



# Investor Presentation

*Milan, 25 September 2018*



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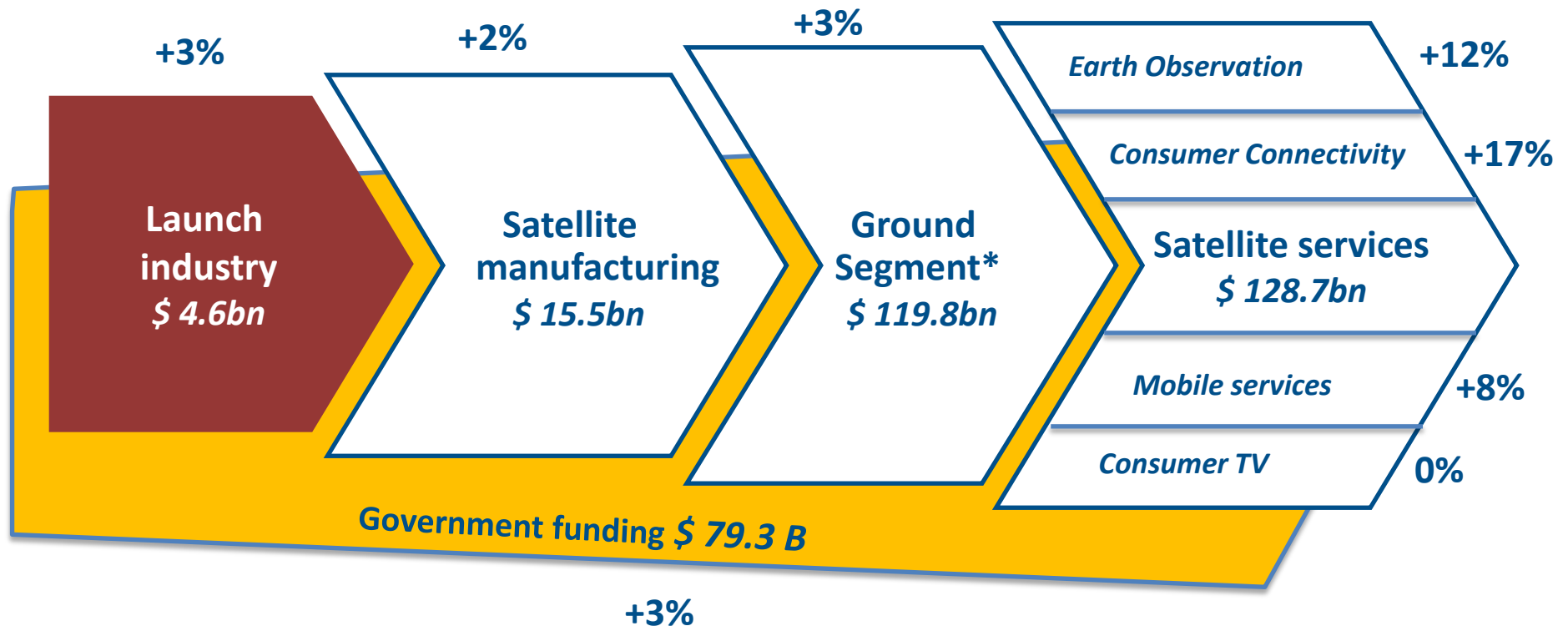
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# Space industry value to triple the next two decades



## Space industry projected segment growth (CAGR to 2040)



From ~300\$ Bn in 2017 to ~1\$ Tn in 2040

*\*Includes GNSS chipsets and Related*

Source : Morgan Stanley

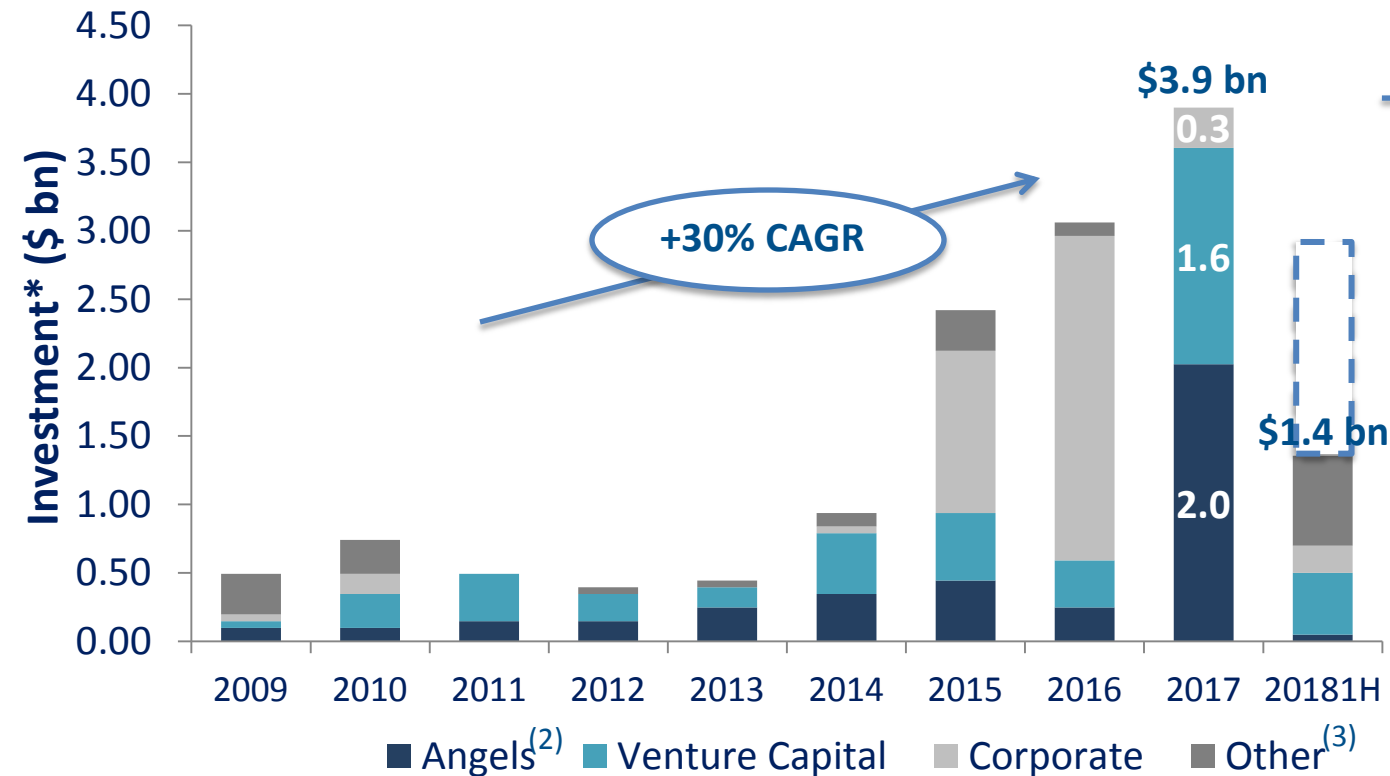
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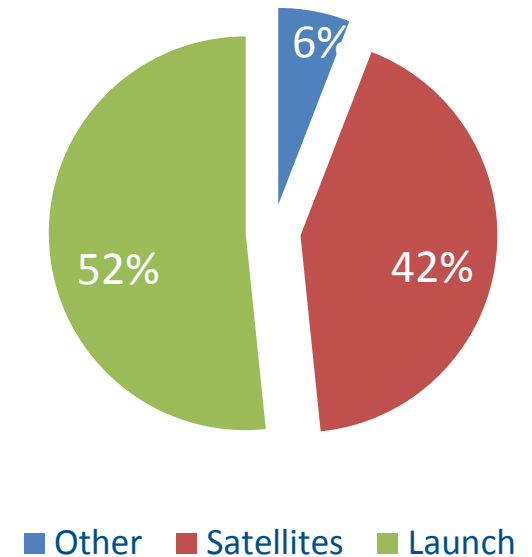
# Investment in the Space sector continues to grow rapidly



## Equity investment in Space Ventures



## Breakdown of cumulated 2009-2Q18 investments by sector (% of 15.3\$ Bn)



(1) Annual non-governmental equity investment

(2) Angels include investments from Jeff Bezos, Richard Branson, Elon Musk, and Robert Bigelow (total \$2 bn)

(3) Other includes Foundations, Private Equity, Sovereign Funds, Crowd Platforms, etc.

