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# COMPOSABILITY IS THE FUTURE OF INNOVATION. CREATE SEAMLESS DIGITAL EXPERIENCES, FASTER!

# AGILE ENTERPRISE CONSISTS OF COMPOSABLE BUSINESS SO YOU CAN INNOVATE FASTER AND BE READY FOR GAME CHANGERS

The world is rapidly evolving, transformed by consumers' strong desire to access the best products and services faster than before, through hand-held devices such as smartphones. Moreover, they are **looking for a completely digitized experience**, personalized and convenient in every aspect of their lives. Consumers no longer buy a hotel room or an airline ticket. They pay for the discovery of the magical moments that make every adventure memorable.

**Every business in every industry is impacted by this new Consumers' desires**, from resellers to back offices and factories bound to respond faster to their front-line evolution. For instance, cars have become an integral part of our everyday experience (feeding the navigation system with their latest internet search). Additionally, smart cities and the road ecosystem add another layer of connectivity. These functions need to be managed as an integrated lifecycle, i.e., directly during the design phase. No one wants to lose time on scheduling an oil change anymore, especially when cars can manage it by themselves.

In this all digital, "work from anywhere" world, it has never been more important to sense and respond to changing market dynamics (growing digital Business, digital talents war, sustainability) — and the needs of customers, partners, and employees — with speed, agility, and efficiency. Existing businesses face this challenge as they initiate digitalization programs and sales reorganization. Throughout these challenges, **they must react even stronger to avoid disintermediation**: pure players performances allow them to vertically integrate traditional businesses, acting as platforms to offer a unified experience at a reduced cost.

A solution is to embrace the Agile Economy meaning building partners' ecosystems across value chains and develop strong synergies. This way companies invent new business models and generate new revenue. And from the operation side, it is important to **design cohesive IT systems to enhance B2B collaboration** and enable Agile Enterprise capacities.

# BUT WE HAVE AN ISSUE WITH HISTORIC ACTORS, AS THEY HAVE BUILT THEIR IS BASED ON THEIR ORGANIZATION IN SILOS TO MANAGE COMPLEXITY AT THE DEPARTMENT LEVEL

Easier said than done! The **demand for digital services and tools is heating up** within and outside IT. Traditional businesses have built their information systems (IS) modelled on their organization, usually in **operational silos**, which manage complexity at the department level, but impede organizational agility as a whole.

However, in today's VUCA (*Volatile, Uncertain, Complex, Ambiguous*) context, **access to 360-degree data** is critical. An overwhelming majority (82%) of business teams say they need easy access to data and IT capabilities to be productive as the amount of new digital projects increases.

But the **lack of IT applications integration** is too often the main reason new initiatives fail — slowing the business down by widening the **gap between the company and its customers**. Indeed, every connection with a system outside of the applications' domain requires way more time and energy to be created and maintained. Coupled with cybersecurity and governance, this issue significantly increases the overall **Information System (IS) integration cost**.

Among the top challenges faced by companies aiming to modernize their systems is **dealing with legacy platforms**, such as mainframes that deliver core business processes. **Legacy architecture is another sticking point, such as SOA** initially built to break silos but eventually backfired and triggered even more intricate systems.

Businesses can no longer lock **innovation** while legacy modernization is ongoing. What is the point of changing everything if a competitor manages to break the market? The IS needs to support innovation models, such as internal innovation within the organization, external innovation through service providers, and or co-innovation with partners and customers. All of this is vital for businesses looking to embrace a full vision of the business value chain through a cogent **"front-to-back" architecture**.

# THE PARADIGM SHIFT “BIG IS TOO SLOW” COMMANDS THAT YOU REVIEW YOUR WAY TO DESIGN SOLUTIONS. WITH NEW TECHNOLOGY, OF COURSE, BUT ALSO ADOPTING A “FRONT-TO-BACK” MINDSET

Business needs and technologies are evolving faster than ever, setting up the need for IT departments to rethink their IS to provide an **adaptive architecture** that keeps pace by addressing today’s needs and preparing for tomorrow’s.

