codurance | CRAFT AT HEART

Leveraging Data and AI for Business Impact

by Codurance

codurance.com

Table of Contents

Foreword

In today's world, data is rapidly becoming the currency of growth, while AI serves as the engine driving innovation and transformation. AI is experiencing unprecedented growth, with Generative AI taking the lead. For organisations, the question is no longer if they should embrace data and AI but how. Yet, the journey forward can feel overwhelming, clouded by technical jargon and uncertainty about where to begin.

This ebook is your guide – a compass to cut through the hype and deliver clear, actionable insights into how data and AI can create real, measurable value. More than a guide to AI, it's a strategic blueprint for leading your organisation into a data-driven future.

As AI adoption accelerates and models and services become increasingly commoditised, it is your organisation's unique data and your ability to harness it effectively that will set you apart in an ever-competitive landscape. Let this book guide you in how to turn opportunity into impact.

Matt Belcher

Head of Emerging Technology
Codurance UK

Leveraging Data and AI for Business Impact

Artificial Intelligence (AI) is no longer just a buzzword; it's a transformative technology that is reshaping industries across the globe. While there may still be some hesitance around its adoption and the impact it might have on traditional business practices, the reality is that AI offers unprecedented opportunities to **enhance operations, streamline processes, and unlock new opportunities for revenue growth**.

The key lies not only in understanding the potential of AI, but pairing AI strategy up with a robust data strategy. Whether it's automating routine tasks, improving customer experience or optimising decision-making, AI can be a game-changer if applied correctly. However, to get the most out of AI, it is critical to not only have a clear understanding of its capabilities and limitations but to evolve the way data is collected, curated and made available within the organisation.

Here you will gain valuable insights into best practices for using AI and data to achieve your business goals. We'll explore how you can leverage them both to deliver true business value and solve business challenges in innovative ways. Adopting AI does not come without its challenges and so we'll also cover how Codurance can **partner with you on your AI and Data strategy** and its subsequent implementation.

How can Data and AI benefit my business?

In today's digital-first world, data and AI have emerged as two powerful forces that, when combined, can create immense strategic value. While AI is often seen as the "brains" driving intelligent insights and automation, data serves as the essential "fuel" powering those insights. AI relies on data to learn, adapt, and improve; without it, AI systems are essentially operating in the dark. Together, they form a transformative partnership that enables businesses to move from reactive decision-making to proactive, insight-driven action.

It seems clear that many business leaders are thinking about AI adoption and many are even starting to see some of the benefits it can bring. A recent CDO Survey by AWS found that 80% of CDOs agree that "Generative AI will transform my organisation's business." The same survey also highlighted a strong appreciation for data strategy in the success of AI initiatives with 93% of CDOs agreeing that data strategy is crucial for getting value out of generative AI.

In this section we explore the relationship between Data and AI and outline the different subfields of AI, highlighting how they can help solve business challenges in different ways.

What is AI, and Why Does it Matter to Your Business?

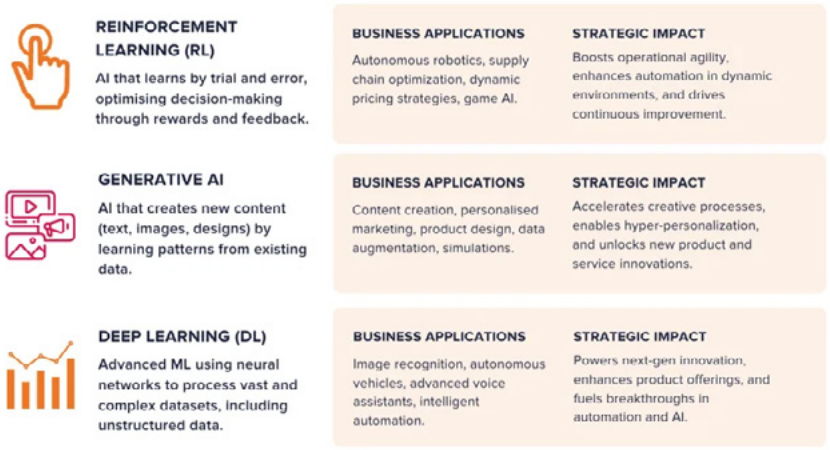
In today's digital landscape, AI is a transformative force that can reshape the way companies operate. It enables businesses to process vast amounts of data, automate routine tasks, and provide data-driven insights in real time.

AI refers to the ability of mechanical systems to perform tasks that typically require human intelligence, such as interpretation, decision making and problem solving.

AI encompasses several subfields, including Machine Learning (ML), Natural Language Processing (NLP), Computer Vision, and Robotics. These technologies are driven by algorithms and vast datasets that allow machines to learn from patterns and make informed decisions autonomously.

Artificial Intelligence (AI) is revolutionising industries, pushing the boundaries of what machines can do and how they interact with the world. While AI is often spoken of as a single concept, it encompasses several distinct areas, each with unique approaches and applications.

Understanding these different areas helps illuminate how AI is shaping our future and which specific parts of AI are best suited to certain tasks..



Why AI Needs Data

AI's effectiveness is only as good as the data it is able to learn from and make use of. Every prediction, recommendation, and automated decision made by AI systems is grounded in patterns found within historical and real-time data. For example:

- **Personalised Recommendations:** AI can suggest relevant products or services, but it requires data on customer behaviour, preferences, and past purchases to make those recommendations accurate and timely.
- **Predictive Maintenance:** AI can forecast when equipment might fail, but only if it has data on past performance, usage patterns, and historical repairs.

Without high-quality, well-organised data, AI outputs can be unreliable or misleading, potentially leading to poor business decisions.

Why Data Needs AI

On the other hand, data alone doesn't drive value unless it's transformed into actionable insights. Businesses today collect vast amounts of data, but without AI to process and analyse it, data often remains an untapped asset. AI enables companies to:

- **Identify Patterns:** AI can detect trends, correlations, and anomalies in data, surfacing insights that would otherwise go unnoticed.
- **Unlock Predictive Insights:** By analysing past data, AI can predict future outcomes, enabling businesses to anticipate customer needs, optimise resources, and manage risks proactively.

In essence, AI turns raw data into meaningful, decision-ready insights that drive strategic growth.

The Power of a Strong Data Strategy

To maximise the potential of AI, businesses need to have a well-defined data strategy in place. A strong data strategy:

- **Ensures data quality:** AI models need clean, accurate data to deliver reliable results.
- **Enhances data accessibility:** A good strategy makes sure data is accessible to across departments, breaking down silos and creating a unified data source able to power AI initiatives
- **Establishes governance and security:** By setting standards for data management, a robust data strategy protects sensitive information and ensures compliance with regulations.

Together, a robust data strategy along with AI adoption can empower organisations to move from hindsight (looking back at what happened) to foresight (predicting and influencing what will happen). This then enables business leaders to take proactive, confident steps in a fast-evolving business landscape.

