**ESA Ministerial\_Technology\_FINAL**

Decisions about the future of the Europe’s space programme will be made at the ESA Ministerial Council meeting on 1-2 December.

Ministers from the 22 ESA member states and Canada will gather in Lucerne, Switzerland to agree on future spending priorities. As well as funding a core programme, ESA members can subscribe to optional programmes. These range from future Astronomy missions to the development of new satellite communications systems.

Before the meeting, each ESA directorate has drawn-up a list of priorities to be considered by ministers. In this report, we hear from ESA’s technology directorate on their proposals for an asteroid mission.

**A-roll**

[Rosetta mission animation]

Everything ESA does is based on developing new technology. Technology that enables a spacecraft to orbit a comet…

[Mars Express still image]

Investigate the atmosphere of Mars…

[Sentinel still image]

Return high resolution pictures of Earth…

[Galileo constellation animation]

Or provide everyone on the planet with the world’s most accurate satellite navigation system…

[I/V Franco Ongaro, Director of Technical and Quality Management]

*Technology is the hidden magic in the box. Meaning people get to see the beauty of a mission – to land a probe on a comet 500 million kilometres away takes a lot of technology and most of that was built from scratch for that mission. In order to be that good you have to invest in research and development and tests and trials a long time before.*

[QinetiQ clean room engineers at work]

In partnership with industry, ESA has a proud history of developing new space technology. Many innovative ideas, materials and technologies are first tested on low-cost missions such as the ongoing Proba series of in-orbit testing mini-satellites.

[Proba 2 images of solar eclipse]

Proba-2, for instance, recently captured this partial solar eclipse.

[AIM mission animation]

The latest technology demonstration mission being put forward for funding at ESA’s Ministerial Council meeting is known as AIM – the Asteroid Impact Mission. Launched in 2020, AIM is designed to help investigate how to protect the Earth against an asteroid strike. It will go into orbit around the Didymos binary asteroids at the same time that a  NASA-built ‘hammer’ spacecraft will attempt to knock the asteroid off course. But it also has a much broader purpose…

[I/V Franco Ongaro, Director of Technical and Quality Management]

*AIM for us is a technology demonstration mission. We’re looking to radically reduce the cost and schedule time of interplanetary missions. We, of course, introduce new ideas and new ways of doing things. We don’t take risks on hundreds and hundreds of millions of a new science mission, we do this on technology missions which we can accept much higher risks and this is the case for AIM.*

[Aim mission animation]

For ambitious missions like AIM to succeed and for ESA to continue to be a world leader in space technology, investments need to be made early.

[I/V Franco Ongaro, Director of Technical and Quality Management]

*Technology goes through a whole cycle which we call the seamless chain of innovation, we start with the idea and we work along from our work in the labs, in industry and especially of small and medium industries, which are the vectors of innovation but in the end you need to prove it works in the real place, space. In order to do that we use missions that can take the risk of flying unproven technology to demonstrate to the larger missions that they work.*

[QinetiQ clean room engineers at work]

Technology development is the backbone of space activities - with benefits for European businesses – small and large, as well as the wider economy and society.

**B-Roll**

BROLL 002: 10:06:12:03 to 10:07:32:12

Franco Ongaro, Director of Technical and Quality Management, ESA

2 clips in English (from A roll)

BROLL 003: 10:07:32:13 to 10:09:40:18

Franco Ongaro, Director of Technical and Quality Management, ESA (French)

Why is space technology development important?

What is the asteroid impact mission (AIM)?

BROLL 004: 10:07:32:14 to 10:12:06:24

Franco Ongaro, Director of Technical and Quality Management, ESA (Italian)

Why is space technology development important? (x2)

What is the asteroid impact mission (AIM)?

BROLL 005: 10:12:07:00 to 10:13:55:23

QinetiQ clean room engineers at work, including CAD satellite development

BROLL 006: 10:13:55:24 to 10:17:50:24

Animations Asteroid Impact Mission (AIM)