



Building a strategic AI roadmap

Methodology & tools

www.keyrus.com

Building a strategic AI roadmap

Methodology & tools

The rise of artificial intelligence is profoundly transforming organizations, offering new perspectives for optimization and innovation. However, despite the enthusiasm for these technologies, their successful integration within a company requires a structured and pragmatic approach. The challenge is not limited to adopting high-performance tools, but involves strategic thinking about governance, skills and organizational impact. Defining a clear roadmap overcomes the challenges of implementing AI, maximizes value creation and ensures sustainable adoption. For all these reasons, we've written one ourselves for you! This ebook provides a comprehensive approach to effectively implementing & managing AI in your organisation.



Images generated by **Midjourney** with the prompt: « Close-up scenes of a diverse team of office professionals men and women in a modern, high-tech workspace, intently collaborating on a strategic roadmap for deploying artificial intelligence. Faces showing concentration, determination, and teamwork, with glowing holographic interfaces, digital charts, and AI schematics in the background. Futuristic yet realistic style, cinematic lighting, depth of field, professional attire, emphasis on expressions and innovation --chaos 10 --ar 3:4 --style raw --weird 300 »

THE transformation driver

Artificial intelligence has become a major driver of transformation for companies in all sectors. We have entered a new technological era, driven by AI, especially generative AI, which is making what were once futuristic capabilities accessible on a massive scale. Business leaders must adapt to this new situation, or risk being overwhelmed by change

The potential for value creation is indeed considerable: according to Goldman Sachs, the adoption of generative AI could increase global wealth by 7%, or nearly \$7,000 billion, and boost productivity by 1.5% over the next ten years. By 2025, 90% of the world's businesses could have generative AI as part of their daily workforce.

This hype is driven by AI's promise of operational efficiencies, product innovations and customer service improvements. **However, achieving these promises on a company-wide scale remains a major challenge.** Today, only a small proportion of organizations manage to deploy AI in a truly profitable way: for example, just 8% of companies would be 'high performers' deriving more than 20% of their results from AI. Most are still struggling to move beyond the experimental stage and generate a significant impact on their sales or margins.

Several challenges explain this situation. On the one hand, **companies often face a lack of clarity about which AI use cases** are most



relevant to their business. Without a clear vision of the problems to be solved or **the value levers to be activated**, AI initiatives run the risk of spreading themselves too thinly, or aiming at objectives that are poorly aligned with corporate strategy.

On the other hand, **deploying AI requires overcoming significant technological and organizational challenges**: insufficient data quality and accessibility, integration constraints with existing systems, a shortage of data science skills, or even cultural reluctance to change. Added to this are uncertainties about ROI: it's not always easy to link the results of an AI initiative directly to the performance indicators tracked by management, which can dampen the support of decision-makers.

Finally, governance, ethical and compliance concerns add complexity to the equation - for example, ensuring the confidentiality of customer data, avoiding algorithmic biases, and complying with emerging regulations around AI. These obstacles mean that many companies launch promising POCs - Proofs of Concept -, but **struggle to industrialize them on a large scale.** And without scaling up, it's difficult to generate the expected benefits from AI and justify the investments made. In short, there is still a wide gap between enthusiasm for AI and the concrete realization of its value.

In this context, **building a strategic AI roadmap is essential to guide the company step by step towards effective deployment.** Such a roadmap provides a structured action plan for navigating the complexities of AI



transformation. First, it forces us to clarify the vision and objectives - defining how AI will concretely support the company's strategy, for example, improving productivity in a key process by 10%, or personalizing the customer experience on a large scale. This framing stage is decisive for aligning all players on a common ambition, and for identifying the most promising opportunities.

Secondly, the **roadmap helps prioritize initiatives** over time: it serves as a compass to focus resources on use cases with higher added value or rapid completion, while planning more complex projects over the medium term. The challenge is to refocus AI initiatives on business priorities, freeing ourselves from scattered experimentation.

