

About the Da Vinci Satellite Project

The Da Vinci Satellite project is an initiative started by a non-profit student team of Delft University of Technology, with the goal:

'To inspire and enthuse the next generation for technology and spaceflight, while emphasizing the impact of spaceflight on our society'

In order to achieve this, the Da Vinci Satellite team intends to put a satellite in orbit around the Earth for educative purposes. The associated educational programme will offer many primary and high school students in the Netherlands the opportunity to come into contact with space travel.



Mission and Timeline

On the occasion of the 75th anniversary of the 'Vliegtuigbouwkundige' Study Association 'Leonardo da Vinci', the 'Da Vinci Sattelite' project has the mission to design, build and launch a satellite with corresponding educational programme. This satellite will provide a direct connection to space for primary and high school students.

By means of a teaching package, all satellite data will be brought directly into the classroom to make space more tangible for the students. In this way, students of all ages will be able to learn about space and everything related to space in an interactive manner.

The current design is a two-unit cubesat, effectively the size of a milk carton. It has two separate payloads, one of which is the dice payload and the other is the bitflip payload. The initial design was made by ten students during their Design Synthesis Exercise in 2019, which is a ten-week graduation project for Aerospace Engineering Bachelor students.

Vision

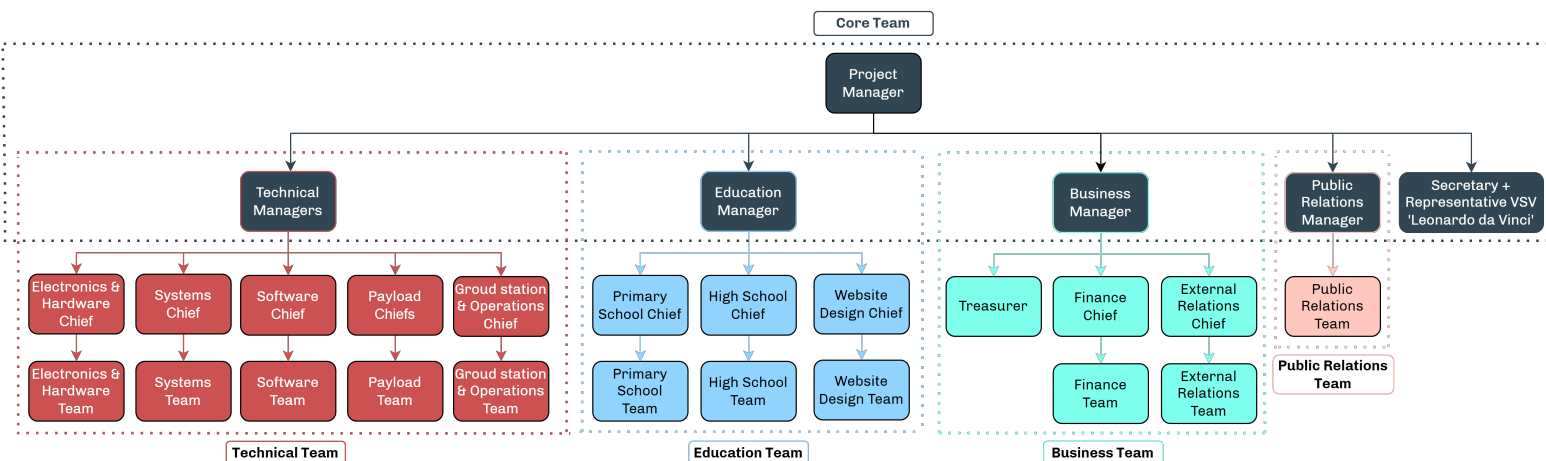
Space travel is indispensable in everyday life these days. It is of social importance that people understand what is happening to the Earth. By becoming acquainted with space travel from an early age, children can become inspired and motivated to discover the world. This may have to do with technology, global warming or sustainability.

With the 'Da Vinci Satellite', school children can interactively become acquainted with and learn about space and what is involved in it. Youth has the future, so it is important to create awareness. Together we elevate education to a higher level!



Teams

In order to realise this project, a team of over 80 students from various faculties at the TU Delft works together to develop the satellite and the corresponding educational modules. These teams (with the aid of many professional partners from both educational and technical entities) work their hardest in order to try to guarantee success of this project and are divided as follows:



Core Team: The Da Vinci Satellite project is led by the core team, they are responsible for keeping an overview of the complete project and are tasked with managing each of the other teams to guarantee all are able to collaborate effectively.

Technical Team: The technical team is tasked with the complete design and construction of the satellite. The team works closely together with the engineering knowledge of the TU Delft as well as relevant players in the Dutch space industry. The team is divided into five subteams, of which each is led by a chief engineer and the chief engineers are led by the technical managers of the core team.

Education Team: The education team is tasked with the development of the educative lesson programs for both primary and high school students that correspond to our satellite payloads. The primary school payload is a zero-gravity dice game where a mechanism is able to throw five dice in space and make a photo of the "thrown" values, connecting students with spaceflight in a playful manner. High school uses the bitflip payload, a memory module that practically shows the effects of radiation on computers in space. The students can experiment with this themselves by uploading their own images to the satellite and seeing them degrade over time. This helps them have a direct connection to space, making it a more tangible topic to discuss. All educational material will be made available on an online educational platform after launch, which is design by the website design team.

Business Team: In order to realise this project, our business team is tasked with ensuring we are able to financially complete this project through acquisition as well as remain in good contact with all our partners. In order to achieve this, the team is split up into two subteams: the finance team and the external relations team. They also work closely together with the treasurer who keeps track of the budget and all procurement activities.

Public Relations Team: The public relations team generates team visibility through active use of our social media, maintenance of the website and making all our physical promotion material and team merchandise. They are also tasked with ensuring our team can go to events and finding external media outlets to promote the team.