Source: Space Angels Q2 2018 Investment Report

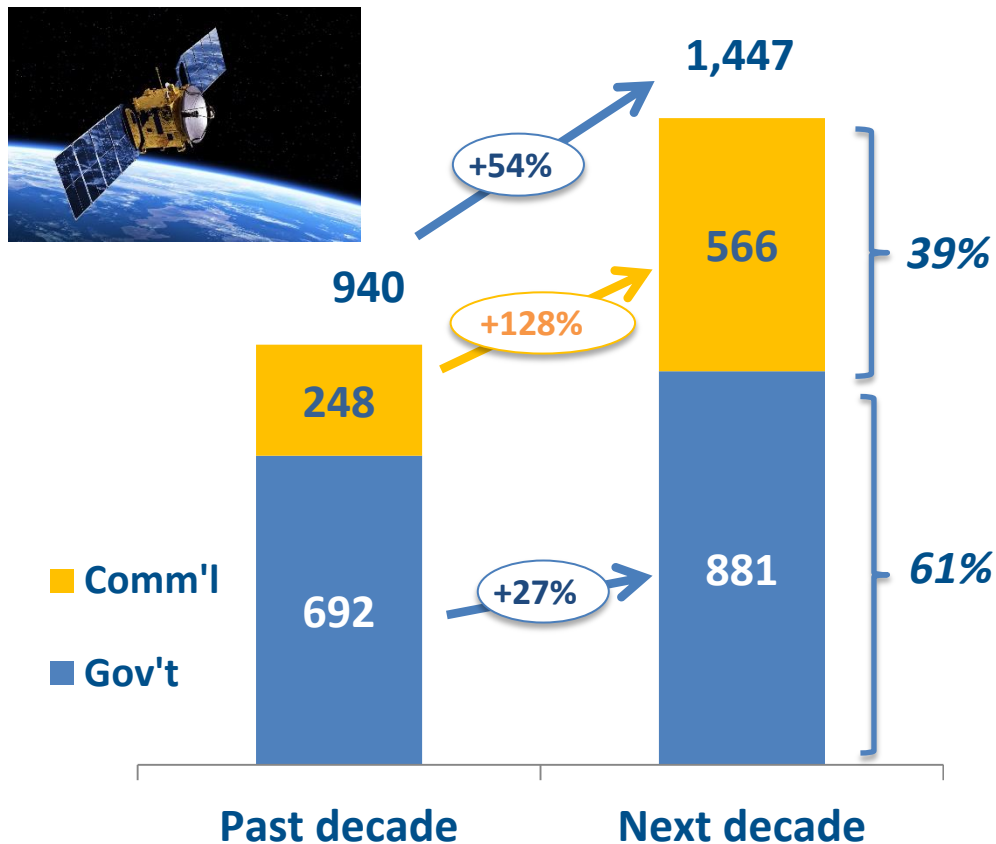


# Space launch demand expected to grow across the next decade

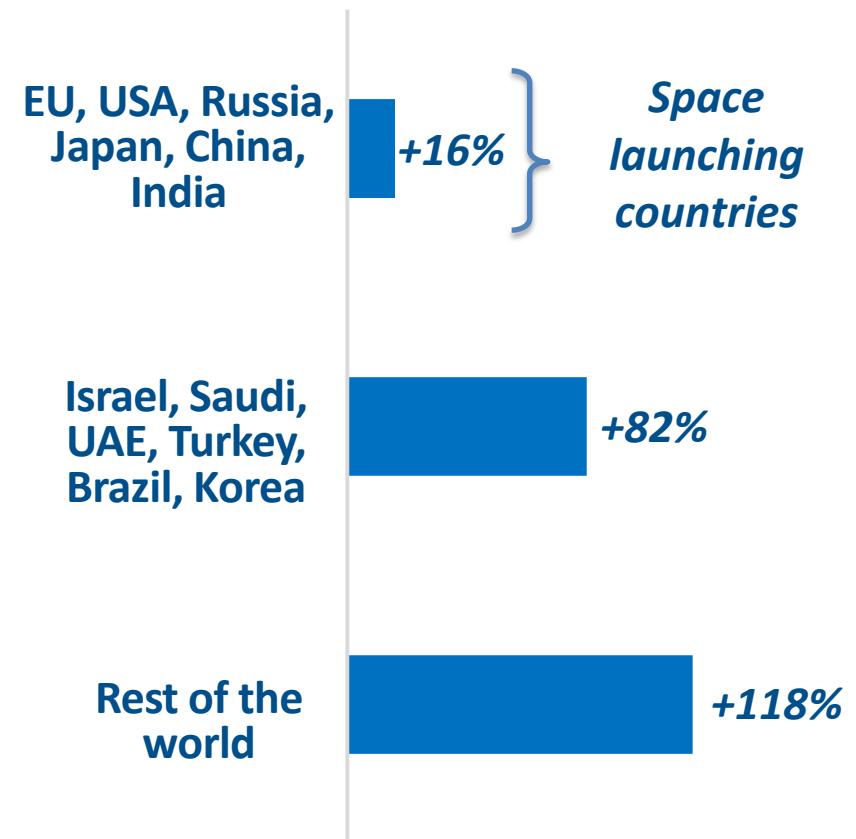
## Government demand continues to be a major driver



### # of Satellites to Space (>50kg)



### Government satellite demand growth by geography



Source : Euroconsult 2016

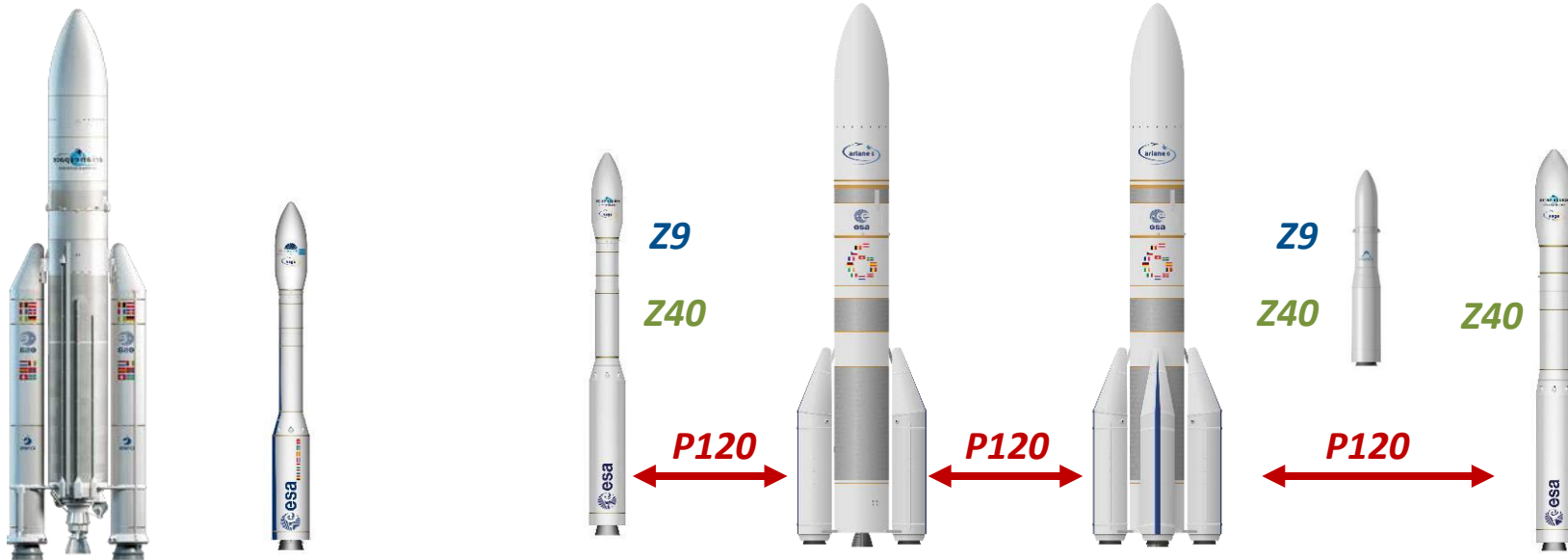
Note: Commercial demand excludes OneWeb and Starlink constellations, amounting to over 5000 sats



# European Launcher offering evolving to meet market demand



Perf	10.5 tons in GTO	1.5 tons in LEO	2.3 tons in LEO	6 tons in GTO	11 tons in GTO	0.3tons in LEO	2.8 tons in LEO
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**Today**  
Ariane 5 / Vega

