

EXECUTIVE SUMMARY

Building the Lunar Economy

*How a sustained presence on the Moon could transform
life, industry, and infrastructure on Earth and beyond*



EXECUTIVE SUMMARY

Humanity is going back to the Moon, this time with the goal of living, working, and operating there for generations to come. *Building the Lunar Economy* reflects perspectives from leaders across the space ecosystem to explore the infrastructure, markets, and potential economic value that could emerge from a sustained presence on and around the Moon.

Governments and commercial companies are converging on the Moon, driven by science, security, commerce, national ambition, and the promise of resources. This convergence marks a departure from earlier eras of lunar exploration, when government programs largely operated on their own. Falling launch costs, sustained government commitment, and growing commercial capabilities are beginning to transform isolated missions into a shared ecosystem where infrastructure, investment, and demand can build on one another.

This shift mirrors a broader transformation across the space economy, as commercial companies take on roles once reserved for government programs, creating opportunities for businesses well beyond the space sector. The outcomes remain uncertain. Yet for the first time, the conditions for a sustainable lunar economy are beginning to form, opening possibilities that could extend far beyond the Moon itself.

The report explores this development across two interconnected layers, illustrated on page 3 in our **Lunar Economy Architecture** framework:

WHAT IT TAKES

The infrastructure and operations required to establish and sustain activity on and around the Moon.

WHAT IT MAKES

The commercial, strategic, scientific, and human value that this infrastructure could enable.

Although the lunar economy remains in its earliest stages, its economic potential is significant. Deloitte's analysis (illustrated on page 6) estimates that it could generate between **US\$343 billion and US\$566 billion in cumulative discounted economic value through 2050**—a range that reflects both the uncertainty inherent in an emerging market and the scale of the opportunity now coming into view.

“ We’re witnessing the most exciting moment in space history. The combination of capital, technology, and commercial momentum entering the market today exceeds anything we’ve seen before. ”

- Jack “2fish” Fischer, Retired US Astronaut and Chief Integration Officer of Intuitive Machines

LUNAR ECONOMY ARCHITECTURE

WHAT IT TAKES

The infrastructure required for a sustained lunar presence



Transportation

Getting to and from the lunar surface



Energy & Power

Generating, storing, and distributing energy



Communications & Navigation

Connecting operators and assets across cislunar space



Surface Mobility

Moving people, robots, and materials across the surface



Construction

Building physical infrastructure and goods on the Moon



Life Support

Keeping astronauts safe and healthy

WHAT IT MAKES

The possibilities the lunar economy could create



National Security



Lunar Data & Services



New Resources & Materials



In-Space Production



Innovation & Scientific Discovery



Human Inspiration

WHAT IT TAKES

The infrastructure required for a sustained lunar presence

Living and working on the Moon will likely require purpose-built infrastructure designed to operate in extreme environments. Much of the early activity is expected to center around the lunar South Pole, where deposits of water ice, prolonged sunlight, and strategically valuable terrain could support long-term operations, making the region a focal point for international exploration and future missions.

Governments continue to be the primary funders, but the model is shifting. Space agencies are increasingly acting as anchor customers, seeding commercial markets through innovative service-based procurement models. **Part I: What it Takes** explores six infrastructure markets: transportation; energy and power;

communications and navigation; surface mobility; construction; and life support. Together, they may represent the first major economic opportunity in the lunar economy, with Deloitte's economic analysis estimating a present value of **US\$282 billion through 2050** under an accelerated growth scenario.



WHAT IT MAKES

The possibilities the lunar economy could create

Once the core infrastructure is in place, activity on the Moon could expand to support a range of government and commercial opportunities, including national security, lunar data and services, new resources and materials, and in-space production.

These opportunities vary widely in maturity. Some have visible sources of near-term demand; others depend on markets or technologies still emerging. Some of the greatest value may ultimately come from innovations we cannot yet predict.

Part II: What it Makes explores the strategic, commercial, scientific, and human value that could emerge from a sustained lunar presence.

Deloitte's analysis estimates these markets could generate a present value of **US\$284 billion through 2050** under an accelerated growth scenario.



Figure 1

THE VALUE OF THE LUNAR ECONOMY THROUGH 2050

The estimated value of the lunar economy could reach between \$343 B (conservative growth) and \$566 B (accelerated growth) from 2026–2050

	CONSERVATIVE GROWTH SCENARIO <i>Base scenario assuming steady-state growth rates</i>	ACCELERATED GROWTH SCENARIO <i>High-growth scenario enabled by breakthrough technologies</i>
PART I WHAT IT TAKES: The infrastructure required for a sustained lunar presence		
Transportation	\$150.0 B	\$205.7 B
Energy & Power	\$31.8 B	\$44.3 B
Communications & Navigation	\$7.4 B	\$9.1 B
Surface Mobility	\$12.3 B	\$13.3 B
Construction	\$5.1 B	\$6.4 B
Life Support	\$2.4 B	\$3.5 B
PART II WHAT IT MAKES: The possibilities the lunar economy could create		
National Security	\$11.9 B	\$31.4 B
Lunar Data & Services	\$1.4 B	\$31.7 B
New Resources & Materials	\$59.2 B	\$114.5 B
In-Space Production	\$61.3 B	\$105.9 B
TOTAL VALUE OF LUNAR ECONOMY 2026–2050*	\$342.8 B	\$565.7 B

*Data reflects cumulative values from 2026–2050, discounted at 7% in real terms, in USD

Source: Deloitte analysis (2026)

CONCLUSION

A new economic frontier is beginning to take shape

A sustained lunar economy is far from inevitable. The engineering challenges are immense, the timelines are long, and near-term demand remains heavily dependent on government funding. Which opportunities ultimately materialize remains uncertain, and some of the most important ones may be those we cannot yet imagine.

The funding choices, infrastructure investments, and technical standards being set today are likely to shape what becomes possible, who participates, and where the value accrues. Whether you invest, regulate, build, or lead a business that has never

considered itself connected to space, activity on and around the Moon may reach your work sooner than the distance suggests. And if actual moonshots become routine, they may change our collective sense of what is possible.



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