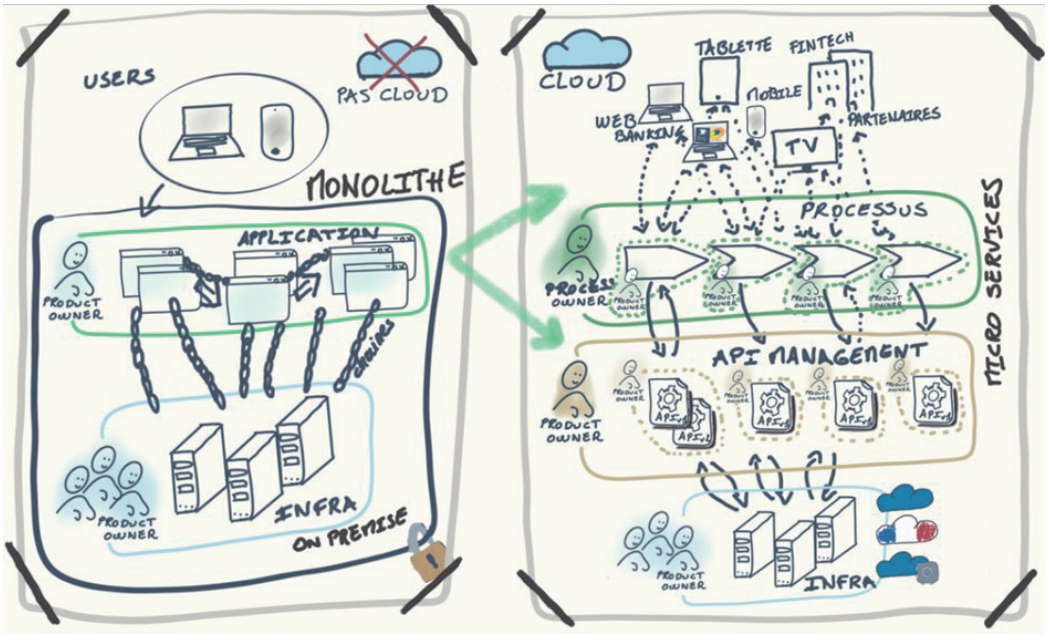
This shift in architecture should come with a **cultural adjustment**, as designing and operating an evolving IS cannot be done using legacy methods and processes. A **“front-to-back”** mindset is essential to eliminating bottlenecks in the IS, thus supporting agility. Such an approach also facilitates designs that serve both customers’ and employees’ needs. It’s no secret that IT capacity is oversubscribed. But companies can’t hire enough people to do everything they need at the speed and scale the business and their customers require.

From an architecture standpoint, **IS are opening up** and IT departments no longer need to handle everything on their own. With the exponential growth of cloud capabilities, **ever-growing parts of IS are now run by external providers**, facilitating the move-to-cloud of large assets, such as ERP and CRM, and the expansion of SaaS solutions.

The IS needs to manage and integrate those external parts efficiently. It also needs to be able to replace or externalize its current solutions without impacting the entire IS. A **modular IS** is the way forward, **enabled by composability from APIs and microservices**. Composability means using these standardized, reusable building blocks, such as APIs, to build new experiences, products, and services with greater speed, agility, and efficiency. This is much for efficient than having to write customized code or starting from scratch every time.

Modular IS lets companies solve pressing challenges today while simultaneously laying a foundation for the future — creating a flywheel of reuse that enables them to **build faster for each project**, hence accelerating their **time to value** while **maintaining security** and **governance and reducing their technical debt**.

Companies should now forget about monolithic solutions to reduce coupling between applications. **Standardizing API exchanges** and **isolate components and functions** by designing **microservices** will enable them to setup a **modular IS** that always swiftly adopts the best solutions, whether they are provided internally or externally.