**2019**  
Vega C

**2020**  
Ariane 62, Ariane 64

**2021**  
Vega light  
(study)

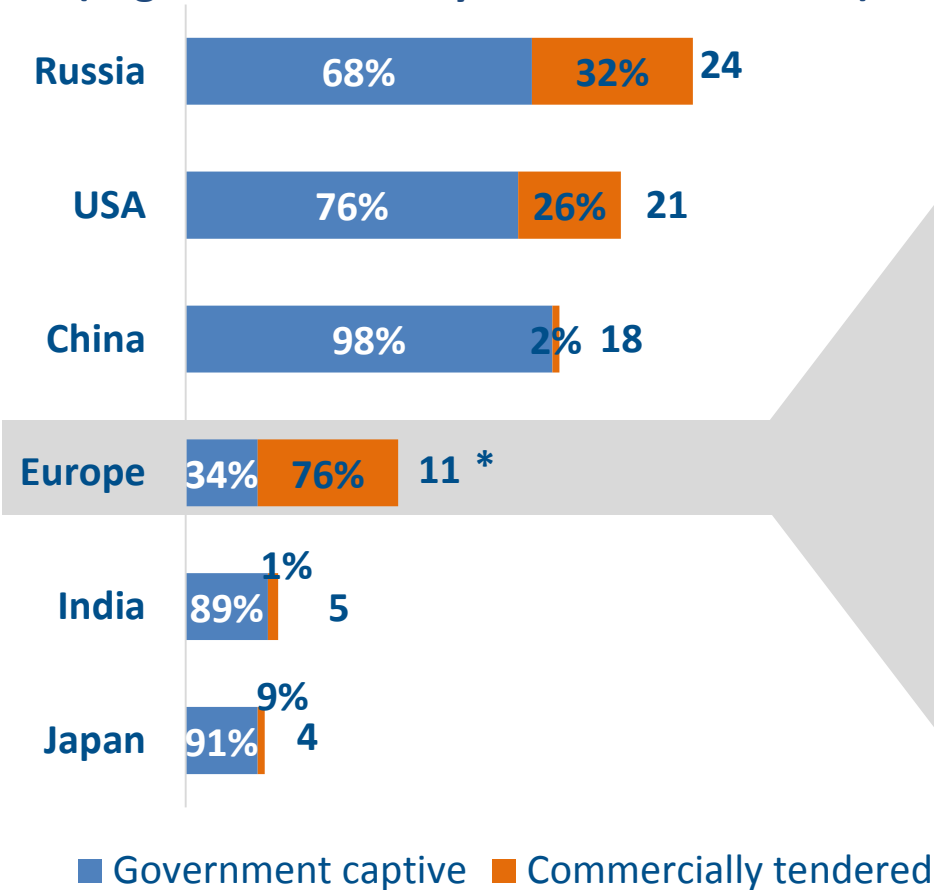
**2024**  
Vega E



# EU launchers traditionally strongest in export but now with incremental opportunities from the domestic gov't demand



Launch activity by country  
(avg # of launches/year over 2012-2017)



EU Multiannual Financial Framework  
EC Proposed Space Budget (€Bn)



• Other programs

2014-2020 2021-2027

7.7

9.7

4.8

5.8

-

0.5

12.5\*\*

16.0\*\*

+28%



Ariane 6



Vega

Source: the Space Launch Report, FAA annual compendium 2018

\* Ariane 5 has double launch capacity in GTO, unlike most other launchers

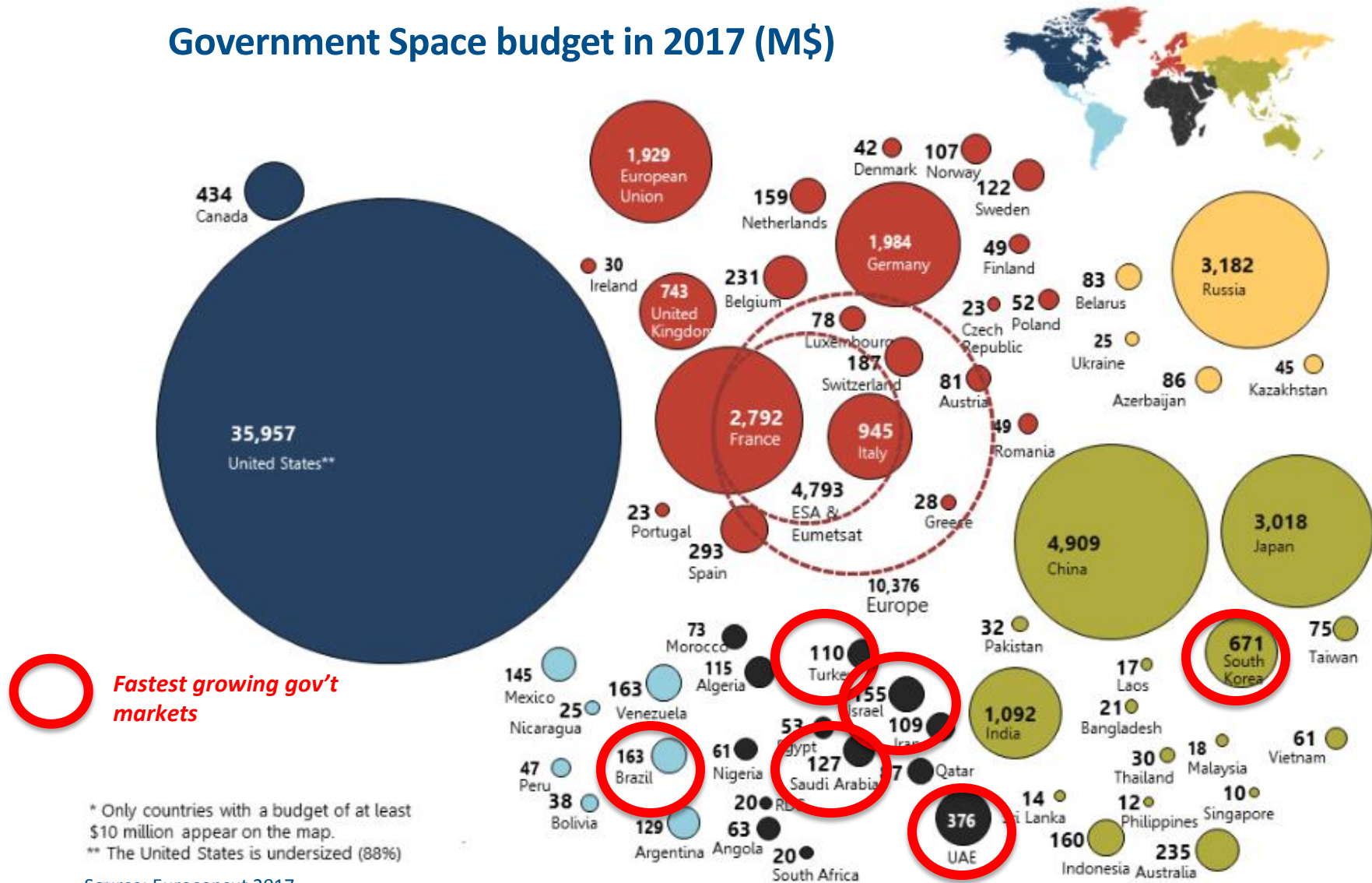
\*\* 2021 economic conditions



# Outside Europe, most of the gov't demand growth to occur in Middle East, Asia and Latin America



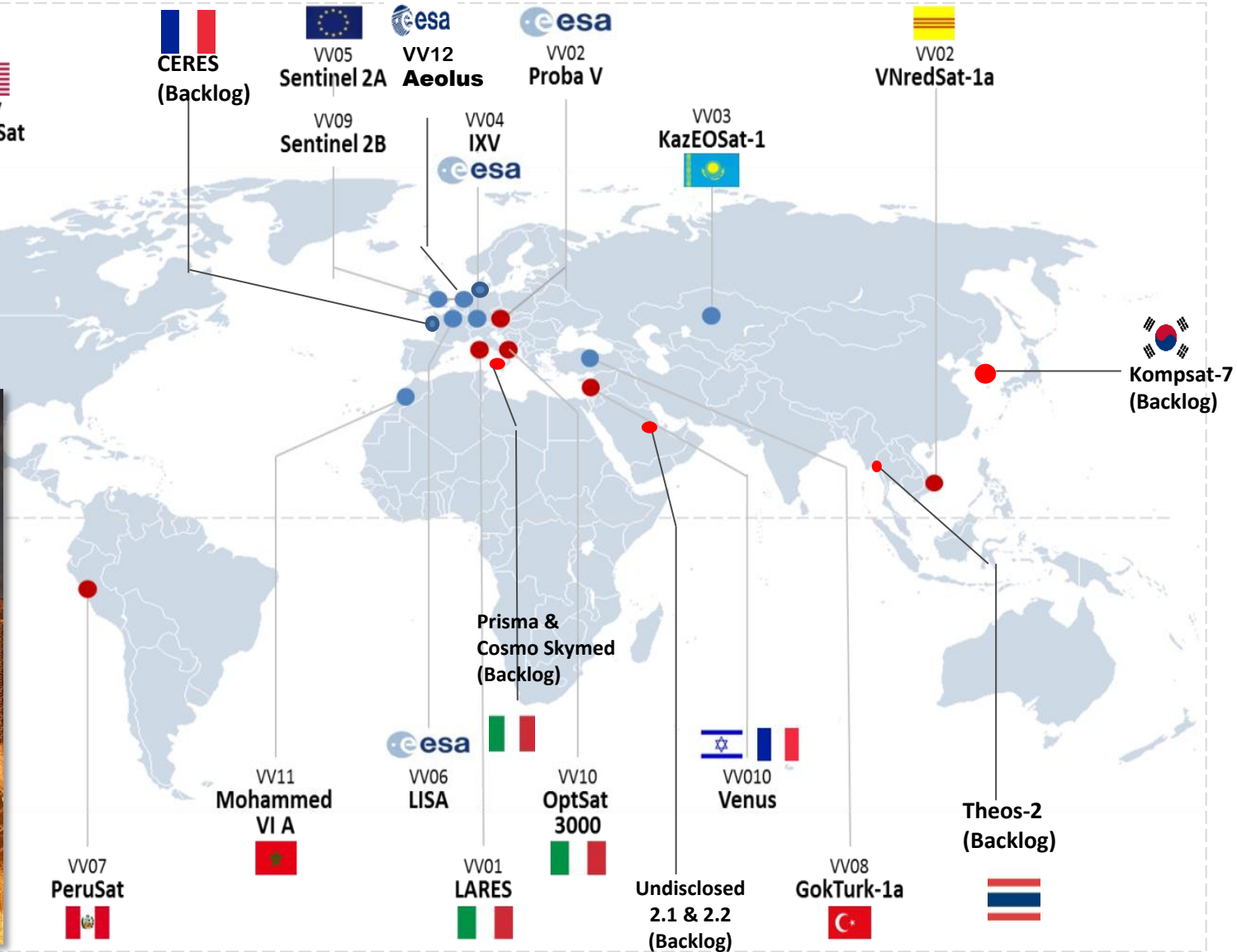
## Government Space budget in 2017 (M\$)



