



UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH

Departament de Projectes d'Enginyeria

ETSEIAT

Departament de Projectes d'Enginyeria

EARTH CLIMATE CHANGE OBSERVATION ECCO

Deliverable 1 Project Charter

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1. Project Charter

1.1. Project Purpose and Justification


Nowadays we live in an industrial society which requires large amounts of resources in order to be sustainable, resulting in a global contamination of the atmosphere and oceans. It has been demonstrated that over the centuries climate changes have been produced, but today, the question is how humans are taking part of it. This impact is known as global warming and has been one of the strategic priorities for the European Union. Some initiatives have been taken by the European Union to transform Europe to a highly energy-efficient economy, reducing emissions (specified on Kyoto Protocol) and specifying targets up to 2050. In the last years, different programs have sent satellites to analyse and transmit data to study and control human impact, like A-Train constellation by NASA and JAXA or Copernicus programme (in development by the European Union).

For this purpose, we present a new revolutionary design of fractionated satellite, joining the potential of upgradability and reliability, to acquire relevant information about global warming. Fractionated satellites use the new wireless technology to transfer information and power through different modules, each one with a specific sensor. This system improves flexibility to launch independent modules (with a specific function) to upgrade or change an operative module, reducing costs and introducing the maintenance concept to satellites, increasing the useful life of the overall satellite.



Figure 1. Example of fractionated satellite of system F6 from Darpa

All the information captured would be useful to check the targets specified by the European Union for the next years, be aware of climate evolution and be able to contrast information with other programmes like Copernicus.

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1.1.1. Vision

Our vision is to be the worldwide leaders in acquiring relevant information about global warming and to be the tool to improve global economic efficiency and achieve a sustainable development of the world.

1.1.2. Objectives


The key objectives for this project are:

- Develop a new system to enable and control the communication between each module, and the ground station.
- Use the advantages of fractionated satellites in order to improve robustness and reliability, developing new technology related to upgradability.
- Create new software to control the formation of the constellation, in order to avoid collisions and keep all modules in a specific range.
- Develop simulation software to test and validate software related to navigation control and data transmission.
- Design an innovative power transmission system that increases the power transfer efficiency.
- Set an incremental deployment of modules to be connected to the infrastructure module, reducing update and maintenance costs and allowing better flexibility for future projects.

1.1.3. Scope

The scope for this project is to:


- Design a system to establish communication between satellite and ground station, as well as gather information of module attitude and condition.
- Develop the software to control formation flying, interfacing between modules and sub-systems of each module.
- Create software able to simulate and verify the interface created between the modules to control navigation and communication.
- Develop a new way to use existing sensors in order to get more relevant data, including three dimensional mapping of atmosphere, ocean, ground and demography.

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- Design an innovative system of power generation and transmission to reduce losses and a revolutionary interface to enable real-time communication between modules to command navigation and attitude control.

The following items are considered to be out of the scope of this project:

- Design the specific sensors used to acquire data.
- Design the satellite launch system.
- Post-processing of the acquired data.

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1.2. Project Description

Throughout the necessity to study the impact of the global warming of the earth, constellations of satellites have been sent over the last years with the latest technology applied on sensors and communications. One example is the A-Train constellation, designed and launched by NASA and JAXA, which is composed by six satellites where each one has a specific role into the constellation. Since 2002 (when the first satellite was deployed), an improvement in technology has been done, and new sensors have been developed. Due to the difficulty of access to systems that are in space, there are no possibilities of maintaining or upgrading the actual satellites, making necessary to send an entire satellite to improve the sensors or to restore lost functionalities, assuming the high costs of it.


The aim of this project is to create a constellation of instruments for tracking information related to global warming, and using the new concept of fractionated satellite to enable upgradability and maintainability by modules exchanging. It means taking advantage of work with a modular satellite to replace only one module, reducing costs of launchings and enable the capacity to upgrade specific sensors. In order to achieve the objectives, control systems must be designed and improved. Few modules must be used to control the constellation behaviour, for instance the formation of all modules to avoid collisions and keep them all into a specific range, the communication between them and ground station, and the power generation and its transmission. The results obtained through the development of the project could be applied to other satellites, taking the advantage of using fractionated designs and reducing costs related to investment.