Moreover, drawing up a roadmap means addressing the organizational prerequisites; governance, data, infrastructure, skills, necessary for the success of AI projects upstream. This ensures that the foundations are in place to accommodate the algorithms, a bit like preparing the ground before erecting a building. Once the AI has been deployed, the roadmap serves as a guideline to steer its execution: it articulates the pilot initiatives and their scale-up, providing for evaluation stages after each step.

Thanks to this methodical approach, the company can **minimize technical, financial or user adoption related risks** by anticipating points of vigilance at each phase of the project. It has been observed that a well-defined strategy, including a clear vision of the challenges to be

overcome and planning for AI operationalization, **is a key factor in successfully deploying AI at scale and in a sustainable way.**

The benefits expected from such a structured approach are worthy of the efforts involved. By following a roadmap, the company gives itself the means to **deliver concrete results** with AI and reap the rewards on all fronts. From an operational point of view, effectively deployed AI can **automate routine tasks, boost team productivity and reduce costs**, freeing up time to focus on higher value-added activities. On the decision-making front, AI can provide predictive analysis and real-time insights, **improving decision-making and market responsiveness**. On the customer side, AI applications such as chatbots, personalized recommendations, etc. help to enrich the customer experience, offering faster and more relevant services, thereby **boosting satisfaction and loyalty**.

Internally, intelligent automation can also improve the employee experience by eliminating administrative drudgery and restoring meaning to work, an important factor in engagement. Finally, for the company itself, a successful AI transformation translates into a **sustainable competitive advantage: it becomes more agile, innovative, and able to generate new revenue streams** that less advanced competitors will struggle to replicate. All these potential benefits - greater operational efficiency, better-informed decisions, enhanced

“The success of an artificial intelligence deployment project depends first and foremost on a rigorous **strategic framework**. The challenge is to avoid the frequent pitfall of isolated experiments, disconnected from business objectives, which dilute investment and compromise value creation.”



Image generated by **Recraft** with the prompt :
 « Avoid the common pitfall of isolated experiments,
 disconnected from business objectives. »

customer satisfaction and business innovation - illustrate the considerable value that strategic AI adoption can bring.

Ultimately, having a clear roadmap for deploying AI is not just a question of method: it's a guarantee of coherence and sustainability in the company's digital transformation, an indispensable condition for moving from announcement effect to genuine value creation thanks to artificial intelligence.

Strategic framing and identifying opportunities

The success of an artificial intelligence deployment project depends first and foremost on a rigorous strategic framework. The challenge is to avoid the frequent pitfall of isolated experiments, disconnected from business objectives, which dilute investments and compromise value creation. Defining a clear ambition and aligning AI with corporate priorities is the first structuring step in the roadmap.

Defining AI ambition and aligning strategic vision

This framing work must be supported by senior management and integrated into the organization's overall strategy. General management, in consultation with the business and technical teams, sets a clear course and formulates the objectives pursued: reducing operating costs, personalizing the customer experience, generating new sources of revenue, or accelerating innovation. This clarification of the AI vision is essential to federate all stakeholders and avoid scattering initiatives.

The organization's maturity on the subject must also be measured right from this phase. An



assessment of the level of AI literacy by the teams, the skills available, the existing infrastructures and the use cases already tried out will enable the ambition to be realistically calibrated. The AI roadmap will draw on this initial snapshot to build a progressive, tailored program.

Identify value drivers and use cases

Once the ambition has been set, the priority is to identify the areas where AI can create the greatest value. This requires an analysis of the company's activities in terms of their economic and strategic levers. Key questions need to be answered: which processes are the most costly or time-consuming? Where are the major friction points in customer relations? What new services or products could AI make possible?

The formulation of use cases must be based on a rigorous, methodical approach. The most successful companies generally favor a top-down approach, starting from the strategic objectives defined by management and deducing the opportunities for applying AI. This approach

avoids limiting itself to marginal operational gains, and refocuses AI on the transformation of value-creating activities.

At this stage, the involvement of the business units is essential to qualify and refine the use cases.