Source: Euroconsut 2017



# Vega is a young product but already established as a globally recognized product in several growing markets



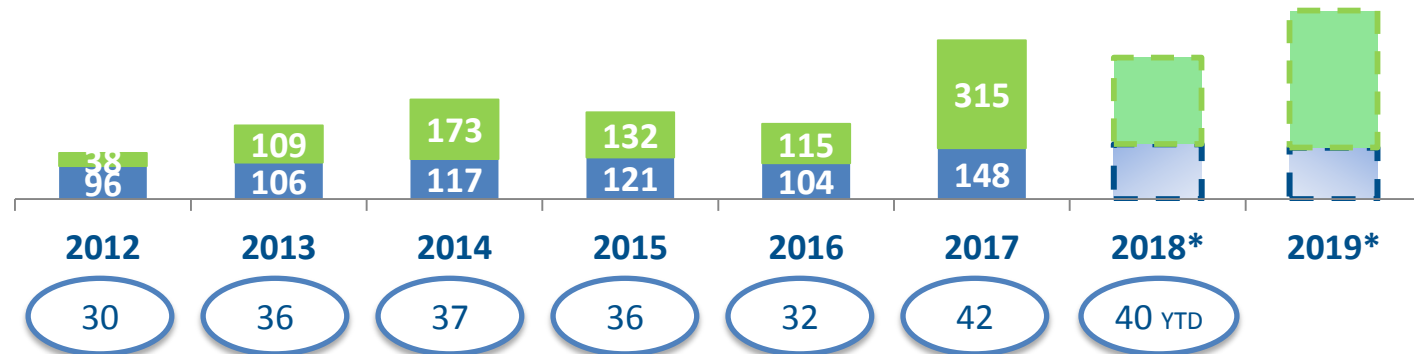


# Demand is shifting towards small sats (<500kg) while Vega flight rate increases

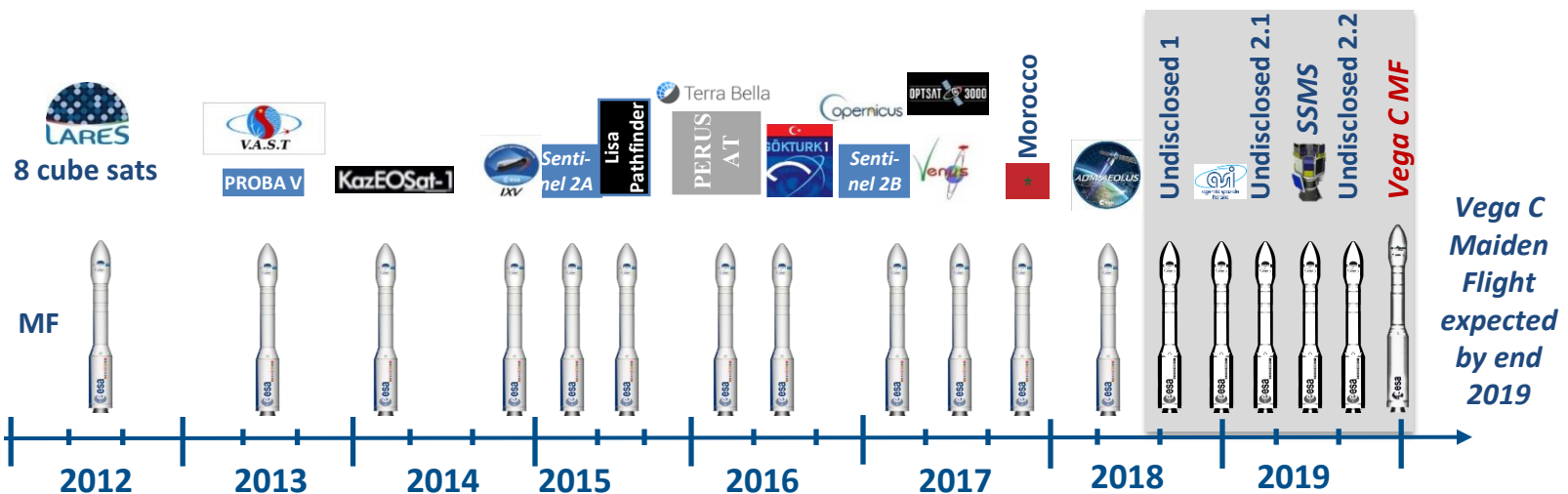


Total nr. of satellites launched into Space worldwide

■ Sats > 500 kg ■ Sats < 500 kg



Vega flight record since 2012 and near term manifest\*\*



• Estimated figures for 2018 year end and 2019 forecast

\*\* Launches already sold and accounted for as the order backlog for 2018- 2019

Source: Space Launch Report; Gunter's Space

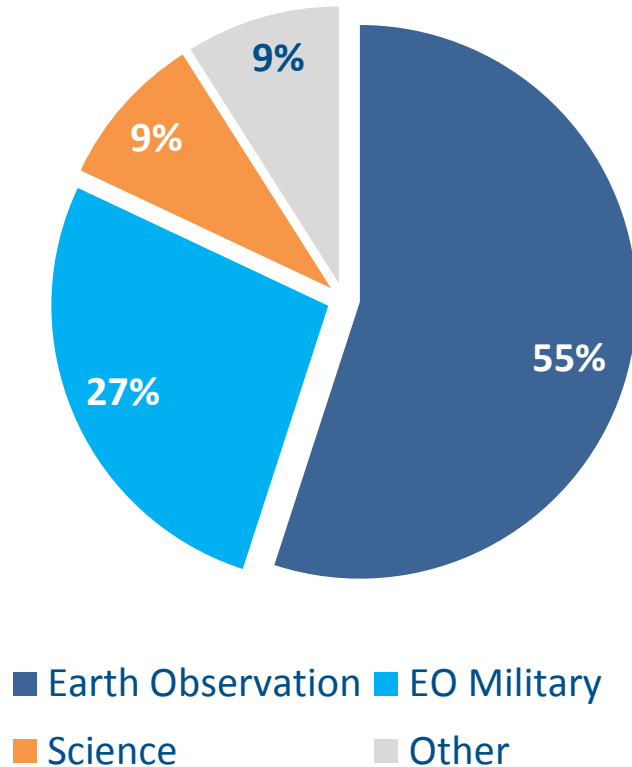
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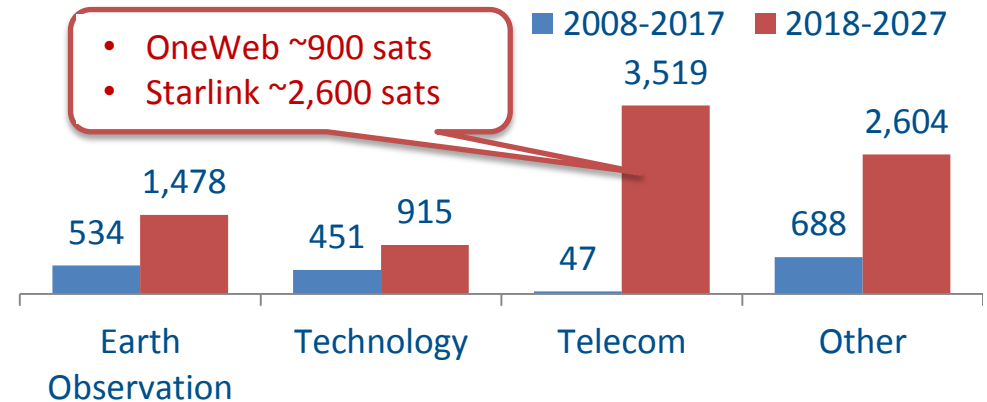
# Within smallsats, more robust growth expectations appear to be for Earth Observation applications – Vega optimally positioned