How AI can Improve Efficiency and Productivity

By automating repetitive tasks, predictive analytics and intelligent decision making, AI enables businesses to improve efficiency and productivity to streamline processes, reduce operational costs and allow teams to focus on higher-value work.

According to the 2024 Stack Overflow Developer Survey, AI has a significant impact on developers at different career stages: 71% of beginners find AI accelerates their learning, while 61% of professionals use it to streamline workflows and stay competitive.

Advantages of incorporating AI tools in your business:

- **Automating Routine Tasks:** AI-based tools such as robotic process automation (RPA) can automate time-consuming routine tasks such as data entry, invoice processing or customer service queries. For example, chatbots equipped with natural language processing (NLP) can handle customer queries at scale, freeing up human agents to focus on more complex issues.
- **Predictive Maintenance:** AI-driven predictive maintenance solutions analyse data from equipment to identify patterns that indicate potential failures before they happen. This proactive approach reduces downtime, leading to improved operational efficiency and cost savings.
- **Data-driven Decision-Making:** AI algorithms can process and analyse large amounts of data in real time, providing actionable insights. For example, AI-based business intelligence tools can identify trends, predict customer behaviour or optimise supply chain logistics.
- **Enhanced Software Development:** In software engineering, AI-powered tools such as automated code generation, error detection and intelligent testing frameworks help developers work more efficiently. Tools such as GitHub Copilot or DeepCode help developers by suggesting code optimisations or identifying potential bugs, speeding up development cycles.
- **Innovation:** AI enables teams to move beyond traditional data analysis by identifying patterns and insights that are otherwise hidden in vast datasets. This new depth of understanding drives more informed strategies, fosters creative solutions, and accelerates the development of next-generation technologies.

- **New Revenues Streams:** AI's ability to analyse market trends, customer behaviour, and inefficiencies helps businesses discover new revenue opportunities. It enables personalised offerings, precise market entry, and innovative AI-powered products.

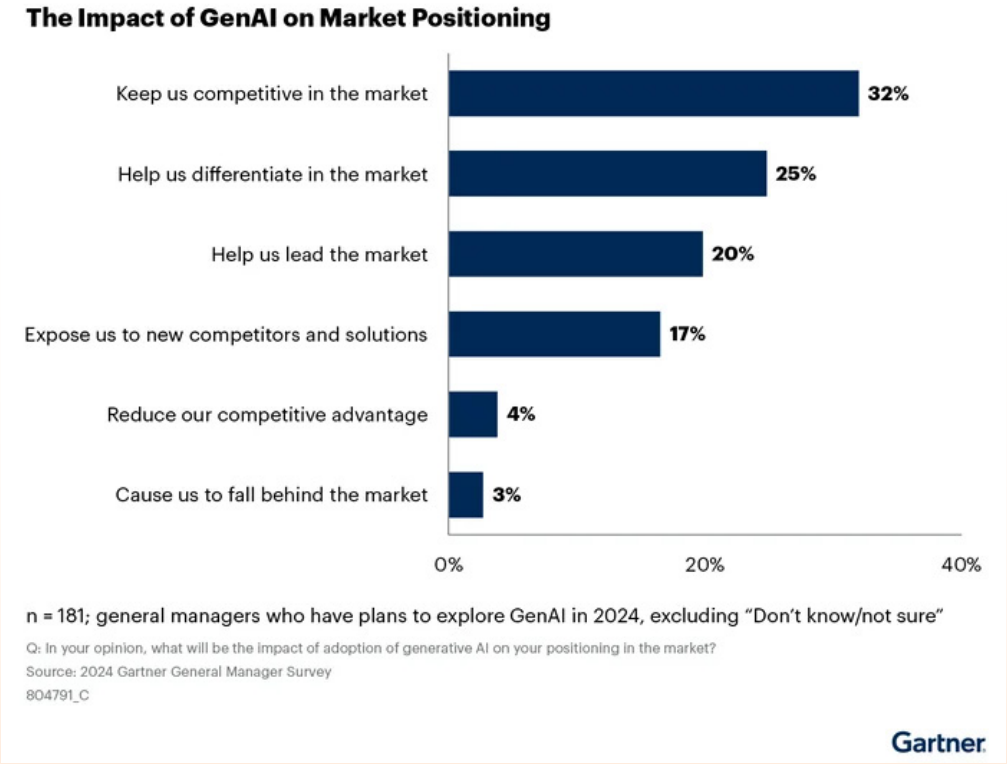
Artificial intelligence is certainly **a game-changer for organisations** that want to stay ahead of the curve. By harnessing the power of AI, companies can significantly increase productivity while maintaining high levels of quality and innovation. However, it is crucial to carefully manage privacy, skills development and ethical considerations, topics we will explore in chapter two.

The Competitive Advantage of Early AI Adoption

In today's competitive landscape, organisations are constantly jostling for position and looking for that extra edge. For early adopters, AI can be a point of differentiation - offering customers new and innovative ways to interact with their products and services and benefiting from first mover advantage.

Early adopters of AI, like Amazon, position themselves as industry leaders, setting benchmarks for others by personalising customer experiences, optimising operations, and automating processes.

A Gartner research shows that general managers tend to focus on the role of GenAI in maintaining their market position, with 32% of those launching a GenAI-enabled product believing that the investment will help them stay competitive, while 25% view their GenAI solutions as a means to create differentiation in the marketplace.



AI-driven automation allows companies in fast-moving sectors like financial services and retail to rapidly develop and launch new products, staying ahead of competitors by **responding to market demands** with speed and flexibility. It also enables businesses to deliver hyper-personalised services at scale, enhancing customer satisfaction and loyalty by tailoring products and services to individual needs.

> ***"Generative AI can create value in a wide range of use cases. The economics and technical requirements to start are not prohibitive, while the downside of inaction could be quickly falling behind competitors."***
>
> – McKinsey, What Every CEO Should Know About Generative AI

One of the biggest benefits of adopting AI is certainly cost-effectiveness. AI solutions can be used to automate back-end processes and improve resource allocation, reducing operational costs. Early adopters can reinvest these savings to further strengthen their competitive position.

As AI-based tools such as code generation and error detection mature, the implications for efficiency and innovation are immense, with the potential to **revolutionise software development** as we know it. Understanding how AI fits into software development processes is crucial for companies that want to stay ahead of the curve.

Finally, data plays a crucial role in any AI-driven solution. Therefore, having a robust data strategy is key. Those organisations that are embracing AI early are also having to face this too. Over time as AI becomes commoditised it's an organisation's data that will be the true differentiator and how well set up they are to leverage that. Early adopters of AI stand to benefit most from addressing this sooner than others.

The Role of AI in Software Craftsmanship

The **Software Craftsmanship Manifesto** emphasises the importance of high-quality code, continuous learning, and collaboration.

AI-driven tools assist developers in writing cleaner code through automated code reviews, debugging, and optimisation, ensuring that the software aligns with high standards. These tools can also speed up repetitive tasks, allowing developers to focus on more creative and strategic aspects of software design, ultimately contributing to the crafting of more resilient and scalable solutions.