The ultimate intended outcome of the project will be the successful testing of the hardware and software designed.

1.3. High-Level Requirements

The high-level requirements are:

- Satellites will be put into a low sun-synchronous orbit, to track information of the overall Earth.
- Use sensors to acquire properties of the atmosphere, including concentrations of ozone, chlorine, water vapour, CFCs and other trace gases.
- Use sensors to acquire information related to the ocean (for instance cloud distribution and precipitations, sea level temperature and ice and snow surface).
- Use sensors to acquire information related to ground, including deforestation, ground temperature, humidity, etc.
- Use sensors to acquire data about demography, including grow and dispersion of the population.


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1.4. Acceptance Criteria

All documents must be approved before the final deliberation to ensure that objectives and scope are accomplished. The following acceptance criteria are defined to check the documents:

Table 1. Acceptance criteria

| Acceptance Criterion | Condition to be Accepted |
|-----------------------------|--|
| Research and Innovation | The project must be ambitious, has innovation potential and beyond the state of the art, including trans-disciplinary considerations. |
| Quality and Presentation | All documents must be done with the highest quality, presenting all the ideas, developments and conclusions linked, explained clearly. All documents must be printable. |
| Performance Requirements | The efficiency and functionality of all systems designed must be enough to realise all the objectives indicated and the purpose of the proposal too. |
| Technical Documentation | The documentation must be complete, specifying the development procedure, the final characteristics and the method to use the hardware and software developed. |
| Test and Validations | All tests and validations must be indicated and successfully passed using the available regulations. All this information must be correctly written, with all the modifications done to improve functionality and allow its verification (and of course the results of the tests and validations). |


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1.5. High-Levels Risks

The risks identified for the project are specified below:

Table 2. High-Levels risks

| Risk | Description |
|-----------------------------------|--|
| Lack of communication | Poor communication between payloads and infrastructure module |
| Lack of Innovation | Lack of approach to this project business innovation. |
| Lack of Technology Improvement | Failure in demonstrating the new knowledge or improved technology developed in this project. |
| Lack of Information | That refers to the difficulty of finding the required information. |
| Inconsistency | High level of inconsistency across the products produced by human errors. |
| Component Failure | Failure of any component at the final stage is critical. |
| Unpredicted Software Bug | Software is one of the main basis of communication between instrumentation, this failure will produce serious problems. |
| Design Flaw | This technical risk will produce a restudy of each stage of the design, prototype, testing and manufacturing process. |
| Erroneous Command | Human errors are more common than it is thought. |
| Stakeholders Desertion | Loss of interest from the stakeholders. Which implies a decrease on helpful information and support. |
| Commercial databases and software | There is a high risk in acquiring a software or database which is in development as it is highly probable to quickly be improved |
| Legal requirements | The project must comply with legal basis and requirement |
| Ecological impacts | Nowadays, every project has to be aware about ecological impacts because of climate change. |


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1.6. Project Deliverables

All the documents cited below will be delivered before or at the end of the project. Time t_0 means the date of the beginning of the project, and the time added are years expected to expend in each deliverable.

Table 3. List of deliverables

| Deliverable Name | Description | Estimated due date |
|----------------------------|---|---|
| Project Management Plan | A document that defines a more detailed and technical vision of the project, specifying resources, their distribution in time to accomplish the project objectives, a detailed version of the project Charter, control and monitoring actions and level of implementation among others. | $[t_0 + 1 \text{ month}]$ |
| Preliminary Design Review | Review of the preliminary design, and checking of the requirements and risks | $[t_0 + 1 \text{ year}]$ |
| Project Communication Plan | Develop a dissemination plan, design an own webpage to explain the overall objectives, organize congresses to spread the project and design instruments to reach society. | $[t_0 + 1 \text{ year } 2 \text{ month}]$ |
| Intermediate Report | Intermediate report to check the state of the project and be validated by the all the participants, including stakeholders | $[t_0 + 2 \text{ year}]$ |
| Hardware Specifications | A document that contains all the information related to satellites hardware, including all the tasks done to achieve the objectives. | $[t_0 + 3 \text{ years } 3 \text{ month}]$ |
| Software Specifications | A document that contains all the information related to satellites software, including all the tasks done to achieve the objectives. | $[t_0 + 3 \text{ years } 3 \text{ month}]$ |
| Tests and Validations | A document that contains all tests and validations with the obtained results. | $[t_0 + 3 \text{ years } 9 \text{ months}]$ |
| Final Report | Final delivery that includes all development done in the project. | $[t_0 + 4 \text{ years}]$ |


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1.7. Project Milestones

The milestones of the project are cited below.

