



● Whitepaper

# Redesigning for AI: The process building blocks for enterprise transformation

**eraneos**

## Contents

<b>Situation: The legacy process problem</b>	<b>03</b>
<b>Solution: The Eraneos AI process design framework</b>	<b>04</b>
Layer 1: Macro views for alignment & storytelling	04
Layer 2: Building blocks for design & execution	05
<b>Reference case: transforming credit card ordering</b>	<b>06</b>
AI-optimized process flow	07
Why AI-first process design enables radical simplification	07
The power of reusable building blocks across processes	07
<b>How the Eraneos AI process design framework drives transformation</b>	<b>08</b>
The implementation process	08
Preparing for agentic AI	09
Reusability is key	09
Maintaining low dimensionality	09
<b>Multi-level benefits of the AI process design framework</b>	<b>10</b>
<b>Get in touch</b>	<b>13</b>

# Situation: The legacy process problem

Most organizational processes were never designed with AI in mind. They are the product of incremental changes over years, sometimes decades – manual checks layered on manual checks, data moving between siloed systems, and exception handling scattered across teams. Technology plays a supporting role at best, and humans are still positioned as the primary executors of each step. The result is an accumulation of complexity: processes that are fragmented, slow to execute, costly to adapt, and difficult to scale.

In the age of AI, this legacy architecture is a liability. To unlock the technology's full potential, we must rethink processes from the ground up so that AI becomes the primary orchestrator, not an afterthought. That means reducing what we call the "dimensionality" of a process – the number of independent decision points, variables, and interactions – so that it is optimized for AI to execute reliably and efficiently. In essence: We need to shift from optimizing existing processes with AI to redesigning processes that inherently integrate AI, making them ready for execution by autonomous AI agents.



# Solution: The Eraneos AI process design framework

At Eraneos, we've developed a comprehensive approach to process design that prepares organizations for both immediate AI implementation and future agentic AI capabilities. Our framework operates on two complementary layers:

## Layer 1: Macro views for alignment & storytelling

Today, many organizations rely on intricate "process blueprints" that visualize every decision parameter of a process, serving as comprehensive guides for translating workflows into technical implementations. While these visualizations are often challenging to maintain and adapt, they provide valuable end-to-end transparency into processes.



In the first layer, we establish this level of clarity while significantly reducing complexity. We use a modular tool box with four different approaches to provide alignment, clarity and executive-level visualization on the process at hand. Each approach brings a distinct perspective and can be applied individually or in combination, depending on stakeholder needs and project goals:

- **Step tables:** Structured, analyzable rows that break down activities into measurable, trackable steps.
- **Swim lanes:** Actor-based diagrams that clarify responsibilities, visualize handovers, and reveal interactions across roles.
- **TIPOO (Trigger-Input-Process-Output-Outcome):** Concise framework mapping how a process is initiated, what it consumes, how it operates, what it produces, and its overall purpose.
- **Narrative:** Human-readable storylines that describe "how the process works" in accessible language.

These approaches offer flexible, modular entry points for process alignment – far beyond the limitations of traditional process blueprints. Instead of overwhelming stakeholders with exhaustive decision logic, our macro views focus on creating immediate clarity, strategic alignment, and actionable transparency.

By selecting the most relevant approach or combining several, organizations gain tailored, high-level process insights that accelerate collaboration and streamline further analysis. This modular flexibility not only accelerates consensus but also lays a solid foundation for subsequent AI-driven process optimization and redesign.

## Layer 2: Building blocks for design & execution

The heart of our framework is the decomposition of any process into fundamental building blocks – think of them as the Lego pieces of process design. These building blocks can be combined, sequenced, and reused throughout a process flow to create AI-optimized workflows.

Unlike traditional process mapping that focuses on unique, specialized steps, our approach identifies repeating patterns that can be standardized. A single process might use the same building blocks multiple times in different contexts – for example, a "Check" building block might appear several times to validate different aspects of a transaction.

