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REPORT

Technological Excellence, Limited Scalability

Europe's Unresolved Equation in Space



Europe's space industry is technologically strong. However, it will only scale successfully once project logic, platforms, and production ecosystems come together to form a robust industrial architecture.



The space sector has become a critical enabler of economic activity, security, and society. It supports essential services such as communications, navigation, and Earth observation while strengthening innovation, competitiveness, and technological independence.

As its importance grows, so do the demands placed on both the development and industrialization of new technologies. Speed, cost efficiency, and the ability to scale are decisive factors in global competition.

To keep pace, Europe must focus on industrial implementation without losing sight of the development of new technologies. The pressure is mounting. New rules of the game have emerged in the U.S., with a shift away from the traditionally government-driven high-tech model toward a more competitive industrial market. On top of this, new players such as startups and expanding space industries in countries like India and China demonstrate how systematically space technology can be industrialized and scaled.

"Unless Europe's space industry fundamentally changes its industrial model, Europe will lose relevance in the global space economy."

Giuseppe La Marca
Partner and Global
Sector Lead Aerospace



For Europe, more is at stake than market share: technological independence, economic competitiveness, and the ability to independently build, operate, and further develop critical infrastructure.

If Europe is to remain relevant on the global stage, technological excellence alone will not be enough. What will matter is the ability to deliver space systems faster, more cost-effectively, and at greater scale.

The following chapters examine four central assumptions about the industrial future of Europe's space sector using representative survey data. On behalf of MHP, Civey surveyed 577 decision-makers in the space industry in Germany, the UK, France, and Italy.

1 **Europe's space sector is not simply moving from projects to products; it is developing a hybrid model that combines project-based value creation with repeatable platform logic.**

2 **Growth can only be financed if scaling no longer relies primarily on additional resources but is organized around industrial efficiency.**



3 **The industry largely agrees on the technologies of the future, but the challenge lies in how to get there.**

4 **Future scaling will take shape in a production ecosystem comprising prime contractors, suppliers, partners, and end-to-end data structures.**

From Project to Platform: The Solution Space for Europe's Hybrid Model

The industry recognizes the mounting competitive pressure, is setting ambitious growth targets, and is systematically advancing future technologies. At the same time, its underlying industrial logic remains strongly project-driven: highly customized, with a broad range of variants, heavy integration requirements, and a strong reliance on specialist knowledge. These characteristics have built Europe's technological strength over decades and enabled demanding missions. Yet they also make scaling structurally expensive. As growth ambitions and production volumes rise, pressure mounts on the very strengths that are increasingly becoming structural disadvantages. Scaling follows different rules from innovation. Project-based value creation thrives on customization and engineering excellence; industrial growth requires repeatability, standardization, and efficient processes. The greater the variant diversity and integration effort, the harder it becomes to automate, achieve economies of scale, and reliably plan production increases.

Project-Based Logic Holds Back Growth

In the space industry, two fundamental industrial logics are at odds with one another:

Project logic is built around individual, customer-specific solutions and a high degree of flexibility. But it also entails low repeatability, substantial integration effort, and limited economies of scale. **Growth therefore remains complex and expensive.**

VS

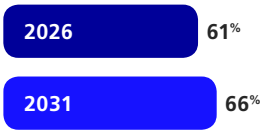
Product logic represents the contrasting model: it is based on platforms, standardization, and repeatability. Systems are designed for scalability from the outset, processes can be automated, and unit costs fall. **Here, growth generates efficiency gains rather than additional effort.**

Europe's Unsolved Space Equation



Europe's space sector has a **strong strategic ambition to scale,** yet at the same time it continues to rely on evolved project logics that make scaling capital-intensive, and operationally complex—while at the same time grappling with **financing** concerns.

Predominantly to fully project-based

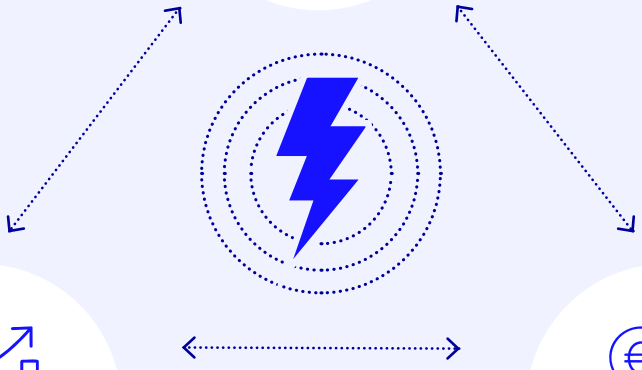


Project logic results in low repeatability

Project logic will gain importance over the next five years: **61% → 66%**

Project logic







Scaling

Scaling drives industrialization and competitiveness

66% of respondents assess current scalability as low, very low or limited, while 74% expect production capacity in Europe to grow by up to 100% or more over the next five years.



