

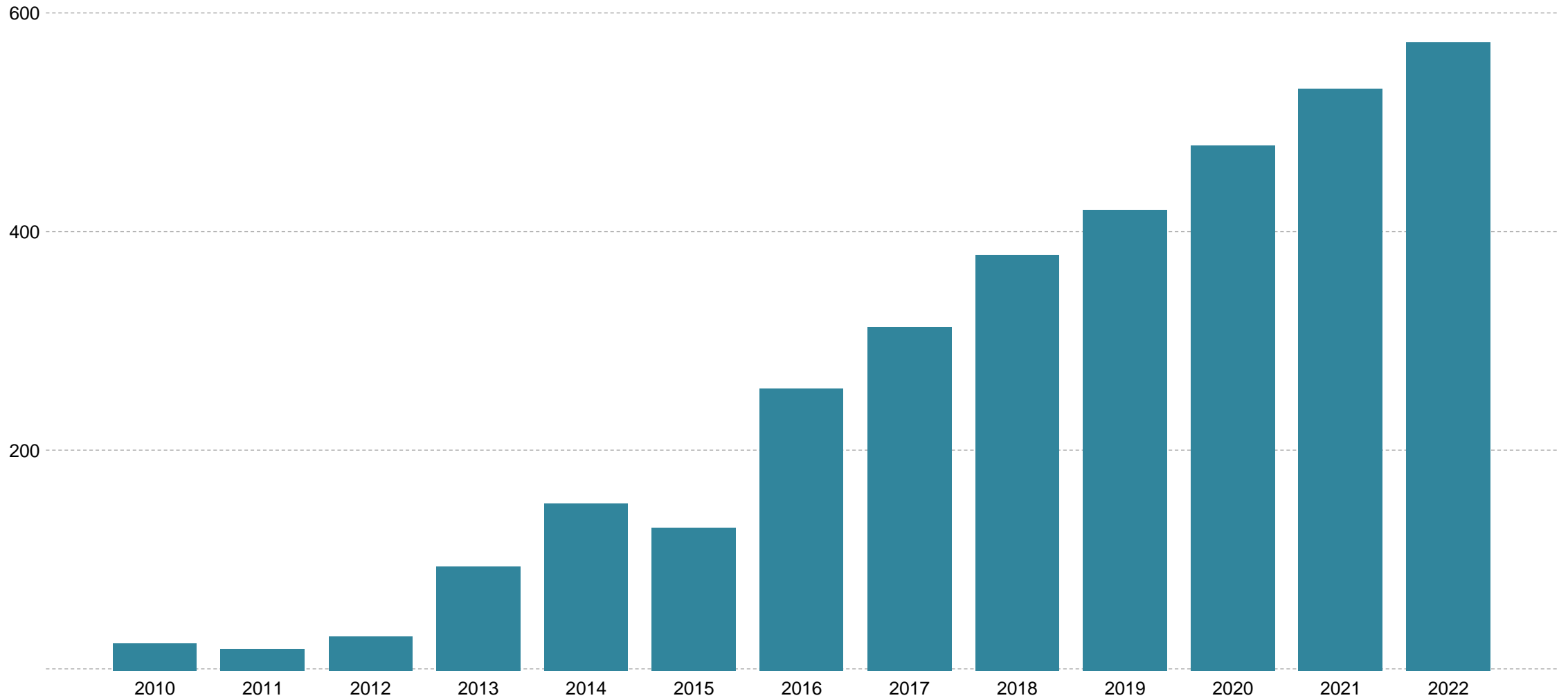


Gonçalo Lopes
CTO, D-Orbit PT
4th Unisec–Global Meeting

