

2025

## EXOCHING

# the Unknown

Launching the new Dubai Future Forum theme

At the Dubai Future Foundation, we are guided by a powerful belief: "the future belongs to those who imagine, design, and execute it", and ultimately "who dare". This conviction, rooted in the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, has shaped our work since the Foundation's inception. The Dubai Future Forum, the Flagship gathering of the Foundation, places a vital role in advancing this mission.

Dubbed as the world's largest gathering of futurists, the Dubai Future Forum attracts 2,500 individuals from 100 countries and is held annually since 2022 at the Museum of the Future in Dubai. Since the Forum's inception, our goal has been to convene a meeting that resonates with the urgency of today's challenges and the promise of tomorrow. Participants and speakers are involved in imagining and shaping the future, conceptually and materially.

This year, we are proud to introduce a new guiding theme: Exploring the Unknown. It is an invitation to push beyond the limits of what we know—not for conquest, but for the advancement of growth, prosperity, and wellbeing for all life on Earth. In an age of rapid technological shifts and environmental uncertainty, Exploring the Unknown is no longer just a matter of curiosity, it is an act of responsibility. And there is no better place to embrace this responsibility than Dubai: a crossroads of cultures and a testbed for bold ideas where the improbable becomes possible.

Humanity has always been driven by exploration. From early navigators of the Arabian Peninsula who charted new horizons, to pioneers who ventured across the poles and into space, exploration has defined our story. Today, science and technology extend this spirit further—into the depths of the oceans, the vastness of space, the complexity of the Earth, and the frontiers of the human mind. Yet exploration must serve a higher purpose: to harness discovery and imagination in the service of life.

The Exploring the Unknown theme will unfold across four dimensions: Ocean, Land, Space, and Mind, each gathering pioneers who challenge our understanding of the world and our place within it. Ultimately, the question before us is profound: How can we find meaning in our futures, whether through the exploration of our planet, the cosmos, or ourselves?

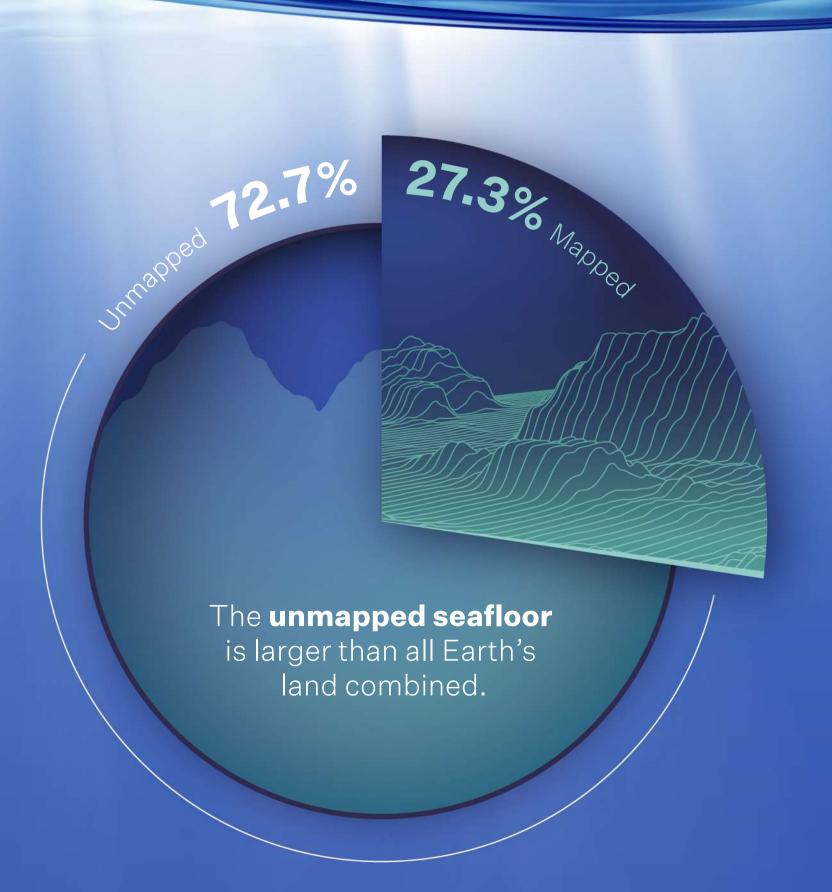
Part of the answer lies in coming together—to share perspectives, challenge assumptions, and imagine futures that serve the greater good. **The Dubai Future Forum is designed to be precisely that place.** 



