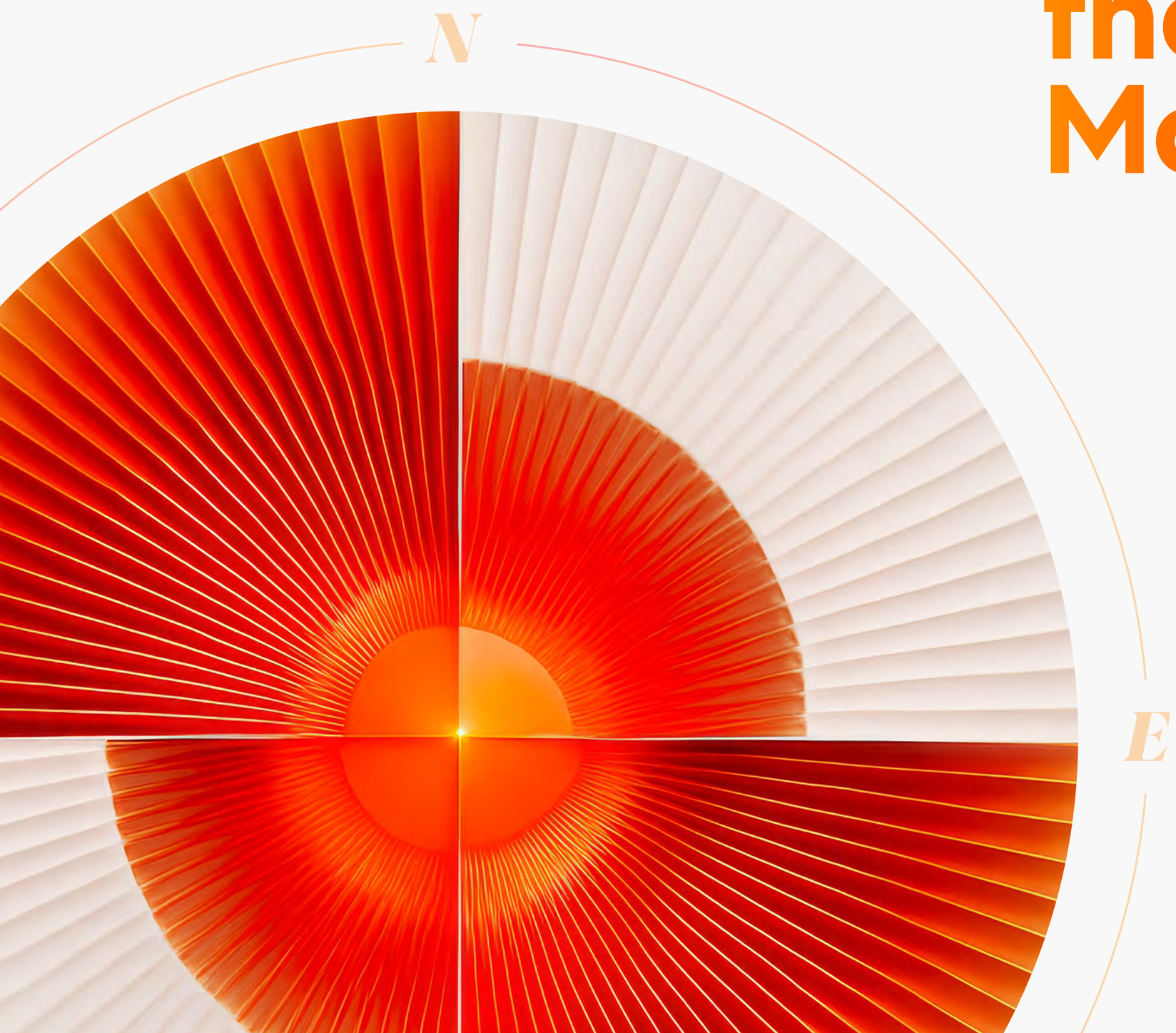
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Escaping the Data Maze

The Data Product as a Catalyst for Organisational Transformation

CIO Compass Series

Introduction – Escaping the Data Maze

Data Space. Data Mesh. Data Fabric. Lakehouse. Data Product...