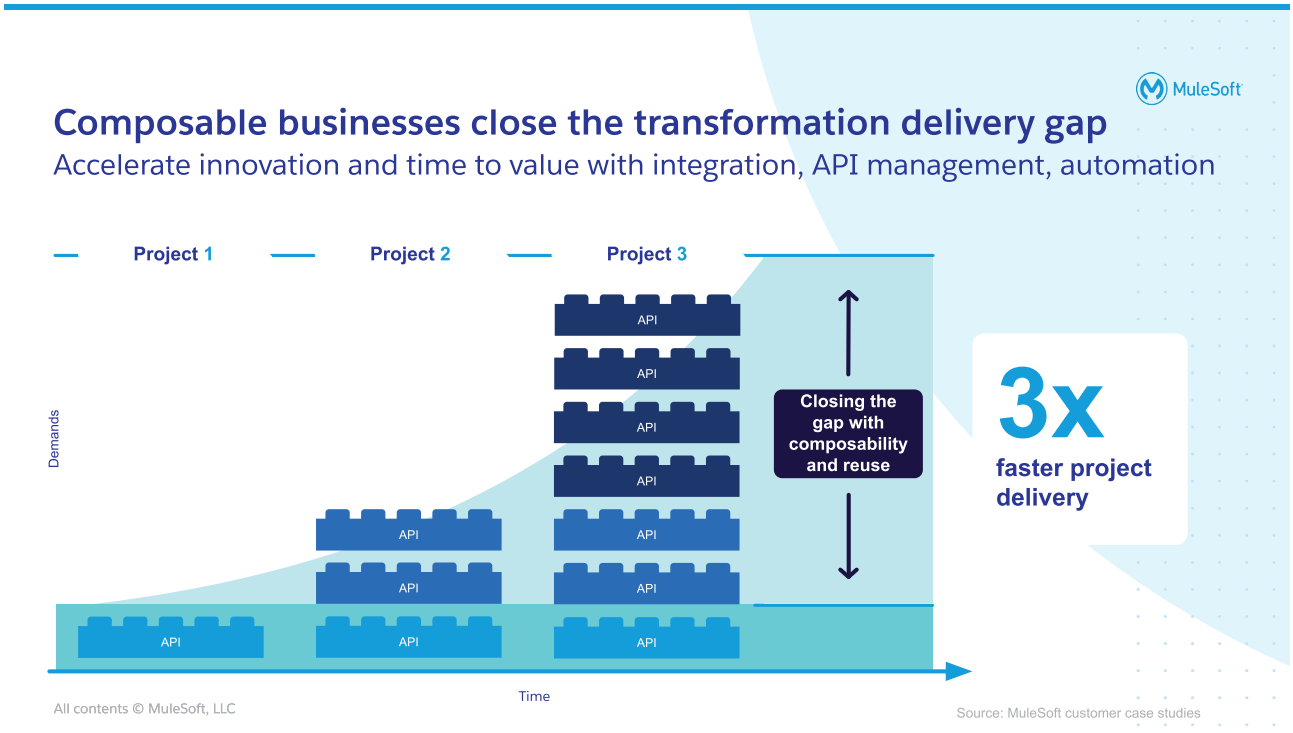


More than an IT topic, **openness is also business-driven**, as exchanging data and services will improve business performance by overcoming regional and functional restrictions. The data sharing shall be performed using secure and governed methods:

**1 - Exposing**
- Creating new business models by selling specialized data
- Improving existing models by increasing the distribution channels of products and services through B2B APIs

**2 - Consuming**
- Integrating products provided by partners to enrich the product offering
- Integrate innovative solutions to digitalize and improve customer experience

Organizations of the future will be composable. When you build in this way, you create what we call an **application network**. In an application network, you have all the **assets**, **business functionality**, **and data** that sits behind it in a format that allows you to know where it is, what it is, and how to securely access and compose it. By reassembling reusable building blocks of **packaged business capabilities (PBCs)** — such as APIs — through a network effect, each building block adds **exponentially increasing value**, and is strengthened as you unlock additional data and business capabilities. Each node is secured by design and is ready for discoverability and self-service. The result is that you **accelerate the speed with which you deliver every subsequent project**.