Check our **e-book on the GenAI revolution** and what this means for software development.

> ***AI could well become just another tool in the toolkit to drive efficiency and productivity; rather than being a replacement, instead see AI as a way to enrich developer experience and invest in the soft skills needed to build better products.***
>
> **- TechUK's panel discussion series**

AI supports the idea of **continuous learning** by providing real-time feedback and recommendations. Machine learning models can analyse large amounts of data from previous projects and suggest best practices and improvements tailored to specific coding environments.

In this way, AI helps developers achieve mastery by maintaining a balance between efficiency and thoughtful software creation, ensuring that both automation and craftsmanship coexist to produce sustainable, higher quality solutions.

How can I build a successful AI and Data Strategy in my Organisation?

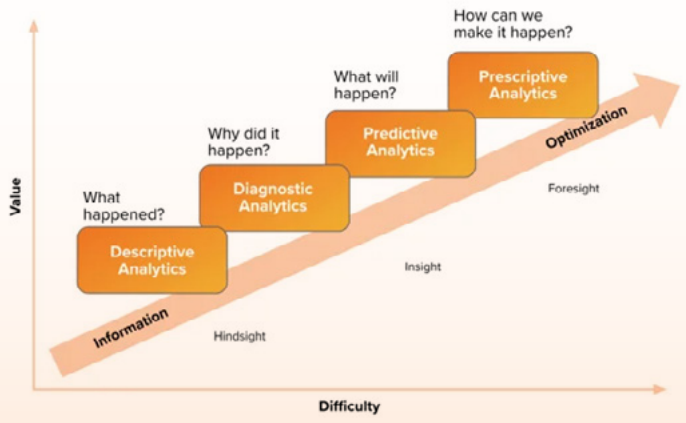
Implementing AI in your organisation goes far beyond simply adopting a few tools. If you truly want to unlock the full potential of AI in your organisation—gaining agility, saving time and resources, driving innovation, and staying ahead of the curve—there are numerous factors to consider. In order to truly leverage AI to the fullest, a strong data strategy is vital alongside other important considerations such as ethical considerations, challenges such as data privacy, and the necessary skills required to ensure your AI initiatives are secure and effective.

It is also critical to ensure that AI projects are aligned to business goals to ensure they deliver a return on investment. A Gartner report from 2022 found that only **54% of AI projects** make it from pilot to production.

In this section, we will explore how AI is currently being applied across various industries, as well as the key factors that will help you ultimately **adopt AI successfully** within your organisation.

Data and AI Strategy as a Unified Approach

For organisations aiming to leverage AI effectively, AI and data strategy must be integrated as a unified approach. This alignment is essential for progressing through the stages of analytics maturity as outlined by the Gartner Analytics Ascendancy Model—from descriptive analytics (hindsight) to predictive and prescriptive analytics (foresight). While data provides the raw material, AI transforms that data into meaningful insights, predictions, and actions that fuel business growth.



Source: Gartner, Analytics Ascendancy Model (March 2012)

The Gartner Analytics Ascendancy Model illustrates four key stages of analytics maturity:

1. **Descriptive Analytics:** What happened?
2. **Diagnostic Analytics:** Why did it happen?
3. **Predictive Analytics:** What is likely to happen?
4. **Prescriptive Analytics:** What should we do about it?

A unified AI and data strategy enables organisations to progress through these stages by providing both the data infrastructure and the analytical power needed to move from basic reporting to actionable insights.

Aligning AI Initiatives with Strategic Business Objectives

Without a clear connection between AI initiatives and business goals, even the most sophisticated AI solutions can end up as expensive, isolated experiments that fail to deliver tangible value. Aligning AI with your strategic vision ensures that every AI-driven effort supports broader business outcomes, drives measurable impact and maximises ROI. But, where to start?

How to Align AI Initiatives with Strategic Business Objectives

1. **Define clear business goals:** Start by identifying key objectives, such as revenue growth, cost reduction, customer satisfaction, or market expansion. Understanding these goals helps determine where AI can create the most impact.
2. **Evaluate organisational capabilities:** Assess your company's AI maturity, data readiness, and technological infrastructure to determine how AI projects can be realistically implemented and scaled.
3. **Identify high-impact use cases:** Prioritise AI use cases that align with business goals, focusing on areas like predictive analytics for demand forecasting, automation for operational efficiency, or AI-driven insights for personalised customer experiences.

4. **Establish KPI's:** Develop measurable indicators of success that directly tie AI initiatives to business outcomes such as costs savings, time to market or customer satisfaction score. This ensures that progress can be tracked and that AI efforts are delivering value.

According to Gartner, effectively leveraging AI involves mapping opportunities by understanding technological options, deployment strategies, and your organisation's risk tolerance.

Evaluating AI opportunities requires assessing potential business benefits, deployment models and balancing risks related to automation, data privacy and compliance. This approach ensures that AI initiatives align with your organisation's strategic objectives, maximising both short-term benefits and long-term innovations.

Key Considerations for AI Strategy

- **Risk tolerance:** What level of uncertainty is the organisation committed to when experimenting with AI solutions?
- **High-impact use cases:** What areas of the business can benefit most from AI to drive revenue growth, cost reduction or process optimisation?
- **Scalability:** How can AI initiatives be scaled across departments to maximise their impact?
- **Investment ROI:** Where are the opportunities to increase valuation for investors by identifying new AI-enabled product ideas or reducing overhead through AI automation.

When AI initiatives are tied to clear business objectives, they receive greater organisational support, clearer funding pathways, and a faster path to implementation, as stakeholders can see how these efforts fit into the overall growth strategy.

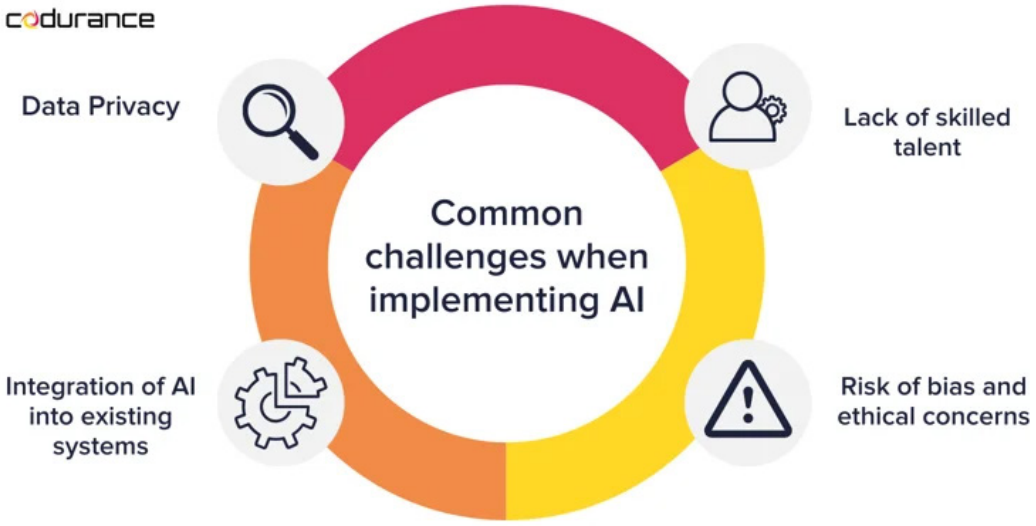
Aligning AI projects with your strategic business objectives is not just about deploying technology—it's about creating a **cohesive approach that drives sustainable growth.** By integrating AI into your business strategy with a clear focus on measurable outcomes, you can transform AI from a technical capability into a core engine for innovation and competitive advantage.

