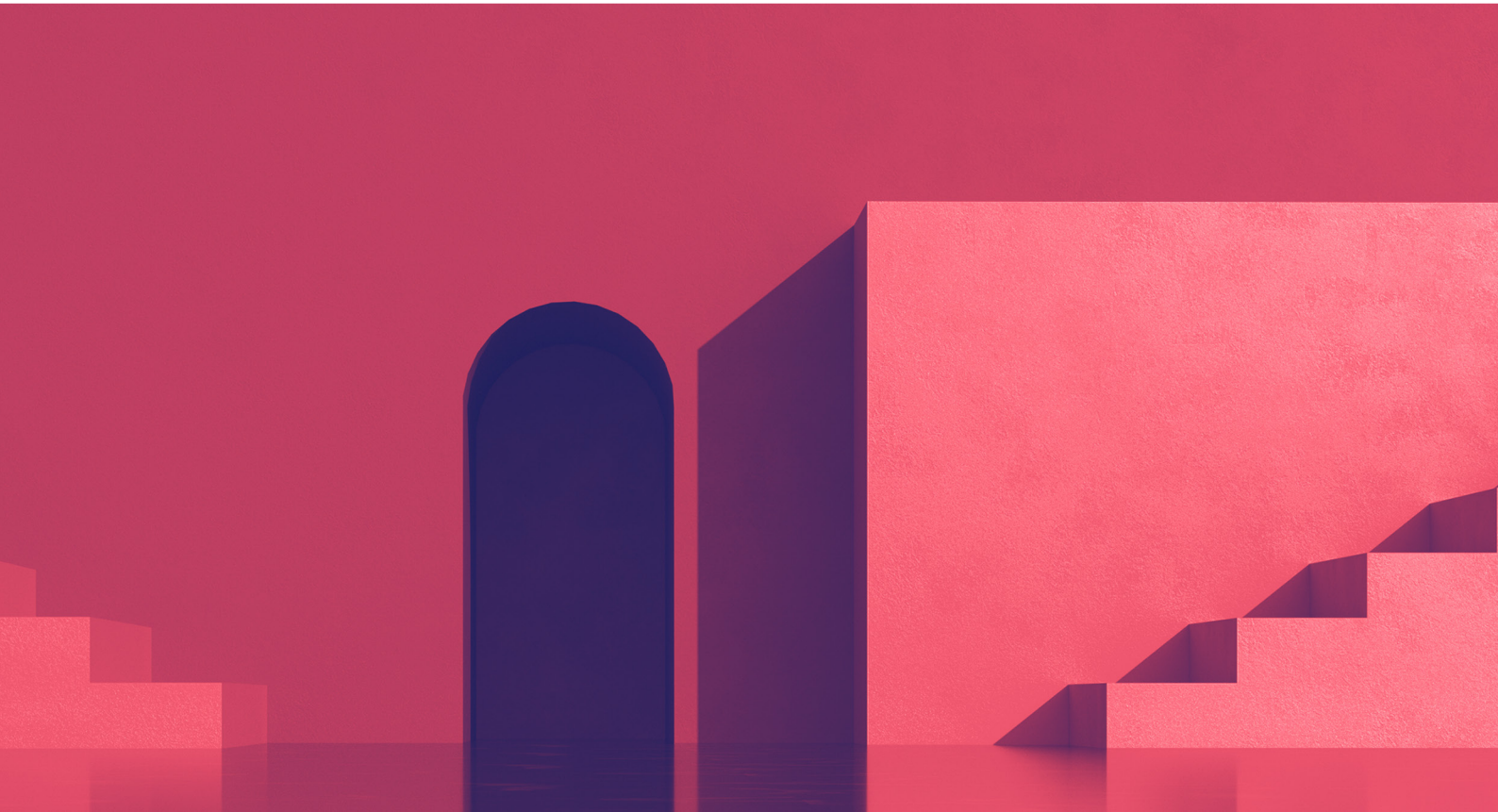
Final thoughts

Experimentation is for the curious; implementation is for the committed.

The introduction of AI solutions doesn't need to be dramatically different from other innovative technologies, but it is dangerous to consider it as just another software delivery project. The use of data is so much more integral to the solution than organisations may be used to, the underlying technologies are far more advanced and are continually evolving, the capabilities needed to deliver AI solutions is fundamentally different and the iterative method of delivery has been challenging banks for years.

Our intent in providing the guidance in this white-paper is to help organisations to understand these challenges and to empower more people to experiment with AI in a controlled manner, and implement solutions successfully.

We appreciate that this advice can only get you so far though. To that end, if you are considering an AI project, or are in the midst or one, we would love to help. Get in touch to arrange a discussion with one of our experienced AI Practitioners. Reach out to the authors or visit our website (**www.woodhurst.com/contact**) if you would like to book a session.



Authors

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Ben is an optimistic futurist, and passionate advocate for using technology to generate business value. With the rise of digital transformation and its subsets – cloud, big data, AI, machine learning, IoT, and business intelligence – companies can rapidly improve internal processes, customer service, and employee experience while reducing the cost to serve. As a recognised expert and thought leader in this field, Ben works with companies to help them get the most out of these disruptive technologies. He loves building teams, innovating, designing new strategies and being accountable for the digital transformation outcomes.

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