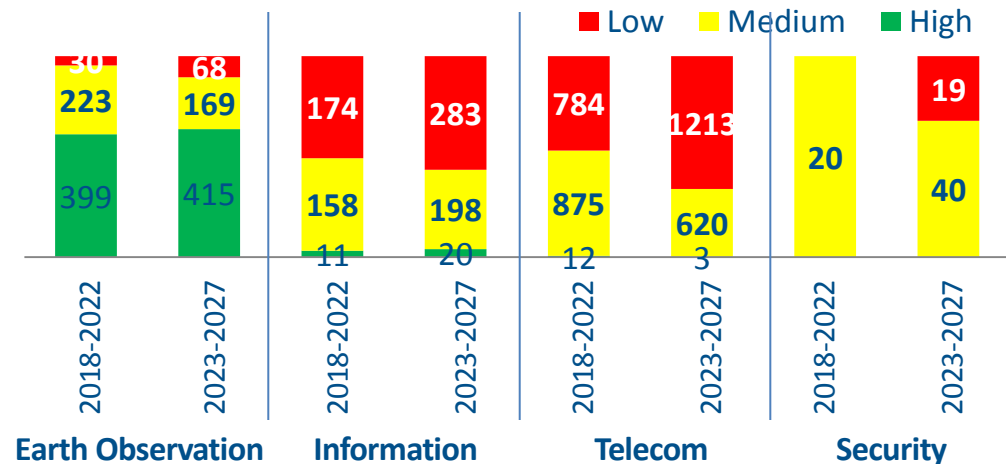
Vega launches by application domain (VV01-VV17)



SmallSats demand by application domain (0-500kg)



Maturity of constellations by application domain 2018-2027



Source: Euroconsult 2018

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# Vega C competitiveness generating positive market momentum – recent commercial achievements



## Vega C signed contracts

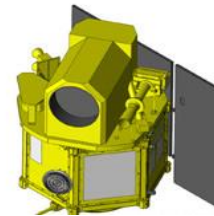


*2 hi-resolution optical satellites to be launched by Vega C in 2020*

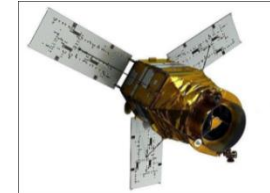
*2 hi-resolution optical satellites to be launched by Vega C in 2021*



*1 Vega C launch in 2021 for a COSMO SkyMed satellite (second generation)*



*1 Vega C launch in 2021 to orbit Thailand's second earth observation satellite THEOS-2*



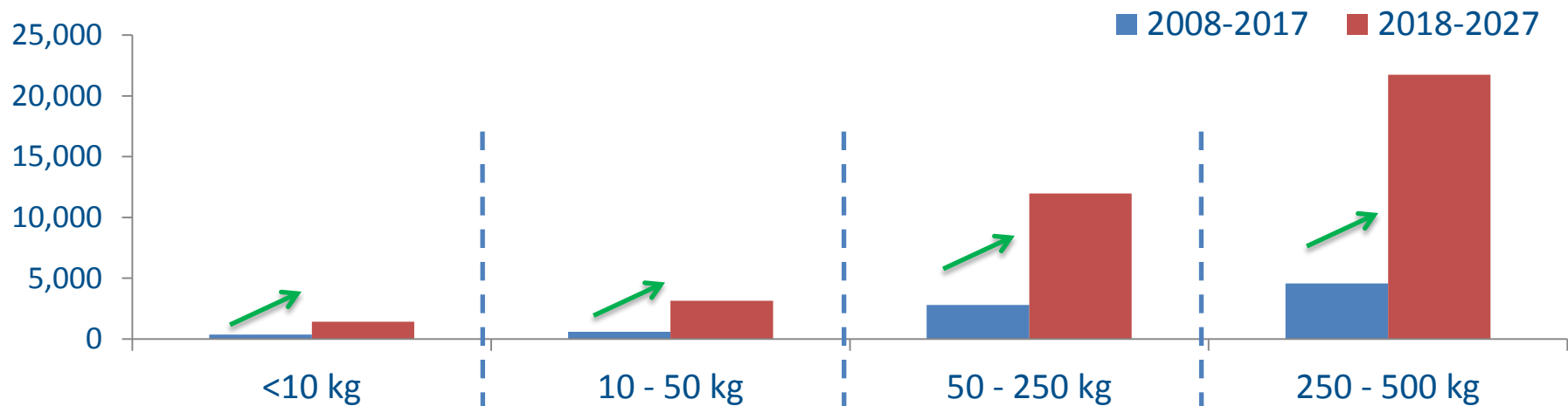
*1 Vega C launch in 2021 to orbit the South Korean Space Agency (KARI) Earth Observation satellite KOMPSAT-7*



# Vega now also re-tooled with adapters to meet all sub-segments of demand for piggy back, rideshare or dedicated launch



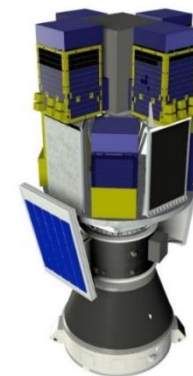
Value of satellites <500kg to be launched (\$M)



**Piggyback**

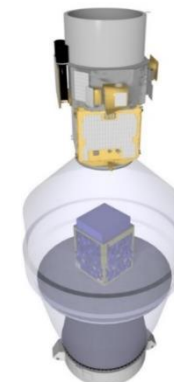


**VAMPIRE**



**SSMS**

**Rideshare**



**VESPA**



**VEGA Light**

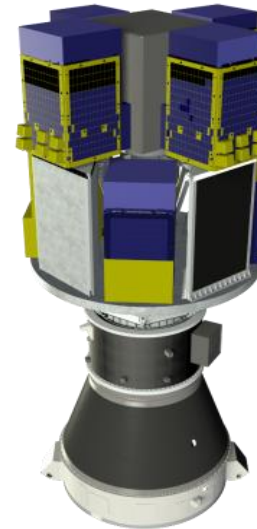
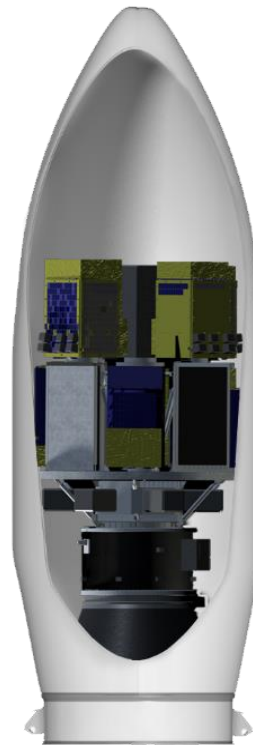
**Dedicated (single/dual)**



# First commercial successes also with SSMS



SSMS adapter clean room for  
satellite integration

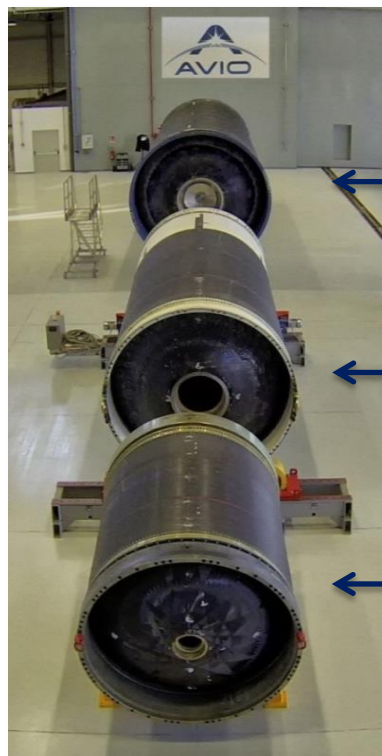




# Vega C development accomplishments in HY 2018



## Industrial achievements



P120  
First stage ✓  
*Ground Tested*

Z40  
second stage ✓  
*Ground Tested*

Z9  
third stage ✓  
*Flight Proven*



Fairing Mould  
ready at RUAG

## Technological achievements



P120 Static Firing Test (16 July, Kourou)



Z40 Static Firing Test (7 March, Sardinia)



# Preparing for production : new facilities and technologies



**New Filament Winding machine**



**Development of SPTF in Sardinia (rendering)**



**New Nozzle Plant at work**



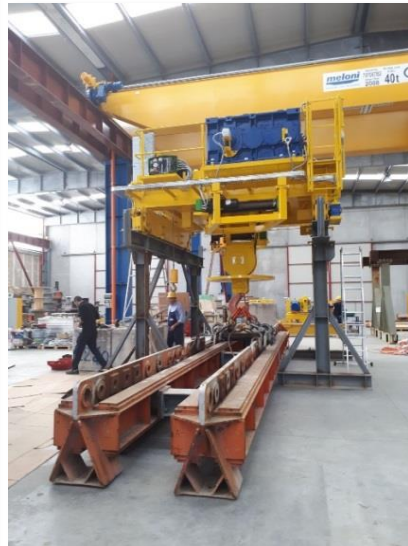
**New Thermal protection Facility at work**



# Preparing for production : new facilities and adaptations of industrial operations in Kourou



New Vega C propellant casting pots (Regulus)



Automated nozzle integration (Europropulsion)



# Highlights of HY 2018 results



- **Backlog:** €962M (+34% on 1H17, +1% on YE17)
  - **Revenues:** €179M (+20% on 1H17)
  - **EBITDA Reported:** €14.5M (+29%)
  - **EBIT Reported:** €7.7M (+79%)
  - **Net Income:** €6.2M (3.6x), interest expenses down by 90%
  - **NFP:** €22M, reflecting typical seasonality and dividend payout in May
  - **Commercial:** Strong Vega C and SSMS market momentum
  - **Technical / Operations :**
    - P120 and Z40 motors (Vega C's 1<sup>st</sup> and 2<sup>nd</sup> stage) tested successfully
    - Vega C readiness coming closer (launch pad adapted to Vega C)
  - **2018 guidance confirmed**
- Non-recurring costs down by 60%
- R&D Tax credit benefit