Financing

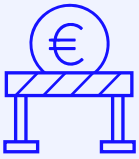
Growth depends on financing and increases investment pressure

For 27.7% of respondents, financing and investment represent the single greatest barrier to scaling.

This is the central paradox of Europe's space industry. The sector is trying to scale through an industrial logic that, in its current form, structurally increases the cost of scaling. In traditional project structures, costs rise almost in direct proportion to output. Higher volumes mean more engineering, more integration, more coordination, more specialist knowledge, and more capital tied up. Growth therefore initially creates additional complexity and cost rather than economies of scale. The financing barrier is a symptom of the existing production logic. When variant diversity, dependence on experts, and heavy integration effort prevent higher volumes from lowering marginal costs, every increment of growth comes at a high price.

27.7%

The findings make this tension clear. Financing and investment are cited by **27.7 percent as the biggest barrier** to scaling space production in Europe—ranking ahead of skilled labor shortages, supply chains, and production processes.

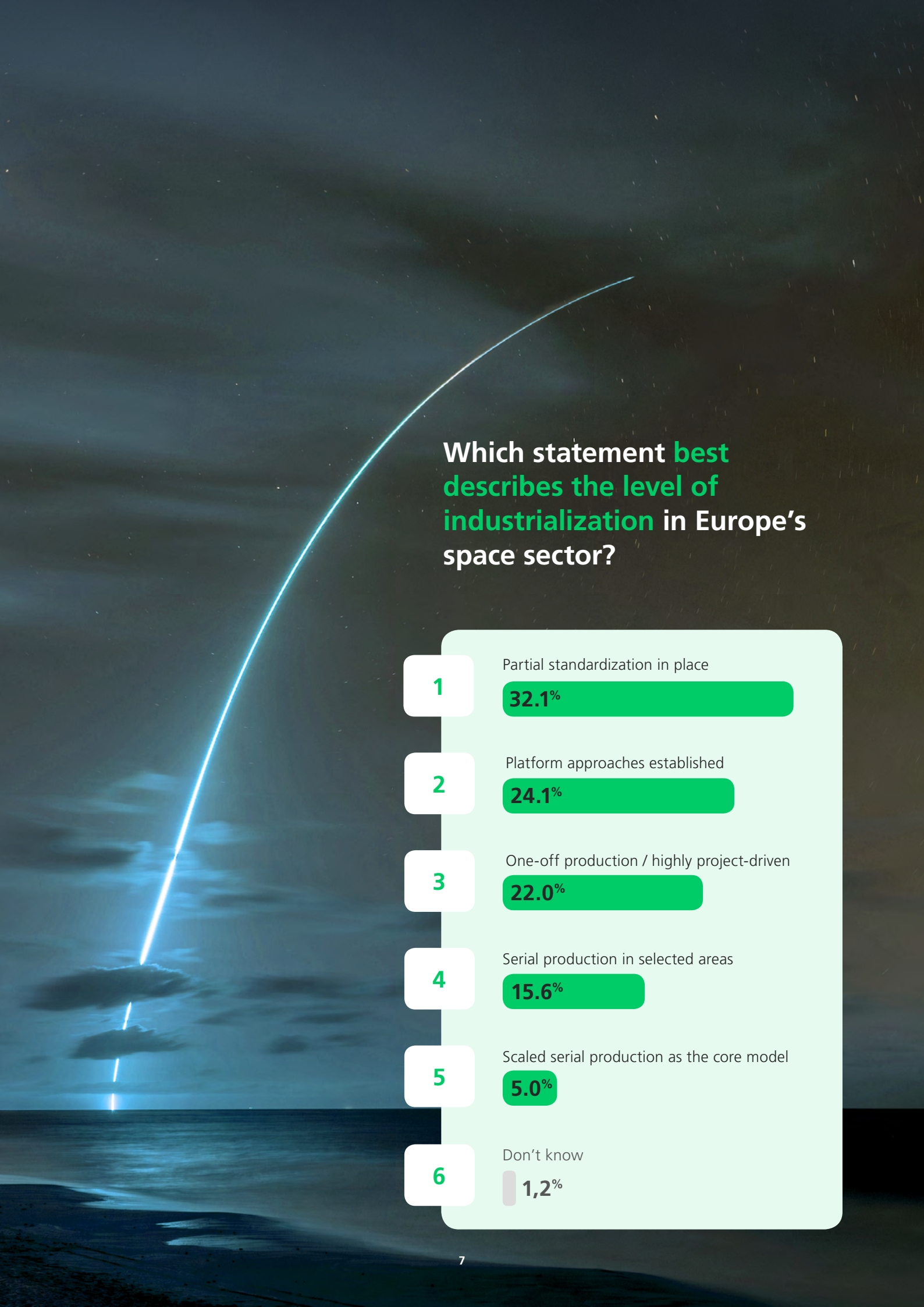


The contradiction is twofold: the industry needs more capital because its scaling is not yet sufficiently industrialized. At the same time, that very need for capital limits its ability to scale faster. The key lies in organizing growth so that capital can work more productively. Repeatability, standardization, modular architecture, automation-ready processes, and reduced integration burdens make the industrial logic itself scalable, and growth becomes financially viable. However, a complete shift to product-based industrialization models remains only partially realistic in the space sector.