CUBESATS ARE A GROWING TREND



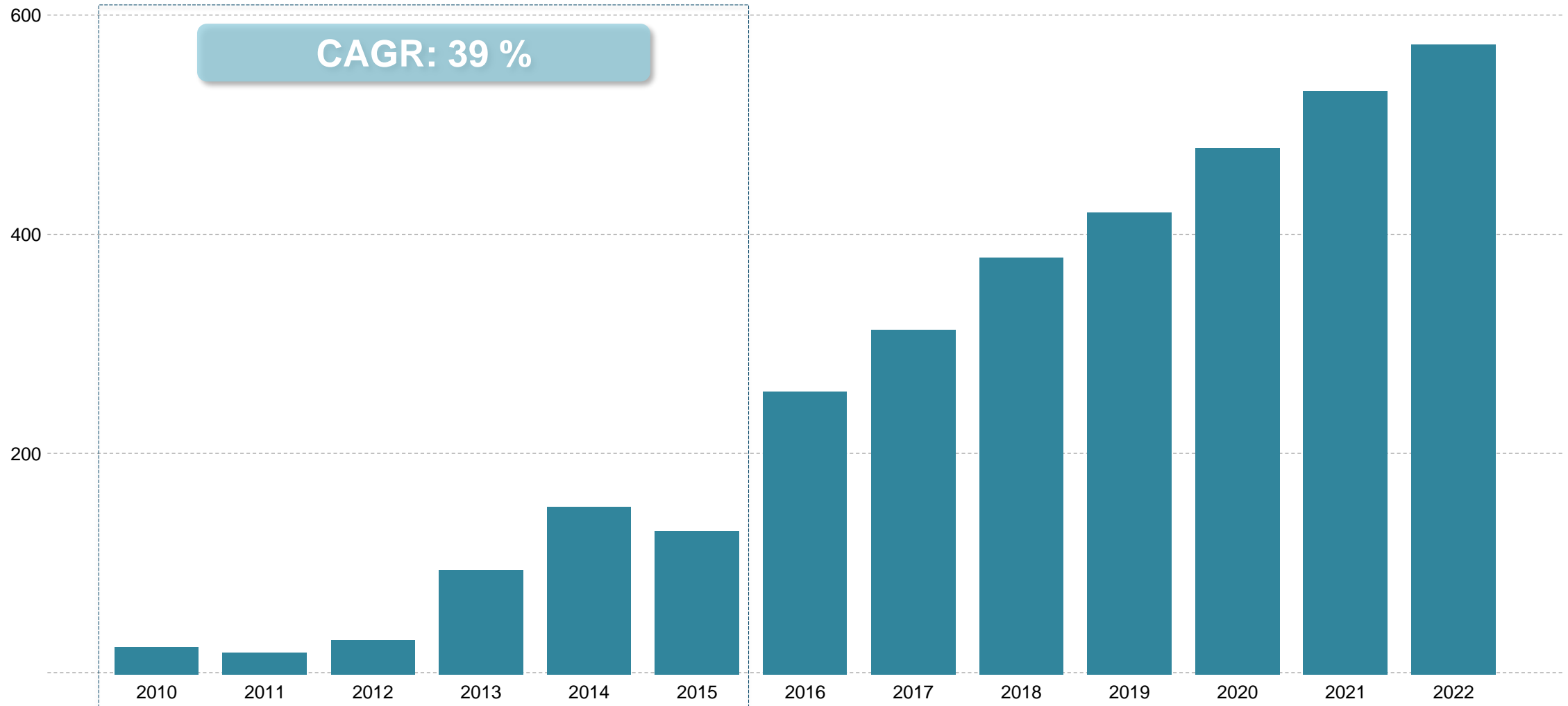
1-50 Kg satellites launch history and forecast



