Payload specifications
(based on information from GomSpace)

Dimensions
The starting point should be a **6U platform 20x30x10 cm**. Please assume that **half of the volume** can be used for payload. If absolutely necessary we might be able to go higher in volume, but this will also require more room for avionics.

Mass
The total platform mass for 6U is **8-9 kg where 50% can be allocated to payload**. This will scale linearly if the size is increased.

Power
The amount of power available is part of the more detailed design, but an average input of 10W to 14W with body mounted panels per orbit can be assumed. For a short period of time (~20 min) an output of 15W -20W can be achieved. The peak is a bit higher.

Lifetime
3-5 years

Launch and orbit
Piggy backing is the most feasible launch option. Orbit parameters (e.g. LTAN) are unknown for now, but the **most likely is a Sun-Synchronous Orbit (SSO).**

There is a launch opportunity for a very low inclination (1º-3º) in 2018 provided the satellite is ready on time.

Attitude (accuracy and sensor for fine-pointing)
The precision is probably down to approx. 30 arcsec but only using a star tracker. This point is still open for discussions and design and can be assumed to significantly change. Also, we can include the main payload in the control loop and increase the performance in this way.

Data volume (up and download)
125 MB per day with one dedicated ground station in Denmark in SSO. If the orbit is Equatorial and we have access to a ground station on the equator somewhere, this will change.

On-board computers and data storage
Different computers are available at the moment raging from small highly stable OBC for basic house keeping and telemetry storage to advanced FPGA systems that provide much more calculating power. On the storage side GomSpace does not have anything above 2GB SD-cards. Please be advised that this media is not considered safe for this project. A mass memory unit will have to be developed to match the requirements for the mission.

Thermal environment
-40º to 70ºC on the outside and –10 to 40 degrees C on the inside.

Radiation
should be below 20 krad for the entire lifetime.