Overcoming AI Implementation Challenges

Implementing AI within an organisation comes with significant potential, but it also brings a set of challenges and risks that must be carefully managed to ensure a successful adoption.

> ***While most acknowledge AI's potential, 76% of business leaders find implementing the technology in their organisations challenging. Key factors facilitating AI adoption include a well-defined strategy and KPIs, expertise in data, and dependable multi-disciplinary teams.***
>
> – AI adoption statistics Report 2024, Vention

Common challenges when implementing AI



One of the foremost concerns in AI implementation is **data privacy.** Since AI systems heavily rely on vast amounts of data to learn and make predictions, protecting this sensitive information is crucial. Businesses must navigate complex data regulations and ensure they have the right frameworks in place to secure customer and proprietary data, avoiding breaches that could damage reputation.

Another challenge is the **integration of AI into existing systems**. Organisations often face difficulties blending AI solutions with their legacy systems, leading to inefficiencies and technical hurdles. Successful AI adoption requires not just technology but also a cultural shift, where teams are trained and aligned with new AI-driven processes.

Additionally, the **lack of skilled talent** remains a significant barrier. Building and maintaining AI systems demand specialised skills that many organisations struggle to find or develop internally. This skills gap can slow down implementation and reduce the effectiveness of AI projects.

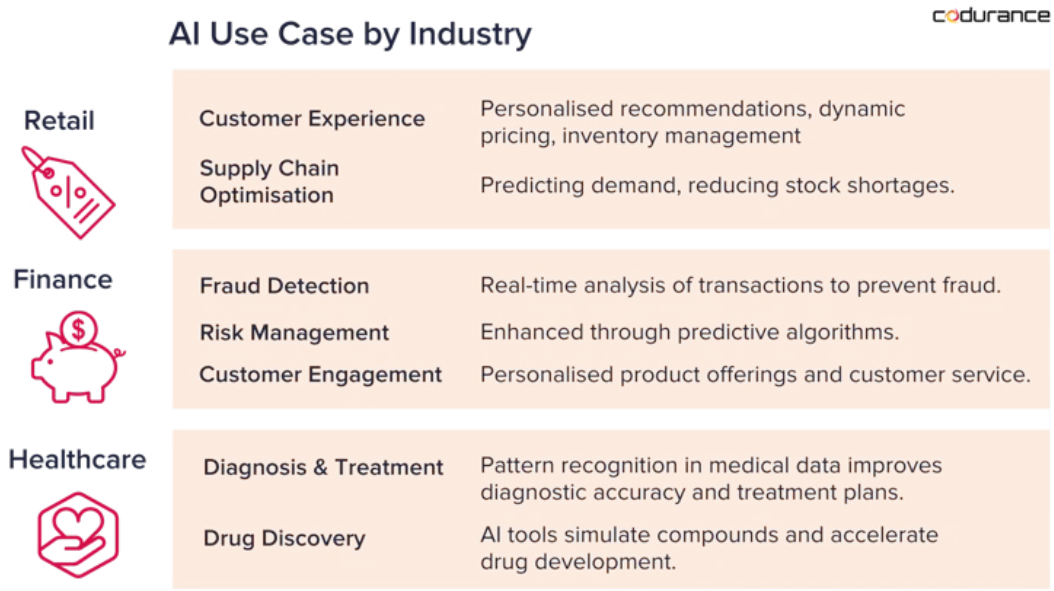
Lastly, there is a r**isk of bias and ethical concerns**. AI algorithms can inadvertently perpetuate biases present in training data, leading to unfair outcomes that may impact decision-making. Addressing these ethical challenges requires ongoing monitoring and the development of transparent, explainable AI models.

Understanding and planning for these challenges is the key to unlocking AI's full potential.

Top AI Use Cases by Industry

Artificial Intelligence is transforming industries across the board driving efficiency, innovation, and customer engagement. According to a Forbes Advisor survey, the **most common uses of AI in businesses** currently are customer service (56%), cybersecurity and fraud management (51%), and customer relationship management (46%).

Here we delve into some of the top AI use cases across various sectors:



Retail: AI can improve **customer experience** through personalised recommendations, dynamic pricing and inventory management. By analysing customer behaviour, AI systems can suggest products tailored to individual preferences, boosting sales and customer loyalty. AI can also optimise supply chain operations by predicting demand and reducing stock shortages.

> ***The retail AI market is expected to grow at a compound annual growth rate of 30% from 2023 to 2030***
>
> – Global Market Insights, 2023

Finance: In the financial sector, AI is revolutionising fraud detection, risk management and customer engagement. Machine learning algorithms examine large volumes of transactions to detect suspicious activity and flag potential fraud in real time. AI also helps algorithmic trading by analysing market trends and executing trades at high speed. AI can also help in driving more sales by delivering better customer service and personalising products to fit specific customer personas. For example hyper-personalised financial advisory services.

> ***Over 30% of financial services companies use AI in product development***
>
> - Statista, 2023

Healthcare: AI plays a crucial role in diagnosis, personalised treatment and drug discovery. Machine learning algorithms analyse medical data to detect patterns, leading to more accurate diagnoses and treatment plans. AI-based tools in the future could also help to reduce the timescales for developing new drugs faster by simulating potential compounds and predicting their efficacy.

Importance of a Well-Architected Platform for AI implementation

A well-architected platform is essential for successful AI implementation. AI workloads are resource-intensive, often requiring high-performance processing, seamless data integration, and scalable storage solutions.

A robust, thoughtfully designed platform ensures that the infrastructure can handle the demands of AI, enabling organisations to develop, deploy, and scale AI solutions efficiently and effectively.

Codurance's approach focuses on creating architectures that are resilient, scalable and aligned with your organisation's strategic goals. This means considering a number of key factors such as:

- **Scalability:** AI platforms need to handle growing data volumes and increasingly complex algorithms. A well-architected platform provides the scalability needed to accommodate these demands, allowing AI initiatives to evolve alongside the organisation's needs.
- **Data integration and Accessibility:** A well-designed platform enables seamless data flow from diverse sources, ensuring accessible, high-quality data drives AI insights.
- **Security and Compliance:** Prioritising robust security measures and compliance protocols to protect sensitive data and comply with industry-specific regulations.
- **Optimised Performance:** Ensuring your architecture supports high-performance AI workloads, providing the speed and efficiency needed for real-time insights.
- **Flexibility and Adaptability:** The AI landscape is constantly evolving, with new tools and models emerging rapidly. A well-architected platform is flexible, supporting a range of AI frameworks, tools, and integrations. This adaptability allows organisations to leverage the latest AI and data advancements without overhauling their infrastructure.