CUBESATS ARE A GROWING TREND

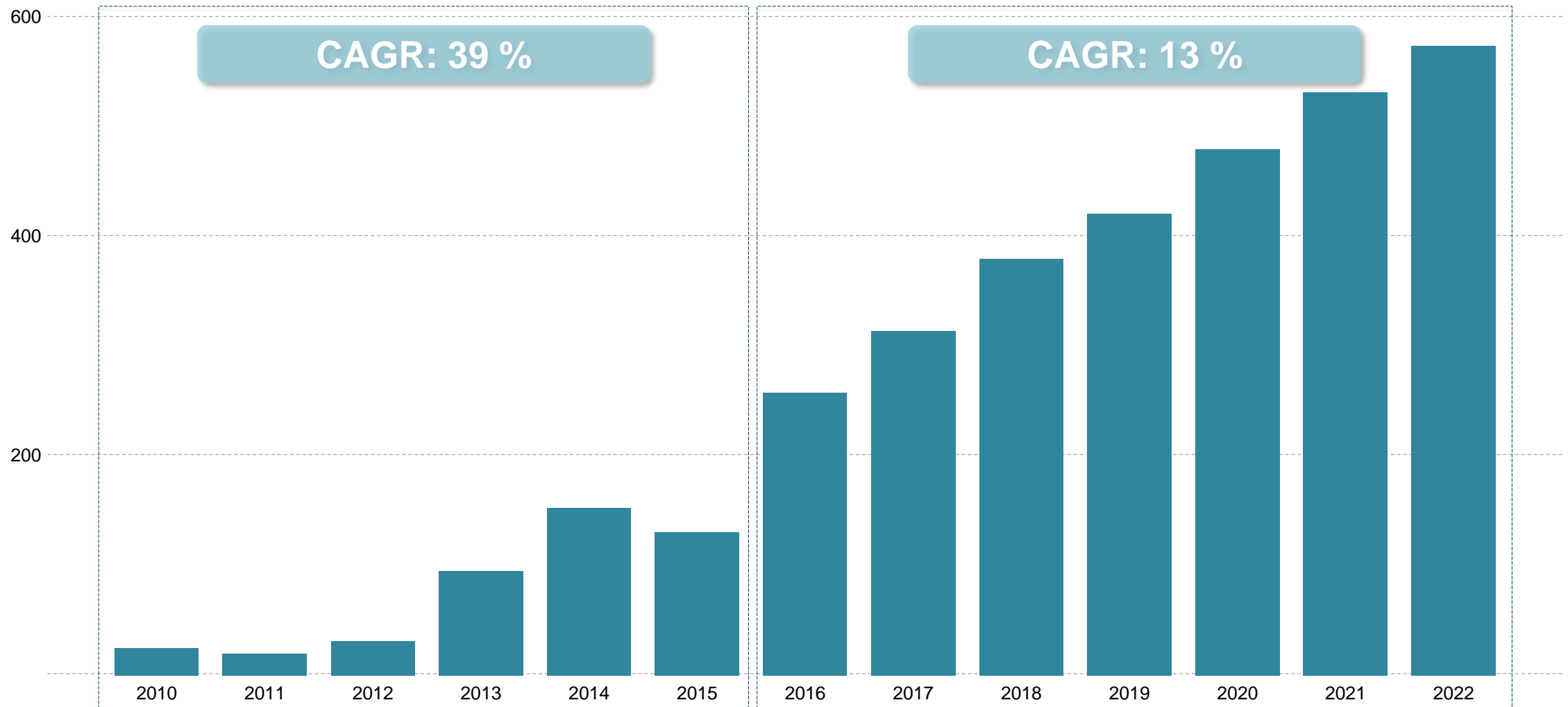


1-50 Kg satellites launch history and forecast



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1-50 Kg satellites launch history and forecast



D-SAT IS A TECHNOLOGY DEMONSTRATOR



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FIRST SATELLITE TO BE REMOVED IN A QUICK, SAFE AND CONTROLLED MANNER

3U Cubesat
4.3 Kg mass

Launch
Q2 2017

2 months
mission duration

500 Km
orbital altitude

< 30 minutes
maneuver

30 N 165 E
Disposal area

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MOST CUBESATS CANNOT SELECT THEIR PREFERRED ORBIT



Flying as secondary payloads poses a limitation on the orbital design available for Cubesats without propulsion.



