



Investor Presentation

Virtual STAR Conference

Rome, 26th May 2020

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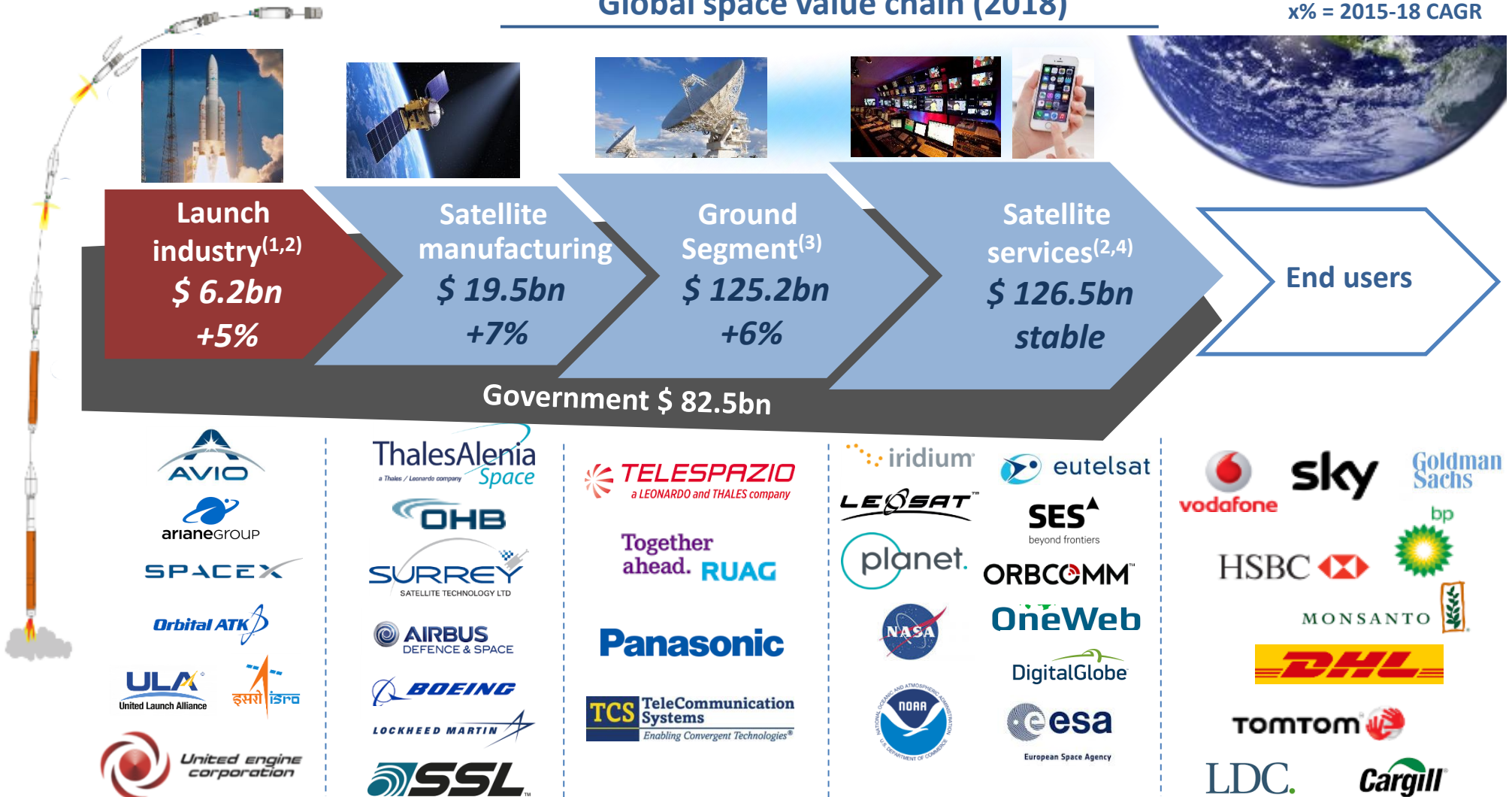
Agenda

- **The Space launcher business**
 - Avio's positioning and evolution
 - Recent updates
 - Financials

The launch industry is the gateway to the Space economy

Global space value chain (2018)

x% = 2015-18 CAGR



Source: Satellite Industry Association (2018)

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(1): Includes launcher manufacturing and launch service activities

(2): Commercial services revenues only

(3): Includes GNSS chipsets and Related

(4): Includes commercial humanflight

Growth in demand of satellite services is driven today largely by Earth Observation and connectivity services

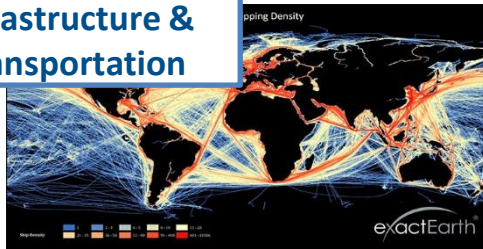


Application

Example

End Users

Infrastructure & Transportation

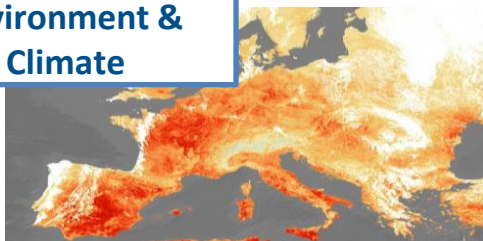


ICEYE

exactEarth®

- Investors & financial analysts (Quant, Commodity)
- Intelligence analysts
- Customs & Border agents

Environment & Climate

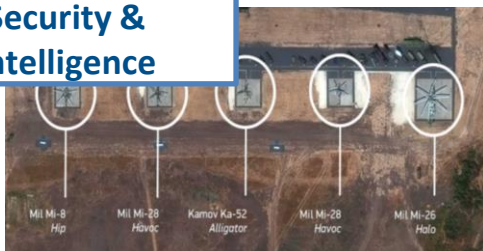


planet.

copernicus
Europe's eyes on Earth

- Farmers
- Insurance companies
- Meteorological agencies
- Civil Protection agencies

Security & Intelligence



DigitalGlobe™ e-geos
AN ASI / TELESPAZIO COMPANY

- Defense
- Intelligence agencies
- Rescue operations

Energy & natural resources



AIRBUS
DEFENCE & SPACE

TERRA SAR

PLÉIADES IMAGERY
SERVICES

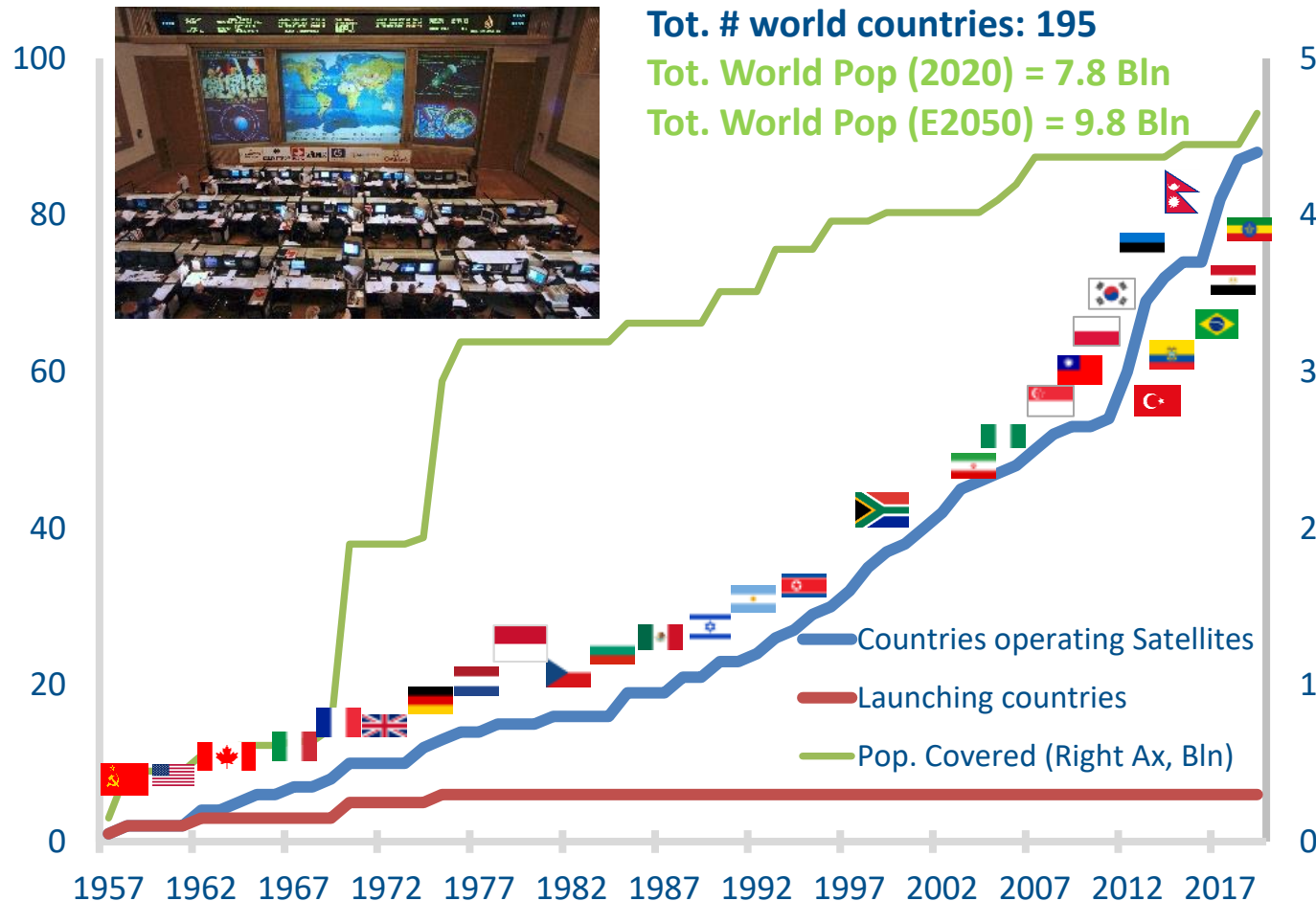
- Investors & financial analysts (Quant, Commodity)
- Insurance companies