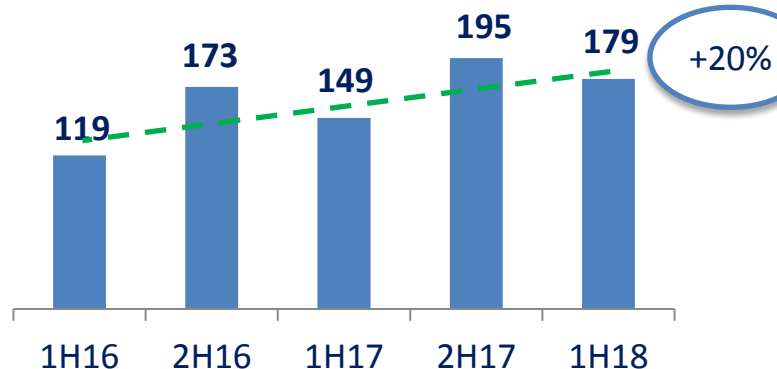


# Evolution of Key Performance Indicators

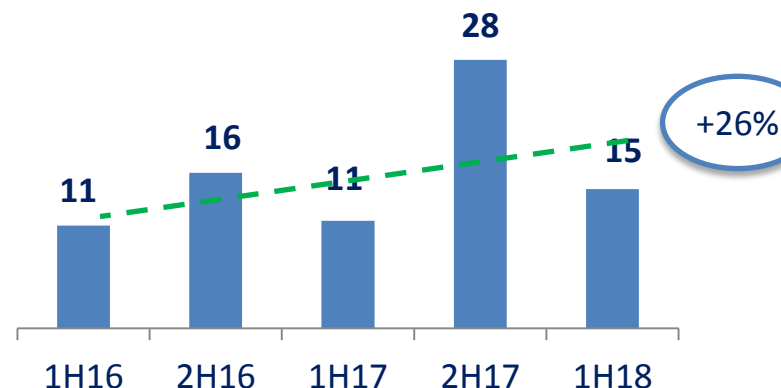
CAGR%\*

€M

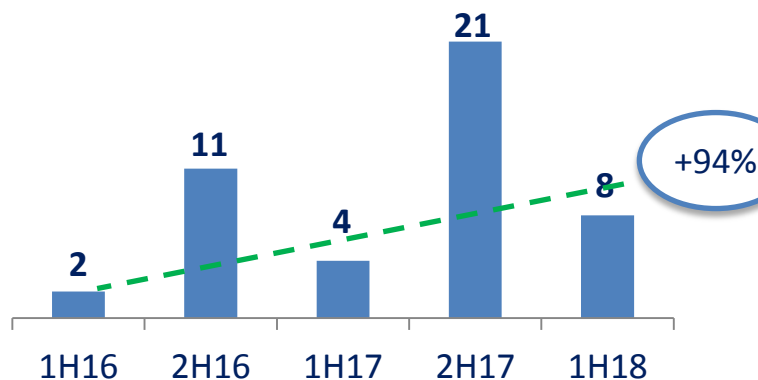
## Revenues



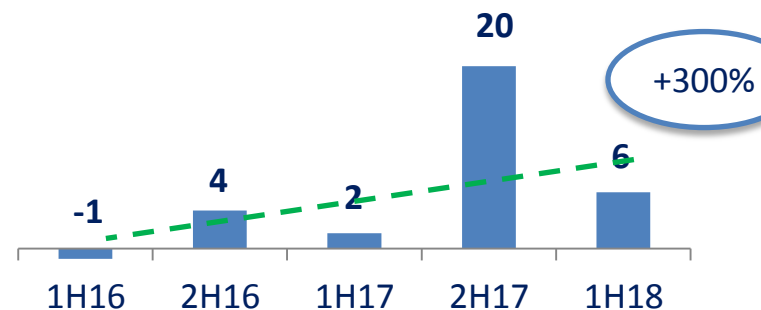
## EBITDA



## EBIT



## Net Income



\*Based on exponential interpolation

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# Key economics HY 2018



HY 2017	MAIN ECONOMICS	HY 2018	DELTA	
€ - M		€ - M	%	Comments
952,1 <sup>(1)</sup>	NET ORDER BACKLOG	961.5	+1%	<ul style="list-style-type: none"> <li>Slightly ahead of schedule (timing)</li> </ul>
148.6	REVENUES	178.8	+20%	<ul style="list-style-type: none"> <li>Growth mainly due to Vega C development activities</li> </ul>
11.2 7.6%	EBITDA REPORTED <i>% on net revenues</i>	14.5 8.1%	+29%	<ul style="list-style-type: none"> <li>HY18 results include €1.2M of R&amp;D Tax Credit relative to 2017 (not present in HY17)</li> <li>R&amp;D tax credit relative 2018 to be assessed at year end and to be included in 2018 results based on actual progress achieved on development activities in 2018</li> <li>Non-recurring costs reduced by 60%</li> <li>Interest expenses reduced by 90% (from €3.1M to €0.2M)</li> </ul>
15.2 10.2%	EBITDA ADJUSTED <i>% on net revenues</i>	16.1 9.0%	+6%	
4.3 2.9%	EBIT REPORTED <i>% on net revenues</i>	7.7 4.3%	+79%	
8.3 5.6%	EBIT ADJUSTED <i>% on net revenues</i>	9.3 5.2%	+12%	
1.7 1.2%	NET INCOME <i>% on net revenues</i>	6.2 3.5%	3.6x	

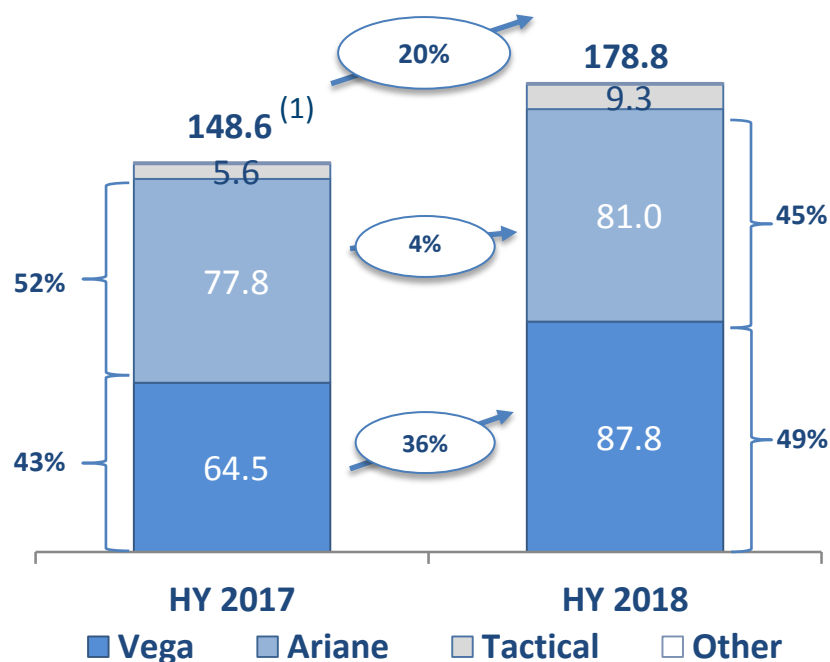
(1) As of 31<sup>st</sup> December 2017



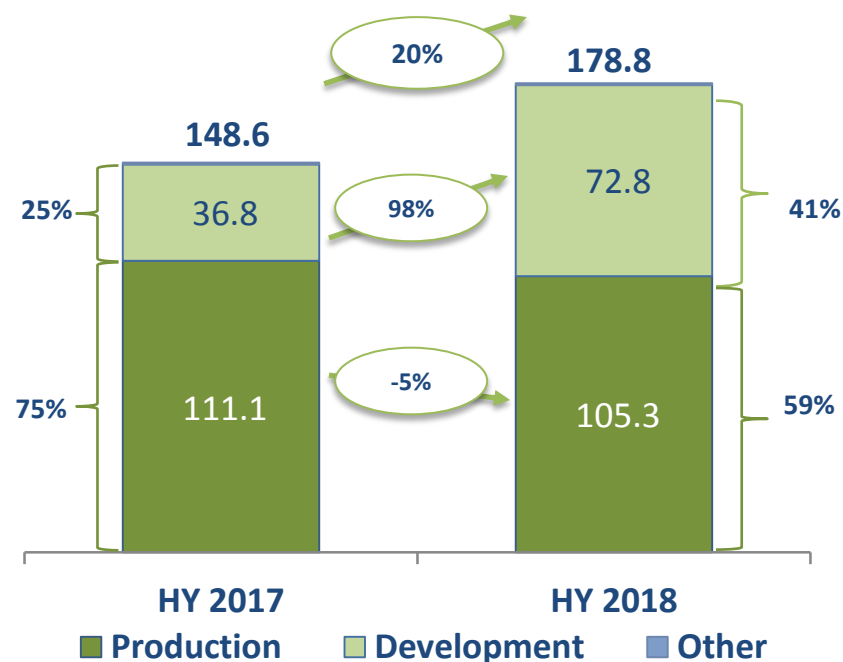
# Net Revenues HY 2018



by Line of Business (€ - M)



by Activity (€ - M)