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Higher orbits
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Higher orbits
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Difficulty to
comply with
debris
mitigation
guidelines

Lower Orbits
imply short
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than 1 year)

Higher
constellation
maintenance
cost and launch
frequency

D-ORBIT HAS A SOLUTION TO THIS COMMON PROBLEM



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FENIX

FENIX PROVIDES MOBILITY TO CUBESATS



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Two different integration configurations

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Two different integration configurations

Circular centered payload

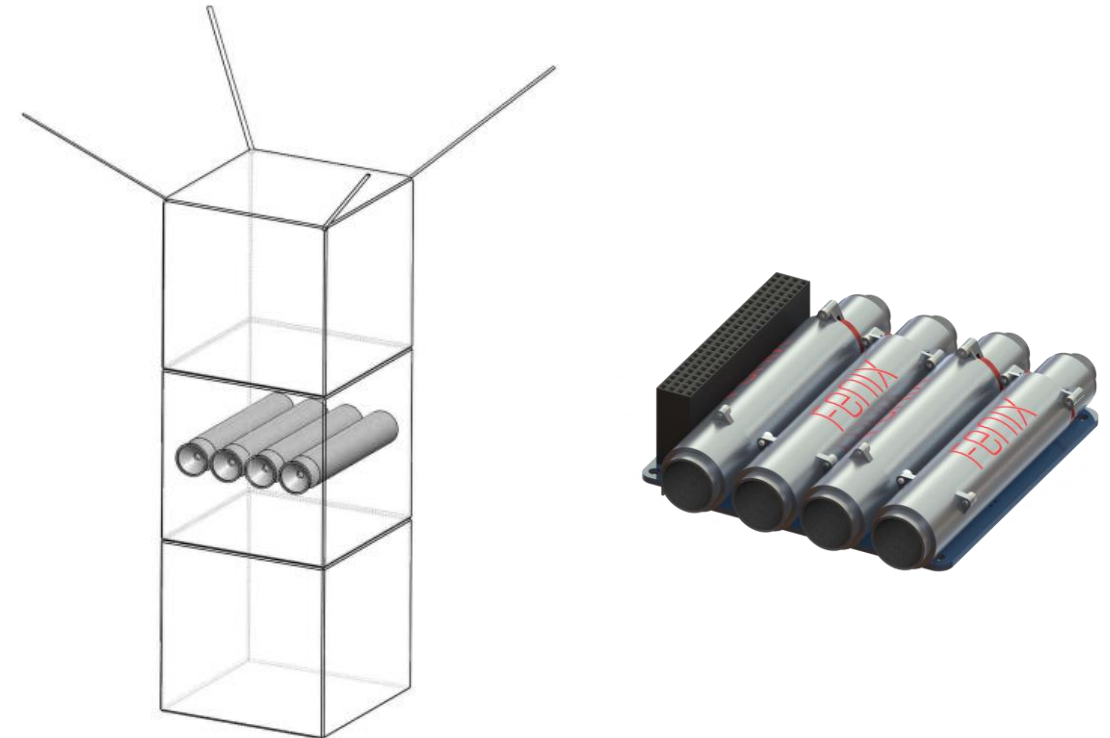


FENIX PROVIDES MOBILITY TO CUBESATS

Two different integration configurations

Circular centered payload

Standard component configuration - stack



ORBITAL FLEXIBILITY IS NOW POSSIBLE



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Constellation
Deployment

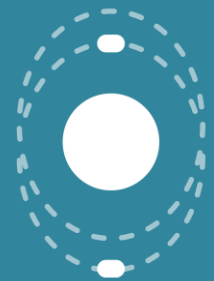
360° full constellation deployment in
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ORBITAL FLEXIBILITY IS NOW POSSIBLE