Increasing gap between geographic origin of demand and supply



of Countries

Population covered

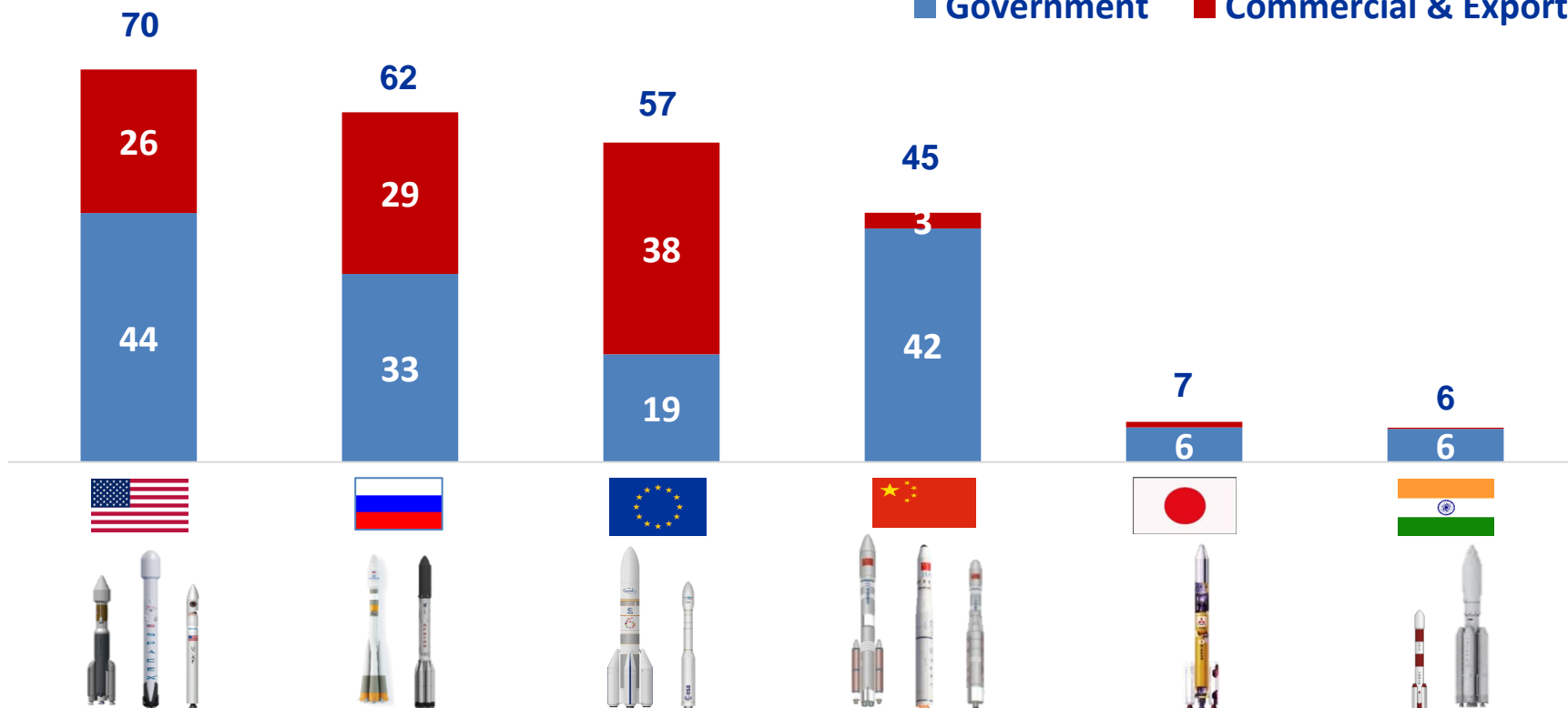


Launch capabilities concentrated in a few countries. Export capacity essentially in Europe and USA



Average Annual Mass Launched in 2009-18 (Tons)

■ Government ■ Commercial & Export

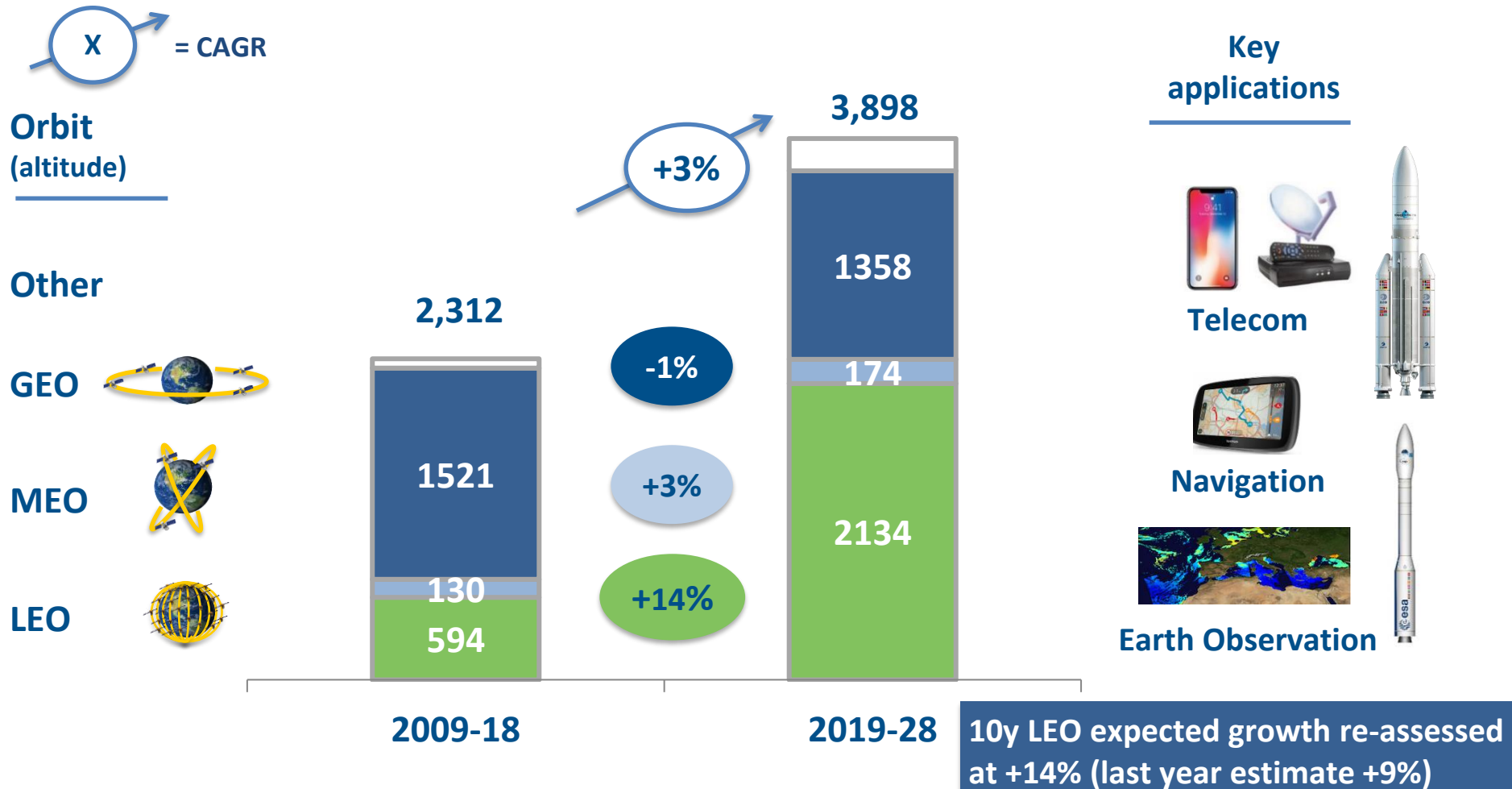


For the next decade: stable launch demand in MEO-GEO, fast-growing in LEO



World Market

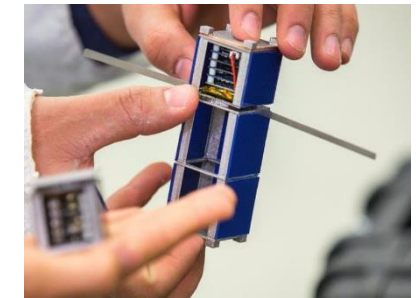
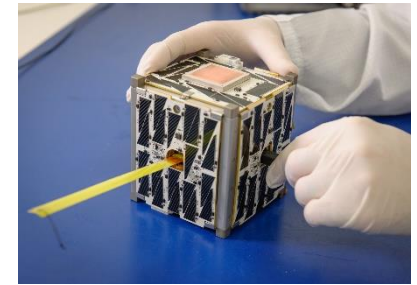
World total mass at launch (tons)



Satellite mass is shrinking quickly



	2009-18	2019-28E
GEO	4.2	3.4
MEO	1.2	1.5
LEO	0.2	0.1



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Avio : a pure player in Space Launchers



- 360 M€ revenues (10% CAGR 2014-19)
- 1.000 employees
- 400 M€ Mkt Cap
- 70% free float
- 4% Mgmt share