The realistic target state is therefore a hybrid approach: platform strategies embedded in programs that remain customer specific. The goal is not a "mass-produced product," but industrialization in a complex environment.

The assessment of the industry's level of industrialization further sharpens this picture. The distribution shows that Europe's space sector is no longer a purely project-based industry, but neither is it a mature mass-production industry. It is in transition: standardization has begun and platform strategies are gaining relevance, but they do not yet dominate industrial activity. New industrial principles have emerged, yet they have not fundamentally changed the underlying industrial logic.

If Europe cannot simply move from project business to conventional product logic, the solution space must emerge at the intersection of the two.



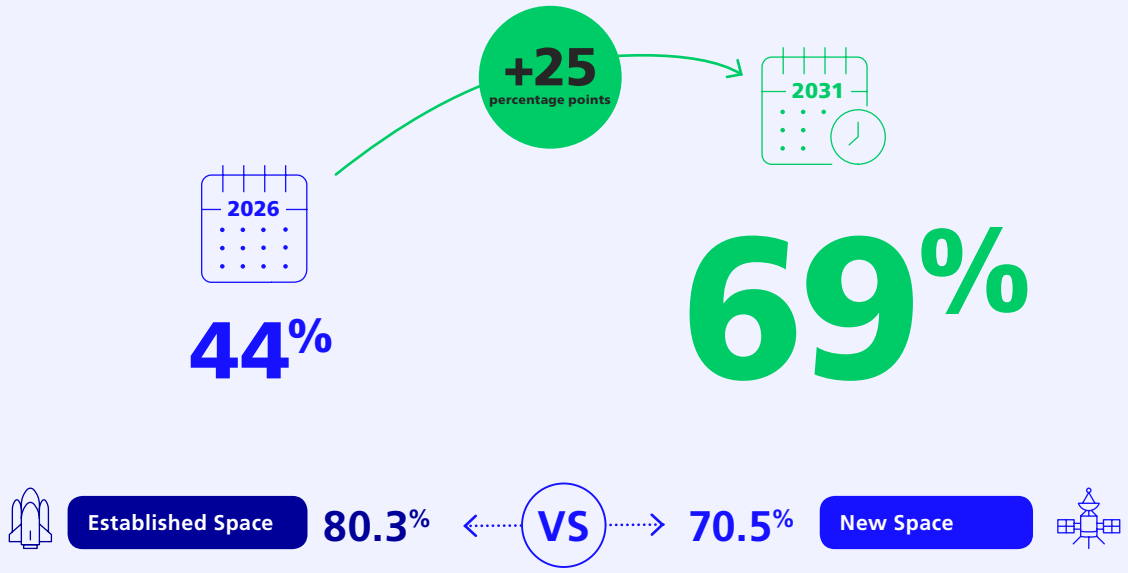
Which statement best describes the level of industrialization in Europe's space sector?

1. Partial standardization in place — 32.1%
2. Platform approaches established — 24.1%
3. One-off production / highly project-driven — 22.0%
4. Serial production in selected areas — 15.6%
5. Scaled serial production as the core model — 5.0%
6. Don't know — 1,2%

While project-based structures remain in place, the demand for repeatability is rising sharply:

Repeatability is becoming the industry standard

Share of respondents who expect at least every second product line to be repeatable.



Currently, 44 percent of respondents estimate that at least 51 percent of product lines are repeatable. 69 percent expect at least half of all product lines to be repeatable five years from now. There are clear differences between traditional space companies and New Space players. The figure is markedly higher among established space companies respondents: 80.3 percent put the share of repeatable product lines above 50 percent, compared with just 70.5 percent among New Space companies.