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Orbit
Raise

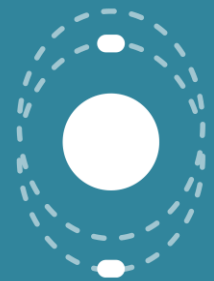
Mission lifetime increase up
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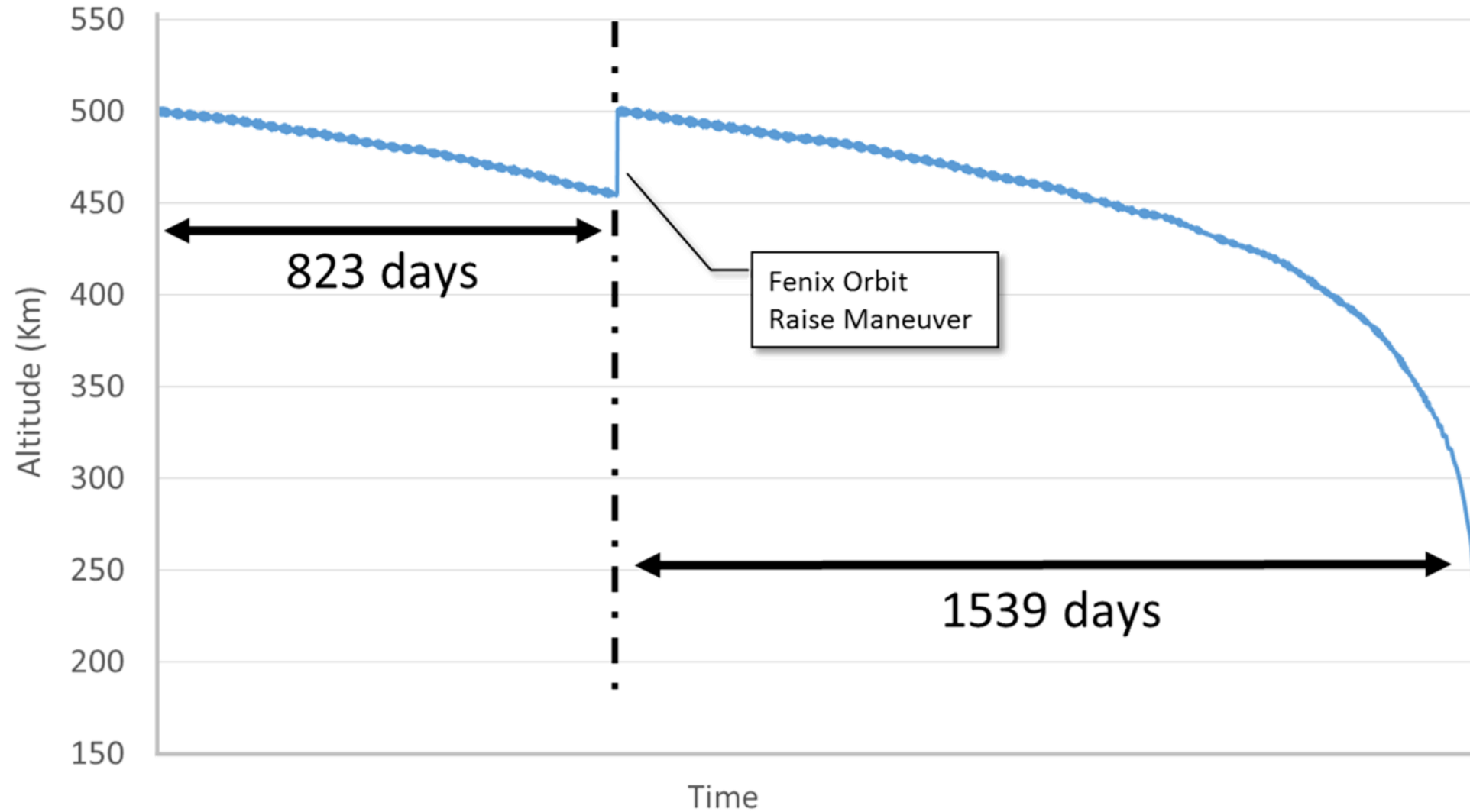
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Decommission