Table 4. List of milestones

| Milestone Name | Description | Estimated due date |
|-----------------------------|---|------------------------------------|
| Kick-Off Meeting | Formation of the development team and first meeting with the stakeholders | [t ₀] |
| Gathering Requirements | To fully study and understand the project objectives, environment, scope and regulation | [t ₀ + 15 days] |
| Project Management Plan | Develop an update the proposal document defining with detail the vision of the project, specifying resources, their distribution in time to accomplish the project objectives, a detailed version of the project charter, control and monitoring actions and level of implementation among others | [t ₀ + 1 month] |
| Preliminary Design Review | Review of the preliminary design, and checking of the requirements and risks | [t ₀ + 1 year] |
| ECCO International Congress | International congress to spread ECCO objectives as well as reach the society | [t ₀ + 1 year 8 month] |
| Intermediate Meeting | Meeting with the stakeholders to check the development of the project, how it is going and the future vision | [t ₀ + 2 year] |
| Hardware Design | Develop all the technology and information related to the satellites and ground structures hardware | [t ₀ + 3 years 3 month] |
| Software Design | Develop all the technology and information related with the satellites and ground structures software | [t ₀ + 3 year 3 months] |
| Testing | Testing and validation of the satellite and communication systems | [t ₀ + 3 year 9 months] |
| Final Meeting | Delivery of the final report | [t ₀ + 4 years] |

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1.8. Project Objectives

The objectives of the project are cited below.

Table 5. Project objectives, success criteria and approval

| Project Objectives | Success Criteria | Approval Responsible |
|---|---|-----------------------------|
| Scope | | |
| Navigation, Control and Communication between payload satellites and the main satellite | It will be a success if the sub-satellites are connected and they work properly with the main satellite. | Project Manager |
| Time | | |
| 4 years' time | It has been determined that 2 years' time will be a good approximation for the development of this project. | Project Manager |
| Cost | | |
| 4.1 Million Euros | It will be delivered 4.1 million euros in order to prove that this project new technology works. | Financial Responsible |
| Quality | | |
| Organization Planning Detailing | The project will be highly focused on presenting a good quality presentation as well as useful and important content information. | Quality Responsible |

1.9. Estimated Budget

Two main sources of income have been identified. The greater amount of the budget will be obtained through the funding of governmental economic aids and non-governmental organizations willing to involve in the climatic change study. Those entities and the total amount they will provide are listed below:

Table 6. Entities and the total amount provided

| Founder | Amount |
|---|------------------|
| European Commission | 2500000 € |
| Ministerio de Economía y Competitividad | 120000 € |
| ESA EOMD | 300000 € |
| WWF | 100000 € |
| Greenpeace | 60000 € |
| TOTAL | 3080000 € |

Furthermore, during the course of the project some technologies will be developed. Two of them will be sold to private companies in order to found the costs of developing ECCO.

Airbus Defence & Space will acquire the newer satellite-satellite and earth-satellite communication system improving the performance of their actual systems. The new space simulation environment will be the entry of INDRA into space simulation.

Table 7. Entities and the total amount provided

| Founder | Amount |
|------------------------|------------------|
| Airbus Defence & Space | 600000 € |
| INDRA | 400000 € |
| TOTAL | 1000000 € |

All contributions raise the total budget of the ECCO up to 4,080,000 €.