Assess the feasibility and value of use cases

The identification of AI opportunities is accompanied by a dual assessment: operational teams contribute their knowledge of processes and challenges in the field, while AI experts assess technical feasibility and data requirements. This cross-functional collaboration guarantees the relevance of the scenarios identified and their alignment with realities on the ground.

Value analysis consists in estimating the impact of the use case on the company's main performance indicators: financial gains, improved customer satisfaction, process optimization or risk reduction. At the same time, the feasibility of use cases is analyzed along three dimensions:



- The **technological maturity** of the solutions required and their integration into existing systems;
- The **availability and quality of the data** needed to learn the models;
- **Acceptance from teams and customers**, as well as compliance with regulatory or ethical constraints.

Prioritize initiatives and build the initial roadmap

The final stage of this strategic scoping consists in selecting the use cases that will make up the first wave of AI projects. The rigorous selection of use cases ensures that each AI project makes a concrete contribution to the strategic objectives. The roadmap then becomes the common thread that guides the entire AI program.

Preparing the foundations

The deployment of artificial intelligence cannot produce lasting effects without solid foundations. These technical, organizational and human prerequisites determine the success of projects and their scaling-up. At this stage, the company must focus on structuring three essential pillars: data, technological infrastructure and operational models. Neglecting this preparation can lead to costly failures, disappointing results, or even make it impossible to scale-up the identified use cases.

Governing data and guaranteeing quality

AI is above all based on data. Without access to high-quality, rich, diversified and governed data, algorithmic models struggle to learn and produce reliable results. The first task is therefore to assess the availability and quality of the data required for each prioritized use case. Too many organizations underestimate this step, and then find their projects stalled for lack of usable or compliant data.

The company needs to make an inventory of its internal and external data sources, mapping their level of reliability, accessibility and format. This phase enables gaps to be identified, and the necessary corrective action to be taken: cleaning up databases, enriching data sets, integrating new sources, or setting up automated data collection processes. In addition to these purely technical considerations, there may also be ESG considerations; as the carbon footprint can vary from one data source to another, some organizations also use this KPI as a factor of arbitration.

Here, data governance becomes a strategic lever. **The principles of ethics, security and compliance must structure every use of data by AI.** Particular attention is paid to the management of personal data and the traceability of datasets used in models. The implementation of robust governance, including clear rules and regular checks, secures the whole approach and protects the company from regulatory and reputational risks.

((The governance of AI projects cannot be limited to traditional IT project management channels. **It must involve business departments, data and AI experts.**))

Build a Scalable and Secure Technology Architecture

At the same time, the organization must assess its technical capacity to support AI use cases. Existing IT architectures are rarely designed to handle the complexity and demands of artificial intelligence. As such, the roadmap must include a plan for evolving infrastructure and tools.

This challenge is twofold: ensuring high-performance processing while enabling seamless integration of AI into the existing application ecosystem. The architecture should support component sharing, promote model reuse, and optimize development and maintenance costs.

Security is a critical requirement at every stage. AI introduces new attack vectors and vulnerabilities, especially when handling sensitive data or generating automated content. Infrastructure must incorporate enhanced protection measures: access monitoring, data encryption, regular audits of models and training pipelines, and detection of attempts to tamper with algorithms.

Implement governance and a dedicated organizational structure

The development of a dedicated AI operating model is emerging as a key, if not the primary, driver of success. AI project governance cannot rely solely on traditional IT project management structures. It must bring together business units, data and AI experts, IT teams, and executive leadership within a coordinated framework.

Establishing an AI governance committee helps oversee all initiatives, set priorities, and ensure compliance with regulatory requirements. This committee also safeguards the overall coherence of projects and encourages resource and expertise sharing.