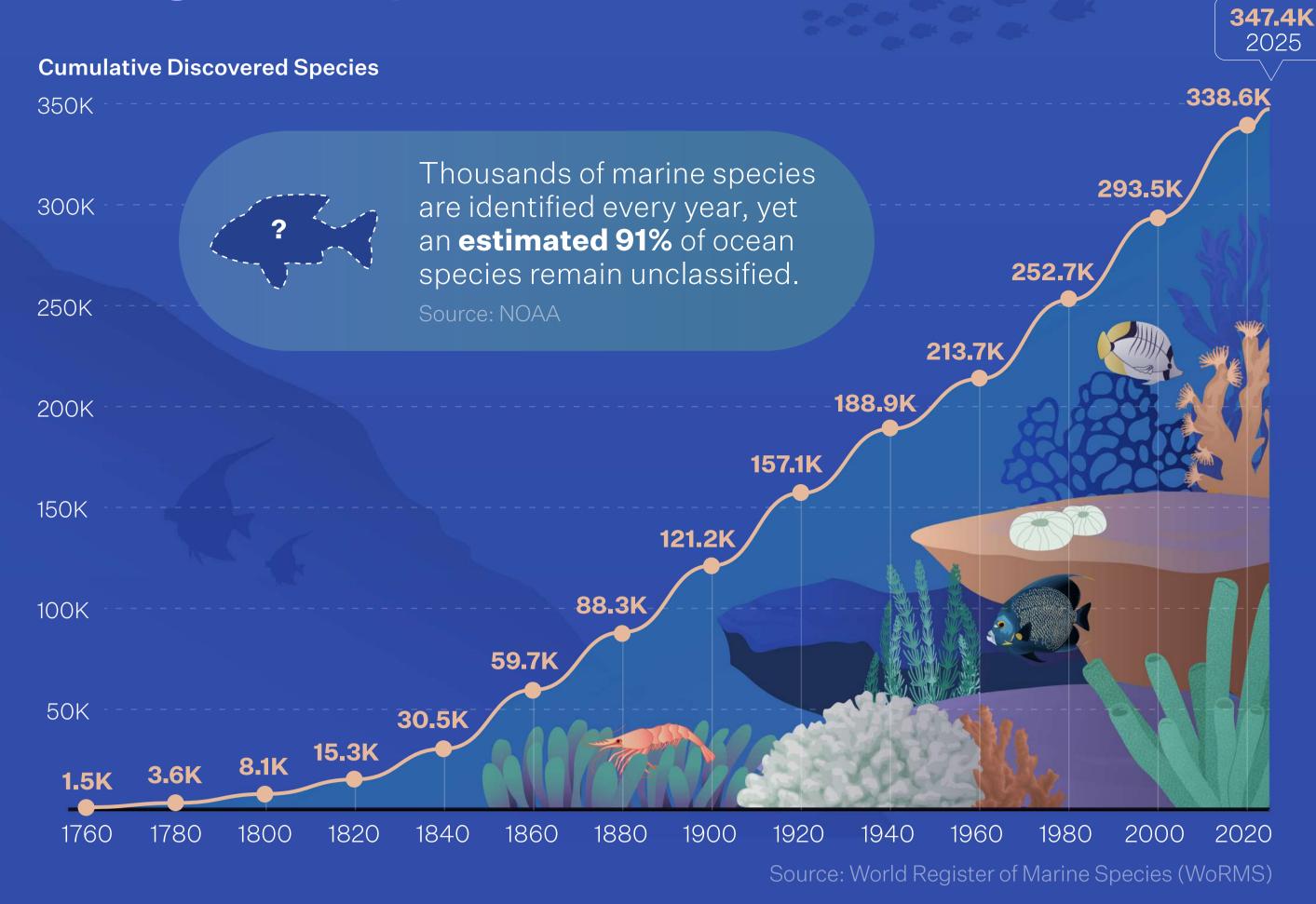
Beyond the Depths:

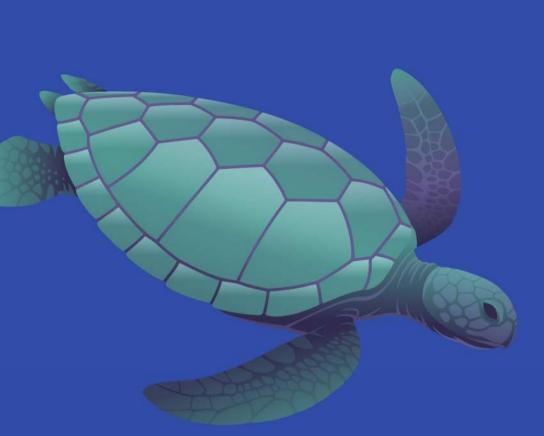
# Exploring The Ocean's Future

The ocean is one of Earth's most vital yet least understood systems. What work has been done so far, and what can be done going forward to preserve our ocean ecosystems?