### Core building blocks

Our framework defines five core building blocks as the foundation of any AI-optimized process design:

1. **Multi-select:** Choose among options based on data-driven criteria
2. **Check:** Verify correctness, compliance, or eligibility
3. **Confirm:** Obtain explicit approval or validation
4. **More-info:** Request or provide missing data
5. **Action:** Execute the outcome step

These building blocks are deliberately generic so they can be applied repeatedly throughout a process flow across industries, creating a standardized "grammar" for process design while remaining simple enough for AI to execute autonomously.

### Extended building blocks

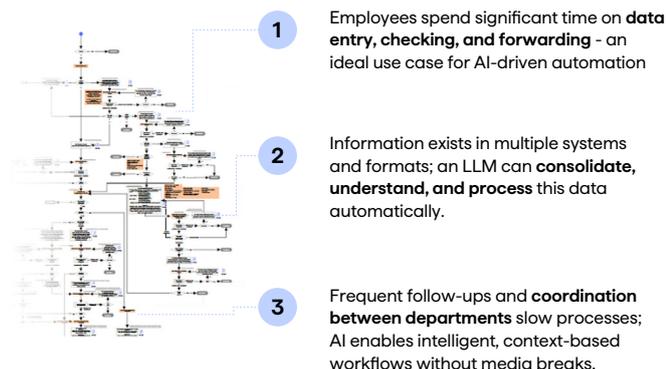
For more complex implementations, our framework includes extended building blocks that provide greater precision and flexibility:

- **Route/Assign:** Direct work to a specific role, queue, or system
- **Wait/Hold:** Represent a planned delay or dependency
- **Notify:** Inform stakeholders without requiring a response
- **Capture/Input:** Gather new data from users or systems
- **Store/Update:** Write information to a system of record
- **Calculate/Transform:** Apply rules or computation to data
- **Exception/Escalate:** Handle errors or special cases
- **End/Outcome:** Mark explicit closure or branch exit

This expanded set of building blocks allows us to model even the most complex processes with precision, while maintaining the modularity and clarity needed for AI implementation. By analyzing the frequency and distribution of these building blocks in existing processes, we can quickly identify opportunities for simplification or redesign.

When a process is reduced to this structure, redundant complexity disappears, execution speeds up, and human involvement is reserved for the few moments, where judgment, empathy, or creativity of a human add value.

### Classical process frameworks



### AI process design framework

The AI process design framework transforms complex processes into **modular process building blocks** to enable effective AI-driven process automation

#### Modular design elements (Example)

Multi-select	Confirm	Check	More info	Action
Users choose from predefined AI-generated options	User validation of AI decisions	Verification of inputs and correction of errors	Adding further data via APIs or other sources	Triggering downstream activities outside the AI model

The framework enables **process standardization**, efficient **AI-powered automation**, and easy **maintenance of process changes**.

# Reference case: transforming credit card ordering

Consider a routine task like ordering a new credit card. In most banks today, this process typically requires the customer to call a service center, undergo manual identity verification, navigate multiple eligibility checks across separate systems, await approval from a back-office team, and finally rely on a manual trigger to produce and ship the card. Throughout these steps, work is handed off between teams, data must be re-entered into various systems, and repeated communication with the customer is necessary whenever documents or clarifications are missing.

Each additional step and handoff introduces complexity and increases the number of decision points within the process. From an AI perspective, this elevated dimensionality creates exponentially more pathways to manage, raises the likelihood of errors, and severely limits opportunities to automate the workflow from start to finish.



## AI-optimized process flow

Leveraging the AI process design framework, we reduce complexity and create an optimized, seamless process flow:

1. The **"Multi-select"** building block determines which card types the customer is eligible for, using real-time data from backend systems.
2. The **"Check"** building block instantly validates identity, credit standing, the shipping address and other prerequisites, replacing scattered manual lookups.
3. **"Confirm"** is the point at which the customer gives explicit approval, handled digitally through secure authentication rather than verbal confirmation recorded by an agent.
4. If additional documents are needed, the **"More-info"** building block generates a clear, automated request through the customer's preferred channel, tracking responses without manual follow-up.
5. Finally, **"Action"** executes the production order for the card and updates all relevant systems in one seamless step.