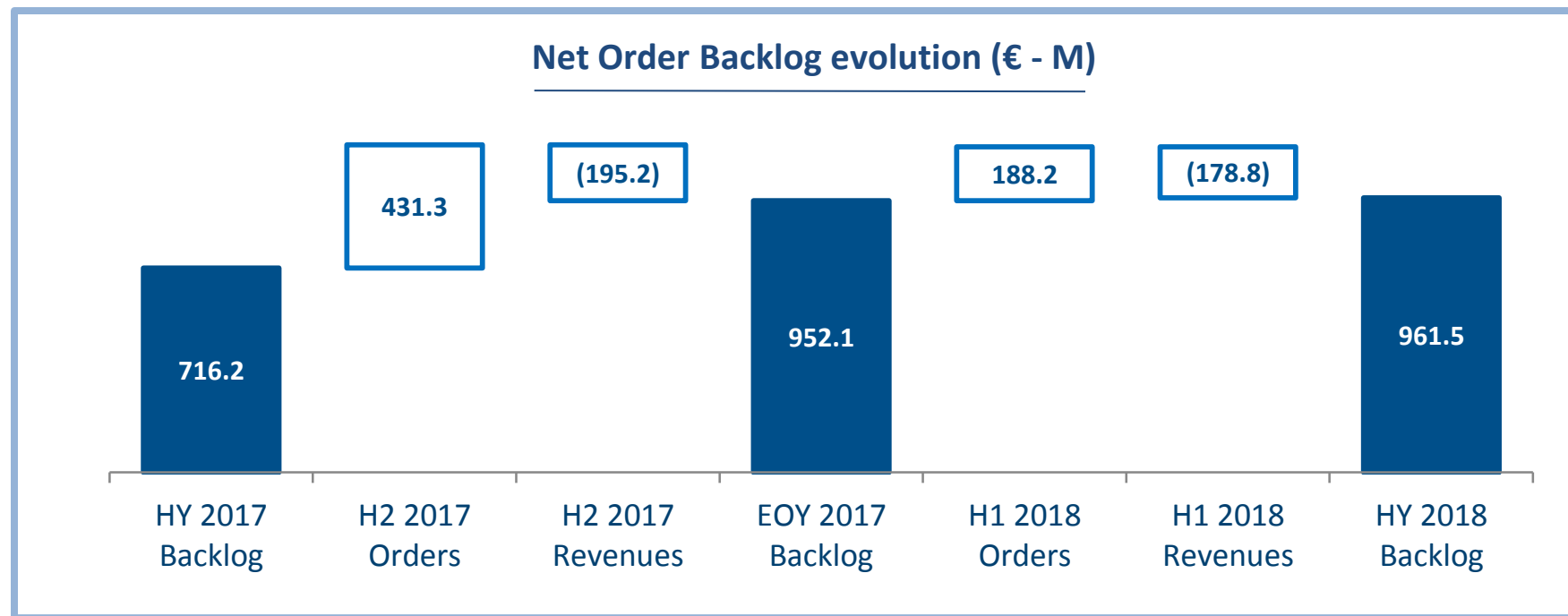
- Significant growth of Vega business (production and development) with stable Ariane

- Significant growth of development activities as approaching Vega C and Ariane 6 Maiden Flights (2019 and 2021 respectively)
- Production stable. Decrease driven by timing

<sup>(1)</sup> Minor reclassifications of liquid revenues from Vega to Ariane



# Net Order Backlog evolution as of HY 2018



- +€188 M of new contracts signed in HY 2018 including :
  - Ariane 5 production batch PC (2019-2021), covering the last 8-10 flight units (in parallel to Ariane 6 ramp-up)
  - ASTER-30 booster production order from MBDA for the period 2019-2022
  - Vega LEAP contract with ESA (maintenance of operational capability for Vega for the period 2018-2019)
  - VEGA GPM for the period 2018-2020



# Balance Sheet HY 2018



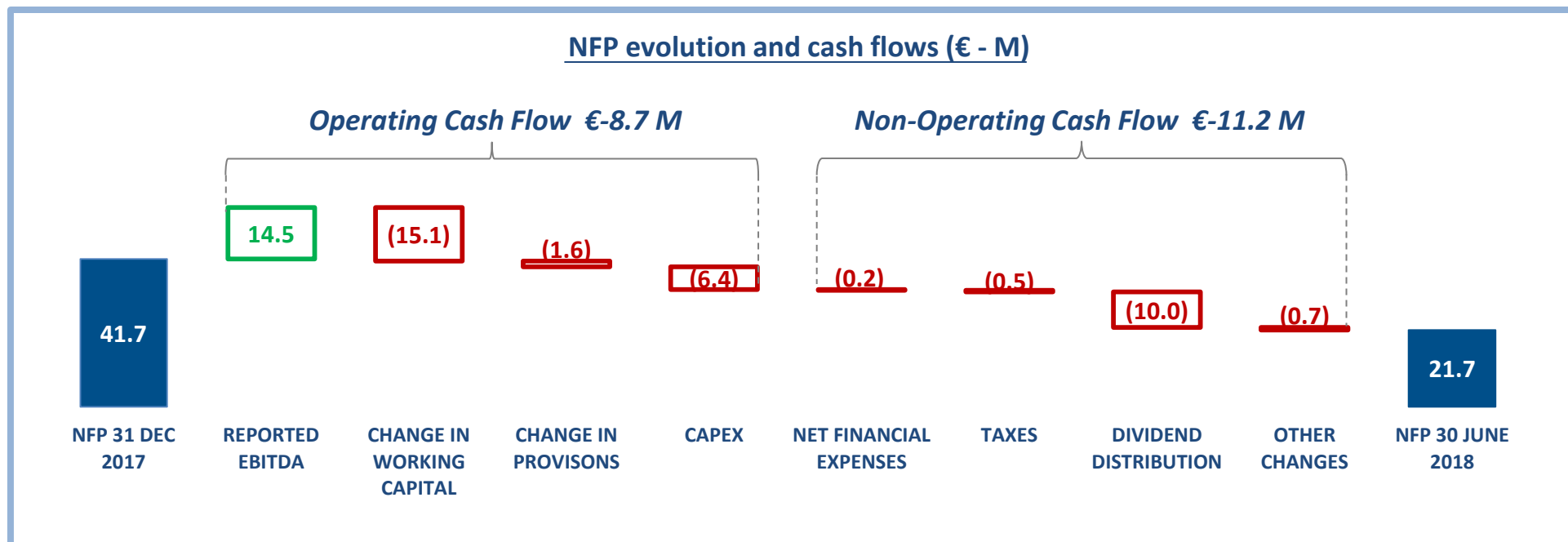
31 DEC 2017 ACTUAL	MAIN SOURCE AND USES	30 JUN 2018 ACTUAL	DELTA	
€ - M		€ - M	€ - M	Comments
(75.9)	WORKING CAPITAL	(60.7)	15.1	• Cyclical trend of Net WIP (activities vs advances already collected)
76.5	DEFERRED TAX ASSETS	75.5	(1.0)	
(27.2)	PROVISIONS (EMPLOYEES' BENEFITS AND RISKS)	(25.6)	1.6	
61.0	GOODWILL	61.0	-	
42.5	CUSTOMER RELATIONSHIP ASSET	41.1	(1.5)	
156.1	FIXED ASSETS	155.8	(0.2)	
7.4	FINANCIAL RECEIVABLES	7.4	-	
240.5	NET INVESTED CAPITAL	254.5	14.0	
41.7	NET FINANCIAL POSITION (IFRS)	21.7	(20.0)	• €10M Dividend payment in May and typical seasonality business cycle
(282.2)	EQUITY	(276.2)	6.0	• Net decrease principally from Dividend payment and net income of the period
(240.5)	TOTAL SOURCES	(254.5)	(14.0)	



