

**The AI shift: why now
is the time to evaluate
your position**

Argon&Co*



Beyond the buzz: unlocking real value with narrow and general-purpose AI

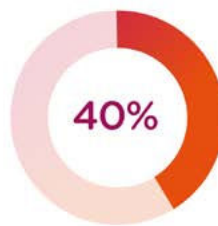
AI is no longer a future concept – it’s today’s competitive advantage. But the companies that thrive will be those who strategically harness its power to solve real business challenges.

At Argon & Co, we partner with leaders to identify and implement AI solutions that increase efficiencies, reduce risks, drive measurable growth, and deliver real change – whether through the highly trained data systems of ‘narrow AI’ or adaptive and flexible ‘general-purpose AI’ models. By 2025, our clients are expecting to see a 35% increase in operational efficiency and a 25% reduction in forecasting errors thanks to AI-enabled resilience.

Projected AI-enabled resilience by 2025



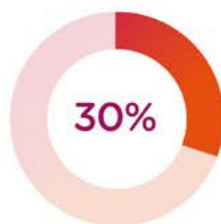
75% of supply chain planning will be supported by AI



40% reduction in supply chain planning costs



35% increase in operational efficiency



Robust resilience strategies reduced disruptions by 30%



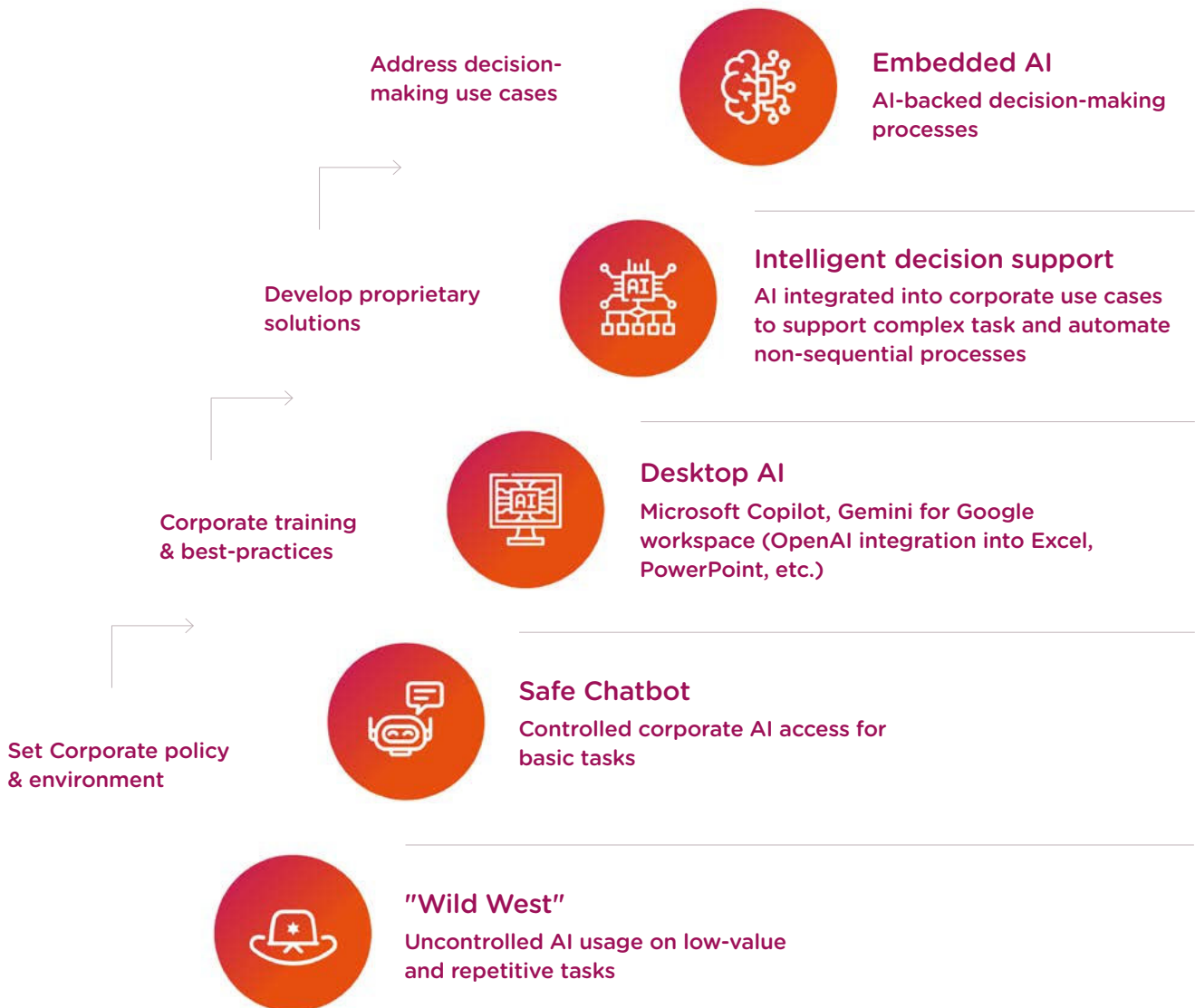
Sectors allocate 20% of operational costs to resilience-building strategies