The data ecosystem has rarely generated so many concepts in so little time. Every conference introduces a new framework, every vendor promotes its own “unified” vision, its interpretation of sovereignty, and every publication promises faster delivery and greater scalability.

Yet beyond this conceptual buzz, the reality on the ground is more complex.

Most organisations do not lack platforms. They operate modern cloud stacks, industrialised pipelines and sophisticated analytical environments. Despite these investments, the same tensions persist: data and use case delivery cycles stretch over weeks or even months; business teams remain dependent on IT backlogs; accountability for data assets is unclear; governance is perceived as a constraint; and parallel initiatives proliferate outside official frameworks.

Technology has undeniably progressed. Organisational models, however, have evolved far more slowly.

What organisations call 'data complexity' is rarely a technical problem at its core. More often, it reflects a deeper misalignment between IT and the business: who truly owns the data, who guarantees its quality, who sets priorities, who bears the costs – and ultimately, who captures the value?

At the same time, expectations have shifted profoundly. Self service is no longer experimental. Use cases are operational, sometimes close to real time, and AI is gradually being embedded into core processes. Data no longer just explains what happened - it now drives decisions and shapes outcomes.

In this context, the challenge is no longer to store more data. It is to transform data into durable, reliable, secure and reusable value.

This is precisely why concepts such as Data Product, Data Mesh, Lakehouse and Data Space are gaining traction – not as passing trends, but as different attempts to industrialise value creation without recreating organisational silos.

Among these approaches, the Data Product stands out less for its technology than for the shift it introduces: moving from a project based mindset to a product based model, grounded in clear accountability, explicit commitments and defined service offerings.

In other words, the future of data is not solely architectural. It is organisational and cultural, built upon assumed accountability, measurable commitments and a sustained focus on business value.

Technology accelerates access to data.

The accountability is what ultimately turns data into value.



The Data Product : Clarifying accountability and value

The Data Product emerges at a time when technology has matured enough to simplify access to data and unlock significant business value.

For many years, the priority was consolidation: centralising data, pooling infrastructure and standardising pipelines. This approach delivered coherence and security, but it also concentrated decision making and constrained adaptability.

Gradually, a gap widened between the technical sophistication of data platforms and the organisation's actual ability to translate data into performance.

Data has become strategic for all business functions. Yet accountability models have often remained centralised, creating growing tension between expected speed and actual delivery capacity.

When to move to a Data Product Model: The signals that change is required

Transitioning to a Data Product model is not a matter of technological maturity, but of **organisational tension.** Several warning signs should alert CIOs and CDOs:

1. **Rapid growth in the volume and criticality of business use cases**
   Data becomes central to operations and use cases can no longer be treated as ad hoc requests.

2. **Overloaded data backlogs**
   Priorities accumulate, timelines lengthen, and business teams increasingly bypass official delivery channels.

3. **Proliferation of "shadow data" initiatives**
   Business teams develop their own solutions outside IT frameworks, increasing risks around quality, security and consistency.

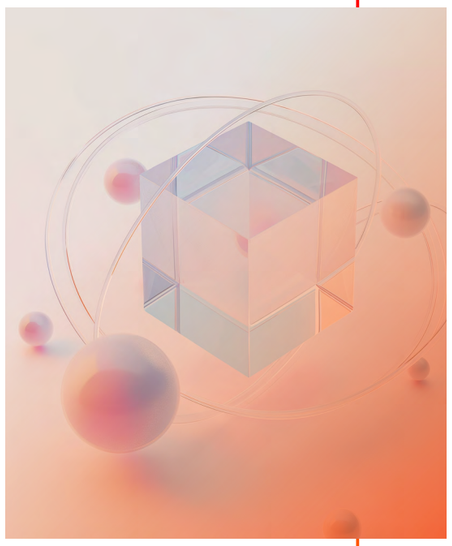
4. **Limited visibility on value creation**
   Data investments are significant, yet it becomes increasingly difficult to identify which use cases truly generate value.