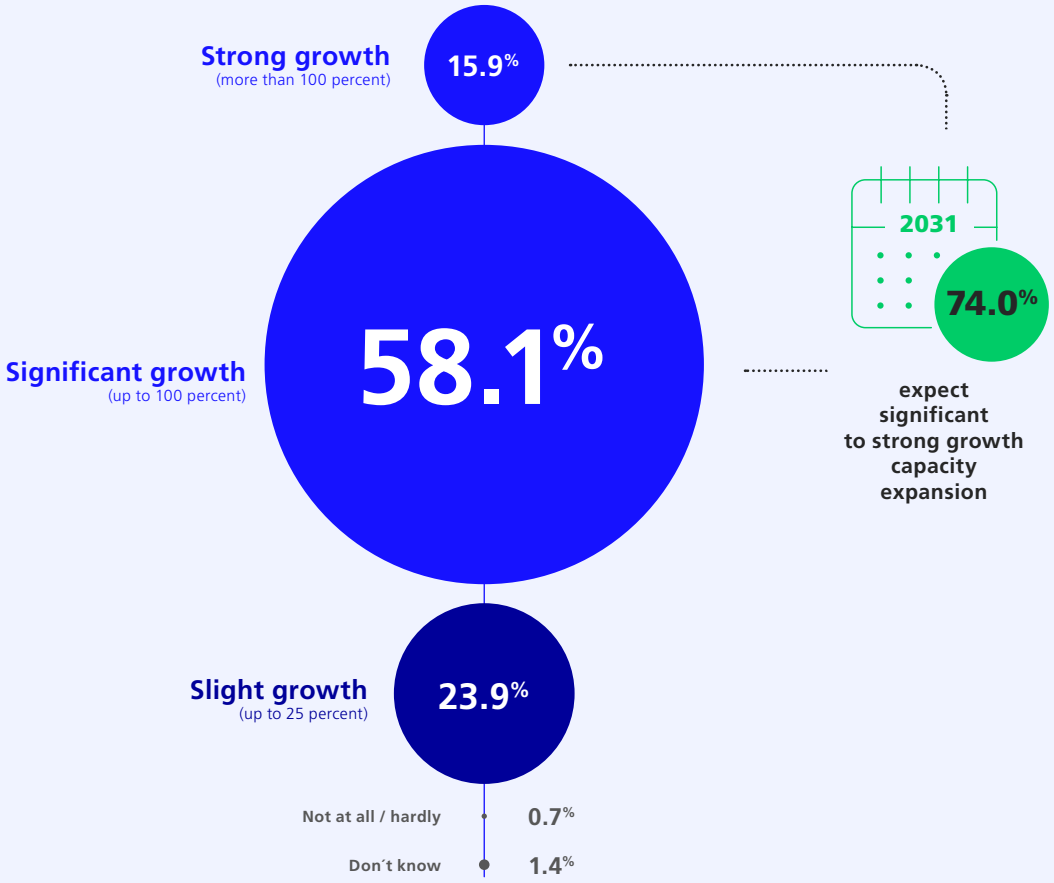
This creates a clear industrial imperative: project-based ap proaches must become more productive, standardized, and repeatable. In the future, companies will need to manage customer-specific programs and repeatable platforms in parallel. That requires modular product and process architectures and end-to-end digital value chains—from PLM, ERP, and MES through to an end-to-end digital thread.

This confirms the assumption that Europe's space industry is not simply moving from project logic to product logic but is instead developing a hybrid model that combines customer-specific value creation with repeatable platform capabilities.

Growth Requires Industrial Efficiency

The European space industry's growth ambitions are substantial:

How much do you expect production capacity in Europe's space sector to grow over the next five years?

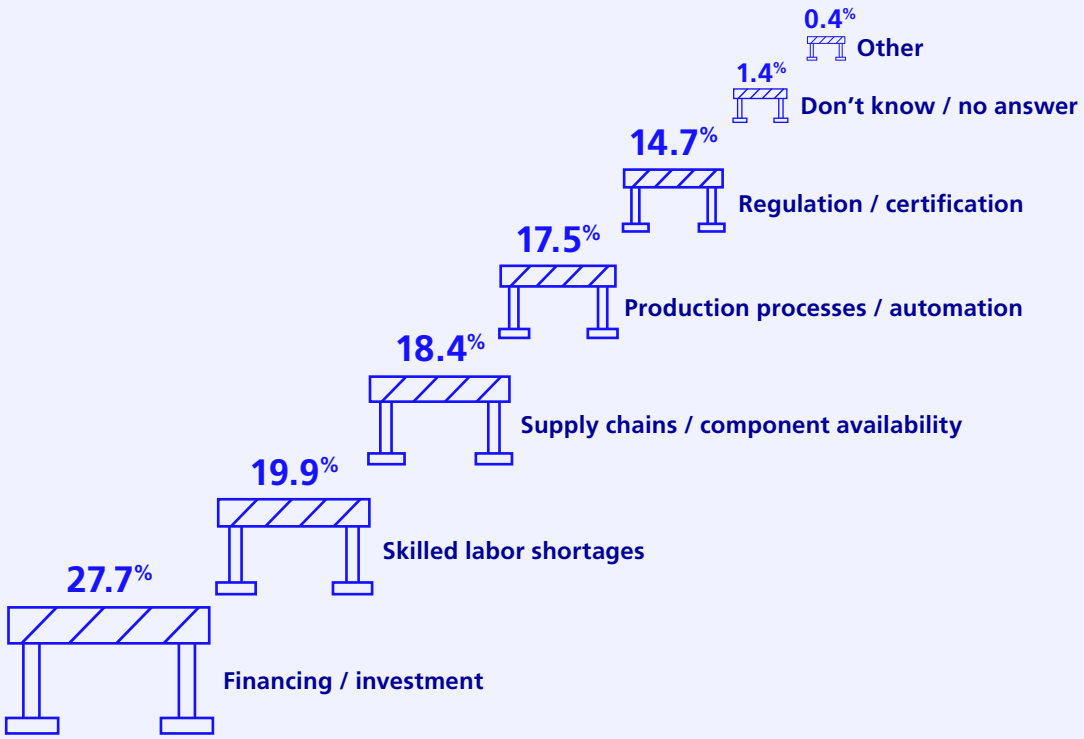


Europe's space sector is pursuing ambitious growth targets and planning a substantial expansion of its production capacity. Overall, 74.0 percent expect capacity to expand significantly. At the same time, 65.9 percent rate current scalability as only moderate to very low. This figure is highest in the UK, at 76.9 percent, and is roughly the same across the other three countries.