However, adoption of AI varies: 68% of large companies, 33% of medium-sized businesses, and only 15% of small firms have integrated at least one AI technology, demonstrating the hesitance that remains among many business leaders.

The efficiency and speed of AI implementation – particularly in the case of the more agile general-purpose AI – can create commercial benefits at a fast pace. For example, by integrating a targeted AI solution to streamline product categorisation, we enabled a major e-commerce client to achieve an additional €10 million in sales – within a single week. Imagine what even a 1% efficiency gain could mean for your top-line growth.

The current shift in AI adoption signals that it's time to explore how AI can benefit your business. However, it's essential to understand the differences between narrow and general-purpose AI, their respective benefits and limitations, and which suits the different areas of your operations best.

Rapid pace of AI development





Defining narrow and general-purpose AI

There's no one-size-fits-all approach to AI. Understanding the differences between the two types – narrow AI and general-purpose AI – and how they best fit each area of your business could be the difference between wasted resources and exceptional ROI.

Narrow AI

Narrow AI is what most businesses have been utilising in their operations to date. Think of it as a specialist – it excels at one task, like improving sales forecasts by 20% or eliminating 90% of repetitive email-sorting tasks. It's a powerful tool where you need targeted, high-impact automation.

20% improvement on sales forecasts

In all likelihood, most internet users will have engaged with some form of narrow AI already; it's used in streaming platforms to recommend music or tv shows based on preferences, on weather apps to predict temperatures, and is used in widely implemented voice recognition tools like Siri or Alexa.

Narrow AI systems are trained on specific – and often private – datasets and are highly effective at their assigned tasks. Importantly though, these assigned tasks have been specifically tailored to the model and are therefore very limited, meaning they can't be easily repurposed outside their original use case.

General-purpose AI

General-purpose AI is in its relative infancy compared to AI, but is considered by many to have far greater potential than narrow AI in the way it can benefit businesses.

General-purpose AI refers to pre-trained models that are capable of performing a wide range of tasks without much need for additional training. They are inherently flexible, can be deployed quickly, and don't require the input of expert AI engineers to adapt to new challenges. Therefore, they are a low-maintenance product and come ready made to address a wide range of tasks with only fine tuning needed. Think large language models (LLMs) like GPT4o (which powers ChatGPT), Azure Computer Vision models that can detect objects in images, or Anthropic's Claude functionality that can track users' desktop computer behaviour to create self-managing agents.

Narrow or general-purpose AI

The most significant difference between general-purpose AI and narrow AI lies in their scope and reusability. While narrow AI is focused, task-driven, and often limited in scope, general-purpose AI is flexible and adaptable, and can be developed and deployed across multiple tasks with minimal adjustment. There is a place for both in the future of AI, as long as they are implemented in the right context.

Context is everything

How do you determine whether to invest in narrow or general-purpose AI? The right answer depends on your business objectives, timelines, and resources. Granted, general-purpose AI can offer rapid deployment and flexibility, but there are still plenty of business scenarios in which narrow AI is the better choice.

Each business is unique in its AI requirements, but the short guide below offers direction when considering the strategic implications of narrow AI or general-purpose AI in your own business context.

Use narrow AI when:

- The task is **highly specialised** and requires a custom solution that cannot be effectively addressed by existing models. This custom solution can take huge volumes of labour-intensive work off human hands, allowing them to reallocate their time to more strategic endeavours.