Digitalization occurs throughout the journey. It represents an opportunity to redesign and refine the experience, sometimes replacing entire sections of front-offices, enabled by modularity and openness of data through the holistic IS. But this transformation should also be supported by an **efficient operational model, bringing IT and business together** to fulfil customers' needs.

# SOLUTIONS NEED TO BE SUPPORTED BY THE RIGHT OPERATIONAL MODEL TO BRING BUSINESS AND IT CLOSER

Organizations need to pave the way toward a **new strategic operating model** as they face a crucial **urge to accelerate their efficiency** and develop new hybrid competences and a transformation capacity to build a state-of-the-art organization.

To deliver the promise of performance, companies should rely on **three transformation drivers**:

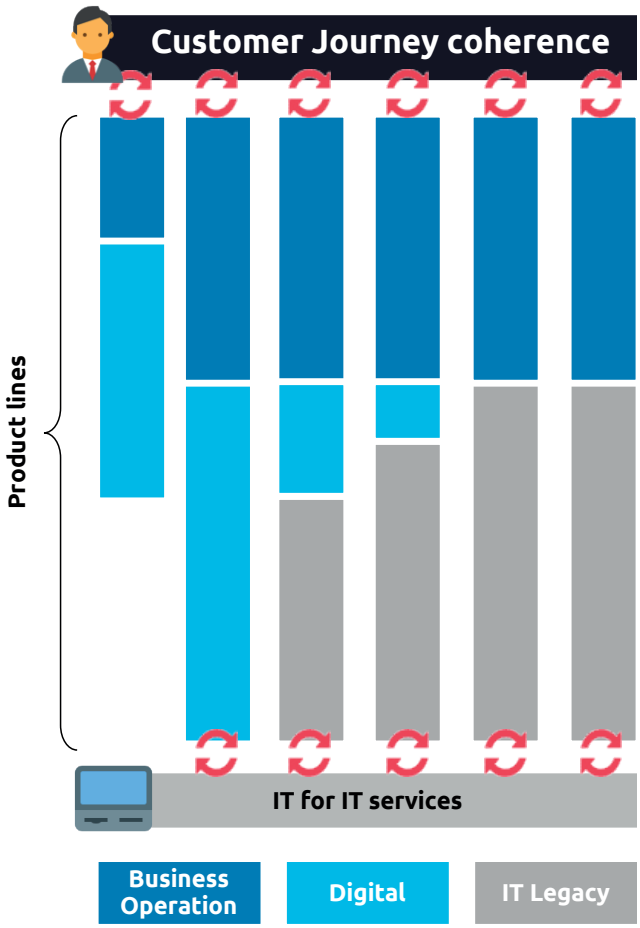
### 1 - Changing ways of working toward agile and product-oriented business/IT organization

Innovating at speed and scale requires a new operating model that empowers IT and the business to work together to make this change a reality. From the **organizational side, changing ways of working** by implementing agile across the entire enterprise will enhance **transparency and business value delivery while** improving responses to **external challenges**. Scaling up agile calls for a **gradual and iterative approach** from initial experimentation to a full **Agile Enterprise** organized around **customer-oriented value chains**.

This can be achieved by evolving toward a "**Product Mode Organization**," which splits core **business concerns into product lines aligned with customer needs**. In this context, **autonomous and outcome-oriented teams** must be responsible for the product throughout its lifecycle. As shown in this Customer Journey visual, there are different kinds of product lines: business operations, digital and IT legacy.

Furthermore, transverse IT for IT services and other **cutting-edge technical capabilities**, such as the adoption of a DevOps Pipeline and the setup of a unified API platform, can also **support** product development and ensure 57% **faster** development and delivery speed.

Agile teams will be further enabled by not only integration, but also the establishment of API-management automation and an API-ecosystem – hinging on **technical levers and composability** that ensures data and system never become roadblocks during agile development.