3U Cubesat decommission
from 700 Km

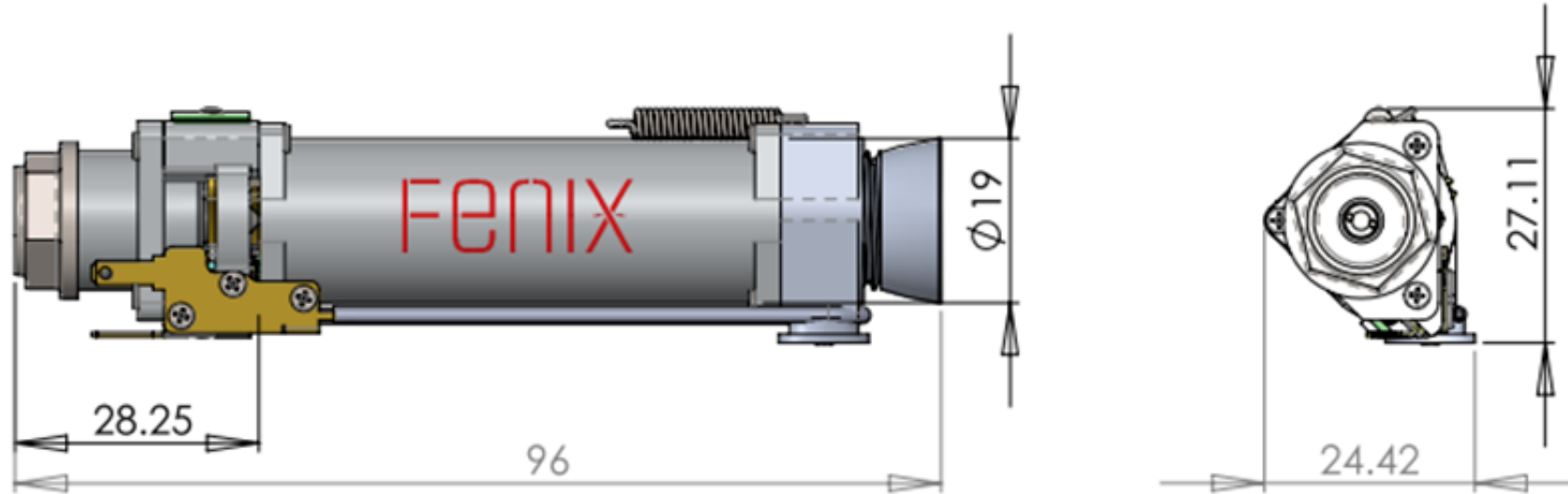
MISSION SIMULATION FOR 500 Km ORBIT



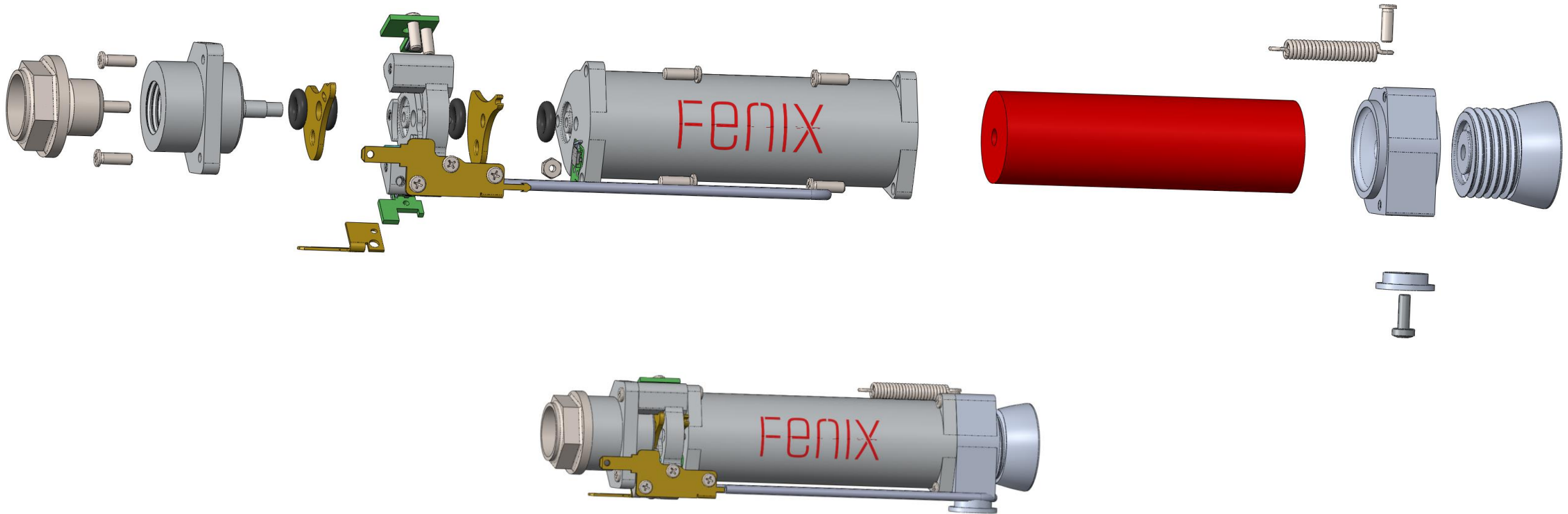
DESIGNED FOR MODULARITY AND SCALABILITY



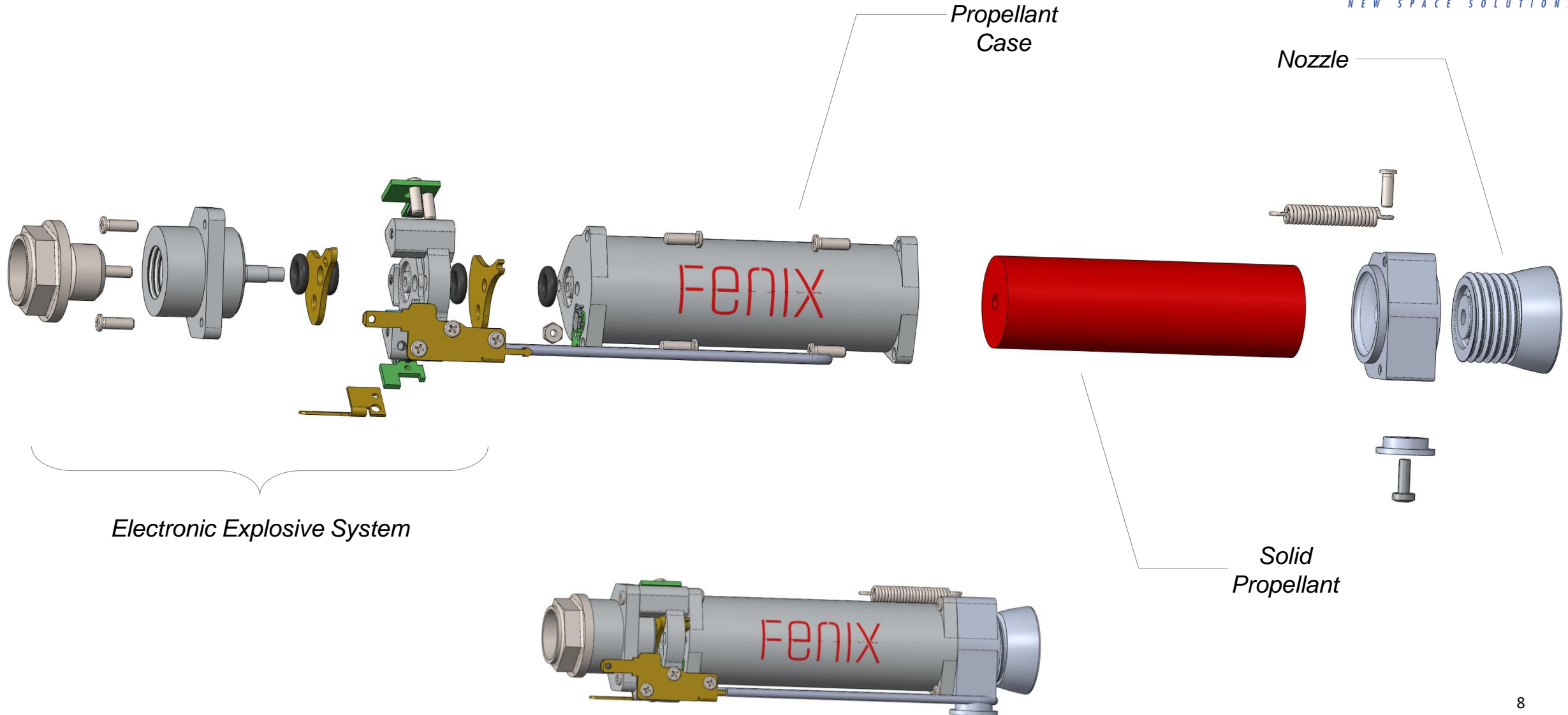
