SeaLion Mission Concept of Operations (ConOps)

Table of Contents

Stakeholder Needs

The SeaLion Mission Concept of Operations (ConOps) is guided by a series of stakeholder needs, listed below.

Stakeholder Need 1.1: Primary Mission Objective 1/2

The SeaLion mission shall establish UHF communication link with Virginia ground station

Stakeholder Need 1.2: Primary Mission Objective 2/2

The SeaLion mission shall establish S-Band communication link with MC3 ground station

Stakeholder Need 2.1: Secondary Mission Objective 1/3

The SeaLion mission shall provide a means to validate an impedance probe in-orbit

Stakeholder Need 2.2: Secondary Mission Objective 2/3

The SeaLion mission shall provide a means to validate a V-Infrared Sensor (VIR-S) in-orbit

Stakeholder Need 2.3: Secondary Mission Objective 3/3

The SeaLion mission shall provide a means to validate a deployable composite structure (DeCS) in-orbit

Stakeholder Need 3.1: Tertiary Mission Objective 1/3

The SeaLion mission shall qualify a newly developed antenna

Stakeholder Need 3.2: Tertiary Mission Objective 2/3

The SeaLion mission shall qualify a CubeSat bus architecture for very-low Earth orbit (VLEO)

> ## Stakeholder Need 3.3: Tertiary Mission Objective 3/3
>
> The SeaLion shall verify DeCS in-orbit behavior performance via accelerometer & temperature sensor data

User Stories

The SeaLion Mission Concept of Operations (ConOps)'s stakeholder needs are then used to identify a series of user stories which then lead to design decisions captured in data structure and activity definitions.