NEW 2020

Ariane 6

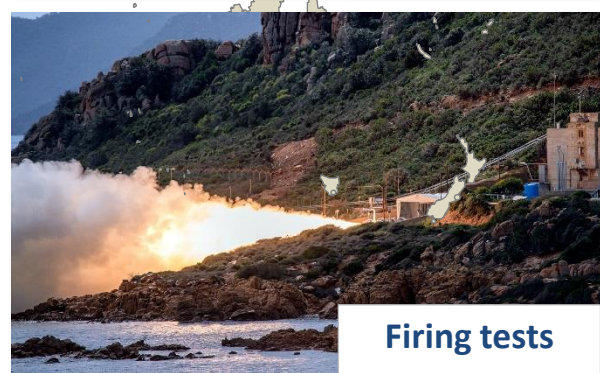
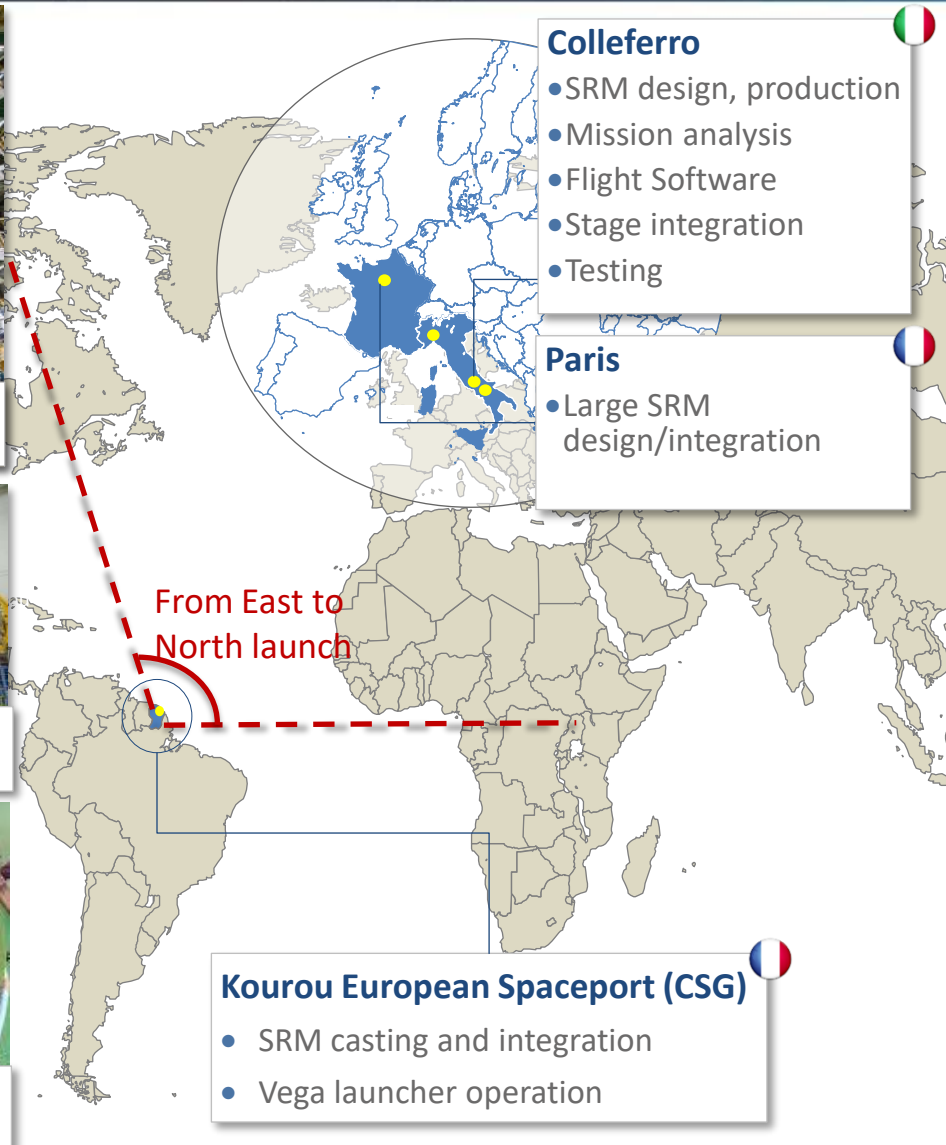
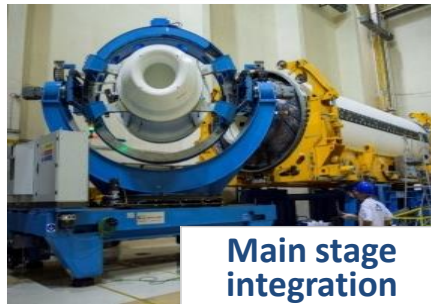
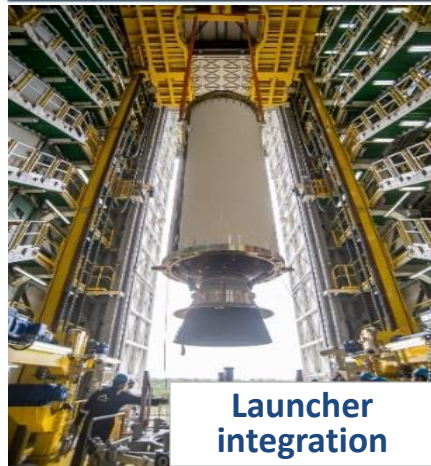
Vega C



- European heavy launcher (10.5 tons in GTO)
- Avio: partner and supplier for strap-on boosters

- European light launcher (1.5 tons in LEO)
- Avio: developer, manufacturer, launcher system integrator

Industrial operations in Europe and French Guyana

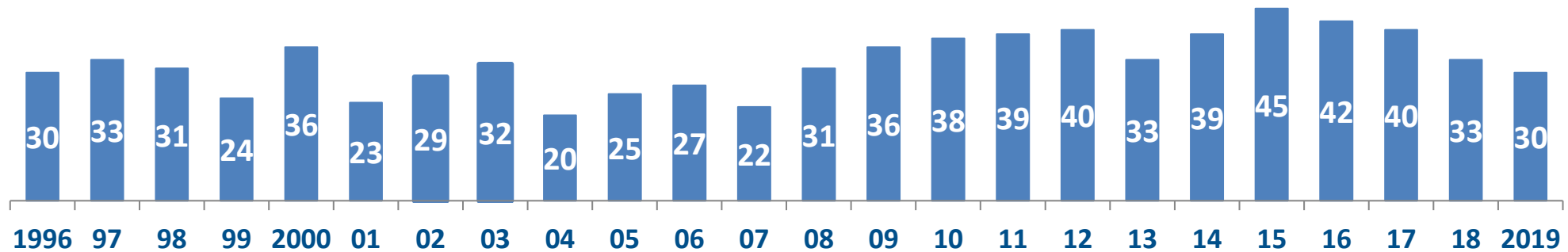


Ariane 5: the workhorse for Geostationary Satellites

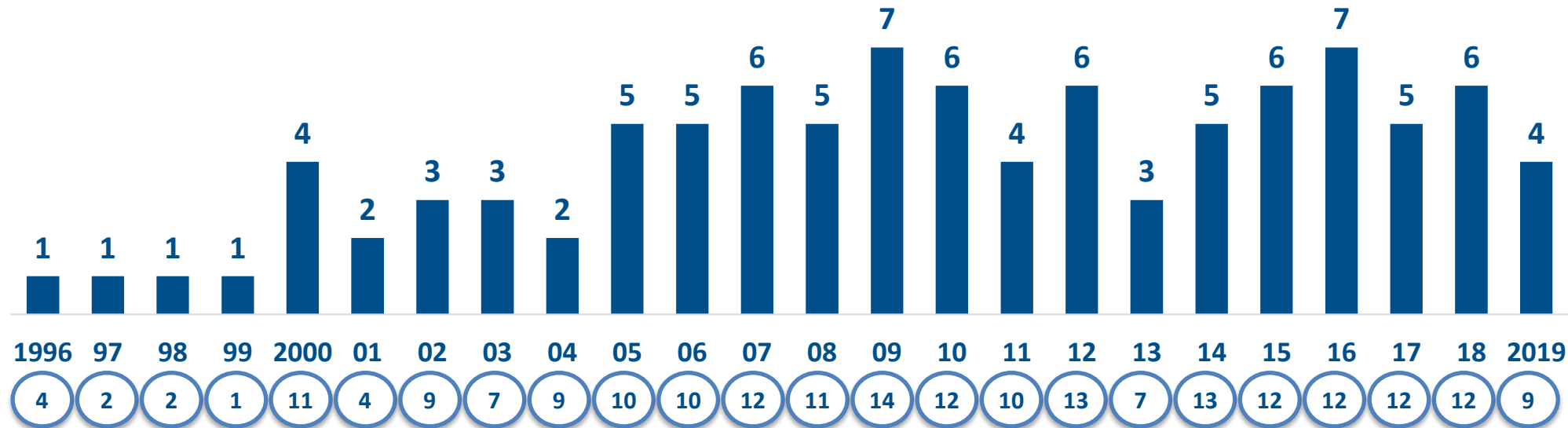


Total # of satellites launched into GTO worldwide

x = # of sats orbited by Ariane5



of Ariane 5 Launches (launches with two satellites)



SOURCE: Web Search

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A stable and resilient business