5. **Difficulty in prioritising across business domains**
   Trade offs become complex and politicised, due to a lack of clear accountability and shared criteria.

When these signals appear simultaneously, the question is no longer *whether* the model must evolve, but *when and how* to structure the transition.

Data becomes a business asset — *Exposing the Limits of Governance*

Today's use cases are no longer exploratory. They have a direct impact on commercial, industrial, financial, regulatory and operational performance. Data is now embedded in the business model itself, not merely delivered as an output.



In this context, a centrally managed backlog driven model reaches its limits. Priorities accumulate, trade offs become opaque and accountability dissipates.

The Data Product introduces a structural clarification. It frames a data asset as a product: with a clearly identified owner, formal service commitments and an explicit lifecycle within which data flows more rapidly and more seamlessly across the organisation.

Key figures
from our industrial clients

In the aerospace and maritime transport sectors, some business use cases previously required **6 to 12 months** to reach production.

The first **Data Products operated by business domains** have reduced this lead time to **4 to 6 months,** representing a **30–50% acceleration in time to market.**

More mature models now target delivery cycles ranging from **a few weeks to 2–3 months,** enabled by component reuse and the standardisation of delivery patterns.

Scaling is no longer measured in dozens, but in **hundreds of Data Products.**

Several large industrial groups are targeting **500 to 800 Data Products by 2030** to cover their core business processes.

In early phases, **fewer than 20%** of critical data assets had a clearly identified business owner.

The adoption of the Data Product model progressively increases explicit ownership to **over 60%** across priority domains — a **threefold increase in ownership.**

The cost of a Data Product varies significantly depending on its complexity: from **€20K** for simple products to **more than €300K** for complex use cases involving critical business processes and advanced transformation pipelines.

Client case

Establishing a Data Services Centre to modernise the Data Platform of a major logistics group and unlock the value of Data Products for the business

For a global transportation leader, data is no longer just an asset — it is the foundation of performance, innovation and transformation. It underpins BI capabilities, AI use cases and the development of new services — yet it only delivers value when it is **governed, reliable and shared.** To address this challenge, **Sopra Steria leads the Data Governance & Data Architecture Services Centre,** whose mission is to transform a fragmented landscape into an **industrialised, coherent and business value driven approach.**

In practice, the Services Centre is built around three core levers:

1. **Governance and Data Products:** Data is managed as a product — certified, reusable and directly aligned with business needs.
2. **Reference Architecture:** The definition and deployment of standards to secure delivery and accelerate project execution.
3. **Change Management:** The creation of a dedicated capability to empower Data Product Owners and Managers across both business and IT, and to anchor the operational model sustainably over time.

Measurable outcomes

The results are tangible:

–22 %
in time to market for Data & AI projects,

with 95 %
of activities delivered on schedule.

Beyond these figures, the Services Centre sits at the core of the organisation's data strategy and acts as a **true transformation catalyst.** It connects governance and architecture directly to business value creation, while building a sustainable model of autonomy, accountability and long term performance.

From Data Assets *to Accountable Products*

A Data Product is not a dataset or a dashboard renamed. It represents a shift towards durable and measurable accountability.

Not every dataset needs to become a Data Product. Productisation introduces operational responsibilities and costs that must be justified by expected business value. The objective is not to productise everything, but to focus effort on the data assets that are critical to decision making, operations or AI-driven processes.

As AI and agent based approaches are increasingly embedded in operational processes, the quality and reliability of Data Products become critical. Without solid foundations, automation merely accelerates flawed decisions.