Yet challenges in existing structures raise doubts about whether this growth can be supported efficiently. There is a clear gap between growth ambitions and industrial reality, as the industry wants to grow significantly faster than it currently considers itself capable of. This perception is particularly pronounced in the UK, where current scalability is viewed with skepticism. Growth therefore becomes a question of efficiency: how can output increase without costs, workforce requirements, investment, and complexity rising at the same rate?



What is currently the biggest barrier to scaling space production in Europe?



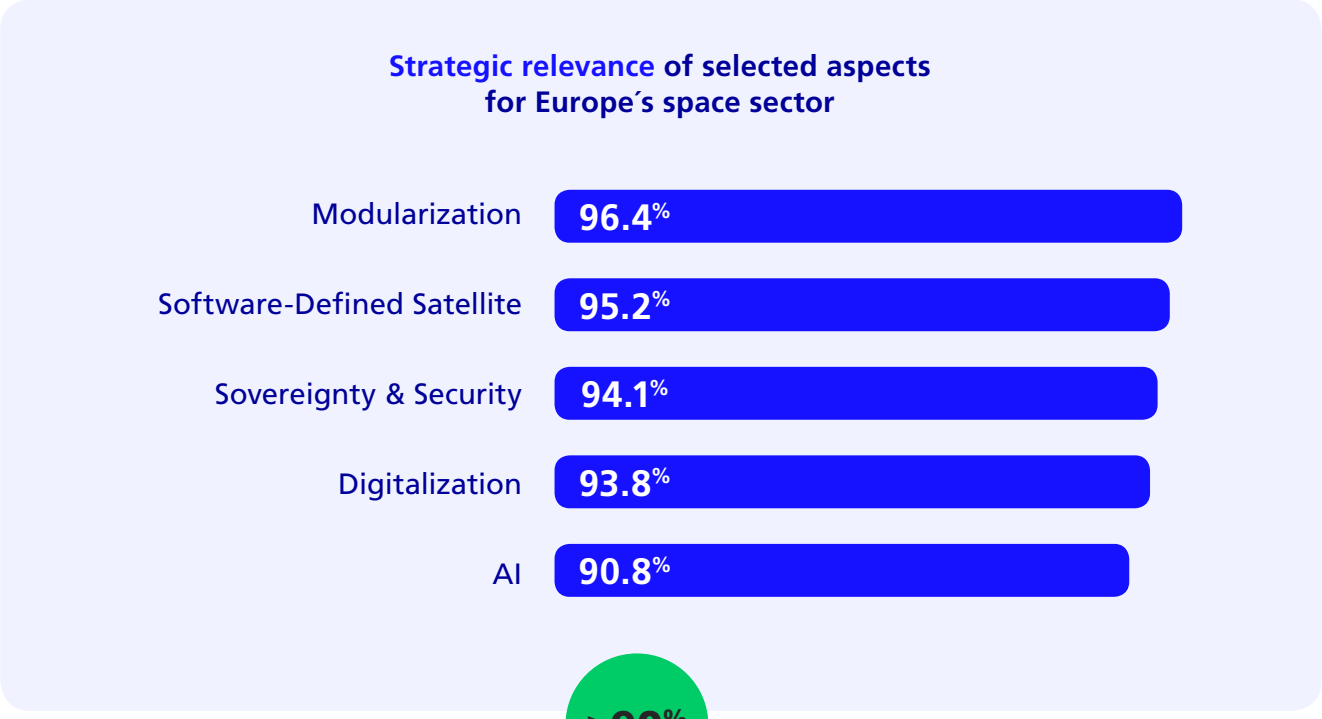
The perceived barriers to scaling demonstrate just how systemic the problem is. Companies see the biggest obstacles in financing growth and in a range of operational and industrial issues. The findings indicate that sustainable growth depends less on technological innovation than on the ability to scale capital, talent, supply chains, and production structures simultaneously.

More resources alone will not solve the problem. The decisive lever is industrial efficiency: repeatable processes, automation-ready workflows, clear standards, robust production systems, and effective governance of ramp-up, quality, and delivery capability. Scalability therefore becomes a competitive factor in its own right. Companies that can deliver faster, more reliably, and more cost-effectively will gain a structural advantage in the next stage of Europe's space sector and be well positioned for the future.

Growth will therefore only be financially viable if scaling no longer depends primarily on more capital, more people, and more complexity. For Europe's space sector, industrial efficiency is the decisive lever.