# HY18 Evolution of Net Financial Position



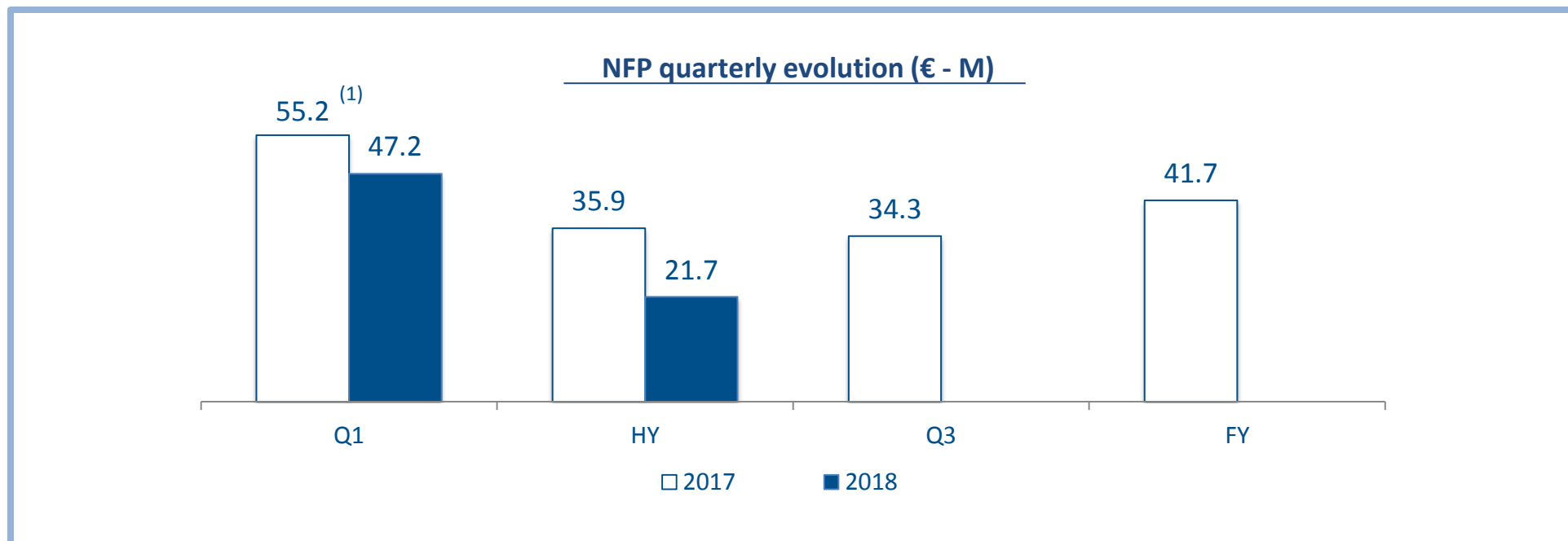
## NFP evolution and cash flows (€ - M)



- Change in Working Capital driven by cyclical trend of Net Work In Progress
- €10M dividend payment in May 2018



# Net Financial Position quarterly pattern



- 2018 NFP quarterly pattern in line with 2017

(1) Pro-forma following the business combination S2-Avio in Q1 2017

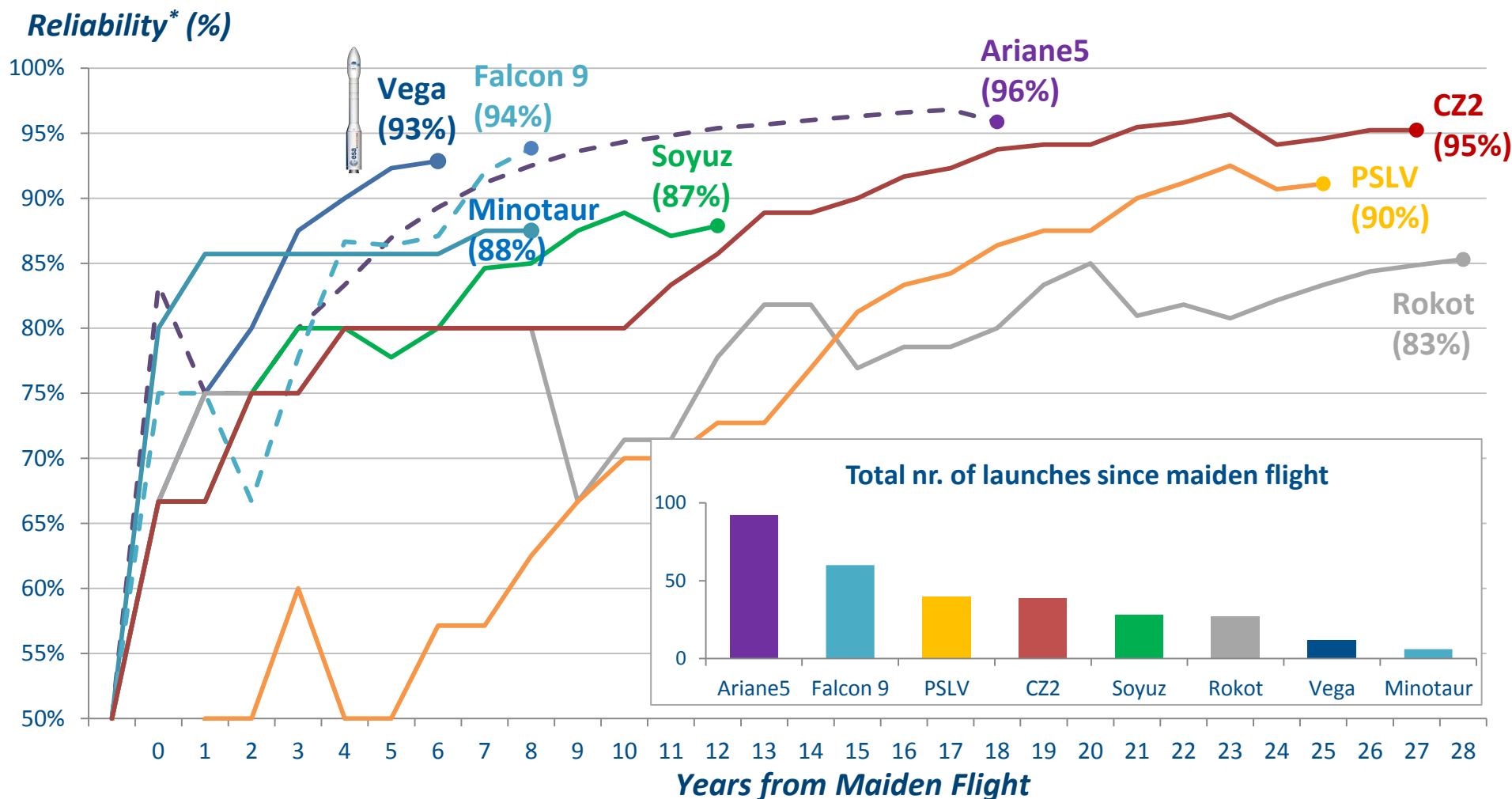


# Appendix





# Vega – the fastest track to top-class reliability worldwide



\* First level Bayesian estimate of mean predicted probability of success for next launch attempt  $(k+1)/(n+2)$  where  $k$  is the number of successful events and  $n$  is the number of trials

SOURCE: Avio elaboration on SpaceLaunchReport data



# Economic Highlights FY 2017



MAIN ECONOMICS	FY 2016	FY 2017*	DELTA	
€ - M	€ - M	€ - M	%	Comments
NET ORDER BACKLOG	775.1	952.1	+ 23%	+€500M new order acquisitions
NET REVENUES	292.0	343.8	+ 18%	Higher production volumes and more development activities
EBITDA REPORTED <i>% on net revenues</i>	26.9 9.2%	39.2 11.4%	+ 46%	Better absorption of fixed costs Program costs lowered by R&D tax credit effect Non-recurring costs decreasing
EBITDA ADJUSTED <i>% on net revenues</i>	36.5 12.5%	46.5 13.5%	+ 27%	
EBIT REPORTED <i>% on net revenues</i>	13.2 4.5%	25.0 7.3%	+89%	Driven by EBITDA reported
EBIT ADJUSTED <i>% on net revenues</i>	26.9 9.2%	32.3 9.4%	+ 20%	EBIT Adjusted impacted by new Customer Relationship Amortization considered recurring non cash item starting from 2017
NET INCOME <i>% on net revenues</i>	3.1 1.1%	21.8 6.3%	+ 603%	Lower financial expenses (new debt structure) Positive impact of deferred tax assets

\* Pro-Forma figures to compare on a “like-for-like” basis the 2016 and 2017 financials in light of the business combination



# The Space launch service has two distinctive market segments addressed by Ariane and Vega



## Geostationary Transfer Orbit

Altitude 36,000km



520+ Satellites\*

- **Applications** : Broadcasting, Telecoms
- **Avg Satellite mass** : 5,000 kg
- **Avg Service life**: 12-15 years

## Medium Earth Orbit

Altitude 3,000-22,000km

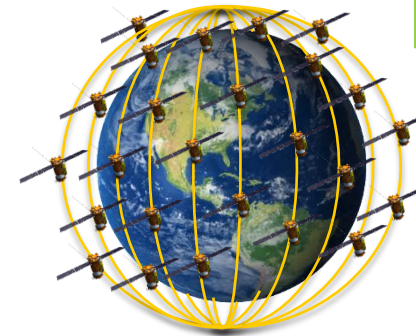
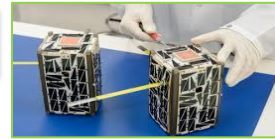


120+ Satellites\*

- **Applications** : Telecom, Navigation
- **Avg Satellite mass** : 1,000-2,000 kg
- **Avg Service life**: 10-12 years

## Low Earth Orbit

Altitude 500-2,000km



804+ Satellites\*

- **Applications**: Earth obs., Internet, Science
- **Avg Satellite mass** : 50 Kg – 1000 kg
- **Avg Service life**: 3-7 years

Mostly replacement markets with growing competition from new USA ventures

Expansion market with growing untapped demand and fewer competitors





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