Without this critical foundation, AI implementations often face scalability issues, data integration challenges, and increased security risks—potentially jeopardising the success of AI projects.

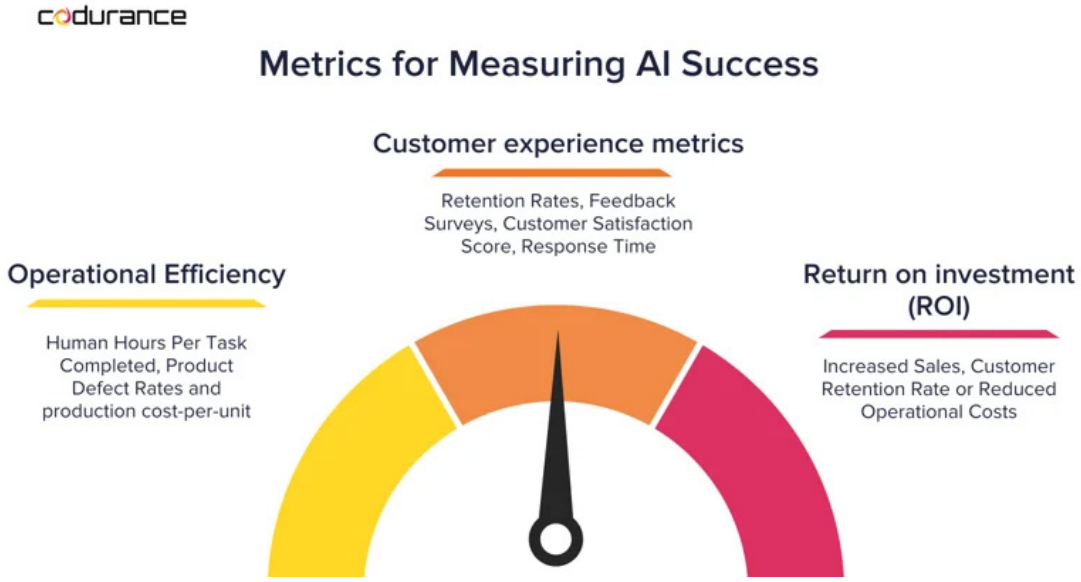
Metrics for Measuring AI Success

To ensure that AI initiatives generate tangible results, organisations must define clear metrics and key performance indicators (KPIs) from the outset. Without the right metrics in place, it is difficult to assess whether an AI solution is delivering value.

KPIs should not only reflect technical performance, but also the wider impact on the organisation. These metrics can then be used as inputs into decision making processes, for example whether to provide further investment or not to an AI project.

Metrics to measure the success of AI could include:

- **Operational Efficiency:** Measuring how AI speeds up processes or reduces costs. AI should drive down inefficiencies, reduce human error, and automate routine tasks. Metrics such as human hours per task completed, product defect rates and production cost-per-unit, help tack these.
- **Customer experience metrics:** Track improvements in customer satisfaction through retention rates, feedback surveys, customer satisfaction score, reduced response times or personalisation of offers.
- **Return on investment (ROI):** Calculate the increase in revenue or cost savings directly attributed to AI. This could be reflected in increased sales, improved customer retention or reduced operational costs.



To prioritise and refine AI efforts, the Lean Value Tree is a useful framework. It breaks down the vision into a hierarchy of value-based goals, allowing teams to focus on delivering measurable results.

- **Vision:** Represents the overall goal, such as improving customer satisfaction or reducing costs with AI.
- **Objectives:** Breaks down the vision into specific goals that support long-term business outcomes.
- **Initiative:** AI projects or solutions aimed at achieving the strategic objectives.
- **Metrics:** Specific KPIs to track progress and validate the success of AI initiatives.

By combining strategic KPIs with strategic planning like the Lean Value Tree, you ensure that AI initiatives deliver tangible value, whether through increased revenue, reduced waste, or enhanced decision-making.

What is Governance in AI?

Artificial Intelligence governance refers to the frameworks, policies and regulations that ensure AI systems are used responsibly, ethically and safely in organisations. As AI adoption grows, businesses need robust governance to align AI's potential with legal, ethical and social expectations.

AI governance aims to ensure:

- **Transparency:** AI systems must be understandable and explainable, especially for high-risk applications like medical diagnosis or financial trading.
- **Accountability:** Organisations must have clear protocols for addressing any misuse or failure of AI systems.
- **Ethical Considerations:** AI systems should align with societal values, ensuring fairness and avoiding discrimination.

One of the most prominent regulatory frameworks addressing AI governance is the European Union's AI Act, the first comprehensive legal framework on AI globally. Enacted in 2024, this regulation imposes a risk-based approach to classifying AI applications, with strict rules for 'high-risk' systems such as biometric identification or AI in healthcare. This regulation aims to safeguard citizens' rights while fostering innovation in AI.

It bans applications deemed to pose "unacceptable risks," such as AI used for social scoring or manipulative technologies, and places transparency requirements on systems like generative AI (e.g., ChatGPT). Failing to comply with these standards can result in severe penalties, including fines of up to 7% of global annual revenue for companies.

> ***Highly regulated industries, such as Financial Services and Healthcare and Life Sciences, have been the most proactive in implementing AI and data governance. Financial services alone experienced an 88% increase in GPU usage in the last six months, emphasising their commitment to secure AI deployments and data protection.***
>
> – State of Data and AI Report by Databricks

The UK has taken a similar pro-innovation approach to AI regulation, emphasising flexibility and encouraging innovation. It focuses on creating AI frameworks that support the development of AI technologies while ensuring safety and trust. This includes balancing innovation with security through clear guidelines that align with international efforts, such as those of the EU, while adapting approaches to local needs.

In this rapidly evolving AI landscape, governance plays a vital role in ensuring that AI systems are transparent, accountable, and secure, helping organisations deploy AI responsibly.

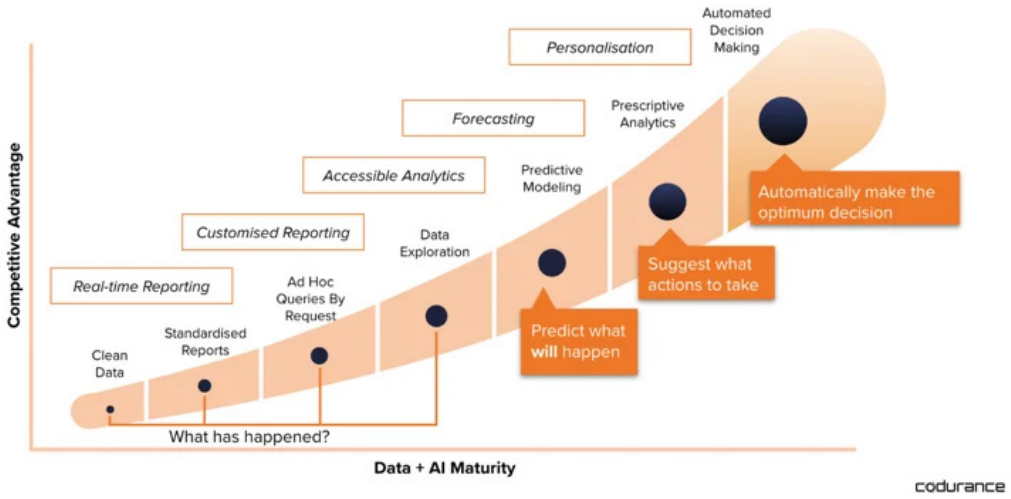
How does a Strong Data Strategy drive AI success?