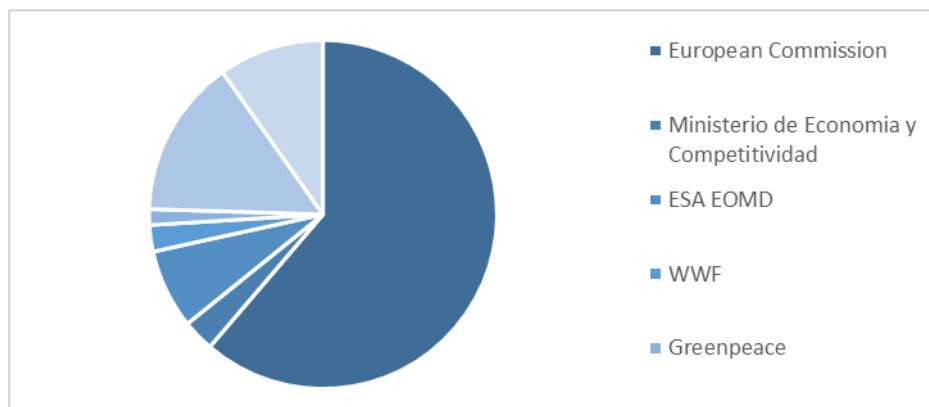


Figure 2. Sector diagram of the incomes

This amount must be distributed to the working groups of the project. The planned amount for each package is the ones that follow.

Table 8. Amount for each work package

| Department | Amount |
|-------------------------|------------------|
| Administrative Services | 204000 € |
| Comunnication | 326400 € |
| Partenrship & Networks | 244800 € |
| Engineering | 2896800 € |
| Casualties | 408000 € |
| TOTAL | 4080000 € |

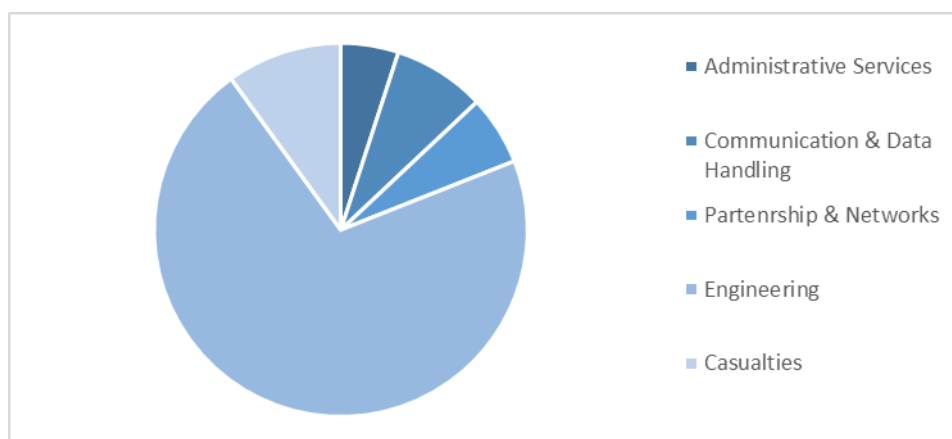


Figure 3. Sector diagram of the distribution of the amount per work package

Due to its large implication in the project, the engineering department has been separated into different expertise sub-departments.

Table 9. Amount for each sub-department

| Department | Amount |
|-------------------------------|------------------|
| Mechanical | 408000 € |
| Mission Design | 408000 € |
| Payloads | 326400 € |
| Communication & Data Handling | 612000 € |
| Testing | 489600 € |
| Manufacturing | 652800 € |
| TOTAL | 2896800 € |