### Closing the Ocean Intelligence Gap



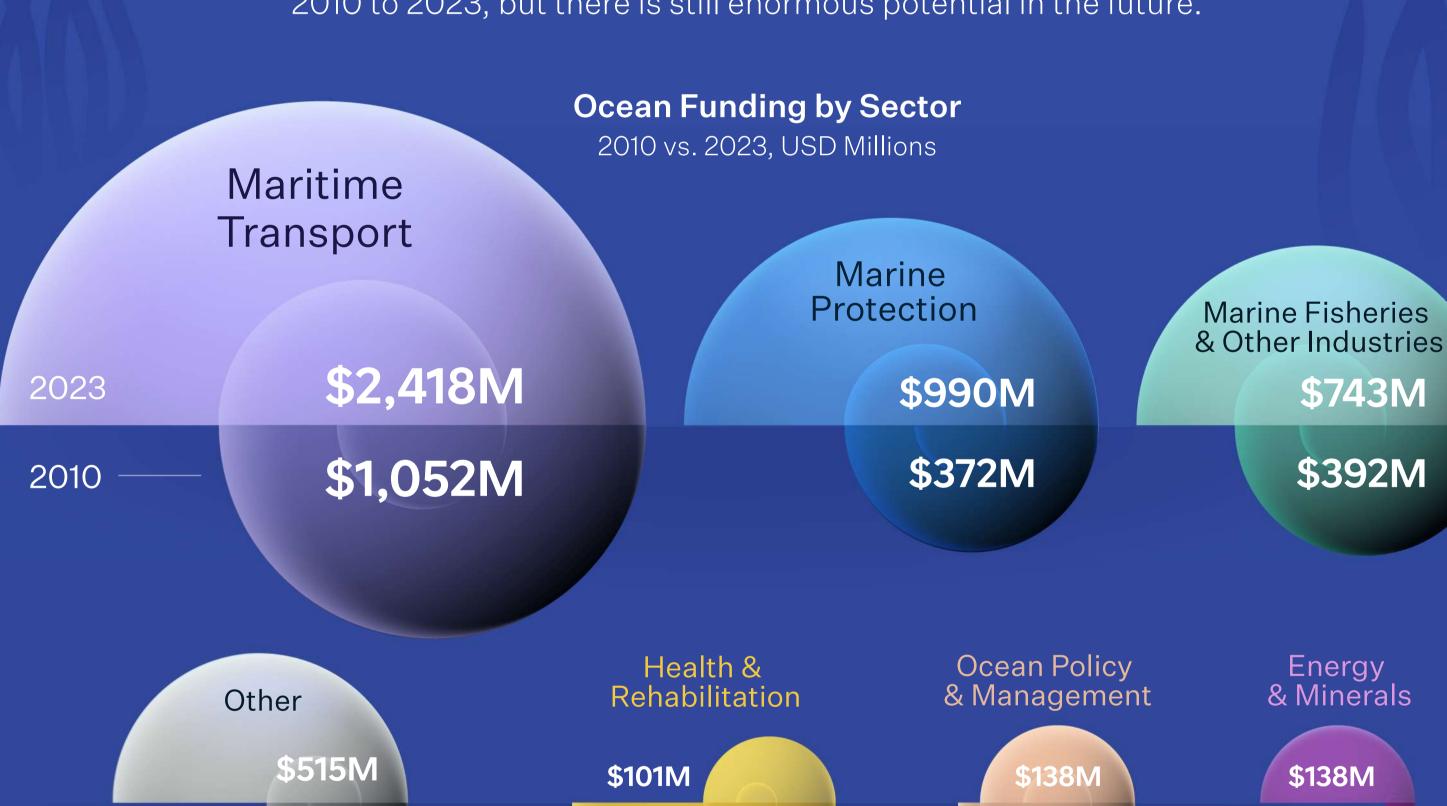


Every deep-sea expedition routinely brings back dozens of organisms that are potentially new to science. But describing them formally (naming, classifying, publishing) can take years.

Each new discovery holds potential for medical enhancements or biomimicry solutions essential for sustaining life on Earth. To secure humanity's future, we must close the ocean knowledge gap through deeper research and greater investment.

### Ocean Capital: Present Trends, Future Potential

Ocean-related financial commitments doubled from 2010 to 2023, but there is still enormous potential in the future.



\$400M

#### **Investment Opportunity**

\$115M

USD Billions

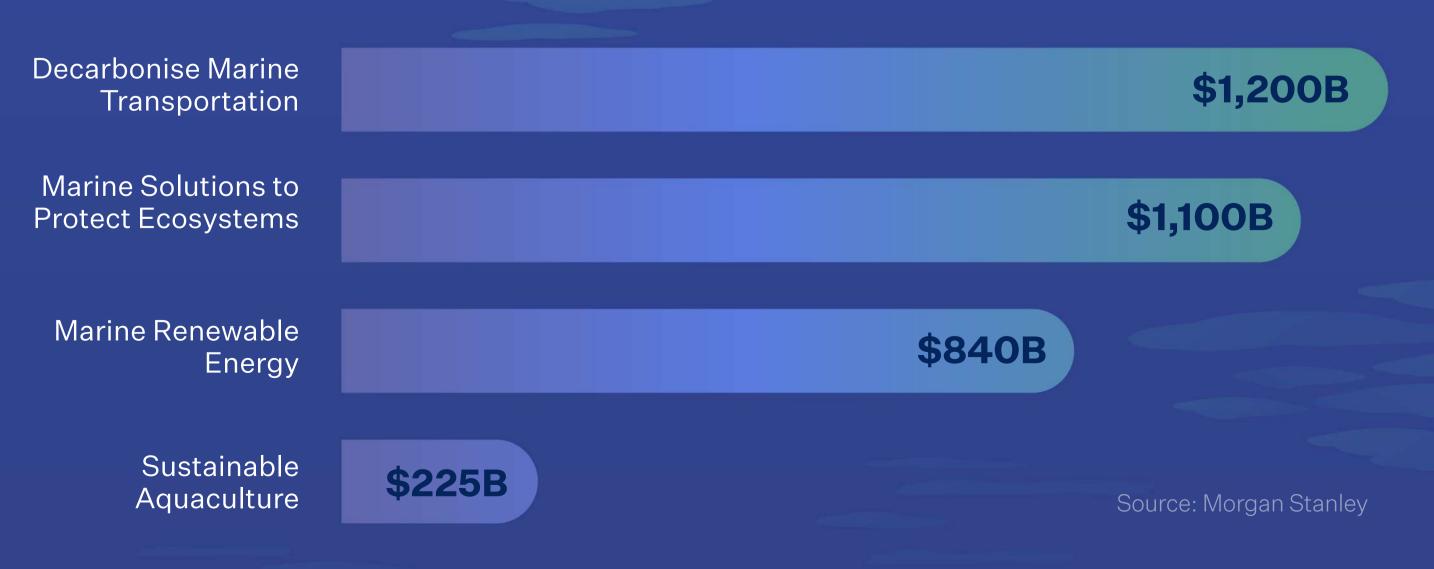
In the coming decades, Morgan Stanley estimates a >\$3 trillion ocean investment opportunity to mitigate climate risks and drive sustainable growth.