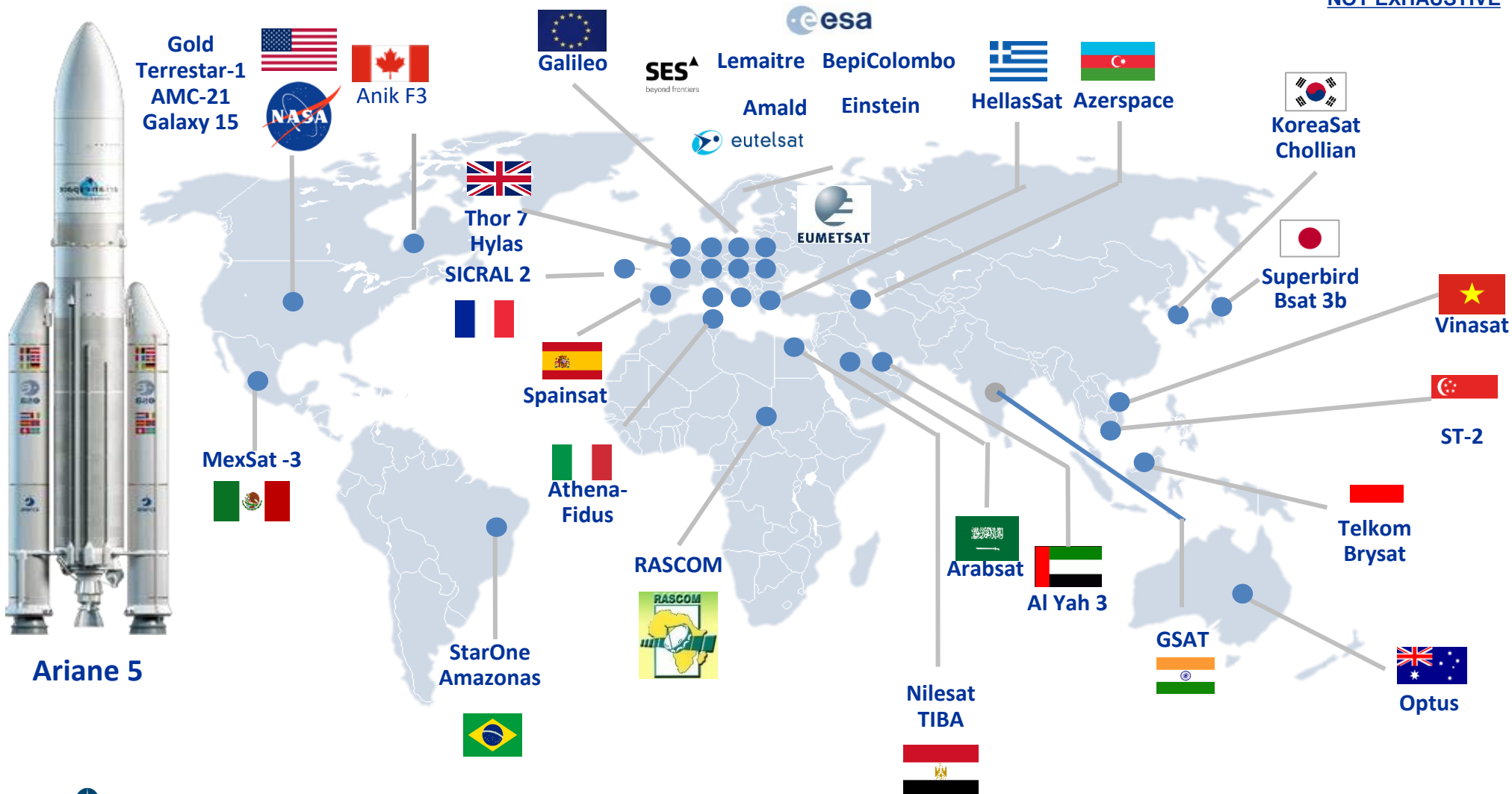
Ariane: global customer base for GEO launch



arianespace
arianegroup

NOT EXHAUSTIVE

● = Last 15 yrs flights



With the Sat miniaturization trend, Vega is ready to increase launch cadence to perform 5 flights per year

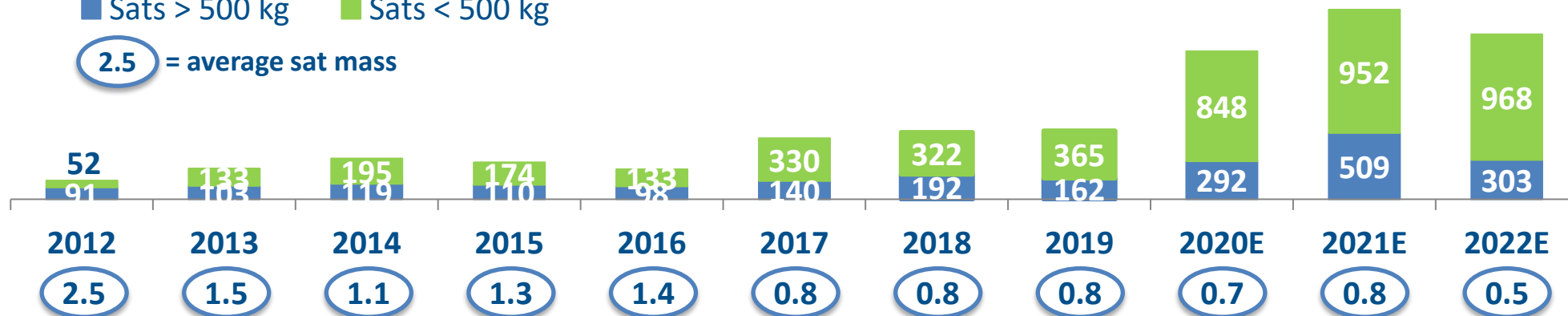


Total # of satellites launched into Space worldwide

■ Sats > 500 kg

■ Sats < 500 kg

2.5 = average sat mass



Number of Vega Launches per year (cumulative 3 yrs avg)