- The AI solution is **core to your value proposition**, such as Netflix's recommendation algorithm. These types of 'recommender systems' can help you to enhance your customer experience by creating more personalised products.

Use general-purpose AI when:

- The task requires **speed and adaptability**. General-purpose AI is ideal for tasks that can leverage pre-trained models, such as text generation, image recognition, or sentiment analysis.
- You need to **address a broad range of tasks** quickly, especially in dynamic environments where requirements may change frequently.
- You are seeking a model that can be **adapted for reuse over time** to address future challenges.





Changing teams, changing needs

Different AI models will require different expertise and tools to ensure they operate efficiently and deliver success to a business. When considering the hows and the whys of AI deployment, it's important to evaluate the makeup of your organisation, from team to technological infrastructure, and whether this aligns with your AI goals.

Different strokes

The differences between narrow and general-purpose AI become clearer when considering the experience and skills required of an internal team to develop and deploy the models.

Narrow AI skillsets

Developing narrow AI solutions often requires in-depth data science expertise. This is because data scientists can understand algorithm selection, data preparation, model training, and evaluation – all things that are required to develop a narrow AI model.

Such models tend to take weeks or months of development. They go through multiple iterations before they are implemented to ensure their performance is optimised to address the task at hand.

The roles required to deliver a narrow AI model include:

- Data scientists for model design and training.
- Data engineers for data sourcing and processing.

- MLOps (machine learning operations) experts to manage deployment, retraining, and scaling.
- Application development experts specialising in UI/UX, as well as front-end and back-end development.

General-purpose AI skillsets

By contrast, deploying general-purpose AI is more focused on expert usage of a model rather than its development.

Skills like prompt engineering (guiding AI models in the right direction with instructions) and tool integration (allowing different tools to engage with each other and share data) are more of a necessity than mathematical or algorithmic knowledge. Teams need to have a deep-rooted understanding of which pre-trained models are best suited for specific tasks and how they can effectively integrate them into business workflows.

The roles required to deliver a general-purpose AI model include:

- AI engineers skilled in prompt engineering and integration.
- Software engineers to design systems that incorporate AI outputs.
- IT specialists to manage infrastructure and cloud services.

What is clear in this distinction is that general-purpose AI as a tool has a lower bar of entry than narrow AI. Rather than the exclusivity of narrow AI, which requires teams with highly technical data capabilities, general-purpose AI shifts the dial towards broader software engineering and AI deployment capabilities. What's also evident is the need for collaborative teams that are hybrid in their

nature, combining technical, operational, and business knowhow in other areas of expertise – such as security architecture, ethics, and responsible AI compliance – to deliver business change and drive readiness for adoption.

Setting up for success

Is the accessibility of general-purpose AI cause for a rethink and a restructure of your business? As is the way with decision-making in this field, it all depends on what the goal is.