\$180M

\$5M

OECD; UNCTAD

Sources:



The Ocean's next chapter will accelerate exploration and our understanding of this ecosystem, while expanding opportunities to invest in its resilience.

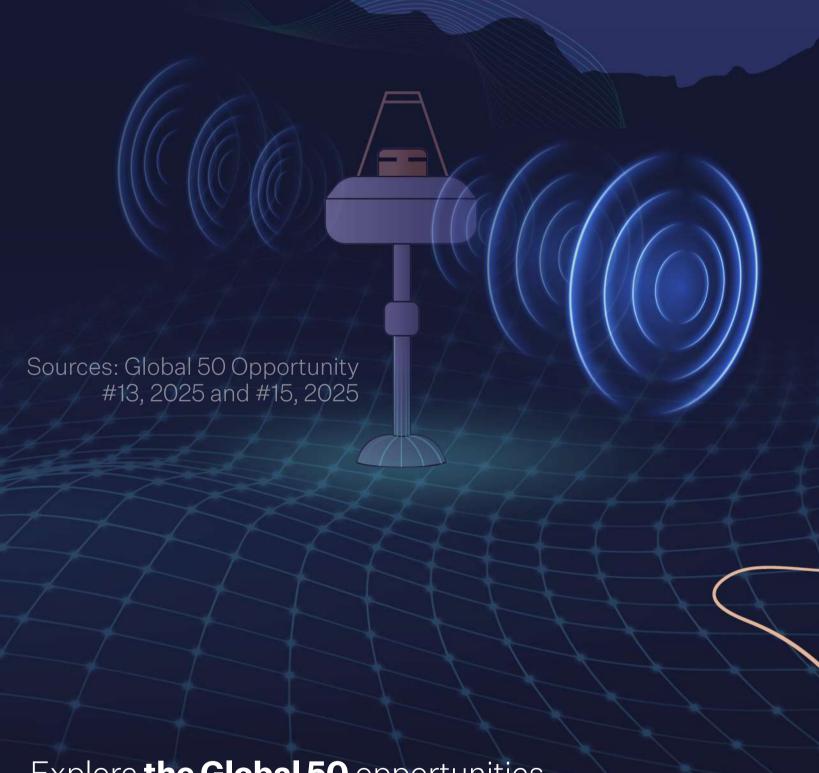
#### What's Next for the Ocean?

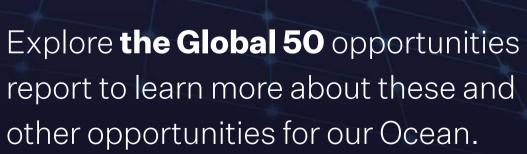
The Ocean's future is being driven by rapid advances in pollution remediation and energy developments.

#### **Global 50 Opportunity:**

**Sonic Sweep:** Ultrasonic waves remove plastics for a cleaner ocean.

Deep-Sea Energy: Ocean temperature differentials harnessed to power marine transport.







Learn more with The Global 50

spotlight

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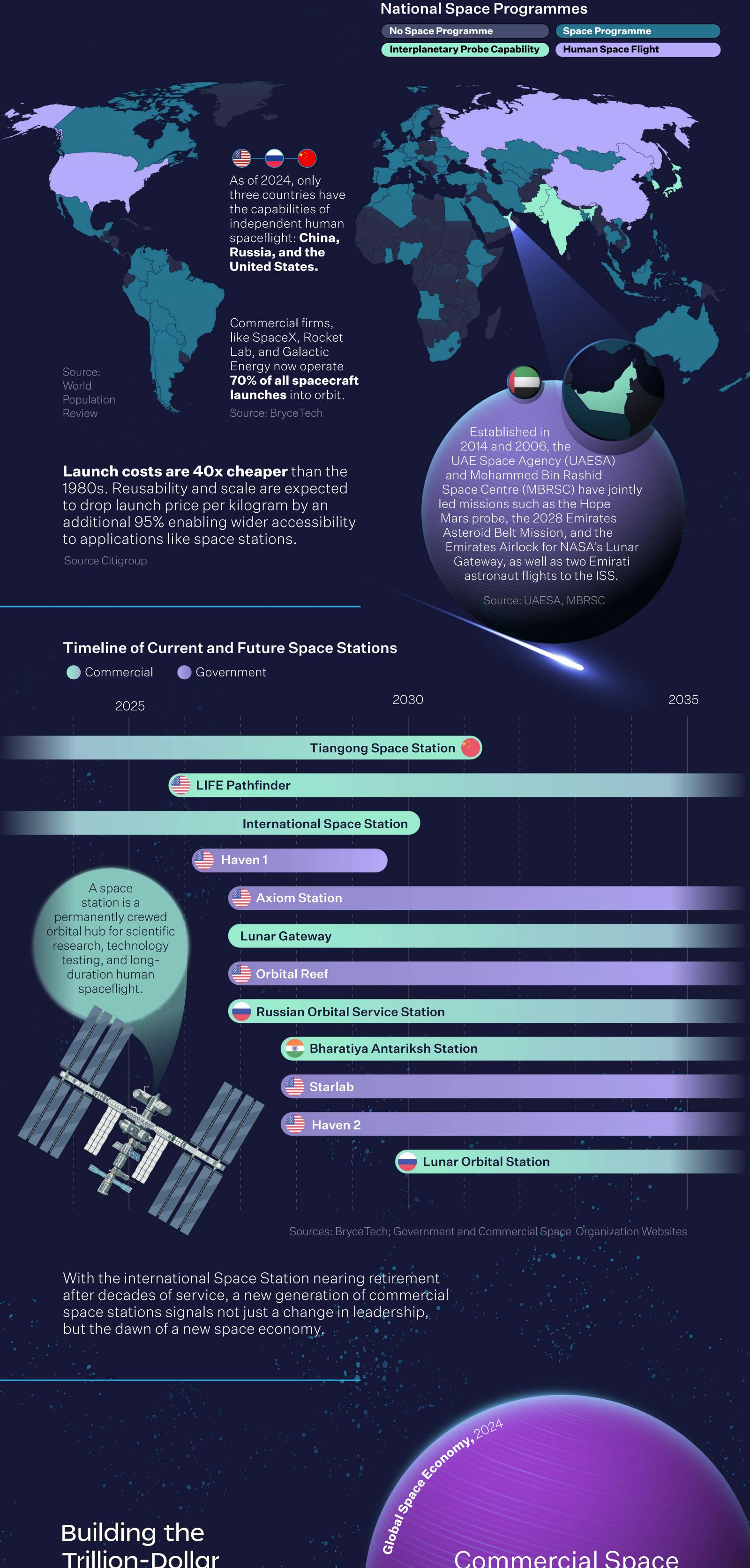
Beyond the Atmosphere:

# Humanity's Journey Into Space

Our reach beyond Earth is guided by curiosity and innovation. Together, they drive the technological systems that make exploration possible.

#### Global Citizens, Galactic Pathways

Space is becoming a unifying frontier, as nations collaborate to extend humanity's reach and shape how we operate beyond Earth. A new wave of commercial players and national space programmes are expanding access and reshaping exploration and governance alike.





Space is emerging as one of the fastest-growing economic frontiers powered by commercial enterprises projected to push the Space Economy beyond \$1 trillion by 2032.

Non-U.S Government Space Budgets \$55.0B

U.S. Government Space Budgets

\$77.3B

Commercial Space Products and Services

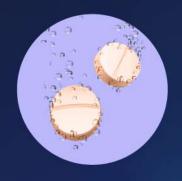
Commercial Infrastructure and Support Industries

Source: Space follows

\$137.3B

#### What's Next for Space?

Humanity's journey into the final frontier is being fuelled by innovations in biohacking, dark energy, and advanced network integration.



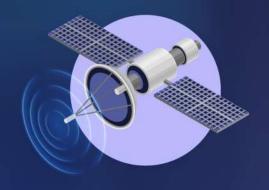
#### **Space Flex**

Individually personalised supplements to prevent bone and muscle loss in support of extended space travel and planetary settlement.



#### **Dark Energy**

Remaining largely unknown to us, dark energy holds the possibility for inspiring, yet untold innovation for energy and technological development.



#### **Network of Networks**

Leveraging machine intelligence and automation to reduce disruptions through intelligent transitions between cellular and satellite networks.

Sources: Global 50 Opportunity #44, 2025; #47, 2025; and #50, 2024



Explore the Global 50 opportunities report to learn more about these and other opportunities for the future of space exploration.



Learn more with

The Global 50 spotlight

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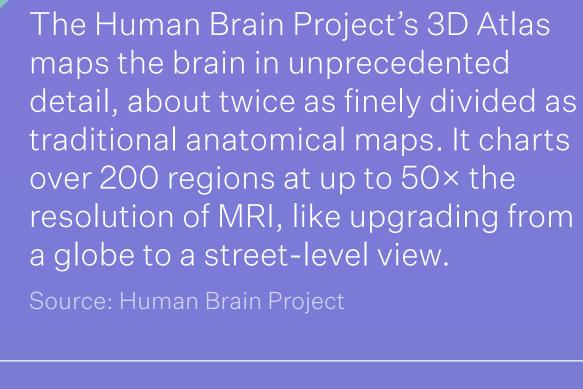
The Frontier Within

## The Future of the Mind

The mind is no longer just a biological organ; it is a frontier for discovery.
Understanding it is key to designing the future that enables humanity to thrive.

### New Maps of the Mind

Recent breakthroughs in brain mapping push the frontier of discovery and bridge the gap between large-scale brain architecture and fine-grained neural connectivity.



But scientists are now zooming in even further, down to the nanoscale. Researchers built a 3D digital model so intricate it produced more than a petabyte of data, the equivalent of streaming HD video nonstop for 40 years.

Source: Science



Mapping projects like these unlock a world of possibilities to enhance our health through advances in neurosurgery, drug development, and Al.