5

4

3

2

1

0

Cube sats



2012

2013

2014

2015

2016

2017

2018

2019

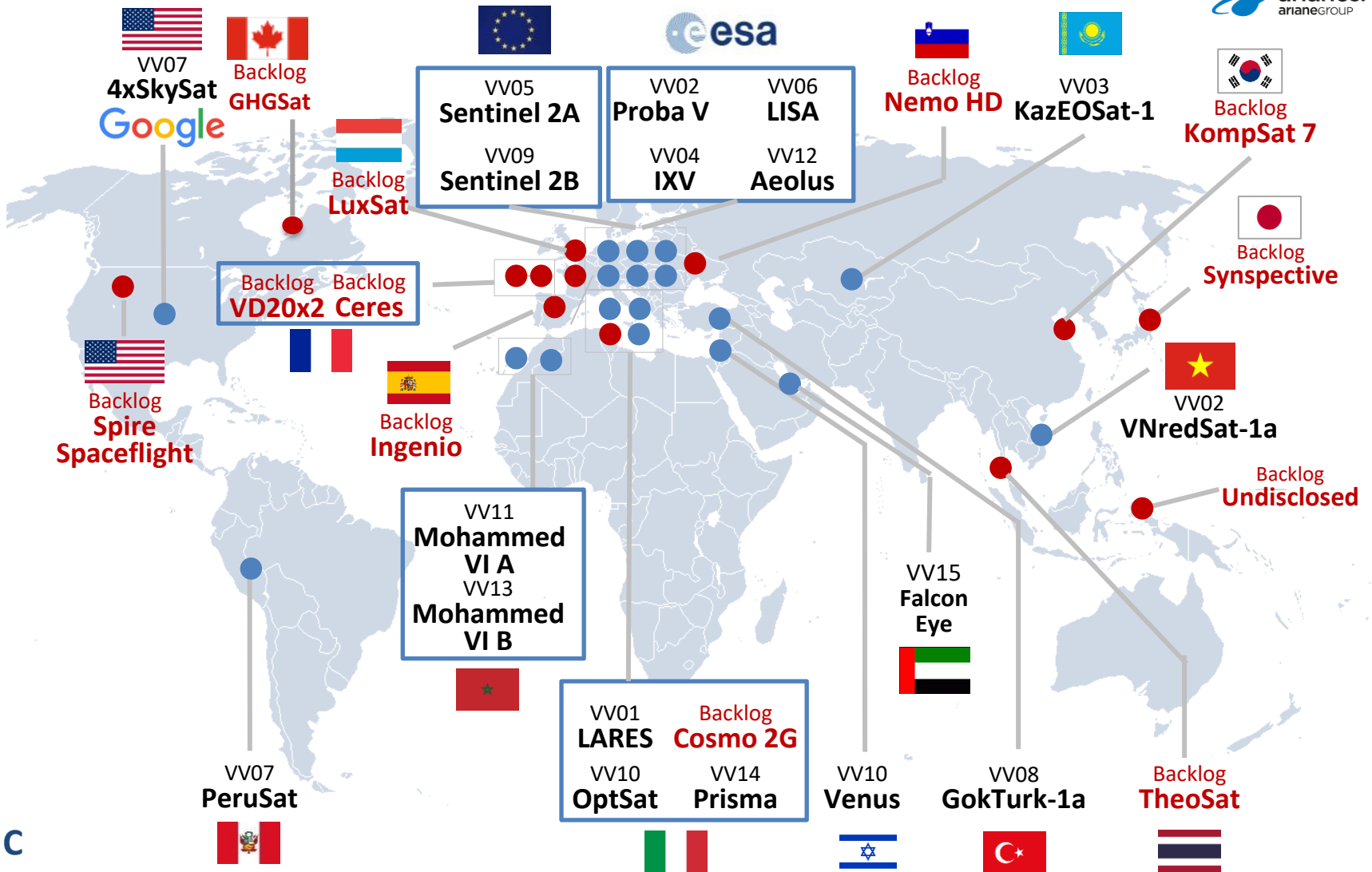
2020

2021

2022



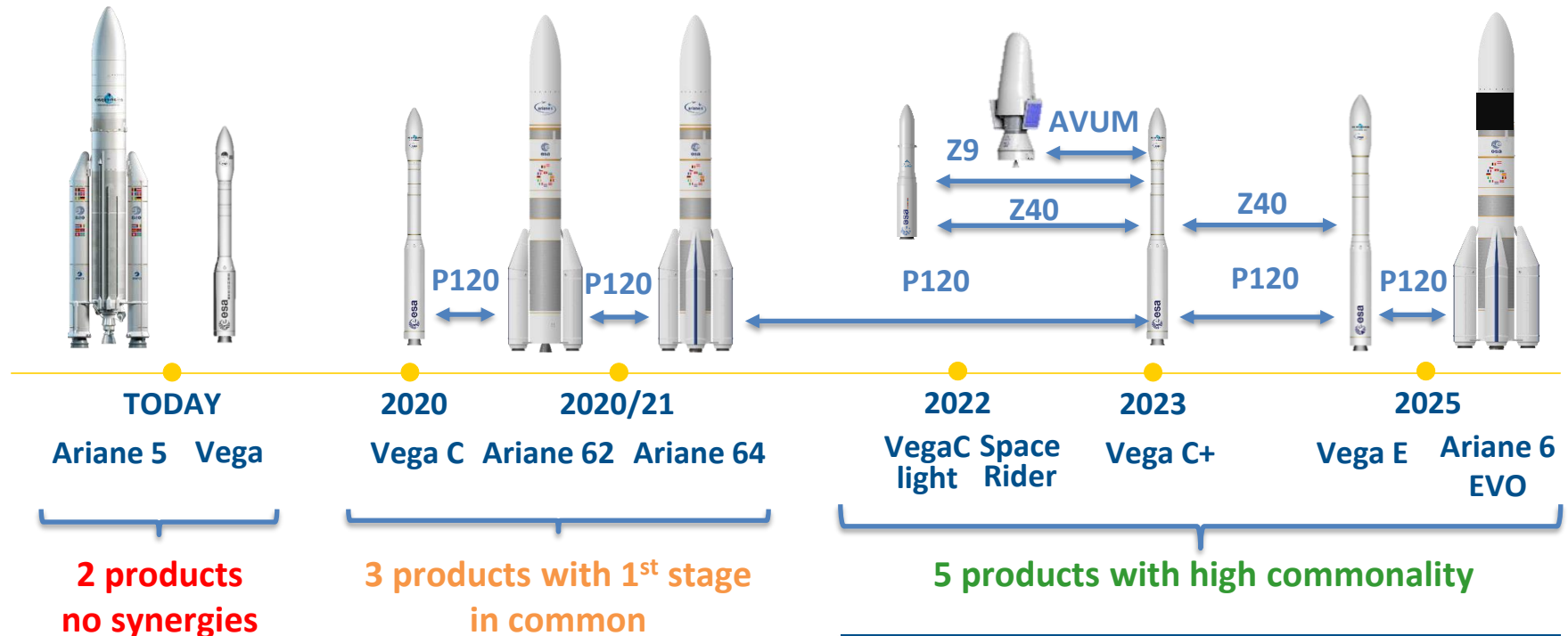
● = Flights



2019 – ESA Ministerial Council: secured €490M funding for new development projects



Product roadmap funded at ESA Ministerial Council '19



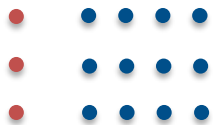
MC '19: €2.2B funding for launchers
(of which ~€490M for Avio)

Automation and standardization to increase cost competitiveness



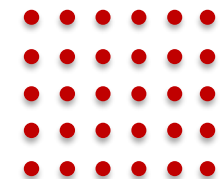
Vega Ariane 5

P80 **P230**



Vega C Ariane 62 Ariane 64

P120



Single main-stage, higher volumes, economies of scale

*First flight items
production*

*Vega C MF
Ariane 6 MF*

*P120 Full volume
production*



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May 2020: Vega on the Launch Pad and ready to return-to-flight



New Launch date:
mid June

VV16 – Vega return to flight with SSMS PoC*



- VV16 integrated, operations to resume on May 25
- First European «rideshare mission» for small satellites (booming demand)
- More than 50 satellites from the US and the EU including Planet, Spire, GHGSat, Tyvak, ISIS
- Innovative mission delivering on 2 different SunSynchronous orbital planes

2019: Key accomplishments on new developments



Largest carbon fiber SRM



**A6/Vega C: P120
firing test (Kourou)**



**Vega C: Zefiro40
firing test (Sardinia)**

1st European Re-entry Vehicle



**Space Rider Project
Design Review**



**Return to flight: Zefiro23
firing test (Sardinia)**



**Vega E: M10 LOX-CH
firing test (USA)**



**First successful
Camm-ER tests**

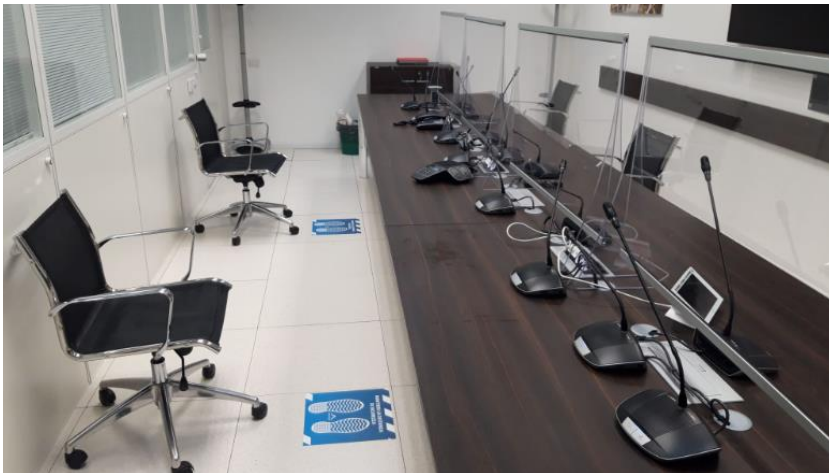
End of the COVID-19 lockdown: adaptation to new normal