Using this framework, we supported our client, a retail bank, in transforming a process that previously involved nearly 70 decision nodes into an AI-driven sequence consisting of just 12 building blocks. The business team now manages the design and any necessary adjustments independently, interacting directly with the AI's instructions and modifying them autonomously as requirements change.

## Why AI-first process design enables radical simplification

This dramatic simplification is possible, specifically because we're designing for AI as the primary executor rather than humans augmented by AI:

1. **Parallel vs. sequential processing:** AI can simultaneously handle multiple data streams and decision points that humans would need to process sequentially.
2. **No organizational boundaries:** AI operates across traditional departmental silos, eliminating handoffs that exist purely due to organizational structure.
3. **Consistent decision logic:** AI applies uniform decision criteria, removing the need for multiple verification steps that compensate for human variability.

4. **Comprehensive data access:** AI can securely access all relevant systems at once, eliminating steps designed to gather information from disparate sources.
5. **Continuous operation:** AI works 24/7 without shifts or capacity constraints, removing queues and wait states from the process.

By designing processes specifically for AI at the core, we remove human-centered limitations and achieve a radically simplified, more efficient workflow. Tasks that once required multiple days and extensive manual effort are now completed within minutes – often fully automated and without any need for human intervention.

## The power of reusable building blocks across processes

Our AI process design framework not only reduces steps within one process but standardizes them across multiple processes. The same "Check" building block that validates identity and credit standing for a credit card application can be reused in a mortgage application or loan approval process with different parameters but identical underlying logic. This standardization enables:

1. Consistent customer experience across different banking products
2. Faster implementation of new products by reusing existing building blocks
3. Centralized improvement of building blocks that benefits all processes simultaneously
4. Simplified training for both AI systems and human staff

# How the Eraneos AI process design framework drives transformation

## The implementation process

We follow an AI-first approach of process redesign in a cross-functional collaboration with the business units, actively involving AI engineers from the very beginning. Following a structured, workshop-based approach, we ensure a comprehensive end-to-end process analysis while enabling rapid technological implementation in short sprint cycles. This seamless integration of expertise and technology accelerates both innovation and execution: from concept to code within a very short time span.

Our methodology follows a clear sequence:

- 1. Start macro:** Use TIPOO, swim lanes, or a narrative to align stakeholders on the current state and vision.
- 2. Decompose into micro:** Translate each step into building blocks (the grammar of the process).
- 3. Analyze:** Count frequency of building blocks to identify automation opportunities:
  - Too many "**Check**" steps? Consider AI / rules engine automation.
  - Excess "**More info**" loops? UX redesign is needed.
  - Bottleneck "**Confirm**" steps? Potential to delegate or automate.
  - Multiple "**Route/Assign**" building blocks? Opportunity to streamline handoffs.
  - Frequent "**Wait/Hold**" steps? Process delays to eliminate.
- 4. Redesign:** Re-assemble building blocks into an optimized process flow.
- 5. Implement:** Feed building blocks directly into workflow engines, RPA, or GenAI orchestration.

This building block based analysis provides a quantitative basis for process improvement, allowing teams to focus on the highest-impact areas first.



## Preparing for agentic AI

This modular architecture fundamentally changes how organizations approach process automation. By reducing processes to standardized, low-dimensional building blocks, we establish the ideal foundation for agentic AI – AI that can orchestrate entire workflows, not just automating individual steps.

In this setup, orchestration agents move beyond executing isolated tasks. They manage end-to-end processes: determining when to trigger each building block, monitoring for exceptions, and adapting dynamically to unexpected situations. The architecture ensures agents can navigate each workflow smoothly, without losing context or being derailed by unpredictable paths.

This architecture transforms the role of AI: agents become true orchestrators, autonomously executing processes, making real-time decisions, learning from outcomes, and continuously optimizing workflows. What starts as process redesign today lays the groundwork for fully autonomous process execution in the future.