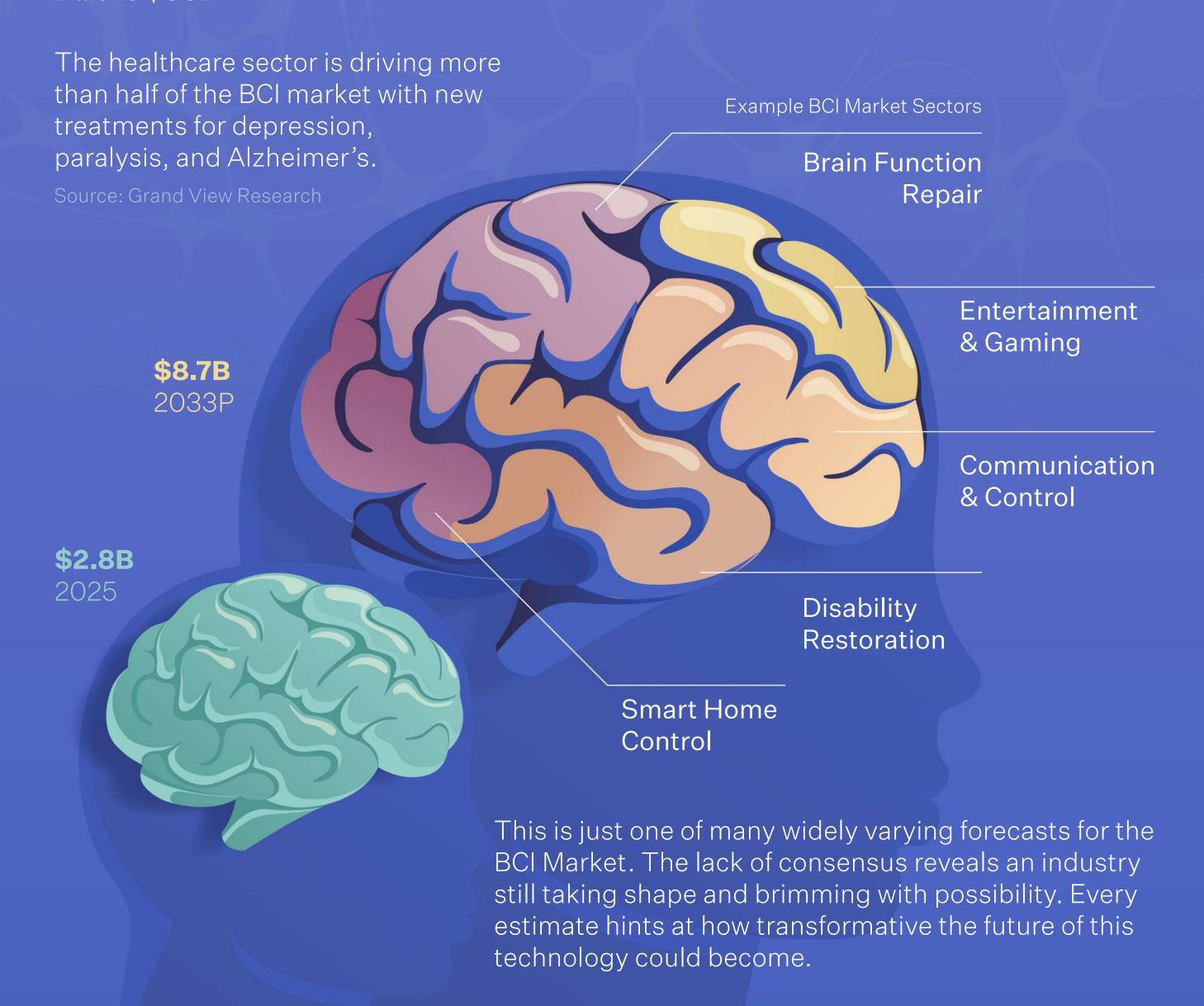
Detailed brain maps are blueprints for next-gen brain—computer interfaces (BCls), systems that translate neural activity into digital signals enabling direct communication between brains and computers.

#### Plugging Into the Brain Economy

The BCI market is expected to triple in size within eight years, with billions in value and millions of users projected in the future. Though the exact path is uncertain, momentum is building in these key sectors to shape what comes next.

#### **BCI Market Value**

Billions \$USD



As the market expands, so will the patient population. Neural interfaces will power life-changing care for millions of people in the future.

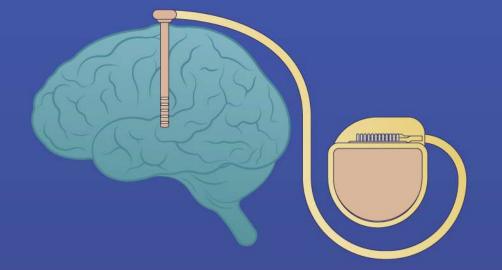
#### 3 Implants Helping Us Hear, Move, and Think



#### Hearing

Cochlear implants send sound directly to the auditory nerve, bypassing damaged parts of the ear. More broadly, the World Health Organization expects more than 700 million people to require some form of hearing rehabilitation, up from 430 million in 2025.

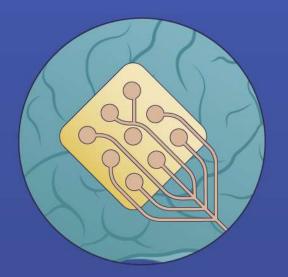
Source: World Health Organization



#### Moving

Deep Brain Stimulation (DBS) uses implanted electrodes to send targeted electrical pulses to the brain, helping manage severe movement disorders like Parkinson's. The treatment is highly invasive and reserved for advanced cases, but by 2050, up to 25 million people could be living with Parkinson's worldwide.

Source: British Medical Journal (The BMJ)



#### **Thinking**

Implanted BCIs convert brain signals into digital commands, allowing patients to control devices by thought. So far, only around 80 people with severe paralysis or communication loss have taken part in trials to advance movement restoration and independence.