Europe's Technological Direction Is Clear

The survey paints a clear picture of the technologies that will shape the future. Across countries, company sizes, and market segments, there is broad consensus on strategically important topics such as software-defined satellites, independence and security, digitalization, and artificial intelligence:



Once the "what" is largely settled, the "how" becomes decisive. How can these technologies be translated into scalable products, industrial processes, and resilient value chains? To gain a competitive advantage in this context, technological progress must be industrialized and made repeatable. The bottleneck is shifting from technology development to execution: serial production, repeatability, quality, and supply chain resilience are becoming key differentiators.

An increasingly software-defined space industry therefore requires an equally rigorously defined approach to industrial execution. The critical link is between technology, production, and IT—from concept to factory, end-to-end. This requires an industrial operating model, digital threads, and effective ramp-up governance.

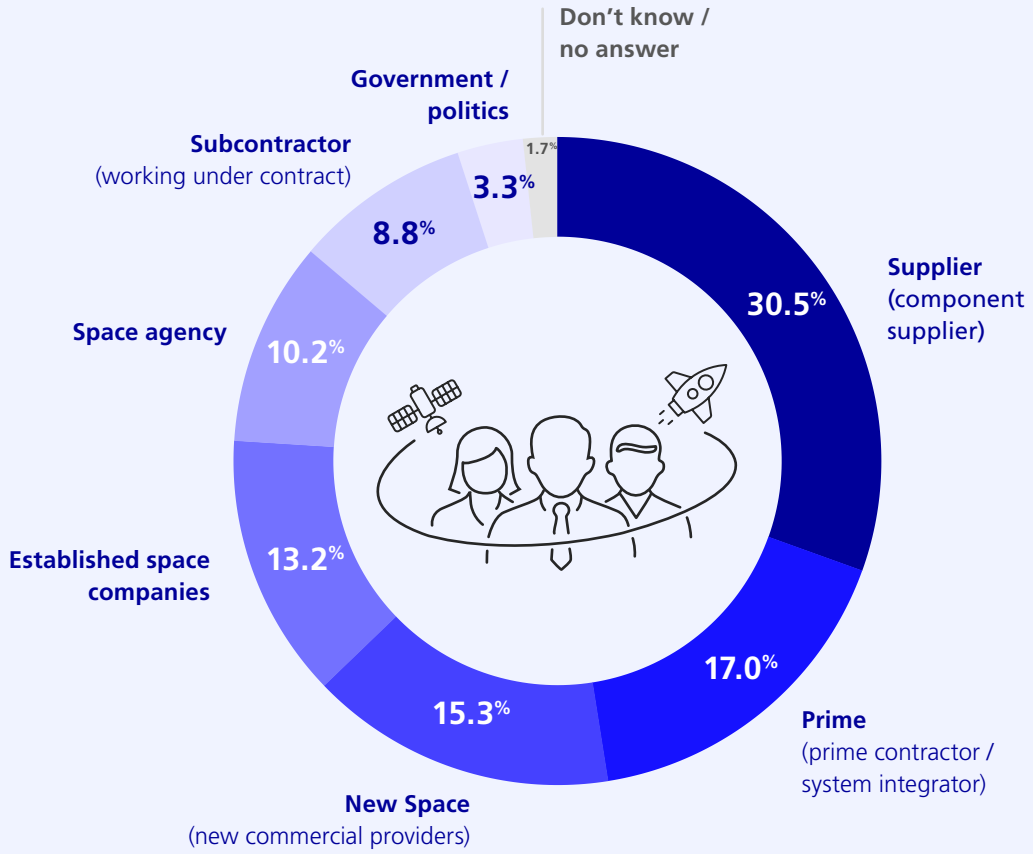
The industry's technological direction is therefore largely set; the real bottleneck lies in industrial implementation.

The Production Ecosystem as a Key Growth Factor

In the future, scaling in the European space industry will no longer be determined within individual companies alone. It will emerge from the interplay between prime contractors, suppliers, partners, and their standards. Two of the five most significant hurdles are directly rooted in the industry's production system.

The respondent profile demonstrates that this assessment comes from the operational core of the industry. The results therefore reflect not only a strategic management perspective, but also, to a large extent, the view of the functions that must enable scaling in day-to-day operations.

