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## EUROPEAN ASTRONAUTS' MANIFESTO ON THE OCCASION OF THE EUROPEAN SPACE SUMMIT

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## Association of Space Explorers – Europe

Humans are explorers. Curiosity is in our nature, and the need to expand our reach is intimately connected to our evolution: it has led us to develop technology and capabilities beyond any other species on our planet.

Humanity's innate desire to explore has a unifying power that is unsurpassed, even in a time of increased polarization and political divide. Space programmes like the International Space Station have provided a unique capability to bridge across ideological and geographical chasms. Throughout recent times challenged by political unrest, economical struggles, and an ongoing pandemic, space programmes have received world-wide support thanks to their peaceful purpose and the universal appreciation of the values they provide: the protection of Earth, the advancement of science and development of technology – simply put, progress. The necessary international cooperation to achieve these global goals is a constant incentive to improved relations, stability, economic growth, innovative approaches and infrastructure enhancements. And yet even more important is the space programmes' unique ability to inspire: seeing humans working and living in space, achieving things that once were called "impossible", is one of the most powerful motivators for the younger generations. It shows young Europeans that they can be anything they want, if they just dare to dream ambitiously, to become the scientists, engineers, and explorers of tomorrow.

Space is today a domain to project global-scale ambitions: at least four other international players will soon be able to carry humans to space; the strategic value of space assets to the safety and security of our society is illustrated by the emergence of new organisations and technical developments; and private commercial entities have become essential components of all partnerships, acquiring a strategic – and sometimes competing – role that once belonged only to public agencies.

At the same time, humanity is facing new challenges: climate change urges us to develop innovative technologies, and to radically change our way of thinking. We are in dire need of a global Space Traffic Management, because of the rapid proliferation of space traffic, orbital debris and related space safety issues.

And in a wider perspective, after COVID, Europe needs new unifying dreams, to keep its talents in Europe, to create economic opportunities and to propel itself back into the lead of technologically advanced nations.



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While Europe is still at the forefront of many space endeavours, such as Earth observation, navigation and space science, it is lagging in the increasingly strategic domains of space transportation and exploration.

Europe's Gross Domestic Product is comparable to that of the United States', but its joint investment in space exploration does not reach even one tenth of NASA's.

The robotic and human exploration of Moon and Mars are the frontiers of this century. Like in all major explorations of the past, those who invest first in these "New Lands" will benefit from strategic and economic opportunities. With utmost urgency, European Leaders must decide now whether Europe shall accelerate its efforts, to remain in the leading ranks of spacefaring nations that shape the future of this planet, or to fall behind into the role of a junior partner for decades to come. We, as space flyers, have a front row seat to witness the societal benefits of the ambitious and extremely successful ISS programme, put in motion 30 years ago by inspired leaders. Their bold, audacious vision has turned into benefits beyond imagination for our societies: we see them daily in our missions. We know that giving ourselves visionary goals in the next chapter of this endeavour – towards the Moon and Mars – will lead to a similar virtuous trajectory. However, if European leaders decide to idly stand by, the cost of inaction in space exploration will have a tremendous strategic and economic impact, just as it would if we stopped investing in other domains of the space industry. If we miss this unique chance to challenge the status quo, we will have to continue procuring human space transportation from other actors, with no guarantees that our needs and values will be a priority. We will be paying customers in a position of weakness, repeating the mistakes of the past in other strategic domains, which left us dependent on external players for our energy requirements or Information Technology development. Our inaction would further impact European industrial competitiveness: European taxpayers' money would be used to advance industrial competitors from abroad.

A Europe that projects itself as a leading society must have the capabilities to set its own goals, and to decide for itself how far it wants to go in space exploration, united in our European values. We now have a unique window of opportunity to accelerate and become a fully recognized partner of the global space endeavour.

If we make use of it, we can ensure a sustainable and balanced utilisation of Low Earth



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Orbit, venture to the Moon and Mars, help preserving our environment through a "green space economy", bringing benefits to humanity, in Europe and elsewhere on Earth.

To enable us to bring these values forward, to shape the future of space exploration, one key piece of the puzzle is missing: we need to be able to count on our own autonomous access to space for humans. Power is the capability and the capacity to act: only then, as fully fledged global partners, we will have a seat at the decision-making table.

It is understood that this capability comes at the price of an initial investment. Yet it is a myth that space exploration is prohibitively expensive: on the contrary, the recent interest of the private sector shows that it is an accelerator and multiplier for the entire economy, and it is well affordable for Europe. It is a superbly powerful tool to project our values and capabilities in a globally visible and awe-inspiring domain.

Imagine the powerful inspiration and sense of European identity provided to young Europeans, seeing their fellow Europeans launch on a European transportation system, to peacefully work in space together with their international partners. As European astronauts, we know very well that space exploration is hard. But we also know that Europe has what it takes: capabilities and ambition. All we need is the support of decision-makers: give ESA the mandate to develop an ambitious roadmap for Europe's future in space exploration, let us achieve together what once was "impossible"! The time to set sails is now. We are ready.

The Association of Space Explorers Europe is the regional chapter of the Association of Space Explorers-ASE. It represents the over 45 European astronauts and cosmonauts who have flown into Space since 1978 and forms an organizational basis for their inspirational outreach, motivational work, and professional exchange. ASE Europe:

- promotes the human presence in Space and its peaceful objectives;
- fosters the international cooperation in exploring Space;
- builds on the enormous technological basis present in Europe;
- recounts the inspirational effects of human space exploration for a young generation;
- is convinced of a unifying societal effect of an independent European push to Space.
- This Manifesto, written by the group of European Astronauts represented in the Association of Space Explorers Europe, is endorsed by its Board.