As we have discussed, data is a critical element of AI projects, a well thought-out data strategy enables organisations to realise the full potential of artificial intelligence by ensuring that data

is available, of high quality and used correctly throughout the AI lifecycle. Creating a solid foundation for data management is not just a best practice, it is a necessity.

The effectiveness of AI models depends on the quality and comprehensiveness of the data they are trained on. Without high-quality data, AI systems are prone to produce biased, inaccurate or misleading results. According to the Databricks Guide to AI Governance, **data management involves collecting, organising and making data accessible for analytics and AI purposes**. Organisations need to manage not only structured data in databases, but also unstructured data, such as text, images and videos, which are crucial for advanced AI applications.

Our Codurance AI and Data Maturity Curve illustrates how data strategy supports the advancement of AI maturity and moving from basic analytics and standardised reporting to predictive insights and proactive decision-making. A strong data strategy enables organisations to progress through these stages effectively.

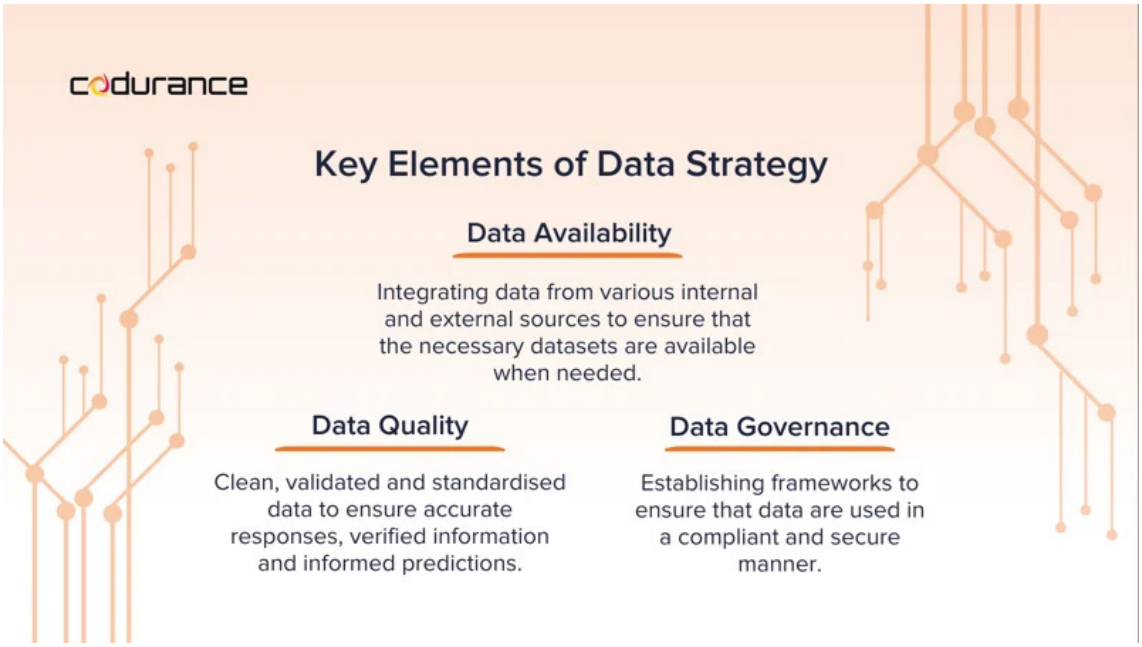


Typically, organisations have tended to rely heavily on data warehouses as a mechanism for storing their data in a structured format. On top of this, reports are generated and either sent out to the relevant teams across the business or made available via dashboards. Whilst data warehouses excel at processing and querying large volumes of highly structured data, they have limitations that make them a less suitable choice for the evolving data needs of many organisations. This is particularly true for organisations looking to adopt AI and advanced analytics practices.

These organisations, find traditional data warehouses struggle to efficiently store and process unstructured or semi-structured data such as text documents, images or real-time metrics. These are often important data points for AI applications. Data warehouses are often optimised for batch processing, making it challenging to handle real-time data streaming effectively. For many AI use cases, access to real-time data is critical for generating timely insights.

As organisations look to evolve their data strategy, careful thought needs to be given to the platform architecture and assessing whether their traditional data warehouse approach will allow them to meet their goals. More recently, many organisations have moved to alternative architectures for their data platform such as Data Lakes or Lakehouses.

Key Elements of Data Strategy



- **Data availability:** Ensuring that the necessary datasets are available when needed. This requires integrating data from various internal and external sources, such as cloud storage, databases and even real-time data streams.
- **Data quality:** Data quality directly influences the performance of AI models. Poor quality data, riddled with inaccuracies, duplicates or missing information, leads to erroneous predictions. Therefore, organisations should focus on cleaning, validating and standardising their data.
- **Data governance:** Data governance frameworks ensure that data is used in a compliant and secure manner. Effective governance provides visibility into who accesses data and how it is used, which is crucial for maintaining compliance and preventing data misuse. It also enables data privacy management, helping organisations to comply with regulations such as GDPR or CCPA.

> *Governance is not just about security—it's about* **knowing which data to use, ensuring its quality, and making it accessible** *to the right people at the right time.*
>
> –Databricks, Accelerate Your Data and AI Transformation Executive Guide

By ensuring data availability, improving data quality and maintaining correct usage, technology leaders can create a foundation that will drive AI success. Without this, even the best AI tools will

struggle to deliver valuable insights, leaving organisations exposed to operational inefficiencies and regulatory risks.