## Reusability is key

Another key benefit of this approach is the ability to develop specialized AI agents for specific building block types – for example, one agent handling all "Check" operations, and another managing "Multi-select" decisions. This enables targeted optimization and maximizes the reusability of solutions across the organization.

Over time, the modular approach creates a growing library of proven, AI-ready modules. This library can be leveraged throughout the organization, simplifying agent development, reducing implementation costs, and accelerating transformation.

Ultimately, standardization is the key. New workflows can immediately utilize existing agents and modules, regardless of specific business context. This results in a scalable, consistent foundation for automation – enabling rapid deployment and ongoing improvement enterprise-wide.

## Maintaining low dimensionality

Once a process is decomposed in these building blocks, improvements are easy to make without disrupting the overall flow. Upgrading the eligibility logic in "Multi-select" or deploying a more sophisticated fraud detection model in "Check" requires no change to the other modules.

Yet, the complexity has a tendency to creep back in, whether through well-meaning exceptions, regulatory changes, or new product features. Thus, monitoring is a built-in part of the Eraneos AI process design framework. By tracking metrics like execution time, exception rates, and AI confidence levels for each module, we can spot when a process is becoming unnecessarily complex and intervene before performance degrades.

# Multi-level benefits of the AI process design framework



Our dual-layer framework delivers value at multiple levels for different stakeholders within the organization:

- Executives see the macro narrative, making complex processes easy to grasp and align with strategic objectives.
- Process owners gain a standardized vocabulary for describing and optimizing workflows.
- IT teams benefit from reusable implementation patterns that accelerate development.

Together, this forms a universal grammar for processes – cross-functional, comparable, and AI-ready. The dual-layer approach ensures that all stakeholders share a common understanding, while also providing the technical precision necessary for seamless implementation. The result is a transformation that delivers immediate operational improvements and equips the organization for the next generation of intelligent systems.

# Conclusion: Building the AI-native enterprise

Designing processes for AI from the start is not just a matter of efficiency; it is about resilience, scalability, and strategic readiness for the next generation of intelligent systems. When processes are modular, low-dimensional, and AI-operable, the organization can pivot faster, integrate new capabilities seamlessly, and free human talent to focus on the work that machines cannot yet replicate.

Whether the process is as simple as ordering a credit card or as complex as managing an insurance claim, the path to AI-first execution lies in reducing it to its essential decisions and actions, structuring those into the modular building blocks, so AI does the heavy lifting.

This is the transformation Eraneos delivers: taking complex, human-centric processes and boiling them down to powerful building blocks that form the foundation of an AI-native, and soon, agentic-AI-native, enterprise. By reducing process dimensionality and creating a modular architecture, we don't just enable today's automation – we prepare your organization for tomorrow's autonomous, intelligent operations.

Ready to transform your business processes for the AI era? Contact our team at Eraneos to discover how our AI process design framework can help you achieve operational excellence and prepare for the future of agentic AI.

## Authors:



**Claudia Schulze**  
Partner – Data & AI  
Eraneos

[claudia.schulze@eraneos.com](mailto:claudia.schulze@eraneos.com)



**Jakob Klement**  
Senior Manager – Data & AI  
Eraneos

[jakob.klement@eraneos.com](mailto:jakob.klement@eraneos.com)