Area of activity – Aerospace decision-makers

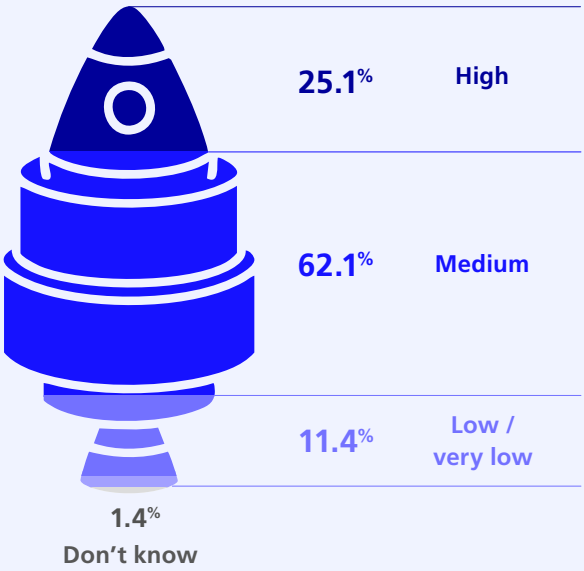


Even today, the European space industry is no longer organized along simple "make-or-buy" lines. The dominant model is neither complete vertical integration nor systematic outsourcing. The sector already operates through production networks in which in-house value creation, supplier contributions, partnerships, and system integration are tightly interwoven.

What is the typical level of vertical integration in Europe's space sector, in your view?

Answer options:

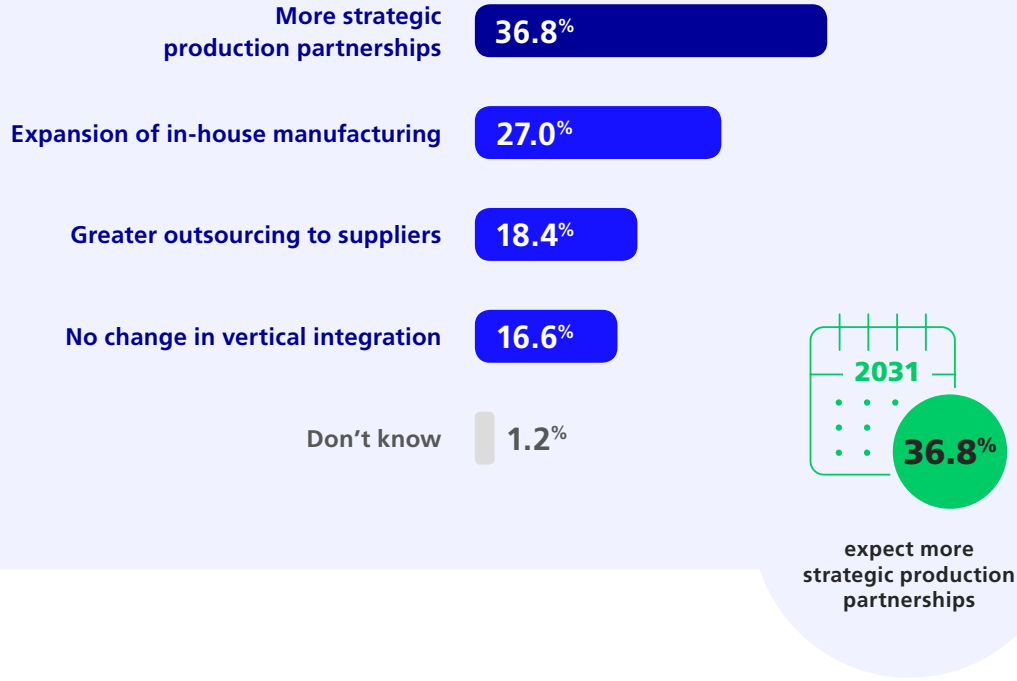
- **Very high**: mainly in-house
- **Medium:** partly in-house, partly external
- **Low:** focus on integration
- **Very low:** mainly external
- **Don't know**



Looking ahead, production models are clearly changing. Companies are placing even greater emphasis on strategic partnerships, while both the expansion of in-house manufacturing capacities and greater outsourcing to suppliers play a lesser role. The industry is moving away from isolated value-creation structures toward networked production ecosystems. The data points to a production model that relies more heavily on coordinated partner roles, shared capacities, and joint industrialization capabilities. Scaling up, therefore, does not necessarily have to be achieved by building additional in-house manufacturing capacity.



How is production in Europe's space sector most likely to develop over the next five years?



This gives rise to a new industrial vision. Europe's space sector will scale through an orchestrated production ecosystem, rather than individual factories. A "make-with" approach becomes crucial: companies must determine not only what to manufacture in-house and what to outsource, but how to design a resilient, scalable production network. Partners must grow along with it. Tier 1 and Tier 2 suppliers become critical levers for scaling, because if they fail to industrialize, they constrain the entire value chain. Competition is therefore shifting from an individual technological edge to the ability to orchestrate a robust industrial network—with shared data flows, aligned quality processes, and reliable planning for capacity, delivery capability, and ramp-up.

Europe's space industry is developing its hybrid industrialization model not only between project and product logic, but also between in-house manufacturing and partner networks. Scaling emerges where platform logic, repeatability, delivery capability, and partner governance work together.

The future of Europe's space industry will therefore be determined not by a single company, technology, or manufacturing strategy, but by the performance of the entire production ecosystem.

Country Focus: A European Consensus with Different Starting Points

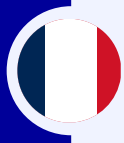
The country analysis does not reveal separate national space strategies, but different industrial entry points into the same European transformation challenge. Technological direction is largely set across all markets; differences arise primarily where growth, scalability, project logic, production networks, and regulatory requirements converge.