A Data Product is owned by a clearly designated business leader, exposes measurable commitments around quality and availability, and follows an end to end lifecycle — including evolution and, where relevant, retirement. It also provides visibility on operating costs and the value it generates.

The real shift is organizational. Maintaining a product becomes a strategic choice, justified by the value it delivers. Decommissioning it becomes an explicit decision. Data investments move from being fragmented to being actively managed.

The organisation no longer manages an accumulation of requests; it manages a≈portfolio of products with identified consumer clients.

For CIOs and CDOs, this shift requires three fundamental clarifications:

- → Is the organisation ready to distribute accountability to business domains?
- → Can it formalise commitments around quality and usage?
- → Does it have clear visibility over its data portfolio, its costs and the value created?

Without structured answers to these questions, the product model will remain superficial.

Architecture : *a lever serving the model*

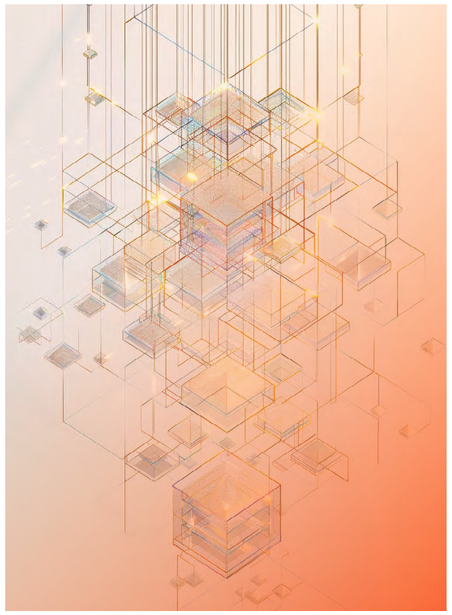
Once the product model is established, architecture becomes a coherent consequence rather than a starting point.

Modern Data Architectures, Lakehouse platforms and Data Fabrics address different contexts. As markets mature, vendors converge and technical boundaries become increasingly blurred.

Differentiation no longer lies primarily in the technology stack. It depends on the organisation's ability to clarify ownership models and operate products sustainably over time.

Choosing an architecture without defining accountability often results in modernising technology without transforming performance. Architecture should support the Data Product model, not drive it.

The same applies to Data Spaces: they are not technologies but structured frameworks for exchange, based on shared standards and clear usage governance. Without ownership discipline and explicit contracts, interconnection amplifies complexity rather than value.



An organisational issue

Data culture continues to be a major barrier

72% of organisations report that they have not yet established a genuine data culture[1]

Data domains: *distribute without fragmenting*

Data Mesh is often presented as a technical alternative. In reality, it is an **organisational posture.**

Its principle is straightforward: **data is a product,** managed by the domain that understands its context and usage best. IT provides a robust platform and shared capabilities, while business domains assume full accountability for their products.

This model requires **genuine domain sovereignty,** formalised service commitments and a form of governance that is **distributed yet coherent.** The objective is not to abandon governance, but to make it **operable at scale.**

An organisational issue

Organisations are not AI ready due to insufficiently reliable data

60% of senior executives state that they lack confidence in the quality or preparedness of their data to effectively leverage AI.[2]

Data Mesh: *from theoretical distribution to real accountability*

Data Mesh is often presented as a technical approach. In reality, it is primarily an organisational model. Its core principle is straightforward: data is a product managed by the domain that understands its context and usage. IT provides a robust platform and shared services, while business domains assume responsibility for their products.

The model succeeds only when accountability is fully assumed, budgeted and supported by an appropriate platform — and when business teams are given time and recognition to perform these new responsibilities.

(1) Overcoming barriers to data impact

(2) Global Corporate Leaders Lack Confidence in Their Data AI Readiness

Operating *a data product platform*

A sustainable transformation cannot rely solely on conceptual principles; it requires **robust foundations.**

A **metadata driven architecture** forms the first pillar. Visibility into data lineage, quality and usage is essential to establish transparency and enable informed steering.