In more advanced organizations, creating an AI Center of Excellence, CoE, accelerates progress and standardizes practices. The CoE brings together key competencies; data scientists, AI engineers, domain experts, and compliance specialists, to consolidate knowledge, share best

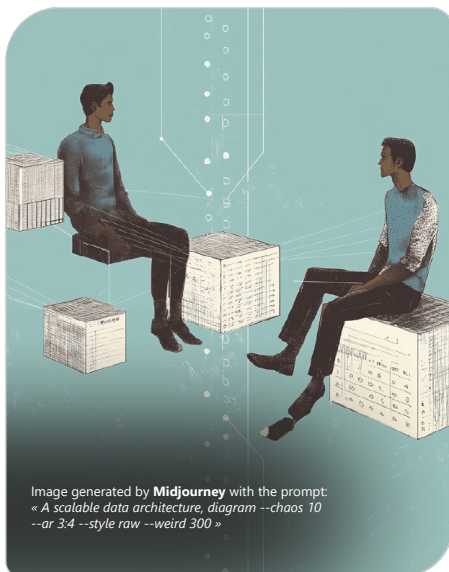
practices, and support projects throughout the entire model lifecycle.

Upskilling teams is another essential aspect of preparation. Companies must train their employees in AI fundamentals, foster a culture of data and experimentation, and attract specialized talent. The goal is to build an AI-ready organization, one that can autonomously manage projects and make AI an integrated lever for operations.

Instill ethical principles and establish risk management frameworks

Finally, preparing the foundations involves creating an AI-specific ethical framework. Defining guiding principles helps set the boundaries of projects, anticipate risks, and prevent potential pitfalls. The company clarifies what it will, and won't, do with AI, in alignment with its values and commitments. This is a balancing act, sometimes requiring trade-offs between caution and innovation. In international organizations, it can also be a moment of cultural confrontation and consensus-building.

This ethical framework must be translated into concrete actions, such as project validation



processes, regular model reviews, and bias control mechanisms, provided there is prior agreement on what constitutes bias. AI risk management becomes a transversal function, integrated into the overall governance structure and aligned with IT and operational risk management systems.

Preparing these foundations ensures the robustness of the AI roadmap and secures the entire program. This step anticipates obstacles, aligns teams, and equips the organization with the resources necessary to turn artificial intelligence into a true driver of sustainable performance.

Value-Driven Experimentation

Similarly, the deployment of artificial intelligence should not be approached as a sudden shift to industrialized solutions. A structured experimentation phase is essential to validate hypotheses, refine models, and secure investments. This approach helps demonstrate the real value of selected use cases while preparing for their gradual scaling.

Adopt an interactive & agile approach

As previously mentioned, the experimentation phase begins with the selection of targeted pilot projects. These are primarily used to test the robustness of the models and measure the gap between theoretical benefits and the results observed in the field. The goal is also to validate the integration of AI into existing processes without disrupting team operations. This low-risk approach helps reassure stakeholders and adjust the roadmap based on concrete insights.

Each pilot project should follow an agile methodology, relying on short cycles of experimentation, evaluation, and adjustment. This method allows for rapid testing of initial hypotheses and necessary refinements.

Agility applies both to model development and their integration into business processes. Successive iterations promote continuous performance improvement, enrich data sets, and adapt functionalities to the real needs of users.

This progressive learning dynamic ensures the team's AI maturity improves and reduces the risk of failure when scaling up.

At the same time, rigorous tracking mechanisms should be established to measure the achievement of set objectives. Each pilot should be evaluated using specific business indicators: productivity gains, improved service quality, cost reduction, and impact on customer satisfaction. These metrics serve as a reference to decide whether to scale up or adjust the strategy.

Organize Feedback Loops

The success of pilot projects relies on business engagement and the ability to gather feedback. From the design of prototypes, operational teams must be involved to ensure the relevance of the developed solutions and anticipate barriers to adoption.

This co-creation process encourages end-users to embrace AI tools and allows for the early detection of potential issues or misunderstandings. Establishing structured feedback loops facilitates model improvement and ensures that the real needs of the field are addressed.

At the same time, a change management strategy should support pilots, preparing teams for the integration of AI into their daily operations. Training, awareness, and internal communication initiatives help overcome resistance and build long-term trust in the deployed solutions.