**11 May -Avio VV16 team departing to Kourou
on Alitalia charter flight from Rome FCO**



Individual protection equipment



Adapted meeting rooms



Modified layout to access facilities

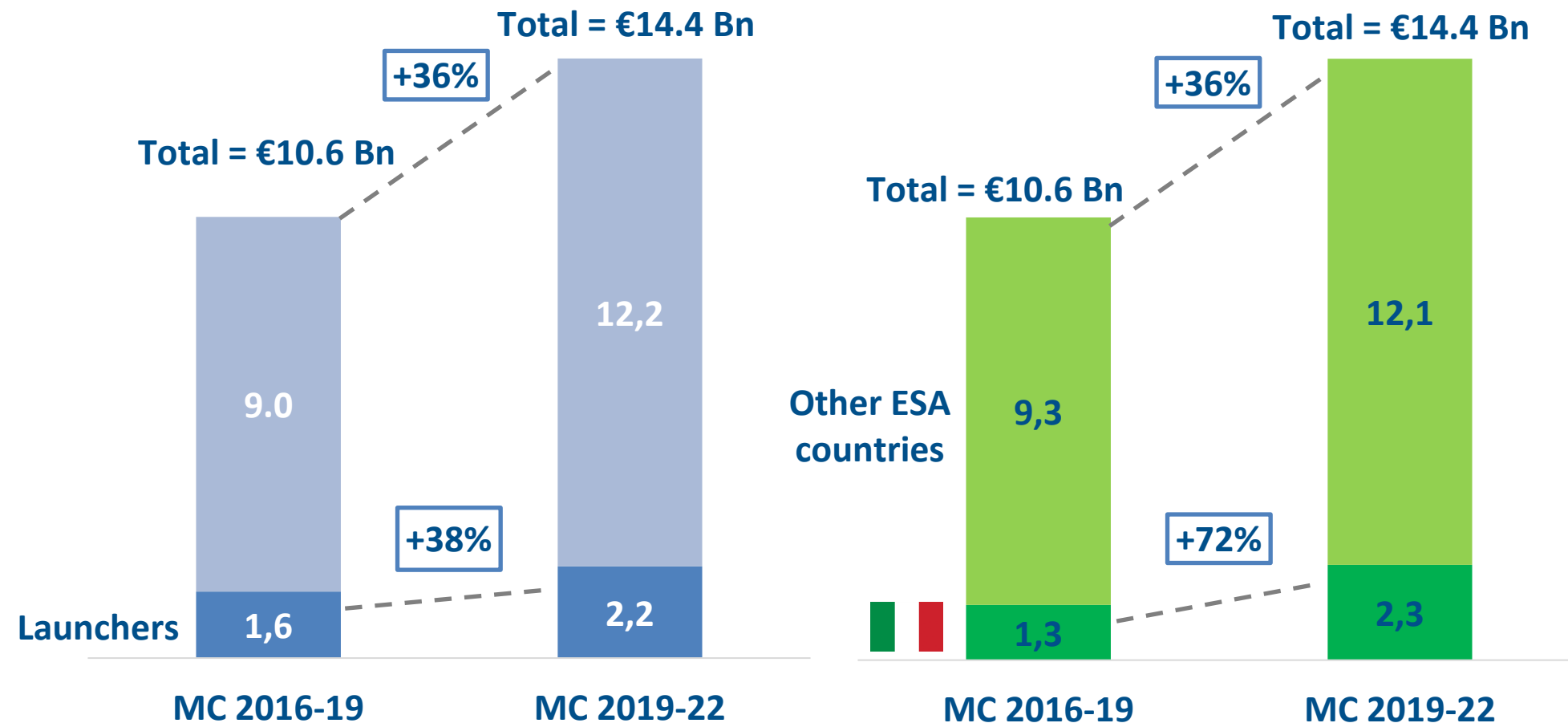


**Hand sanitizer
dispensers**

Positive outcome of the 2019 ESA Ministerial Council



ESA Ministerial Council Subscriptions



Positive outlook for the evolution of Vega programs



Key ESA Space transportation programs under Italian leadership



Vega C getting ready for Maiden Flight by 1st semester 2020



Sub-systems readiness

System-level tests

FAIRING

AVUM

Z9

IS2/3

Z40

IS1/2

P120



Fairing



Vampire adapter



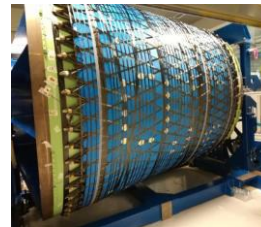
New prop. tanks



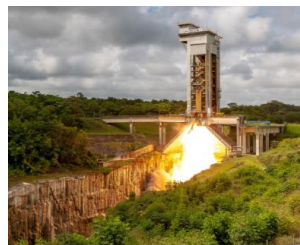
AVUM new gas tank



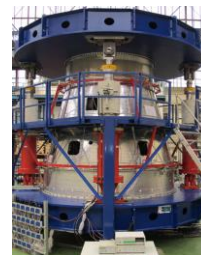
Z40 Firing Test (May)



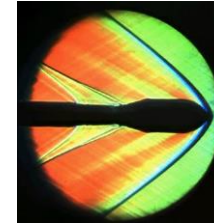
IS2/3



P120 Firing Test (Jan. '19)



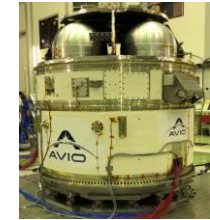
IS1/2



Wind Tunnel Test



HWIL tests



Vibration tests



UCEMC test



A2 Assy test



UCMEC tests

New facilities



P120 BBP



P120 BIP Extension

Ariane 6 getting ready for Maiden Flight by end of 2020



FAIRING



Ariane 6 Fairing Shell completed (Jun.)

VINCI



Ariane 6 launch vehicle building under way



Ariane 6 mobile gantry in construction

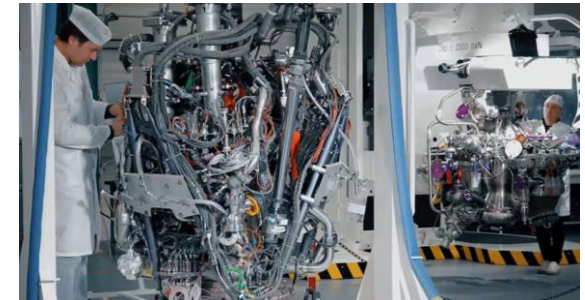
VULCAIN



Vulcan 6 Firing Test (Jul.)



Upper Stage Tanks' Integ. (Jul.)



Vinci Engine Qualification Test (Oct.)

4xP120



P120 Firing Test (Jan. '19)



Ariane 6 P120 Rear Skirt Integ. (Aug.)



Ariane 6 Launch Pad almost ready

Vega E development : nearing full scale M10 firing test



M10
LOX-CH
Upper stage



- Conducted extensive firing test campaign on **sub-scale combustion chamber**
- **M10 LOX-CH Engine components PDR :**
 - **Turbopumps** (Liquid Oxygen and Methane)
 - **Combustion Chamber** (realized with **additive manufacturing**)
 - **Igniter**
- Text performed successfully on February-March 2020 at NASA facilities in the USA

Recent commercial successes highlight customers' confidence in Vega and Ariane



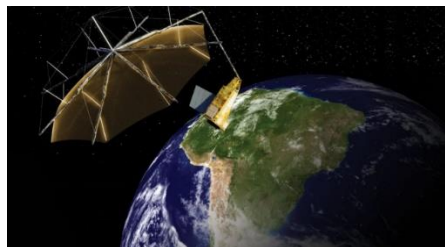
Vega

Earth Explorer Biomass

- Earth Observation satellite to **monitor forests degradation and fires through the analysis of carbon dioxide**
- Weight: **1.2 tons**
- Orbit: **SSO @666 Km**
- Launch vehicle: **Vega**
- Launch date: starting in **2022**

Undisclosed customer

- Earth Observation satellite to **monitor Typhoons**
- Orbit: **LEO**
- Launch vehicle: **Vega**



SOURCE: ESA, Arianespace, Press search
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Ariane

Galileo constellation

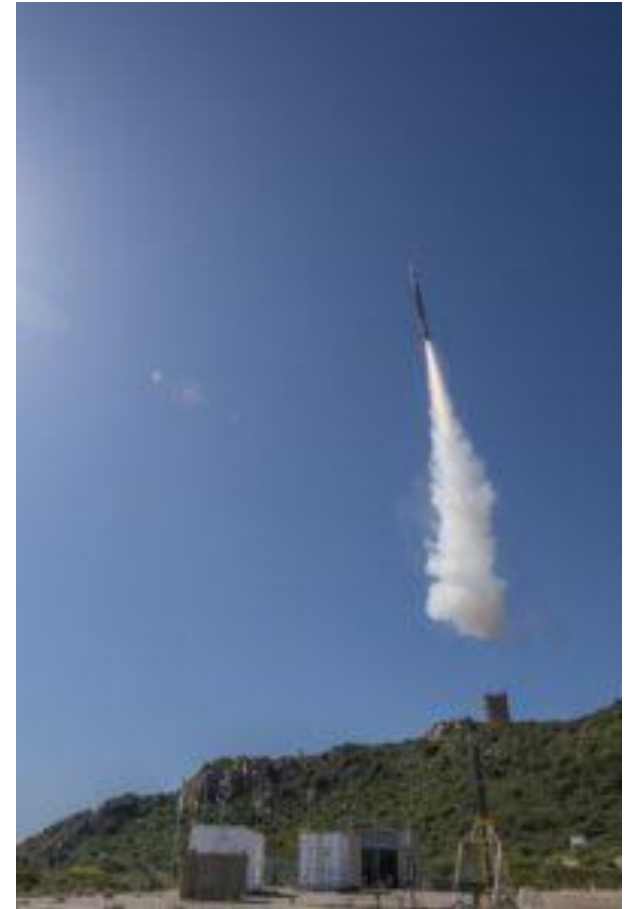
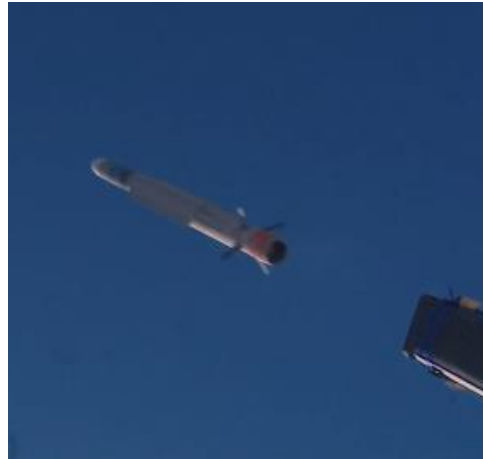
- European Union constellation of navigation satellites for **EU citizens and enterprises**
- Weight per sat: **0.7 tons**
- Orbit: **MEO @23,616 Km**
- Launch vehicle: **Ariane 62**
- Current number of scheduled flights with Ariane 62: **6, with 4 additional sats announced on January 2020**
- Launch dates: starting in **2020**



Tactical propulsion: Successful Camm-ER tests

MBDA

- MBDA successfully completed trials of the CAMM-ER air defence missile
- Series of firings proving performance at extended ranges and high altitudes
- CAMM-ER features a larger rocket motor to provide extended range beyond 40 km
- Avio responsible for the propulsion of the CAMM-ER defence system