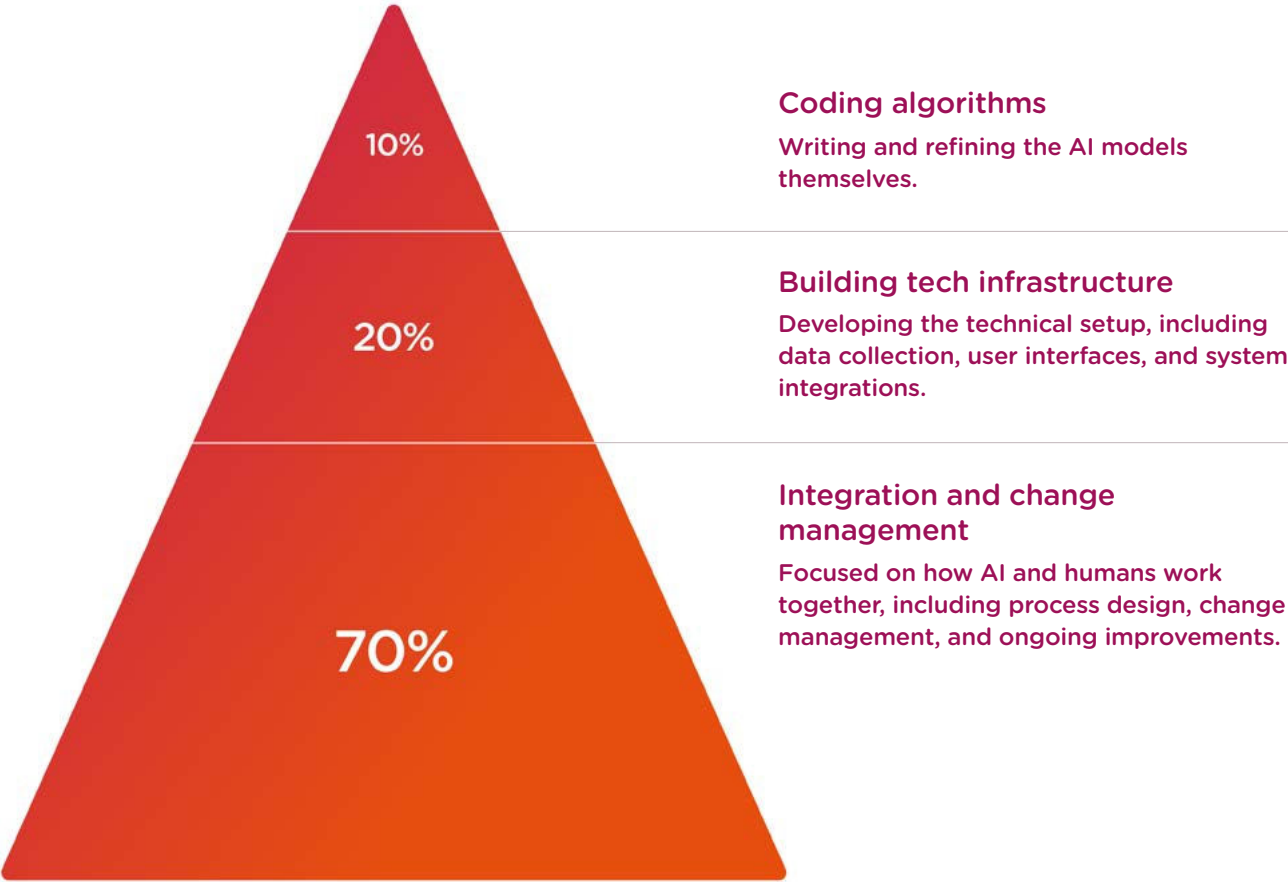
If the context calls for a narrow AI model that needs to be deeply embedded into a specific operational process, your team of end-users will work alongside data scientists, data engineers, and MLOps specialists to develop the model. Together, they will collaborate to design, build, and deploy a custom AI model that serves a

specific purpose and creates a tangible business benefit, as we explain in our first case study.

In a general-purpose AI team, software developers and AI engineers will have to work in a far more diverse team to help shape the practical implementation of the model. This might see business process owners and IT specialists working alongside the AI specialists and end-users that are central to all AI development, in what is likely to be an iterative process that continues to build and develop over time.

An effective guideline for AI efforts is the '70 Percent Rule'. It recognises that while time needs to be dedicated to the technical side of AI implementation, like coding algorithms and the building of tech infrastructure, the majority – i.e. 70% – of your efforts should focus on integrating AI into your wider business ecosystem.

The “70 Percent Rule”





Business case: Elevating short-term forecasting with narrow AI for a global confectionary company

Argon & Co worked with the global confectionary group that sought to improve its short-term demand forecasting.

The group's international reach covers over 25 markets worldwide, with production sites based across Switzerland, Germany, France, Italy, Austria, and the United States.

After introducing SAP IBP forecasting – a cloud-based software used to help companies plan and manage their supply chains – the group saw a noticeable improvement in the quality of medium- and long-term forecasts.

However, at the same time the quality of its mid-month landing evaluations were deteriorating, and were regularly challenged by its Executive Committee.

“Our client had made great inroads on its mid- to long-term forecasting through SAP IBP,” observed Laure Van Effenterre, Partner at Argon & Co. “However, there was still room for improvement in their month-end commercial landings, something their software in its current iteration couldn't necessarily address.”

As a solution, the SAP integrator suggested activating demand-sensing functionalities, which leverage machine-learning algorithms (typically XGBoost) to refine the short-term forecast.

“We helped the group really comb through its internal data, and then suggested what should and shouldn't be included to improve their short-term forecast accuracy,” notes Jean-Loup Ezvan, Consultant at Argon & Co. “Doing so included the collection of multiple data sources, before running dozens of forecasting simulations to help identify the best performing scenario for implementation.”