A **flexible infrastructure,** decoupling storage from compute capacity, provides the elasticity required to support a wide range of use cases without rigidifying the operating model.

Financial accountability represents a third pillar. Cost transparency is not merely about technical optimisation; it introduces managerial discipline. Each Data Product must be able to justify its continued operation through the value it delivers.

Finally, the platform must enable the **convergence of transactional and analytical use cases,** allowing data to directly power business processes. Performance does not stem from the sophistication of tools, but from the organisation's ability to **operate accountable, measurable Data Products aligned with strategic priorities.**

An organisational issue

Organisations that structure their data as "products" accelerate delivery

Organisations adopting a **Data Product** or **Data Mesh** approach reduce data time to market by **up to 50%.** (3)

An organisational issue

The core issue is not technology

93% of the obstacles to adopting data initiatives are related to people and processes rather than technology itself. (4)

CIO Compass — Why Data Product transformations fail

- **Fragmented data leadership across the organisation**
  Accountability is dispersed, with the CDO often retaining control over tools and platforms rather than end to end product outcomes.
- **Ownership without resources**
  New responsibilities are assigned without dedicated time or budget, making Data Product ownership unsustainable in practice.
- **Overly complex Data Products that are difficult to maintain over time**
  A Data Product must address **one context and one coherent use case (or small set of related use cases).** A "catch all" Data Product designed to serve all the use cases of a domain is structurally bound to fail.
- **Insufficient data literacy, training and communication**
  The model collapses when stakeholders are not adequately equipped to understand and operate it.
- **Lack of a recognised data career path (HR wise)**
  Without a formal business side data profession, data roles remain informal and fragile, undermining long term ownership.
- **An ill suited platform (overly IT centric)**
  Platforms designed primarily for IT efficiency fail to support business led product accountability.
- **Absence of value based steering**
  Without explicit measurement and arbitration based on value, Data Products become cost centres rather than strategic assets.

Sovereignty and geopolitics: *a new decision making framework*

Geopolitical considerations have become an integral part of data strategy. The design of a data platform must explicitly take into account the **sensitivity of the Data Products it exposes** and the resulting sovereignty requirements. Each organisation must therefore arbitrate its technology and hosting choices in light of its **sectoral, regulatory and territorial context.** Data architecture decisions can no longer be made solely on the basis of cost or performance; they increasingly reflect strategic positions on risk, dependency and control.

(3) BARC — Modernising Governance for the Era of Agentic AI
(4) Companies Are Failing in Their Efforts to Become Data Driven

Conclusion: transformation is organisational

Data platforms will continue to evolve towards greater integration and automation, with an ever deeper entanglement of data and AI.

Technology, however, will not be the primary differentiator.

What will set organisations apart is their ability to clarify accountability, contractualise quality, manage a product portfolio and make explicit trade offs.

The debate is no longer whether Data Products matter; leading organisations are already moving in that direction. The strategic question now is whether enterprises are ready to redefine responsibility and accept transparency around the value truly created.

Ultimately, the success of data transformation no longer depends on the technology stack alone. It unfolds in governance, accountability and the organisation's ability to structure itself sustainably around its products.

In the age of AI, failing to master your Data Products means losing control over your decisions.

Call to action

→ **Step out of the comfort of technology**
- Stop treating data transformation as a platform issue.
- Performance is no longer determined there.

The question is no longer *"Where is my data stored?"* The real question is *"Who controls its use, its value... and its risks?"*

→ **Enforce an explicit accountability model**
- Assign a **business owner** to every critical Data Product.
- Formalise commitments on **quality, availability and usage.**
- Make consumers and **value delivered** visible.

No owner, no product.
No product, no value.