Germany combines the highest average level of agreement across the five technology topics—96.2 percent—with strong growth expectations of 79.8 percent. At the same time, future value creation remains clearly project-based, at 67.6 percent. Germany's central task is to translate its industrial strengths into a scalable space model.



The UK shows the strongest orientation toward collaboration: 45.5 percent expect more strategic production partnerships. At the same time, 76.9 percent rate current scalability as low or limited, while growth expectations, at 61.2 percent, are lower than in the other countries surveyed. The UK's starting point, therefore, lies in translating partnership logic into robust supply and production capabilities.



France places particular emphasis on operational industrialization. Financing is less prominent, at 14.4 percent, while production processes and automation (23.5 percent) as well as regulation and certification (23.4 percent) rank considerably higher. At the same time, 75.7 percent expect repeatable product lines to predominate in the future. France therefore exemplifies the combination of process capability, certifiability, and scalable production logic.



Italy shows signs of a stronger shift toward a hybrid model, with 81.7 percent anticipating production capacity to double (or more). Meanwhile, the share of respondents expecting project logic to dominate in future is lower, at 57.7 percent, than in Germany and the UK. At the same time, expansion of in-house manufacturing is cited more often (34.6 percent) than partnerships (29.8 percent). Italy therefore raises the question of how in-house manufacturing, platform logic, and network capabilities can be combined into a scalable model.

Europe is not following a single path to industrialization.

Instead, different national variants of the same transformation are emerging: technologically, the countries are largely aligned; industrially, they have different levels of maturity, bottlenecks, and starting points.



Turning Ambition into Industrial Reality

Europe's challenge lies in industrial implementation. The sector broadly agrees on the key technologies of the future, has ambitious growth plans, and is striving for greater repeatability. Yet project-based structures remain dominant, scalability is widely viewed as limited, and financing is cited as the greatest barrier. The decisive question is therefore: how can technological strength be turned into scalable, efficient industrial capability?

MHP supports this transition at the points where growth ambitions must be translated into industrial delivery capability: across the value chain, from operating models and repeatability to partner governance and ramp-up capability. The priority is not merely to describe the gaps strategically, but to make them visible across the entire industrial value chain—from engineering, manufacturing, production, and quality through to the supply chain, certification, and partner networks. To achieve this, Europe's space sector needs an industrial operating model that reflects its hybrid reality: customer-specific programs will remain, but platforms, standards, data logic, and robust production systems can make them more scalable.

For three decades, MHP has supported industrial companies in transforming complex value-creation systems and brings this implementation expertise to the specific requirements of the space industry.

The focus is not on adding complexity, but on building scalable industrial capabilities. These include operating models for space programs, robust production and scale-up roadmaps, platform and modularization strategies, end-to-end product data and digital threads as well as digital twins. The key lever is the industrial evolution of project logic. This allows companies to retain their project capabilities while creating the conditions to scale more repeatably, efficiently, and reliably.

Europe's space industry is technologically strong and poised for growth. However, the next level of maturity will only be achieved when project logic, platforms, and production ecosystems come together to form a robust industrial architecture.

MHP supports this transition with industrial operating models, platform and modularization strategies, digital threads, scalable production and partner networks, and the industrialization of complex value-creation systems across the entire value chain. The path to a scalable space sector is part of **The New Industrial**: the transformation must be delivered at speed, built with resilience, and designed to strengthen technological independence—**Fast. Resilient. Sovereign.**



This turns technological excellence into industrial performance—and Europe's unresolved equation into a scalable future for its space industry.



About MHP

MHP Management- und IT-Beratung GmbH

MHP is an international management and IT consultancy headquartered in Ludwigsburg, Germany. For nearly three decades, the company has been supporting the transformation of processes and products for around 300 clients worldwide across the Automotive, Manufacturing, Aerospace, Public, and Defense sectors. As part of the Porsche Group, MHP provides both strategic and operational consulting in key areas such as Customer Experience and Workforce Transformation, Factory Planning, Supply Chain Management, Cloud Solutions, Integration and Scaling, Cyber Security, Big Data and Artificial Intelligence, Platforms and Ecosystems, as well as Industry 4.0 and Intelligent Products. The goal is to sustainably enhance speed, sovereignty, and resilience. The consultancy operates internationally, with its headquarters in Germany and subsidiaries in the USA, Mexico, India, the United Kingdom, Romania, and China. Around 4,500 MHP employees share a commitment to excellence and sustainable success. This ambition continues to drive the company – today and in the future.

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Survey Profile

On behalf of MHP, Civey conducted an online survey of 577 aerospace decision-makers in Germany, the UK, France, and Italy from April 17 to May 13, 2026. Quotas and weighting were applied to make the results representative, with a statistical margin of error of 4.1 percentage points for each overall result.

Layout & design: www.freiland-design.de

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