### 2 - Relying on technical drivers to set up a flexible and stable IT

**Strategic technical levers & composability** are key factors in making this organizational shift a success, achieving both flexibility and stability of IT. These technological levers can be **targeted and chosen** by the company to best **fit the organizational maturity** and improve the delivery process.

To do so, they could implement **Agile** (hinging on the collaboration between IT and Business) and **DevOps** (encouraging the alignment between "Dev" and "Ops" populations) **delivery approaches** to support this operating model and quickly deliver **high-quality products and services to the market**. By adopting agile, developing and delivering integrations and APIs faster, driving asset reuse, and increasing quality and minimizing rework, companies could achieve 78% faster time to market.

Additionally, from the previously mentioned architectural and infrastructure sides, companies could also opt for a **flexible and reactive architecture** that enables the adoption of a tailor-made **cloud environment and deployment model**, depending on their technical features and ambitions.

To maintain a competitive advantage, the implementation of these technical levers requires a redefinition of organizational **methods for connecting and exposing assets that promotes decentralized access to data and capabilities**. One notable way companies could do this is by strengthening their API@Scale strategies to ensure the visibility and agility needed in an increasingly transformative ecosystem. The research around new use cases driving the **modernization of IS** in a data-driven environment must continue, and the overall success of this transformation should involve stakeholders who are **aligned on a clear vision and strategy** to design how their business can evolve to compete in the future.

### 3 - Increasing employee empowerment

Indeed, from the individual's perspective, the transformation needs to be supported by the **right teams of "doers"** in a **comprehensive and agile sourcing strategy**. This could be achieved by involving specific groups of stakeholders, such as Lean Agile Centers of Excellence (LACE), Design Studios, Agility Champions, and Design Authorities. Such parties can scope and implement a pragmatic **organizational and technical transformation roadmap** for the company. They are also ideally positioned to pragmatically **track and monitor value creation**, aimed at **empowering both IT and business** stakeholders.

IT people can focus on producing reusable assets, securing them, managing them, maintaining them, and automating them. With API-led integration, IT can take advantage of APIs as standard building blocks to securely expose data and core capabilities for broader consumption and reuse, driving greater speed, agility, and efficiency, and freeing up IT to focus on innovation.

Business teams can focus on the consumption of those assets in a discoverable, self-service way to deliver their own projects. With easy integration tools for non-IT users, business teams at the edge gain a fast and easy way to autonomously build integrations, using IT-approved assets while still laying the foundation for an API-led future.

Morover, this API-led transformation is highly corelated with **granting collaborators more responsibility and autonomy** to develop their **hybrid competences**, giving them everything they need to navigate the digital era with ease. As an example, new roles such as the DevOps Site Reliability Engineer (SRE), or "what happens when you ask a software engineer to design an operations function" are highly representative of this **"you build it, you run it" mindset**.

# COMPOSABILITY LAYS THE GROUNDWORK FOR A FUTURE OF INNOVATION

Bringing this all together requires a powerful combination of mindset, technology, and operating model. When done correctly, businesses can deliver at a significantly improved pace without having to trade off security or governance. We call this approach “Composable and Agile IT” transformation, enabled by API-led Connectivity with MuleSoft's AnyPoint Platform.

Together, Capgemini and MuleSoft are helping organizations across all industries to adopt this new approach for IT delivery, create a flywheel of reuse, and deliver connected experiences faster.