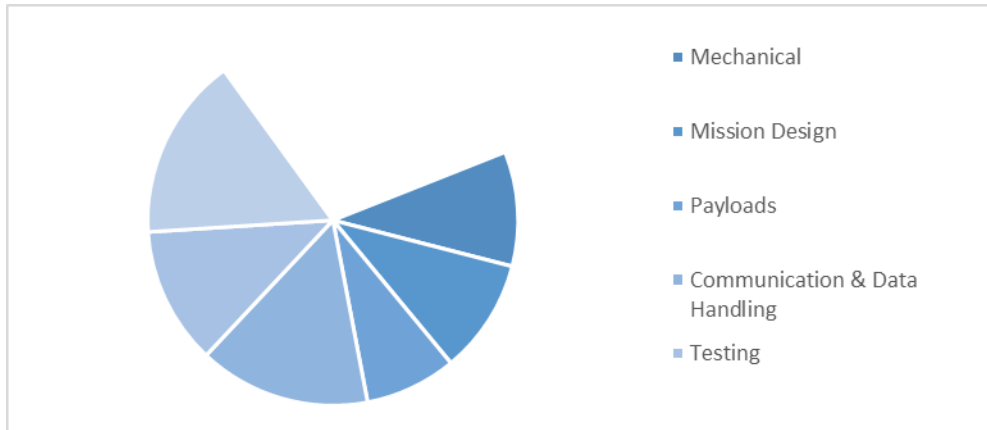



Figure 4. Sector diagram of the distribution of amount in the engineering department

Although a certain amount of the budget has been assigned for possible casualties during the development of the project, in case of further problems, up to a 20% increase in the European Commission funding is allowed. That implies 500,000 € extra for further unexpected incidents.

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1.10. Project Organization

1.10.1. Customers

The following customers are defined for this project:

Table 10. List of customers groups


| Customer group | Customer representative |
|---|--|
| European Commission | Pierre Huguenet |
| ESA Earth Observation Market Development (EOMD) | Marie Tourant |
| Airbus Defense and Space | Mateo Sevilla |
| Greenpeace | Financial responsible Greenpeace Europe |
| Indra | Dolores Albiol |
| Spanish government | Spanish economy and competitively ministry |
| WWF | Financial responsible WWF Spain |

1.10.2. Stakeholders

The following groups and organization are the key stakeholders in this project:

Table 11. List of stakeholders, roles and responsibilities

| Stakeholder Name | Roles/Responsibilities |
|--|-------------------------------|
| Airbus Defence & Space | Investor |
| Allianz | Potential future customer |
| Alstom | Potential future customer |
| Amptek | Collaborator |
| Angelantoni Test Technologies (ATT) | Collaborator |
| Ball Aerospace | Collaborator |
| Bulgarian Chamber of Commerce and Industry (BCCI) | Collaborator |
| Business Units | Employees |
| CHS | Potential future customer |
| Crandfield University | Collaborator |
| DELMAS | Potential future customer |
| Epistemática | Collaborator |
| ESA Earth Observation Market Development (EOMD) | Investor |
| E-TIS Euroconsultores | Collaborator |
| European Association of Remote Sensing Companies (EARSC) | Interested |
| European Commission | Main Investor |

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|---|---------------------------|
| European Council | Regulators |
| European Environment Agency | Potential future customer |
| European Environment Information and Observation Network (EIONET) | Potential future customer |
| European Parliament | Regulators |
| Gamesa | Potential future customer |
| Gosat | Collaborator |
| Greenpeace | Investor |
| Indra | Investor |
| Member States | Potential future customer |
| Non-European Space Agencies | Competitor |
| Orbital ATK | Collaborator |
| Owners | Main Developer |
| PEPSICO | Potential future customer |
| Politechnic University of Catalonia | Collaborator |
| Politechnic University of Valencia | Collaborator |
| Satellitefinance | Interested |
| SENER, Ingeniería y Sistemas | Collaborator |
| SILVANET (UPM Agrónomos) | Collaborator |
| Spacenews | Interested |
| Spanish Government | Investor |
| Sspi | Interested |
| Surrey Satellite Technology Ltd | Collaborator |
| Technical University of Stuttgart | Collaborator |
| University of Southampton | Collaborator |
| WWF | Investor |
| Zurich | Potential future customer |

1.10.3. Roles and Responsibilities

The following key roles have been defined for this project:

Table 12. Roles and responsibilities

| Role | Resource Name | Organization | Responsibilities |
|---------------------------------|--------------------------------------|---------------------|-------------------------------|
| Responsible | Project Management department | ECCO | Manage the project |
| Responsible (Supervisor) | Administrative services department | ECCO | Supervise the department work |
| Responsible (Supervisor) | Communications department | ECCO | Supervise the department work |
| Responsible (Supervisor) | Partnerships and networks department | ECCO | Supervise the department work |
| Responsible (Technical Officer) | Engineering department | ECCO | Supervise the department work |

