

Russia plans replacement for Soyuz rocket

January 14 2013



This file photo shows Soyuz TMA-06M spacecraft blasting off from the Russian leased Baikonur cosmodrome in Kazakhstan, on October 23, 2012. Russia's struggling space agency has unveiled a new programme that will see the creation of a replacement for the ageing Soyuz rocket by 2020.

Russia's struggling space agency has unveiled a new multi-billion-dollar plan that will see the development of a replacement for the ageing Soyuz rocket by 2020.

The \$70-billion plan published over the weekend on the website of the Russian [Space](#) Agency (Roscosmos) also envisions the launch of new unmanned missions to the Moon and beyond.

But one of the biggest priorities is finding a replacement for the Soyuz—the backbone of Russian space travel since its development by pioneering Soviet scientists in the 1960s.

Both the rocket and its eponymous space capsule for manned missions have served as humans' main link to the International Space Station (ISS) since the scientific orbiter's launch in 1998.

But an accident with an unmanned Soyuz cargo ship in August 2011 caused delays to subsequent missions and renewed fears about the safety of space travel.

The Soyuz became the world's only manned link to the ISS following last year's retirement of the US space shuttle programme.

Roscosmos did not disclose many details about its post-Soyuz plans or give a specific date by when the vessel might take flight.

The agency's outline only called for the introduction of an "energy transportation module with a promising propulsion installation that will be ready for testing by 2018."

But Russia will be keen to preserve its status as a vital player in international manned endeavours. Several private US firms are already working on their own smaller-scale shuttle replacements.

The Russian agency said it also intended to "deploy a programme for detailed study of the Moon" and launch a series of unmanned missions for studying its soil samples.

The plan further called for "the development of an entirely new class of interplanetary travel technology and technology (enabling) human activity on the planets."

Roscosmos has been beset by problems in recent years that saw its satellites fail to reach orbit and a high-profile Mars mission crash back down to Earth.

Experts point to a continuing brain drain from the underfunded agency and a reliance on a vast but ultimately inefficient network of state subcontractors as two factors explaining why Russia is increasingly lagging behind NASA.

Yet Roscosmos sounded upbeat in its assessment.

"In 2011, the Russian space industry held a 10.7 percent share of the world space technology market," the Roscosmos report said.

"The state programme presumes further growth (of that share) to 14 percent in 2015 and to 16 percent in 2020."

It intends to do this by keeping control of the Baikonur space centre that Roscosmos leases from Kazakhstan and currently uses for its primary ISS launches.

The Central Asian republic has voiced plans to limit Russia's access to the site and end the lease because of environmental concerns and contract disputes.

Roscosmos said the 2.1-trillion-ruble (\$69 billion) programme will receive both state and private funding that it failed to identify.

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Citation: Russia plans replacement for Soyuz rocket (2013, January 14) retrieved 26 April 2024 from <https://phys.org/news/2013-01-russia-soyuz-rocket.html>

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