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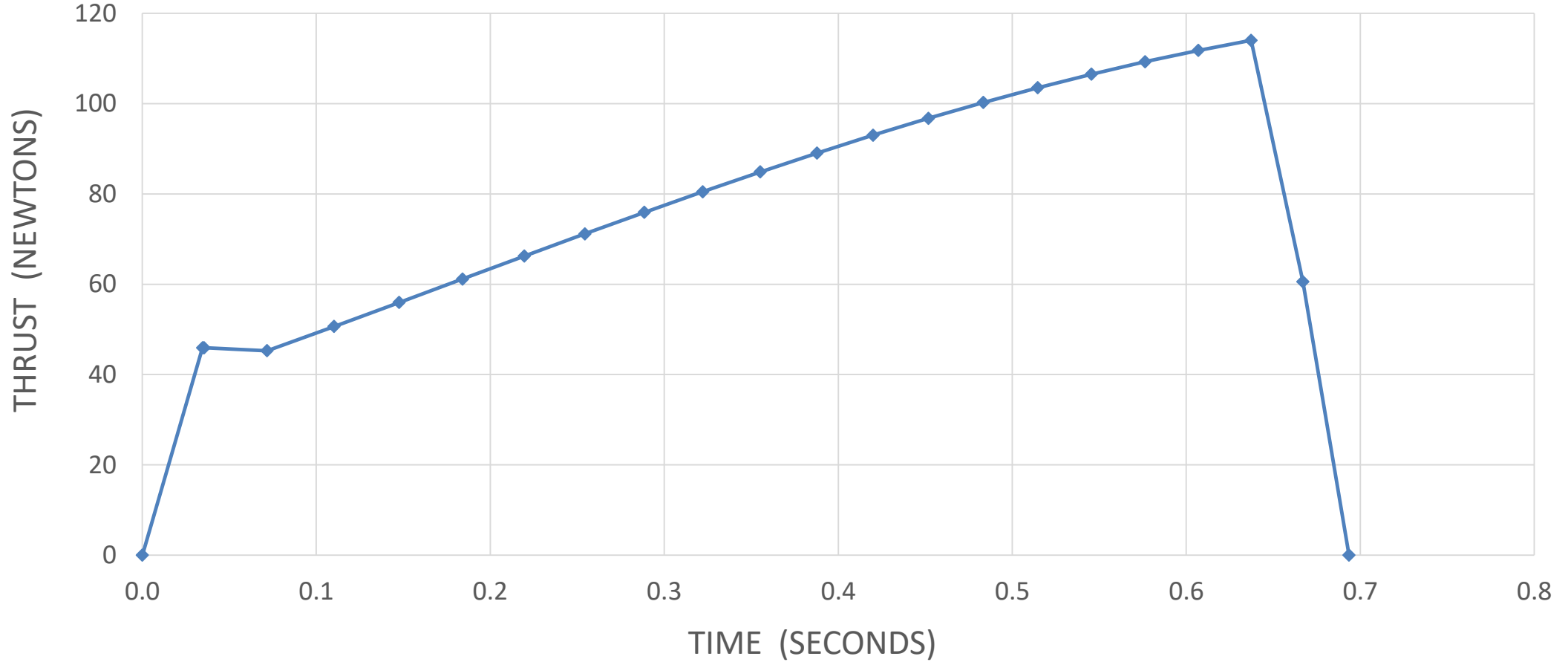
DESIGNED FOR MODULARITY AND SCALABILITY



TECHNICAL SPECIFICATIONS



BURN PROFILE



TECHNICAL SPECIFICATIONS



Specifications	
ISP	260 sec.
Total Impulse	54 N-sec.
Average Thrust	77 N
Thrust Time	0.7 sec.
Δv (4Kg Cubesat)	13.4 m/s
Propellant Mass	20 g
System Mass	480 g

DEVELOPMENT ROADMAP INCLUDES IN-ORBIT VALIDATION IN 2018





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