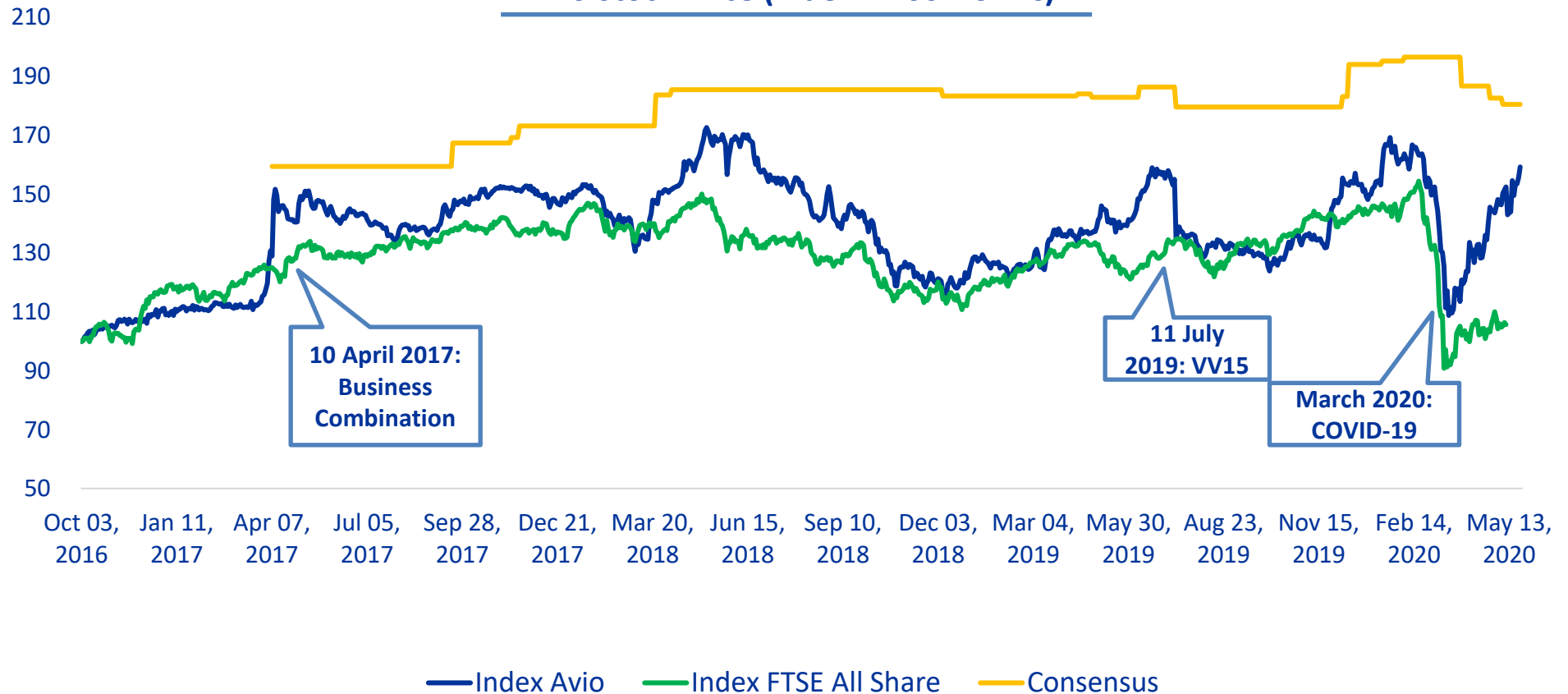
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Avio stock price vs Consensus Target Price and Benchmarks



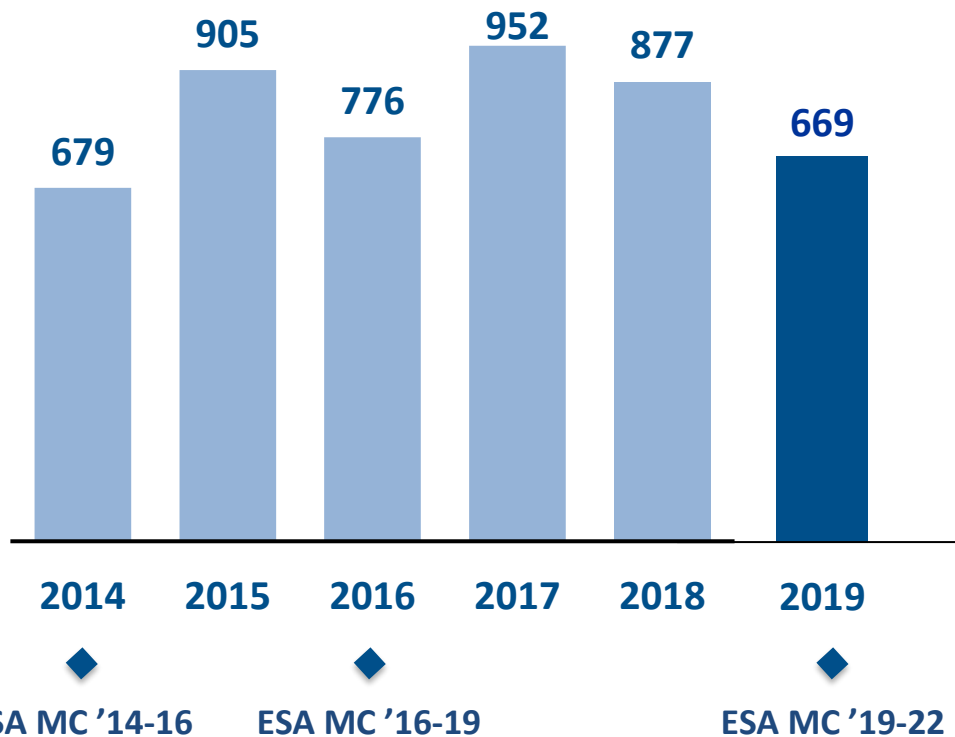
Avio Stock Price (Index = 100 = 9.2 €)



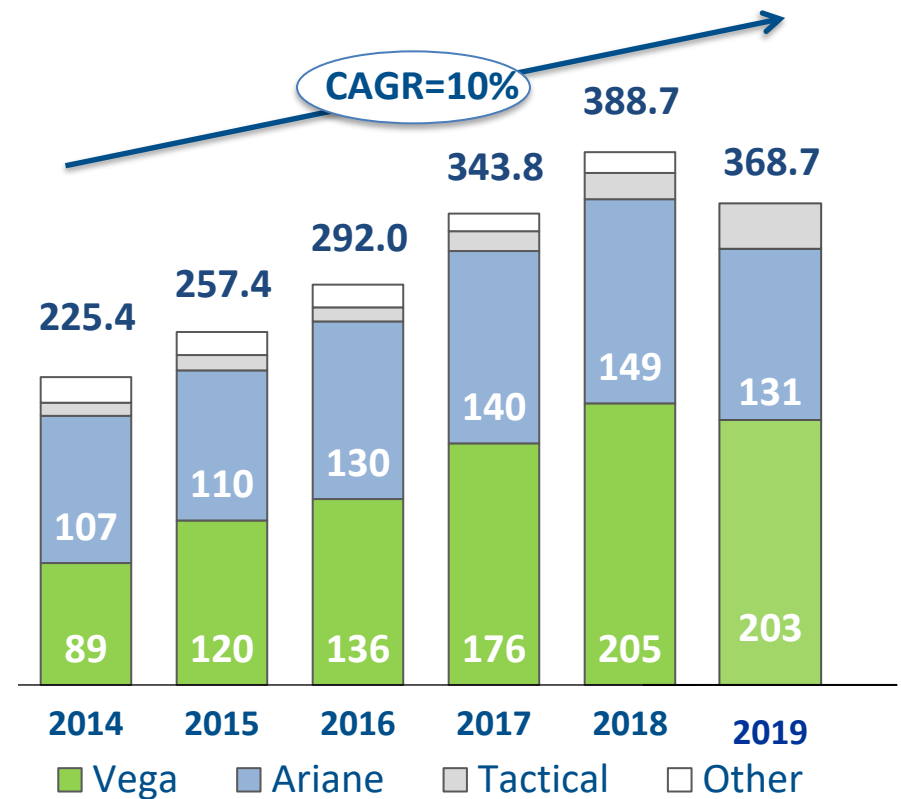
Net Order Backlog and Revenues



Net Order Backlog Evolution (€ - M)



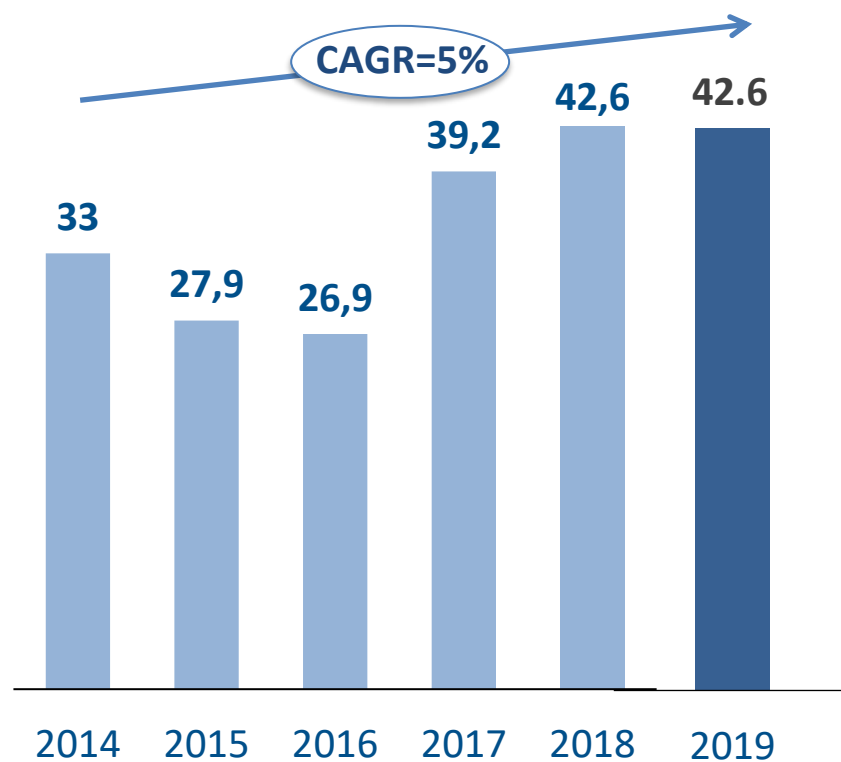
Revenues by Line of Business (€ - M)