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|------------------------|---|---|---|
| Developer responsible | Payload department | Amptek | Required sensor supplier |
| Testing responsible | Testing and manufacturing department | Angelantoni Test Technologies (ATT) | Conduce tests with the prototype |
| Developer collaborator | Structures design department | Ball Aerospace | Collaborate in the design and testing of the modules |
| Subcontracted | Communications department | Bulgarian Chamber of Commerce and Industry (BCCI) | Dissemination of the project |
| Developer collaborator | Mission design department | Crandfield University | Collaborate in the mentioned department |
| Subcontracted | Project Management department | E-TIS Euroconsultores | Collaborate in the mentioned department |
| Subcontracted | Power generation department | Orbital ATK | Power system supplier |
| Developer collaborator | Data management and processing department | Politechnic University of Catalonia | Collaborate in the mentioned department |
| Developer collaborator | Testing and manufacturing department | Politechnic University of Valencia | Collaborate in the mentioned department |
| Developer collaborator | GNC and formation flying department | SENER, Ingeniería y Sistemas | Collaborate in the mentioned department |
| Developer collaborator | Payload department | SILVANET (UPM Agrónomos) | Collaborate in the mentioned department |
| Developer responsible | Payload department | Surrey Satellite Technology Ltd | Collaborate in the mentioned department |
| Developer collaborator | Thermal control department | Technical University of Stuttgart | Collaborate in the design, built and test of a sensor |
| Developer collaborator | Intermodule communications department | University of Southampton | Required sensor supplier |

2. Stakeholder Identification

2.1. Stakeholder Analysis Matrix

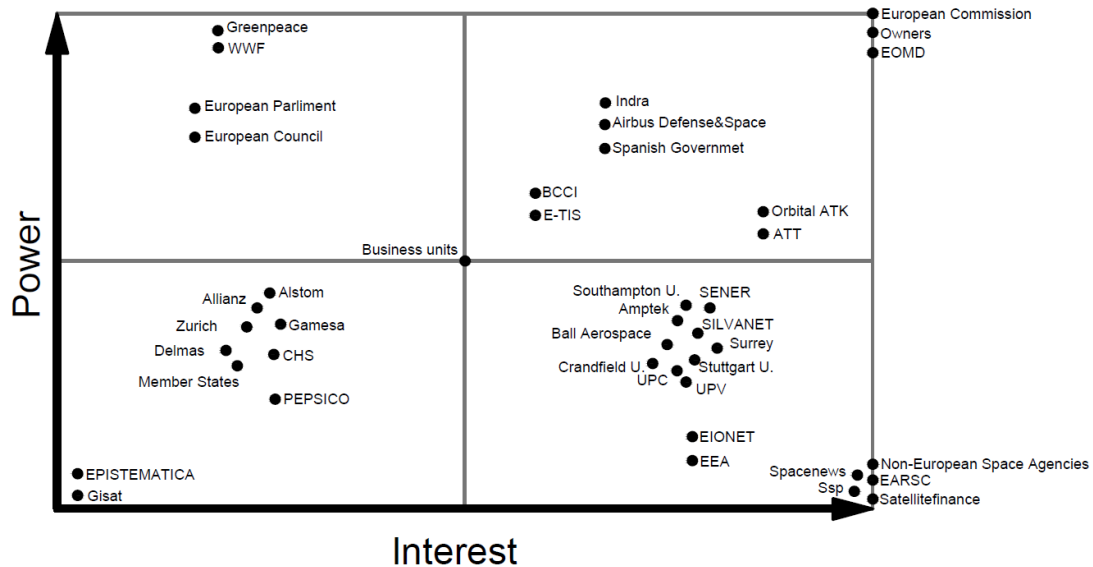


Figure 5. Stakeholder analysis matrix

In the next paragraph any stakeholder is classified according to their implication in the project success.

2.2. Stakeholder Register

In the following table is exposed the register of all the stakeholders of the project. In the table are detailed the expectations of any stakeholder with the project and their requirements from ECCO. Any mentioned stakeholder is classified according to their support of the project.


