

# After wrangle, Europe set to approve Ariane 6 launcher

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After a two-year debate sparked by the emergence of low-cost competition, European space nations on Tuesday are likely to back plans to build a new rocket, the Ariane 6, say sources.

Intended to be ready for 2020, the rocket will replace the Ariane 5, taking its place alongside the lightweight Vega and Russia's veteran Soyuz at the European Space Agency (ESA) base in Kourou, French Guiana.

A medium to heavy launcher that traces its roots to 1985, the Ariane 5 has 62 successful operations to its name and accounts for more than half of the world's commercial launch market.

According to ESA, it has generated "direct economic benefits" in Europe of 50 billion euros (\$125 billion).

But the workhorse of [space](#) also carries hefty costs—and now finds itself flanked by nimble US commercial competitors such as SpaceX.

With smaller launchers, these rivals are well placed to exploit a fast-growing market for lighter, electric-propulsion telecoms satellites.

What to do about the Ariane 5 has topped ministers' agendas since 2013, creating tensions between France and Germany, two of ESA's pillars.

But, say officials, there should be a happy end on Tuesday at the meeting

in Luxembourg.

Its successor, Ariane 6, should get the green light for startup costs estimated at 3.8 billion euros.

All told, the meeting is expected to open the way to eight billion euros—800 million annually over 10 years—to fund the agency's launchers and their infrastructure.

"A big debate has taken place about this project, and we are convinced that it's a good project," German Economy Minister Sigmar Gabriel said in Paris on Thursday.

The meeting culminates months of effort to find a compromise.

Germany had pushed for an intermediate model, the Ariane 5 ME, for Midlife Evolution.

A tweaked version of the 5, it would be ready by 2017 and yield early savings in operational costs.

France had lobbied for a transition to the Ariane 6, which would take flight from around 2021 or 2022.

It argued that, at a time of tighter belts, the ME would drain crucial resources and lead to duplicated effort and probable holdups.

What emerges is a compromise whereby the Ariane 6 will incorporate features from the ME and other projects.

It will culminate in two versions—a two-booster or four-booster design—able to take between five and 10 tonnes into orbit.

It will include a [solid rocket motor](#), the P120C, which is being designed as an upgrade for ESA's Vega launcher, as well as a strap-on booster.

The wrangle has been marked in part by differences on engineering, driven by fears of cost overruns and delay when new technology is introduced in the high-risk environment of space.

But another undercurrent was how to share out the bounty within Europe's space industry.

## Quid pro quo

In return for Germany's climbdown on the ME—and for boosting its annual contribution to Ariane 6 from 115 to 175 million euros—France and Italy are expected to beef up contributions to the International Space Station (ISS).

ESA wants ministers to approve a three-year 820 million-euro budget for the manned outpost in space.

"For the first time, there is a shared technical solution among space agencies and industrial corporations, with Airbus Defence and Space, the satellite operator Arianespace and customers such as Eutelsat the most closely involved," French Research Minister Genevieve Fioraso told AFP.

"There is continuity. We will be using many tried-and-trusted components from the Ariane 5 or which have already been designed for the Ariane 5 ME."

"The truth is that there are very few new parts" in the Ariane 6, she said.

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