To learn more, see our Agile Enterprise article[2] or MuleSoft details[3] or contact the team listed below.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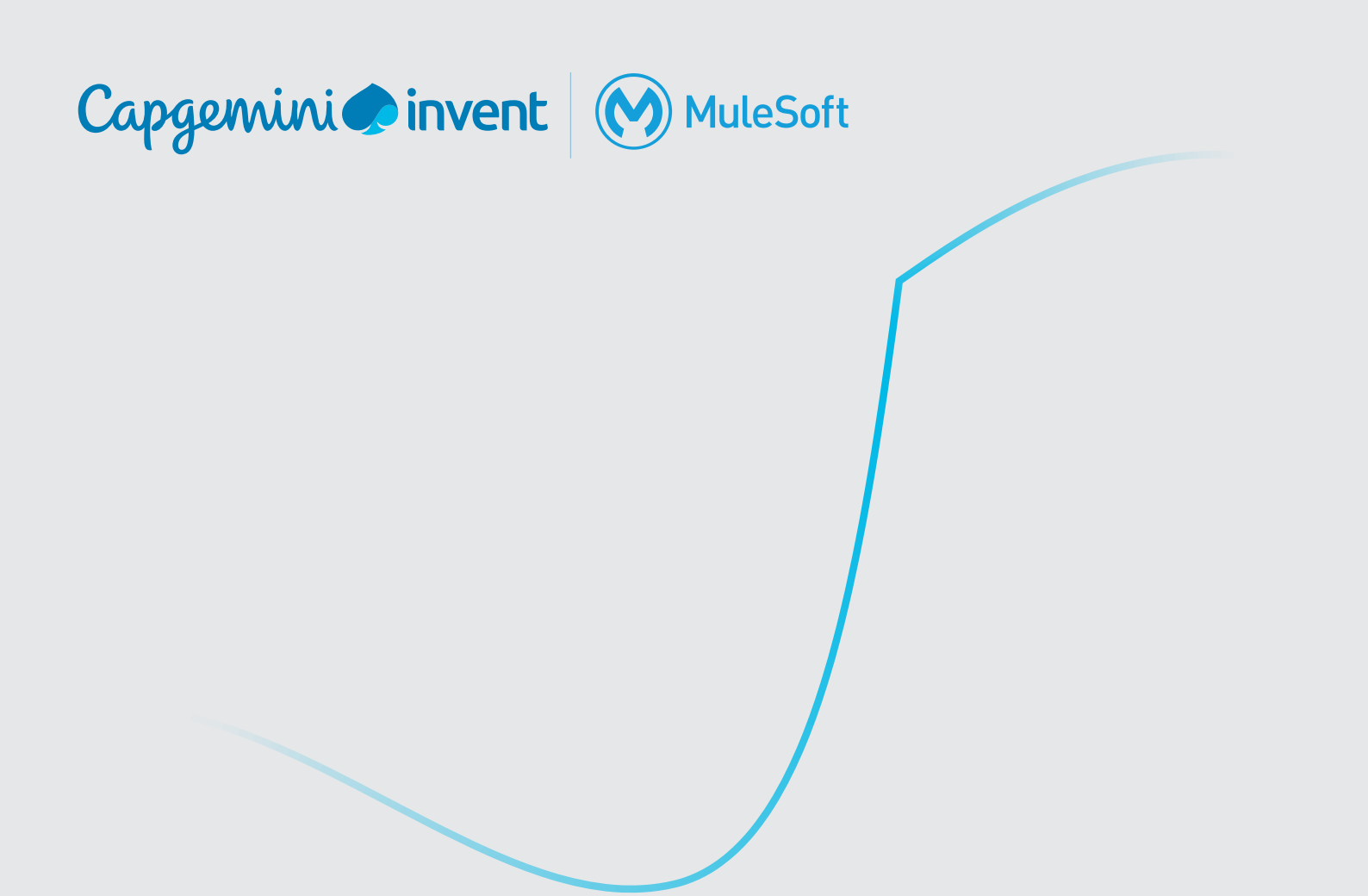
1 - https://www.capgemini.com/2019/11/the-power-of-api-led-integration/

2 - https://www.capgemini.com/fr-fr/ressources/invent-entreprise-agile-equilibre-entre-attentes-clients-et-talents/?utm_source=Social&utm_medium=Social

3 - https://www.mulesoft.com



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Capgemini Invent is an integral part of Capgemini, a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of 325,000 team members in nearly 50 countries. With its strong 55 year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2021 global revenues of €18 billion.

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