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Table 13. Stakeholder register

| Name | Position | Role | Contact Information | Requirements | Expectations | Influence | Classification |
|---|--------------------------------------|---------------------------|---------------------|---|--|----------------|----------------|
| Airbus Defence & Space | - | Investor | Mateo Sevilla | Buy the new revolutionary satellite intercommunication technology | Develop a new revolutionary satellite intercommunication technology | Manage closely | Influencer |
| Allianz | - | Potential future customer | Cristian Tüsing | To be interested in our future products | Information about probability of a disaster, so they can increase the insurance cost in advanced | Monitor | Supporter |
| Alstom | - | Potential future customer | Pau Nualart | To be interested in our future products | Information about wind field so they can optimize their wind parks | Monitor | Neutral |
| Amptek | Payload department | Developer responsible | CEO of the company | Responsibility in the development of one of the payloads | Obtain expertise about the specific working area | Keep informed | Supporter |
| Angelantoni Test Technologies (ATT) | Testing and manufacturing department | Testing responsible | Cinzia Iacono | Partnership from the H2020 portal. Responsibility of testing of the prototype | Obtain expertise about the specific working area | Manage closely | Neutral |
| Ball Aerospace | Structures design department | Developer collaborator | Martin Kaufeler | Collaborate in the design of a specific part of the project | Obtain expertise about the specific working area | Keep informed | Influencer |
| Bulgarian Chamber of Commerce and Industry (BCCI) | Communications department | Subcontracted | Mariana Tanchena | Partnership from the H2020 portal. Communication and dissemination responsibilities | | Manage closely | Supporter |




EARTH CLIMATE CHANGE OBSERVATION

| Name | Position | Role | Contact Information | Requirements | Expectations | Influence | Classification |
|--|-------------------------------|-------------------------------|---------------------|--|--|----------------|----------------|
| Business Units | Project teams | Employees | - | To do as much as they can for the project | To get recognition and salary | Manage closely | Internal |
| CHS | - | Potential future customer | David Scott | To be interested in our future products | Information about crop monitoring and water quality | Monitor | Resistor |
| Cranfield University | Mission design department | Developer collaborator | Simon Medley | Collaborate in the design of a specific part of the project | Obtain expertise about the specific working area | Keep informed | Influencer |
| DELMAS | - | Potential future customer | Willy Boat | To be interested in our future products | Information about oceanic currents for the optimization of the transportation by ship | Monitor | Neutral |
| Epistemática | - | Potential future collaborator | Luca Severini | To post process our data | Get part of benefit of the sales | Monitor | Supporter |
| ESA Earth Observation Market Development (EOMD) | - | Investor | Marie Tourant | Get 300.000 € of funding for research | To answer the topic of their specific call, which is also included in the current scope | Manage closely | Supporter |
| E-TIS Euroconsultores | Project Management department | Subcontracted | Juan Hernández | Partnership from the H2020 portal. Project management and quality responsibilities | | Manage closely | Neutral |
| European Association of Remote Sensing Companies (EARSC) | - | Interested | Antoine Nessim | Ideas and opinion of the project evolution | Our failure, because we represent a strong competition to the companies inside the association | Keep informed | Blocker |




EARTH CLIMATE CHANGE OBSERVATION

| Name | Position | Role | Contact Information | Requirements | Expectations | Influence | Classification |
|---|----------|-------------------------------|---|---|--|----------------|----------------|
| European Commission | - | Main Investor | Pierre Huguenet | Get 2.500.000 € of funding for research | The deliverables that were presented in the previous sections | Manage closely | Supporter |
| European Council | - | Regulators | Environmental concerns responsible | To provide the legal environment for the development of the project | Fulfil the regulations and laws | Keep satisfied | Resistor |
| European Environment Agency | - | Potential future customer | International cooperation responsible | To be interested in our future products | All kind of information regarding global warming and environment | Keep informed | Influencer |
| European Environment Information and Observation Network (EIONET) | - | Potential future customer | International cooperation responsible | To be interested in our future products | All kind of information regarding global warming and environment | Keep informed | Influencer |
| European Parliament | - | Regulators | International cooperation responsible | To provide the legal environment for the development of the project | Fulfil the regulations and laws | Keep satisfied | Resistor |
| Gamesa | - | Potential future customer | Francesc Bofill | To be interested in our future products | Information about wind field so they can optimize their wind parks | Monitor | Neutral |
| Gisat | - | Potential future collaborator | Anne Deschamps | To post process our data | Get part of benefit of the sales | Monitor | Resistor |
| Greenpeace | - | Investor | Finantial responsible Greenpeace Europe | Get 60.000 € of funding for research | A more eco-friendly earth | Keep satisfied | Supporter |