Argon & Co then provided the SAP IBP vendor and integrator with a business requirements document for the setup of demand-sensing functionalities, helping the group to address the challenges it faced in short-term forecasting.

Building on the right foundations

For all their differences, narrow and general-purpose AI models are built on a similar infrastructure at their core: they tend to require things like data extraction, storage, and processing tools. Companies now utilising AI to its highest degree are those that have historically invested in their own data, since it is this data that can help unlock the full potential of these AI models. Equally, without good data to feed these AI models, the benefits they may offer are diminished.

It's important to understand that AI is not here to replace the workforce. It should complement the human-centric capabilities that make businesses unique. According to an Argon & Co client survey, businesses still see human interaction as a critical element to 40% of supply chain processes. So in an AI-driven world, it's the synergy between AI tools and human expertise that will drive your business forward. By selecting the right AI strategy, you're not just improving efficiency but building resilience and setting a new standard in your industry.

35% of supply chain processes require some form of human input

30% of supply chain operations require collaborative human effort for problem-solving

While there are similarities at their core, what differentiates narrow and general-purpose AI is how complex the model is to deploy and to manage for your teams.

A narrow AI model may require an organisation to manage its own MLOps. Practices like model retraining to address accuracy drift, infrastructure management, model scalability, and model tuning can be highly technical and complex. They may involve specialised hardware which can ramp up the costs. Plus, you'll also need specialist expertise in your team to manage the MLOps.

General-purpose AI is less complex when deployed. Often, general-purpose AI models use cloud-based connections between applications, allowing businesses to bypass the need for extensive in-house infrastructure upkeep. Instead, they can

engage with the model directly through application programming interface (API) requests – essentially requesting a service or information from the model itself. That said, the costs of monitoring, usage, and performance is similar to that of narrow AI. Additionally, if a business opts to host its own pre-trained models for general-purpose tasks, it may need more intricate setup and maintenance than even a standard narrow AI model, increasing costs further.

Making the call on speed and efficiency

What might you value from an AI model? Do you have a significant and specific business challenge that needs addressing by an AI model that provides pinpoint accuracy? Or are you looking for a more agile, adaptable model that offers quick wins? These are questions that will define whether narrow or general-purpose AI is the most effective solution for your business.

Narrow AI models are powerful and can be developed to resolve large-scale, specialised problems. Granted, such models will take time and resources to develop, with lengthy cycles of fine-tuning potentially slowing down project timelines, but they can deliver enormous efficiency and cost-saving benefits once deployed.

The pre-trained models of general-purpose AI can offer time to value as a big win from your investment, if what you are looking for is adaptability rather than a solution to a singular, significant business challenge. With the right team in place, these general-purpose AI models can be adapted to suit new tasks involving unstructured or textual data in just hours or days, providing businesses with immediate resolutions. Our second case study offers a real-life insight into this.



Business case: Helping beverage manufacturer reduce order-processing time by 73%

In 2024, Argon & Co was engaged by the customer services team of an alcoholic drinks manufacturer to improve the processing of all incoming orders from those customers that were not on electronic data interchange (EDI).

Using general-purpose AI and LLMs, we were able to deliver a rapid proof of concept for the client that converted non-standardised forms of order received from customers into ERP (enterprise resource planning) ready sales order forms.

The tool, which was deployed on the client's own Azure platform, enabled the high-speed completion of an array of tasks – as Mohib Rahmani, Managing Principal at Argon & Co, suggests.

“The model we were able to deliver was so effective because it covered so many bases – and this is why the results are so significant. It could highlight PO discrepancies and misalignments to master data, and at the same time help users with customer email content generation when there might have been inconsistencies or deviations.”

Other tasks the tool could complete at high speed included:

- Identifying and extracting the relevant information from POs using LLMs, and translating that to customer master data (e.g. unit of measurement, product descriptions, customer code, customer address, delivery date etc.).
- Performing allocation and availability checks through a live interface with the ERP system.
- Breaking down the orders into correct container sizes based on optimisation (highlighting where there is an opportunity to upsell based on current container space utilisation).

As a result of the tool's implementation, the client saw a 73% reduction in order-processing time and a 50% reduction in application switches while processing orders.

In addition, we provided post-deployment support to the client to ensure the application was handed over without bugs, and developed new processes for the client that established clear roles and responsibilities within the team to ensure continued success.