Source: Advanced Science

The next wave of BCIs will use more external interfaces not just for restoration but to strengthen the mind and unlock new opportunities for cognitive health and mental wellness.

#### What's Next for Our Minds?

Innovative approaches to cognitive health and adaptive mental wellness support are rapidly expanding the possibilities for our minds.

#### **Sense & Serenity**

BCIs to detect brain waves and adjust stimuli to calm the nervous system, shifting the body from 'fight or flight' to relaxation.

#### **Neural Charter**

A three pillar approach focused on: open research, safety standards, and responsible deployment.

#### Mindscape

Early, focused approaches to cognitive health in children to build cognitive resilience, flexibility, and reserve for lifelong health.

BC

Explore the **Global 50** opportunities report to learn more about these and other opportunities for the future of our mind.

Sources: Global 50 Opportunity #1, 2025; #5, 2025; and #46, 2025



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#### From Ice to Insights:

## The Future of Polar Regions

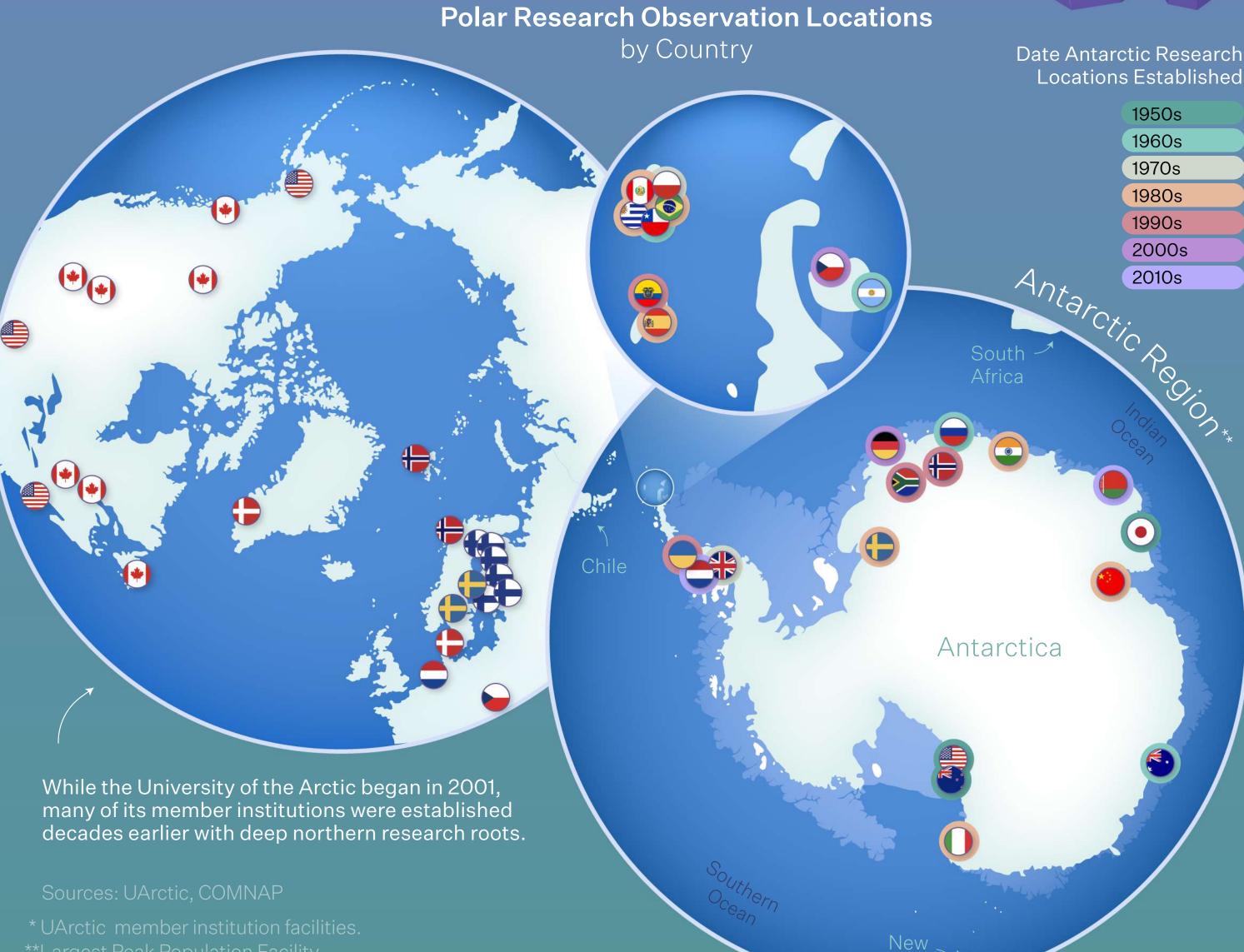
Polar regions are central to Earth's climate system, sea levels, and future resilience. Research and Innovation at the edges of the world will define what comes next.

#### Frozen Frontiers of Knowledge

The polar regions are some of Earth's most important observation posts. Where do the growing number of researchers go to brave the elements in the name of science?