Leverage Results and Structure the Scaling Process

The lessons learned from pilot projects form a valuable foundation for the rest of the roadmap. Every success should be highlighted to decision-makers and teams to demonstrate AI's ability to generate tangible value.

Communicating the gains achieved, the challenges overcome, and the opportunities opened helps fuel internal momentum and strengthens stakeholder engagement.



Image generated by **Lexica Aperture v5** with the prompt: «
Training, awareness-raising and internal communication actions »

Value-driven experimentation thus becomes a strategic lever to secure transformation and maximize the benefits of investments in artificial intelligence.

Scaling and Sustainability

The scaling phase marks the true turning point of an artificial intelligence program: it transforms promising experiments into robust solutions that are permanently integrated into operations. This stage requires rigor, method, and enhanced governance.

Scale Solutions and Ensure Operational Continuity

Scaling requires transferring validated AI models and solutions into a production environment. This industrialization goes beyond simply replicating pilots across different functional or geographical areas. It necessitates a revision of processes, automation of workflows, and enhancement of technical infrastructure robustness.

MLOps practices become essential at this stage: they ensure the automation of model lifecycle management, from training to updating, along with continuous monitoring. Version control, performance monitoring, and periodic retraining of models ensure their long-term relevance in the face of evolving data and business contexts.

Securing AI solutions becomes critical at this point. This involves deploying algorithm observability mechanisms, detecting potential drifts, and preventing risks that could compromise decision quality or regulatory compliance.

Establish governance and a scalable operating model

Centralized management of AI initiatives ensures consistency in technology choices, resource sharing, and risk control. The AI governance committee becomes the key decision-making body.

Sustaining AI also requires smoothly integrating deployed models into business processes and information systems in an interoperable way. AI thus becomes a natural part of daily operations, just like management tools or transactional systems.

Extend AI Across the Entire Value Chain

Scaling up paves the way for the gradual expansion of use cases across all business units and subsidiaries. The challenge lies in replicating successful initiatives in new areas, identifying fresh opportunities, and amplifying AI's impact on the company's overall performance.

This expansion can occur vertically by deepening value within the same processor horizontally,

((The **scaling-up phase** marks the real tipping point for an artificial intelligence program: it transforms promising experiments into robust solutions, permanently integrated into operations.))