The wins and the watch-outs

The benefits of AI are numerous, as long as it is deployed in the right context. According to data gathered from our clients and Gartner Research, 75% of supply chain planning will be supported by AI and will contribute to a 40% reduction in supply chain planning costs.

But businesses cannot underestimate the need to set themselves up for success. If the challenges involved are recognised and addressed appropriately, the opportunities are there to be taken.

Challenges

- **Investment:** Implementing AI models can vary significantly, starting from \$5,000 for an off-the-shelf solution to over \$500,000 for a more complex use case. This investment includes costs for specialised hardware like graphic processing units (GPUs), essential for AI training, and software and development expenses. Then there's the cost of hiring skilled professionals like data scientists and machine-learning engineers. Hidden costs can stack up too, comprising up to 70% of the total investment, and come in the form of data cleaning, system integration, regulatory compliance, and ongoing maintenance.
- **Data management:** Both narrow and general-purpose AI require well-organised, high-quality data to function effectively – and the management of this data can be extremely labour intensive. Such data can include structured data like databases and

spreadsheets, and unstructured data, like text, images, and videos. Robust data governance policies are required that establish guidelines for data use, privacy, and security. Along with the processes mentioned above under hidden costs, they can also include data validation to confirm data accuracy and relevance, while data integration skills are also essential for the wider ecosystem.

- **Infrastructure readiness:** The weight of deploying and scaling AI models – particularly with general-purpose AI – can stretch existing IT systems. Businesses will need to evaluate their cloud capabilities, data storage solutions, and processing power to ensure their infrastructure can hold up.

Opportunities:

- **Problems solved:** Both narrow and general-purpose AI models can help businesses address key challenges. Doing so can unlock new commercial potential.
- **Accelerated innovation:** The speed at which general-purpose AI models can be deployed may help businesses solve challenges fast and open up new possibilities for innovation, provided they are sufficiently prepared with the internal expertise and specific use cases to handle rapid developments.
- **Cross-functional collaboration:** AI deployment requires teams from across the business to work together, fostering collaboration and driving alignment between technical and business goals.



Looking forward: a narrow highway, or a general direction?

With a firm grip on the challenges they're facing, businesses are now turning towards AI to help work towards a solution. As AI develops at pace, businesses must think strategically about how they deploy these technologies.

Narrow AI remains essential to problem solving for many businesses – particularly those that rely on custom solutions for a competitive advantage such as healthcare, finance, retail, transportation, and manufacturing. It can aid business-critical decision-making through data-led algorithms, enhance customer experiences, and elevate productivity.

The adaptability of general-purpose AI has the potential to offer unprecedented flexibility and speed. Should this potential come to pass, it will allow businesses to scale their AI capabilities at

pace without the need for constant rebuilding from the ground up. And it is this notion – that general-purpose AI's intuitiveness allows it to be reused and repurposed over time – that underpins the rich and potentially endless possibilities of AI.

It's crucial for businesses to recognise that the decision to adopt narrow and general-purpose AI is not based on choosing one or the other. The blending and leveraging of the two approaches can lead to more refined solutions, and help businesses leverage a broader range of data and models. But to navigate these choices and make sensible architectural decisions that are both efficient and effective, businesses need experts like IRIS, the specialists within Argon & Co that have deep expertise in data and AI for operations. The guidance of real experts is critical for businesses aiming to ensure their AI deployment aligns with their strategic objectives, needs, and resources. Now more than ever, their future depends on it.

Acknowledgements



This whitepaper has been written collaboratively by our [IRIS by Argon & Co](#) Data & AI team.

IRIS are the specialists within Argon & Co that have deep expertise in data and AI for operations. With services spanning data and AI advisory, advanced operations analytics and AI applications, underpinned by our innovation lab, we work together with clients to generate real change. Our people have a proven track record of applying a mix of operations experience, data expertise and broad business knowledge to design and implement robust solutions. We are based in Paris, London, and Sydney, and work collaboratively across the Argon & Co offices globally.

About Argon & Co

Argon & Co is a global management consultancy that specialises in operations strategy and transformation. With expertise spanning supply chain planning, manufacturing, logistics, procurement, finance, and shared services, we work together with clients to transform their businesses and generate real change. Our people are engaging to work with and trusted by clients to get the job done. We have 18 offices across Europe, Australasia, America, Asia and the Middle East.

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