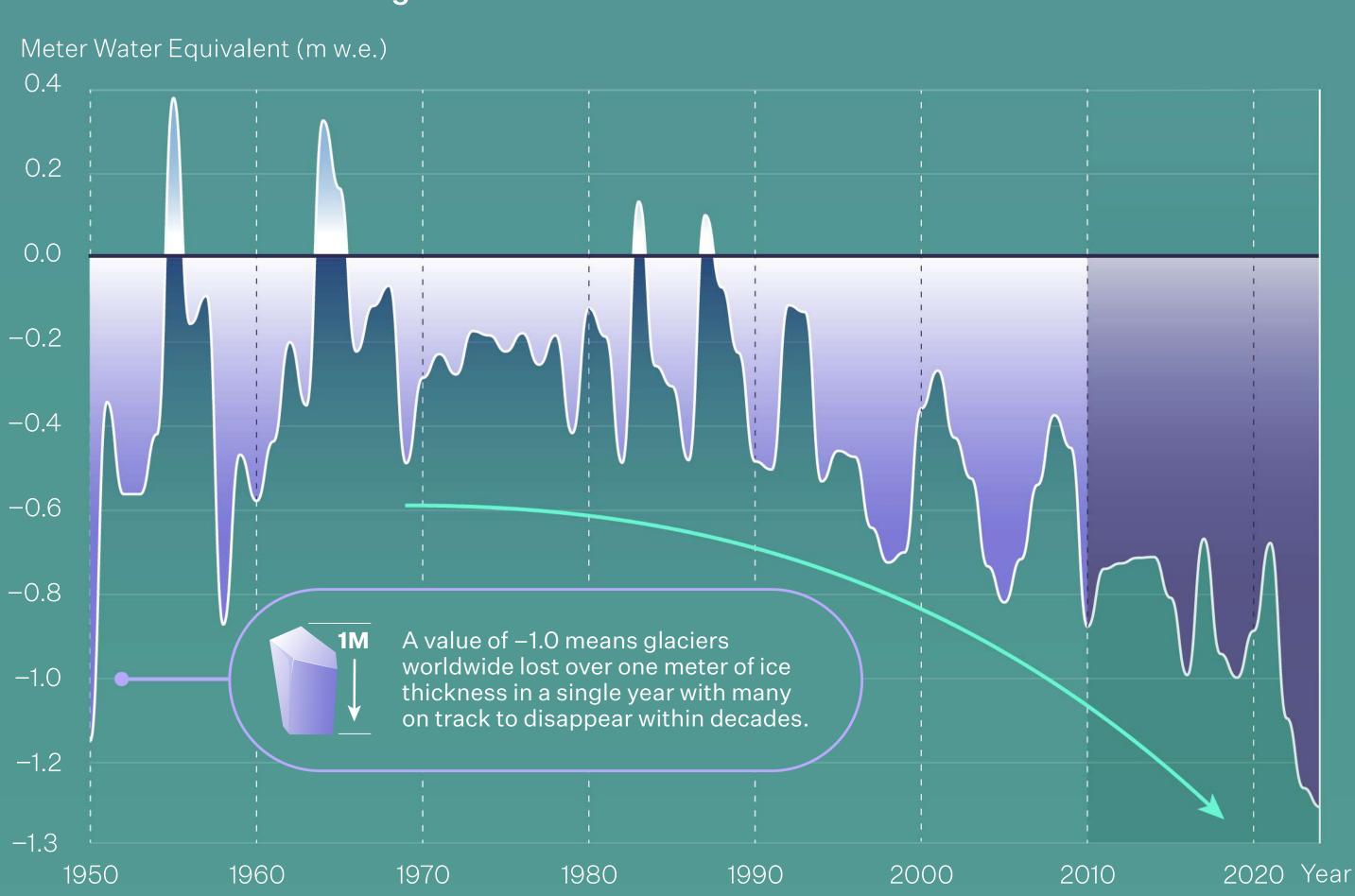


Zealand



By expanding our watch on the poles, we can spot the earliest signals of planetary change. One of the clearest indicators is the rise and fall of glacier mass over time.

#### Global Glacier Mass Change Over Time



Source: World Glacier Monitoring Service

Eight of the ten worst years for glacier ice loss have happened since 2010. As melting accelerates, more nations are racing to fund research and track the world's vanishing ice.

#### The Arctic: for environmental research, sustainability Laboratory for the Future innovation, and interdisciplinary cooperation. **Arctic Research Projects** Antarctica's fragmented, government-run and Funding programmes make funding data difficult to track. In the Arctic, research led by local communities and universities offers a clearer, North more connected picture of polar science. America Europe Asia Number of Projects With the recent launch of the Emirates Polar Program and creation of the Polar Research Center, the UAE is stepping onto the global stage as an emerging polar research nation. China \$29M SA ANA Private funders and foundations Japan contribute only 1% of Arctic research projects in the period of 2016-2022. \$154M Russia SOM Source: **UArctic** \*Russia No Funding Amount Reported \*\*Norway Partial Funding Reported \*\*\*EU Partial Funding \$396M\*\*\* Reported \$593M\* 1,159 EU The investments and research shaping the polar regions today are only the beginning. Tomorrow will depend on how global vision and resources come together to protect the poles. What's Next for the Polar Regions? The future of the poles depends on deeper research and global action. **Global 50 Opportunity:** Planet Pulse: A global quantum sensor network monitors air, land and sea environments in real time, providing instant environmental data analysis and disaster prediction enabled by advanced machine intelligence.

The Arctic is becoming a live laboratory



**Learn more with** The Global 50 spotlight

Explore the Global 50 opportunities

report to learn more about "Planet

Pulse" and other opportunities for

our Evolving Ecosystems.

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Source: Global 50

Opportunity #14, 2025