→ **Move from a backlog to a product portfolio**
- Stop accumulating requests.
- Actively manage a **Data Product portfolio.**
- Make clear trade offs: **invest, maintain, retire.**

What does not create value... **creates unnecessary exposure.**

→ **Make sovereignty a design criterion**
- Integrate **cost, performance and sovereignty** into every decision.
- Classify Data Products according to their sensitivity (business, regulatory, strategic).
- Adapt architectures accordingly (hosting model, encryption, localisation, access controls).

Sovereignty is not declared. It is designed — product by product.

→ **The Real Choice**
- You can continue to modernise your platform.
- You can optimise costs.
- You can accelerate use cases.

But **without accountability,** you control **neither value, nor governance, nor strategic dependencies.**

→ **The Decision**
Moving to a **Data Product** model is not a data initiative. It is a **decision about governance, value and sovereignty.**

Contacts



Xavier LANDRY
Partner, CDO, Data & AI (Strategist)
→ xavier.landry@soprasterianext.com



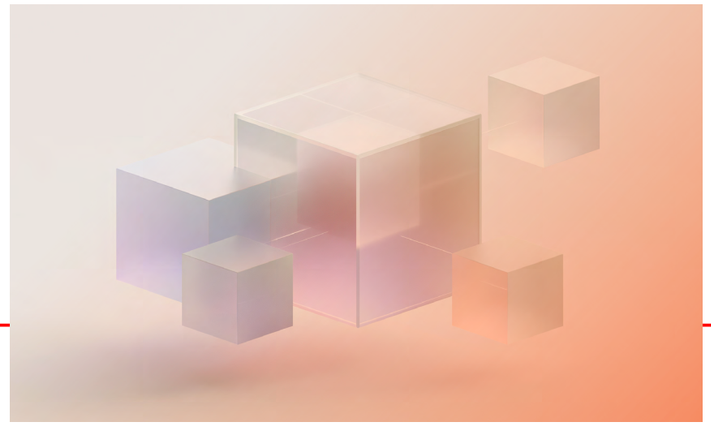
Laetitia CANCELLI
Director Data
→ laetitia.cancelli@soprasteria.com



Arnaud PROTASSIEFF
Consulting Director, Data & AI Strategy, Governance, Data Architecture
→ arnaud.protassieff@soprasterianext.com



Ansel BUZANCAIS
Consulting Senior Manager, Data & AI
→ ansel.buzancais@soprasterianext.com



Contributors of our European Network

Olivier BROUSSEAU
Architecture & Tech
→ olivier.brousseau@soprasterianext.com

Isabelle PONS
Data & AI
→ isabelle.pons@soprasterianext.com

Valérie THIBLET
Data & AI
→ valerie.thiblet@soprasterianext.com

Axelle ROESCH
CIO Advisory
→ axelle.roesch@soprasterianext.com

Thomas OTTO
CIO Advisory
→ thomas.otto@soprasteria.com

Philipp MAIER
CIO Advisory
→ philipp.maier@soprasteria.com

Simon KAYE
Architecture & Tech
→ simon.kaye@soprasteria.com

Ray BAKER
Architecture & Tech
→ ray.baker@soprasteria.com

Andy WHITEHURST
Architecture & Tech
→ andy.whitehurst@soprasteria.com

Jahn-Fredrik SJOVIK
CIO Advisory
→ jahn-fredrik.sjovik@soprasteria.com

Tor NESET
Architecture & Tech
→ tor.neset@soprasteria.com

Marius SANDBU
Data & AI
→ marius.sandbu@soprasteria.com

Robert HEXSPOOR
Architecture & Tech
→ robert.hexspoor@soprasteria.com

Hugo HERMSEN
CIO Advisory
→ hugo.hermsen@soprasteria.com

Juan Antonio MARTINEZ SANCHEZ
Architecture & Tech
→ juanantonio.martinezsanchez@soprasterianext.com

Mauro PALMARINI
CIO Advisory
→ mauro.palmarini@soprasterianext.com

Conception: Spintank