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| Name | Position | Role | Contact Information | Requirements | Expectations | Influence | Classification |
|-------------------------------------|---|---------------------------|-------------------------------------|---|--|----------------|----------------|
| Indra | - | Investor | Dolores Albiol | Buy the fractionated satellite environment simulation | Develop a fractionated satellite environment simulation | Manage closely | Supporter |
| Member States | - | Potential future customer | Responsible from each country | To buy our products | Information about global warming, so they can measure their pollution and reduce it | Monitor | Neutral |
| Non-European Space Agencies | - | Competitor | Contact member for the Space Agency | Keeping track of our project | To keep updated about the project evolution | Keep informed | Blocker |
| Orbital ATK | Power generation department | Subcontracted | Daniel Humbolt | Collaborate in the design of a specific part of the project | | Manage closely | Neutral |
| Owners | Owners | Main Developer | - | To do as much as they can for the project | To get recognition and a successful project | Manage closely | Internal |
| PEPSICO | - | Potential future customer | Manuel Park | To be interested in our future products | Information about probability of a disaster, so they can increase the insurance cost in advanced | Monitor | Neutral |
| Politechnic University of Catalonia | Data management and processing department | Developer collaborator | Enrique García Berro | Collaborate in the design of a specific part of the project | Obtain expertise about the specific working area | Keep informed | Supporter |
| Politechnic University of Valencia | Testing and manufacturing department | Developer collaborator | Ignacio Tortajada | Collaborate in the design of a specific part of the project | Obtain expertise about the specific working area | Keep informed | Supporter |
| Satellitefinance | - | Interested | Kazun Hiyou | Dissemination of the project | Get interesting information about project updates | Keep informed | Neutral |

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| Name | Position | Role | Contact Information | Requirements | Expectations | Influence | Classification |
|-----------------------------------|---------------------------------------|------------------------|--|---|--|----------------|----------------|
| SENER, Ingeniería y Sistemas | GNC and formation flying department | Developer collaborator | Iñigo Gurrea | Collaborate in the design of a specific part of the project | Obtain expertise about the specific working area | Keep informed | Supporter |
| SILVANET (UPM Agrónomos) | Payload department | Developer collaborator | José Antonio Manzanera | Collaborate in the design of a specific part of the project | Obtain expertise about the specific working area | Keep informed | Supporter |
| Spacenews | - | Interested | Salim Benadouda | Dissemination of the project | Get interesting information about project updates | Keep informed | Neutral |
| Spanish Government | - | Investor | Spanish economy and competitiveness ministry | Get 120.000 € of funding for research | Justification of the expenditures of the budget they provide | Manage closely | Neutral |
| Sspi | - | Interested | Patrick O'neil | Dissemination of the project | Get interesting information about project updates | Keep informed | Neutral |
| Surrey Satellite Technology Ltd | Payload department | Developer responsible | Pol Guixé | Responsibility in the development of one of the payloads | Obtain expertise about the specific working area | Keep informed | Influencer |
| Technical University of Stuttgart | Thermal control department | Developer collaborator | Dennis Hardenacke | Collaborate in the design of a specific part of the project | Obtain expertise about the specific working area | Keep informed | Influencer |
| University of Southampton | Intermodule communications department | Developer collaborator | Michael Woodbridge | Collaborate in the design of a specific part of the project | Obtain expertise about the specific working area | Keep informed | Influencer |
| WWF | - | Investor | Financial responsible WWF Spain | Get 100.000 € of funding for research | A more eco-friendly earth | Keep satisfied | Supporter |