Preparing Your Team for AI Adoption

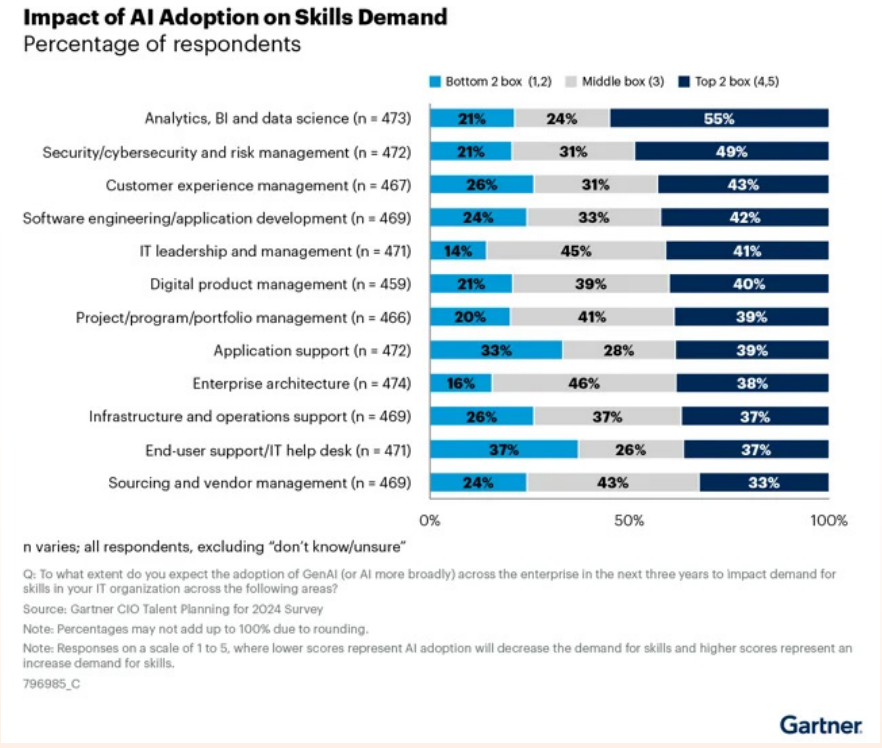
For AI to thrive in your organisation, as well as a robust data strategy you also need the right mix of talent, capabilities and resources. Successful adoption requires enterprise-wide awareness and participation, and must be integrated into the long-term strategy and roadmap.

Organisations must assess where AI can deliver the most value, whether it is automating routine processes, improving the customer experience or making more data-driven decisions.

Management must prioritise AI by allocating the right resources, both in terms of staff and time. This could also involve creating cross-functional teams in which IT, data science and business managers collaborate to ensure that AI aligns with organisational goals.

Building Capacity & Expertise

Organisations must ensure that their **teams are prepared to work with AI** models, algorithms and data-driven decision making. The adoption of AI is expected to significantly increase the demand for skills in various functions. According to a **Gartner survey**, **analytics, BI and data science roles will experience the highest increase in skills demand,** with 55% of respondents indicating a strong impact. This is followed by security/cybersecurity and risk management, with 49% expecting an increase in skills needs driven by AI.



Investing in training programs is vital. This could range from technical upskilling for engineers to AI literacy training for non-technical staff. Start by implementing structured onboarding programs that introduce employees to AI principles and practical applications. Additionally, internal advocates can be established within each department to provide guidance and support.

Providing ongoing training through workshops, seminars and mentoring programmes will keep your team up to date with the latest AI trends and techniques. This can also foster a culture of experimentation, where teams feel empowered to try new AI-based strategies without fear of failure.

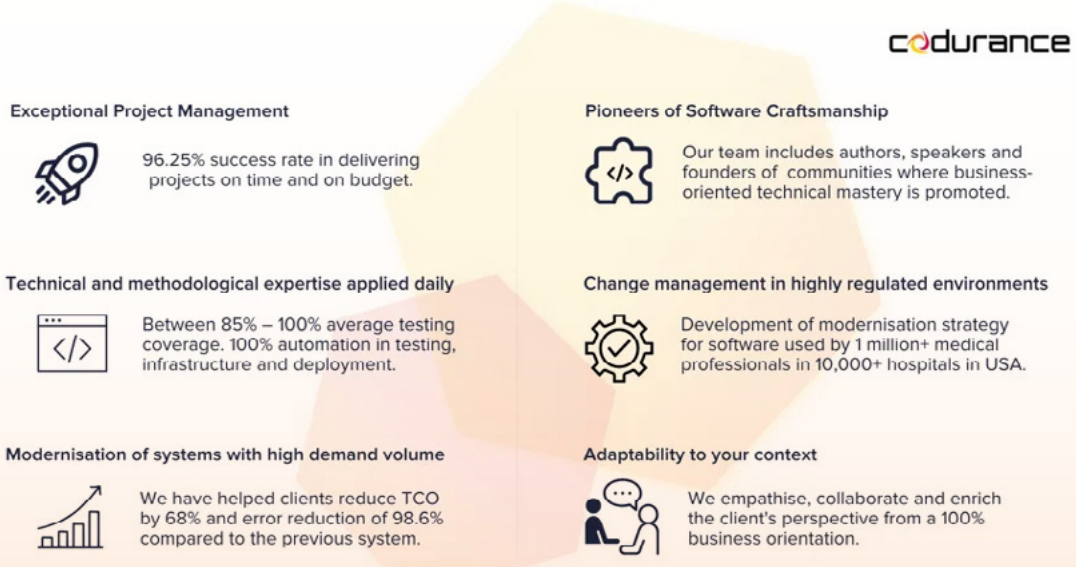
By focusing on creating expertise, integrating AI into your roadmap and providing ongoing training, your organisation will be better equipped to adopt AI successfully.

Codurance helps you deliver industry-leading Data & AI solutions

We are a software consultancy composed of expert software crafters, agile delivery managers, and platform engineers who approach their work as artisans. By producing the highest quality code, we design the best possible product to meet client needs and contribute to overall business success.

Guided by the Software Craftsmanship philosophy, we foster a culture of excellence within our clients' technical teams, enhancing their ability to innovate. This philosophy drives us to develop robust and scalable solutions, complementing the Agile approach with technical skills and programming best practices, thus raising industry standards through professionalism and technical excellence.

We achieve great things for our customers



Choosing the Right Partner for AI Implementation Success

When embarking on an AI journey, choosing the right partner is crucial to long-term success. With AI transforming every facet of business, the need for a reliable, capable and visionary partner cannot be overstated. Here's why **Codurance can be the right partner for your AI initiatives.**

1. **Proven expertise in complex systems**
   Codurance brings years of experience in designing, building and scaling complex software systems, which is essential for AI implementation. Our engineers and consultants are experts in creating a well-designed platform for AI implementation, ensuring seamless integration and scalability while maintaining system stability and security
2. **Vast industry experience across domains**
   Our extensive experience across a range of industries, from finance to healthcare to retail, enables us to understand the unique challenges and opportunities of each industry. Codurance's adaptive approach ensures that AI solutions are not only technically sound, but also precisely aligned to the business requirements and industry regulations that matter most to you.
3. **Strategic partnerships and cutting-edge tools**
   Codurance is at the forefront of AI innovation through strategic partnerships with leading technology providers. These collaborations keep us abreast of the latest developments in AI and allow us to bring the best tools and frameworks to your projects. Our partners share our commitment to innovation and quality, enabling us to deliver world-class AI solutions that give you a competitive advantage.

Codurance is here to guide you through every stage, from assessing your Data and AI readiness to training your team, and managing the associated risks and developing well crafted working solutions. Find out how ready your organisation is by visiting our Data and AI Readiness Assessment for a customised analysis.