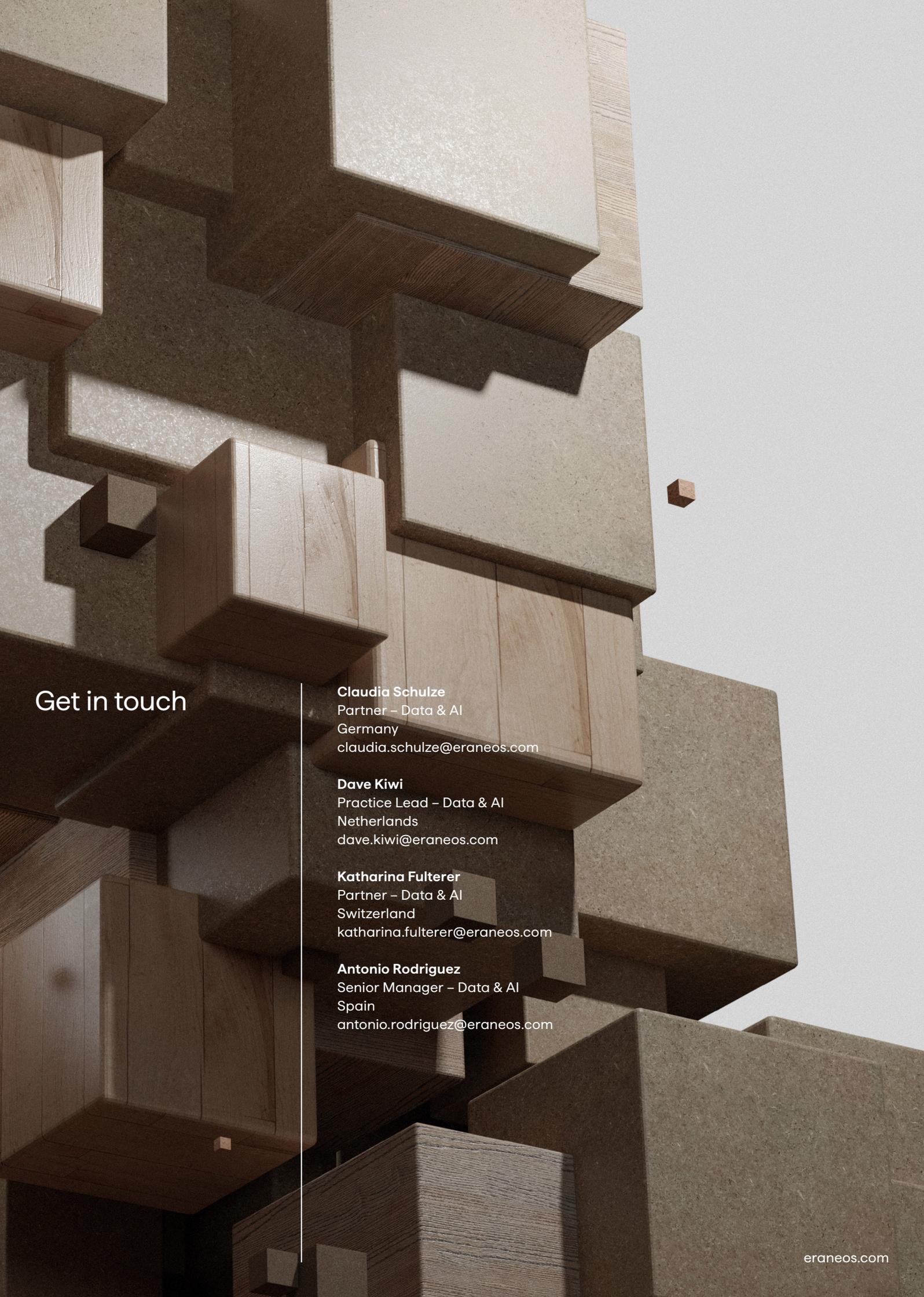
**Matthias Reck**  
Senior Manager – Strategy  
Eraneos

[matthias.reck@eraneos.com](mailto:matthias.reck@eraneos.com)



**Lisa Simon**  
Director – Data & AI  
Eraneos

[lisa.simon@eraneos.com](mailto:lisa.simon@eraneos.com)



## Get in touch

**Claudia Schulze**  
Partner – Data & AI  
Germany  
[claudia.schulze@eraneos.com](mailto:claudia.schulze@eraneos.com)

**Dave Kiwi**  
Practice Lead – Data & AI  
Netherlands  
[dave.kiwi@eraneos.com](mailto:dave.kiwi@eraneos.com)

**Katharina Fulterer**  
Partner – Data & AI  
Switzerland  
[katharina.fulterer@eraneos.com](mailto:katharina.fulterer@eraneos.com)

**Antonio Rodriguez**  
Senior Manager – Data & AI  
Spain  
[antonio.rodriiguez@eraneos.com](mailto:antonio.rodriiguez@eraneos.com)