Why is the Launch of Boeing’s Starliner Significant

October 27, 2025 • vajiramandravi.com

What’s in today’s article?

Why in News?

The launch of the Boeing Starliner, which was set to take astronaut Sunita Williams to space for a third time, **has been postponed** due to a technical glitch.

What is Boeing’s Starliner?

- Starliner is **a partially reusable crew capsule**, officially known as **CST-100** (crew space transportation).
- **It consists of two modules**.

    - One is the **crew module**, which can be reused up to 10 times, with a six-month turnaround.
    - The other is the **service module** – the powerhouse of the spacecraft – which supplies electricity, propulsion, thermal control, air, and water in space. This module is expandable.
- **On its first crewed test flight**, Boeing's Starliner spacecraft **would be carrying two NASA astronauts** and will be launched on an Atlas V rocket from the Kennedy Space Center to the International Space Station (ISS).
    - The two NASA astronauts are Barry "Butch" Wilmore and Sunita Williams
- **If the mission is successful**, Boeing will become the **second private firm** to be able to provide NASA crew transport to and from the ISS, alongside **Elon Musk's SpaceX**.

What is the Mission?

- The main objective of the mission is **to see how Starliner performs in space** with a crew onboard.
- It is supposed to dock with the ISS (a day after the launch) **for around 10 days** before it returns to the Earth.
- But before Starliner automatically docks with the space station, **the crew members will test flying it manually**.
- The crew will also **test seats, assess onboard life-support and navigation systems**, as well as evaluate the system that moves cargo into the ISS.
- **The space suits** worn by Wilmore and Williams will also be tested – these blue suits are around 40% lighter than their predecessors and have touchscreen-sensitive gloves.
- **During the return journey**, NASA and Boeing will be keeping an eye on the spacecraft's heat shield and parachutes.
    - They will slow the descent before airbags open to soften the moment of impact with the ground.
    - **Unlike other crew capsules, Starliner will land on the ground and not in the sea.**

What Caused the Delay?

- **After NASA retired its space shuttle fleet in 2011**, it invited commercial space companies to help it transport astronauts and cargo to the ISS.
- **Two companies got the contracts**: SpaceX and Boeing. While SpaceX has been ferrying astronauts to and from the ISS since 2020, **Boeing is yet to successfully launch its first crewed flight**.
- **Starliner's first uncrewed flight** itself came after four years of delay. Although it was set to take off in 2015, the company postponed it to **2019**.
    - When it did finally happen, **a series of software and hardware failures** thwarted the spacecraft from getting into its planned orbit and docking with the ISS.
    - It took more than 80 fixes for Starliner to make its first successful uncrewed flight.
    - Even after achieving the goal, there were concerns about the performance of the spacecraft's safety and cooling system.
- As a result, Boeing delayed the launch of Starliner's first crewed flight from 2023 to where we are today.

Why is the Mission Significant?

- The mission’s success is **crucial for both NASA and Boeing**. Currently, NASA has only one private company, SpaceX, which can take its astronauts and cargo to the ISS.
- Starliner getting approval for conducting routine flights to and from the ISS **would give NASA a backup and option to not depend on one company** or vehicle for space launches.
- **The success is more important for Boeing.** If Starliner completes its objectives, it will also help Boeing challenge SpaceX’s dominance in the commercial space industry.

Q.1. What is the International Space Station (ISS)?

The ISS is a large space station assembled and maintained in low Earth orbit by a collaboration of five space agencies: NASA, Roscosmos, JAXA, ESA, CSA, and their contractors.

Q.2. What is the Bharatiya Antariksha Station?

It is a planned modular space station to be constructed by India and operated by ISRO. Originally planned to be completed by 2030, it was later postponed to 2035 due to delays caused by technical issues related with the Gaganyaan crewed spaceflight mission and the COVID-19 pandemic in India**.**

Source: Why is the launch of Boeing’s Starliner significant?