Scaling the world's first AI-enabled fragrance curation platform

Scentmate by dsm-Firmenich has revolutionised the fragrance industry with its AI-powered fragrance curation platform, designed to automate the fragrance recommendation process and simplify fragrance co-creation to deliver best-in-class fragrance solutions to entrepreneurs and independent brands (SMEs). Codurance partnered with Scentmate to enhance their platform, optimising scalability, security and user experience and incorporating industry best practices to ensure long-term success.

Stable platform with 99.95% system availability.

Fragrance samples delivered to customers within 48 hours (previously 4 weeks)

Improved code quality with a stable system that allows new features to be delivered without bugs.

Our involvement included refining the AI selection engine for greater accuracy and automating fragrance ordering processes to streamline user interactions. Our engineers worked closely with the Scentmate team to strengthen platform security and improve scalability, ensuring compliance with stringent fragrance industry regulations. As well as integrating industry best practices into their team to maintain sustainable growth.

The outcome? A robust, self-sufficient platform with 99.95% system availability, which enabled Scentmate to confidently expand into new markets. By improving the accuracy of fragrance recommendation, the platform not only increased customer satisfaction, reducing fragrance sample delivery from 4 weeks to 48 hours, but also set a new industry standard. Read the full **case study of Scentmate by dsm-Firmenich here.**

Assess your organisation's readiness for AI adoption

Integrating AI effectively requires more than just selecting the right tools; it requires a solid understanding of your organisation's current capabilities and readiness.

Codurance's **Data and AI Readiness Assessment** is designed to help businesses assess their readiness for AI adoption, providing a strategic foundation for implementing AI solutions that drive tangible results. Through a combination of in-depth consultations, technical evaluations, and strategic analysis, we identify strengths, gaps, and the specific areas where Data and AI can make the most impact in your organisation.

Our assessment is based on 6 pillars:

1. **Opportunity Identification:** Identify AI opportunities that align with business goals and establish KPIs to measure their impact.
2. **Data Strategy:** Evaluate the availability, quality, and completeness of necessary data inputs.
3. **Capacity & Expertise:** Evalute the team's current AI skills and openness to adoption.
4. **Technology:** Review the compatibility of the existing tech stack with AI initiatives.
5. **Governance:** Identify regulatory, security, and ethical requirements and the capability of the current governance structure to support them.
6. **Delivery Maturity:** Assess how well the current software delivery process would support AI.

The output of this assessment is a comprehensive and practical roadmap that includes recommendations on tools, processes and timelines tailored to the specific needs of your business.

Ready to find out how prepared your organisation is for AI? Download the Data and AI Readiness Assessment **brochure** here to learn more about our approach and start your journey towards AI transformation.

References

Stack Overflow. (2024). *AI insights from the 2024 developer survey.* **https://survey.stackoverflow.co/2024/ai**

Boehm, J., Grennan, L., Singla, A., & Smaje, K. (2023, June 26). *What every CEO should know about generative AI.* McKinsey & Company. **https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/what-every-ceo-should-know-about-generative-ai**

Gartner. (2023). *Crossing the Chasm: Tech Provider Plans for Generative AI in 2024*. **https://www.gartner.com/document-reader/document/5221563?ref=solrImgSearch&refval=433597959#**

Gartner. (2021). *Emerging technologies: AI in financial services* (ID: G00758115). **https://www.gartner.com/document-reader/document/5811415?ref=solrAllImg&refval=435987881**

Vention. (2024). *AI adoption statistics 2024: All figures & facts to know*. Vention. **https://ventionteams.com/solutions/ai/adoption-statistics**

Global Market Insights. (n.*d.*). *Artificial Intelligence (AI) in Retail Market Size & Share Report.* Retrieved October 9, 2024, from **https://www.gminsights.com/industry-analysis/artificial-intelligence-ai-retail-market**

Grand View Research. (n.*d.*). A*rtificial Intelligence in Telecommunication Market Trends.* Retrieved October 9, 2024, from **https://www.grandviewresearch.com/industry-analysis/artificial-intelligence-telecommunication-market**

IBM. (2022, May 19). *Global data from IBM shows steady AI adoption as organizations look to address skills shortages, automate processes and encourage sustainable operations.* IBM Newsroom. **https://newsroom.ibm.com/2022-05-19-Global-Data-from-IBM-Shows-Steady-AI-Adoption-as-Organizations-Look-to-Address-Skills-Shortages,-Automate-Processes-and-Encourage-Sustainable-Operations**

AI Act Info. (n.*d.*). *EU Artificial Intelligence Act*. Retrieved October 16, 2024, from **https://www.aiact-info.eu/**

Artificial Intelligence Act. (n.*d.*). *High-level summary of the AI Act.* Retrieved October 16, 2024, from **https://artificialintelligenceact.eu/high-level-summary/**

Thomson Reuters. (2024, August 8). *AI Act: The world's first comprehensive laws to regulate AI.* Retrieved from https://blogs.thomsonreuters.com/legal-uk/2024/08/08/ai-act-the-worlds-first-comprehensive-laws-to-regulate-ai/

VOA News. (2024, September 25). E*U AI Act checker reveals Big Tech's compliance pitfalls.* Voice of America. Retrieved from **https://www.voanews.com/a/eu-ai-act-checker-reveals-big-tech-s-compliance-pitfalls/7824029.html**

Databricks. (n.*d.*). *Accelerate your data and AI transformation: Executive guide.* Databricks. **https://databricks.com/try-databricks?utm_source=ebook&utm_medium=referral&utm_campaign=20171019-uap-ebook2:contentReference[oaicite:0]{index=0}**

Databricks. (n.*d.*). *A comprehensive guide to data and AI governance.* Databricks. **https://databricks.com/try-databricks?utm_source=ebook&utm_medium=referral&utm_campaign=20171019-uap-ebook2:contentReference[oaicite:1]{index=1}**

Gartner. (2022, August 22). *Gartner survey reveals 80 percent of executives think automation can be applied to any business decision.* Gartner. Retrieved from **https://www.gartner.com/en/newsroom/press-releases/2022-08-22-gartner-survey-reveals-80-percent-of-executives-think-automation-can-be-applied-to-any-business-decision**

Davenport, T. H., Bean, R., & Wang, R. (2023). *CDO Agenda 2024: Navigating data and generative AI frontiers.* Amazon Web Services (AWS). Retrieved from **https://d1.awsstatic.com/psc-digital/2023/gc-600/cdo-data-biz-value/cdo-data-biz-value.pdf**

codurance

hello@codurance.com
www.codurance.com

Codurance is a global software consultancy that helps businesses build a better, sustainable technical capability that supports growth and innovation.

We build well-crafted, reliable, secure and easy to modify software that minimises waste, and reduces cost and delivery times.

For more information visit: **www.codurance.com**

Follow us on social media:
@codurance

aws PARTNER Advanced Tier Services

Microsoft Solutions Partner Digital & App Innovation Azure

Google Cloud Partner

databricks CONSULTING PARTNER

new relic