

Deloitte.

Executive summary
xTech Futures:
SpaceTech

Launching the ultimate emerging market





EXECUTIVE SUMMARY

Space has never been more accessible; the potential for breakthroughs, never greater. *xTech Futures: SpaceTech* chronicles this inflection point.

In the future, we expect every company will likely be a space company, participating at varying levels in the space economy—some as *creators* of products and services, others as *purveyors* that support space-based activities, and still others as *consumers* of services.

This report explores business opportunities in three areas as described below and illustrated on page four in our **SpaceTech frontiers** framework.

HERE

Right here, on Earth, the space economy's historical barriers to entry are being decreased, de-risked, and democratized.

NEAR

Very near, in Earth's orbits, entrepreneurs and enterprises alike are turning possibility into profitability, today.

THERE

Out there, in deep space, a new frontier for human health, wealth, and wisdom awaits.

Additional opportunities and issues are relevant across all three areas, or ***Everywhere***.

Despite presenting profound challenges, this new era will provide many opportunities for organizations to leverage their existing expertise in space, just as they might for any new market.

HERE

Right here, on Earth, the space economy's historical barriers to entry are being decreased, de-risked, and democratized. In this new space era, the public and private sectors are growing their space capabilities in tandem, fueling each other to reach new heights.

In this chapter, we explore the impact of new types of launch vehicles and the expansion of spaceports. Innovative launch vehicles are helping drive the commercial space flight revolution—and making it easier than ever for organizations to access not only space but the business opportunities across the space value chain. And the development of spaceport infrastructure will also likely be critical for opening new avenues to space: As the demand for commercial launches grows, so too will the need for a host of infrastructure and services necessary to venture from our home planet.

NEAR

Very near, in Earth's orbits, entrepreneurs and enterprises alike are turning possibility into profitability, today. An energized ecosystem of satellites, space stations, and services is already flourishing, and companies and governments are working to build on past experiments and determine their capabilities and constraints in space.

As the number of launches steadily increases, businesses increasingly are exploring how to harness the benefits of space to positively impact life on Earth. This chapter sheds light on opportunities to leverage satellites to tap into new economic opportunities in satellite communication, satellite navigation, and earth observation and remote sensing; the possibility for in-space research aboard future commercial space stations; remediation and mitigation of space debris; servicing, assembly, and manufacturing in space; and space tourism.

THERE

Out there, in deep space, a new frontier for human health, wealth, and wisdom awaits. International space agencies and private companies are testing technologies needed to meet the ambitious goal of returning astronauts back to the Moon and beyond. From there, it's onward to Mars.

This chapter demonstrates that building long-term habitations off Earth, venturing to distant planets, and mining asteroids or other celestial objects are becoming more plausible with each passing day. It also examines how we might overcome the challenges that such extreme environments pose to human physical and mental health. Nations able to crack these challenges—and private companies that support or even lead their own missions—stand to reap substantial rewards in terms of scientific advances, economic activity, and potentially valuable natural resources.

CONCLUSION

The space economy has reached an inflection point in terms of both access and opportunity. We have entered a new space age that offers a launch window for pioneering companies of all sizes, and in all sectors, to establish sustainable competitive advantages by reimagining themselves as space companies—not as a radical pivot, but as an intentional extension of core business models. Companies can leapfrog to the next opportunity by creating space-based products and services, supplying this growing industry, or leveraging space-based technology advances.

And yet: SpaceTech is only the beginning. We anticipate that many of tomorrow's most lucrative investment opportunities will lie at the intersections of SpaceTech and BioTech, RobotTech, EnergyTech, and other xTech (emerging technology) domains that stand to significantly impact the way we work and live in the next 30 years. Leaders who can capitalize on the convergence of these domains won't just be market-takers, but market-makers.

SpaceTech frontiers

HERE

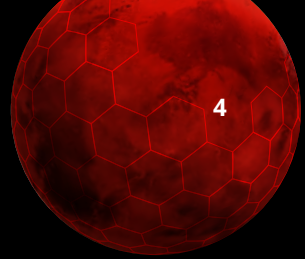
Reducing barriers to entry and exploration

NEAR


Capturing higher-value business cases in Earth's orbits

THERE

Exploring new frontiers for health, wealth, and wisdom




 The Red Planet


 The new gold rush



 Lunar redux

 The human problem

 Destination: Space

 Offworld production

 Cosmic cleanup

 Defying gravity

 New constellations


 Gateways to the galaxy

 Upward bound

EVERYWHERE

 Sustainability

 Cyber and defense

 Media, entertainment, and marketing

 Regulation

 Ethics

Diagram is not to scale

CONTACT US

Our insights can help you take advantage of emerging tech trends.

If you're looking for fresh ideas to address your business challenges, let's talk.



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DELOITTE NEX

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