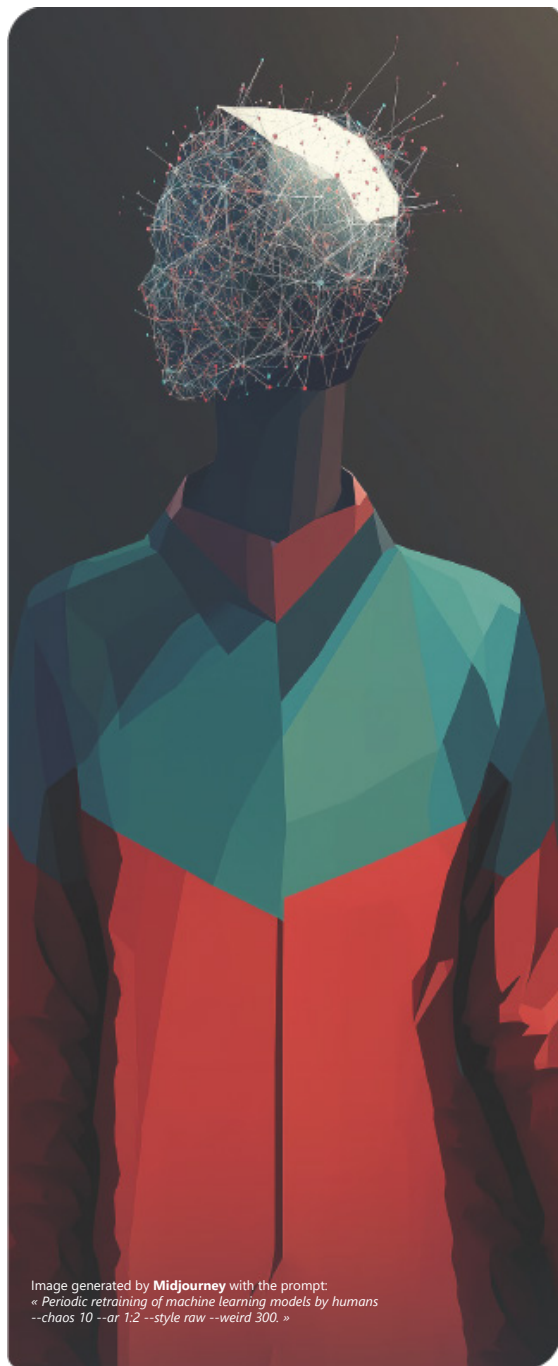


Image generated by **Midjourney** with the prompt:
« Periodic retraining of machine learning models by humans
--chaos 10 --ar 1:2 --style raw --weird 300. »

by applying AI solutions to related activities. This step-by-step approach helps manage risks, fine-tune models as they evolve, and maintain coherence across the broader AI strategy.

The widespread integration of AI across all areas of the enterprise; customer relations, production, supply chain, finance, and human resources, leads to lasting transformation of operations and significantly enhances the organization's capacity for innovation.

In summary...

Here is a summary table of the key steps in the AI roadmap, presented vertically, where each step begins with framing and structuring actions before transitioning to sustainable, industrialized systems in more advanced activities.

Stages of building an AI roadmap	Initial actions	Medium to longterm trajectory
Strategic Framing and Opportunity Identification	Define the AI ambition and align with strategic vision.	
	Identify value levers and formulate use cases.	
	Assess the feasibility and potential value of use cases.	
	Prioritize initiatives and build the initial roadmap.	
Foundation Preparation	Govern data and ensure its quality from the start...	...and maintain this focus over time.
		Build a scalable and secure technology architecture.
	Establish dedicated governance and organization... starting with a small, agile team...	...that grows as the project matures.
	Embed ethical principles and prepare for risk management	Continue and formalize the approach.
Value-Driven Experimentation	Adopt an iterative, agile approach in the short term...	...and over the medium to long term!
		Set up continuous feedback loops.
	Capitalize on results...	...and structure the scale-up process.
Scaling and Sustainability		Industrialize solutions and secure operations.
		Structure governance and the operational model at scale.
		Extend AI across the entire value chain.

Securing value creation

Deploying artificial intelligence at the enterprise level is not something that can be improvised. Success relies on a structured roadmap that combines strategic vision, careful selection of use cases, preparation of technical and organizational foundations, and a gradual scaling process. Each step is designed to secure value creation, manage risks, and ensure AI initiatives are aligned with business priorities.

Faced with these challenges, Keyrus supports companies in defining and implementing their AI roadmap. With its expertise in data, technologies, and business challenges, Keyrus guides organizations at every stage... from identifying high-impact opportunities to industrializing solutions.

This tailored support helps accelerate transformation, maximize return on investment, and turn artificial intelligence into a true driver of performance and competitiveness.

eBook co-written by Keyrus, ChatGPT, DeepSeek, Mistral, Claude, Copilot, Perplexity & Gemini



By combining industry, functional and technological expertise in all the most current areas of data and artificial intelligence, Keyrus helps its customers to implement the resources they need to increase their competitiveness, resilience and adaptability.

Keyrus offers a complete value proposition, covering consulting and solutions, so that the opportunities created by data, artificial intelligence and digital become a reality:

- . Data advisory & consulting
- . Data & analytics solutions
- . Artificial Intelligence
- . Enterprise Performance Management: EPM
- . Digital & multi-experience

Relying on the accumulated experience of more than 3200 people and present in more than 28 countries on 4 continents, Keyrus is one of the foremost international experts in data, consulting, and technology.

Learn more at: <http://www.keyrus.com>
#HumanizingTheFuture