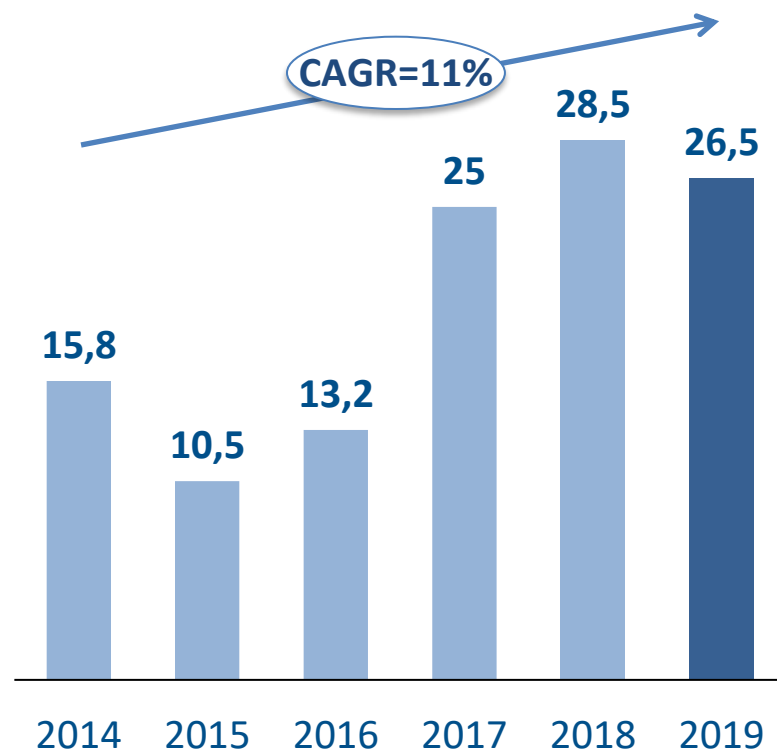
EBITDA and EBIT growing – High operating leverage



EBITDA (€ - M)



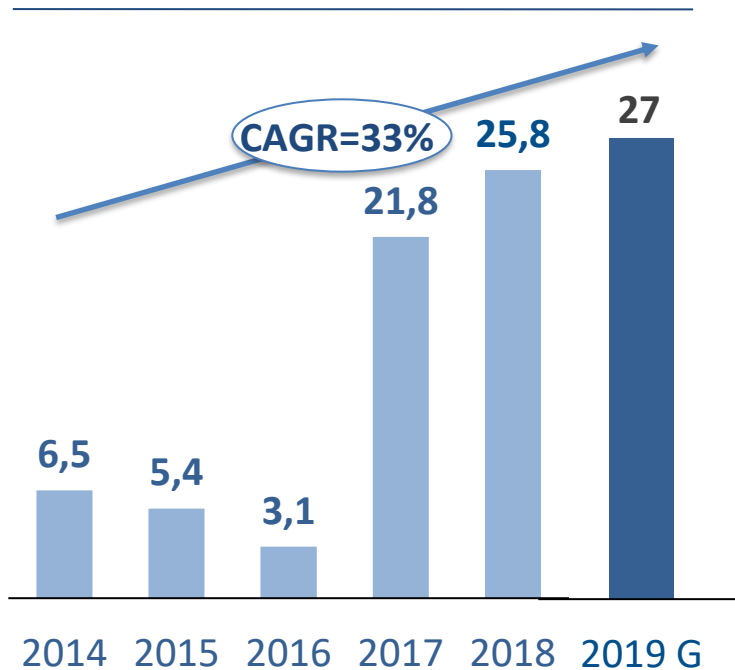
EBIT (€ - M)



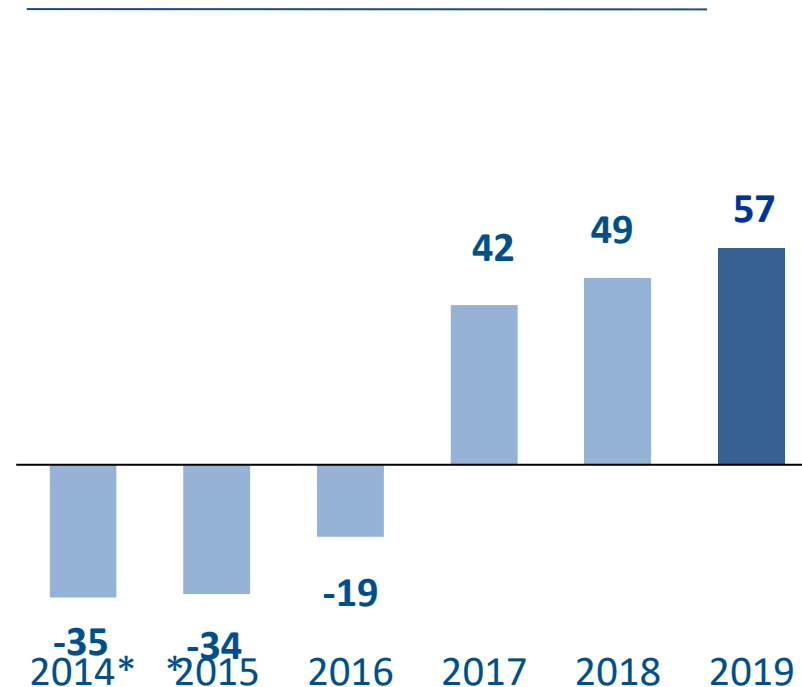
Growing Earnings and Cash supporting dividends and capex



Net Income (€ - M)



Net Financial Position (€ - M)



Dividends
(€ - M)

- 220* - 10 11.5

CAPEX
(€ - M)

17 14 25 29 23 29

* Extraordinary dividend ** Pro-forma to account for extraordinary dividend financing

Q1 2020 financials in line with Q1 2019



Q1 2019 ACTUAL	MAIN ECONOMICS/ FINANCIALS	Q1 2020 ACTUAL	DELTA	DELTA	Comments
€ - M		€ - M	€ - M	%	
82,6	NET REVENUES	80,0	(2,6)	-3%	<ul style="list-style-type: none"> • Slight slowdown in production and development activities • EBITDA benefitting from effective fixed costs control
7,0	EBITDA REPORTED	7,2	0,2	4%	
8,4%	% on net revenues	9,0%			
7,0	EBITDA ADJUSTED	7,8	0,8	11%	<ul style="list-style-type: none"> • Increase of non recurring costs related to the COVID-19 outbreak (e.g. protection equipment and donations) • Increase in depreciation related to previous years' capex
8,5%	% on net revenues	9,8%			
3,1	EBIT REPORTED	3,1	0,0	0%	
3,8%	% on net revenues	3,9%			
3,2	EBIT ADJUSTED	3,8	0,6	18%	
3,9%	% on net revenues	4,7%			
31 DEC 2019 ACTUAL		31 MAR 2020 ACTUAL	DELTA	DELTA	
€ - M		€ - M	€ - M	%	
57,9	NET CASH POSITION	42,1	(15,8)	-27%	<ul style="list-style-type: none"> • In line with ordinary business cycle

Next steps – Busy 2020 and incoming contracts



- **Upcoming flight activity**
 - VV16 SSMS – mid-June
 - VV17 – August
 - VV18 – by year-end
 - Vega C - launch campaign to start by year-end
 - Ariane 5 VA253 – end of July
- **Backlog**
 - Contractualization of the ESA '19 MC developments in progress
 - Tactical production contracts expected to be signed in the next few weeks
- **Development**
 - Vega C ground qualification review – 3rd quarter
 - P120 QM2 test (third and last static firing test for Ariane 6) – by year-end
- **2020 Financial results**
 - September 14th: HY 2020 – possible definition of the 2020 Guidance
 - November 5th: 9M 2020 results

Publicly announced flights in backlog and beyond for Vega and Ariane



Flights in backlog, detailed launch dates and schedule TBD

Vega/
Vega C



Comm.



Inst.



Inst.



Inst.



Inst.



For. Inst. For. Inst.



Inst.



Inst.

Ariane 5
&
Ariane 6



Comm.



Comm.



Comm.



Inst.



Inst.



Comm.



Inst.



Inst.



Inst.



Comm.



Inst.



Comm.



Inst.

2020

2021

2022

Some flights have the option to fly alternatively with Vega or Vega C
Some flights have the option to fly alternatively with Ariane 5 or with Soyuz

Source: Arianespace announcements and PRs, ESA, Press releases, Public information, NextSpaceflight.com

Structural elements of Avio's business resilience



	Drivers	Elements of resilience
Commercial	<ul style="list-style-type: none"> • FY 2019 Net Order Backlog ~€700M • New orders from ESA to be received from 2020 ~€500M 	<ul style="list-style-type: none"> • 2 years-equivalent revenues, 3-4 years business visibility based on planned roll-out • > 10 Vega flights & > 20 Ariane flights • ~70% of backlog for government end customers • Development projects subscribed at ESA MC '19
	<ul style="list-style-type: none"> • Positive NFP ~€60M • Low-interest Gross Debt ~€50M • Tax credits >€80M • Own shares ~€4M • Mgmt Long Term Incentive ~€1M 	<ul style="list-style-type: none"> • Available cash to better manage operations • Flexibility in Capex planning & execution • EIB 7 years-term debt • <1% fixed interest rate • Deferred tax assets (Income Tax) • Additional VAT and R&D credits • Buyback limit €9M • Bonus payment voluntarily deferred to 2021

Long-term outlook unchanged by Coronavirus



☐ Covid-19-related uncertainties may lead to short-term external turbulence and business slowdown:

- No 2020 Guidance at this time
 - Dividend distribution suspended
- } To be reviewed upon HY 2020 closing (September 2020)
- Deferred Long-Term Incentives' payment to management

☐ Continuity of operations:

- Authorised to continue industrial operations
- Vega return-to-flight in mid-June
- Strategic supplies already secured
- Vega C Maiden Flight preparation on track
- Robust Ariane and Vega backlog

☐ Long-Term outlook unchanged

Share buyback program launched in August 2019



Objectives

- **Efficient use of liquidity** generated by the ordinary business activities through a **medium-long term investment**
- Offer an additional **return to shareholders** along with dividend payments
- Possible use **own shares in M&A transactions**

Program scheme

- **€9M maximum investment amount** (as decided by shareholders in April)
- Initial mandate by BoD in August for €5M lasting until **October 2020**
- **Share Buyback** carried out **by an independent broker (Equita SIM, S.p.A.)**

Following the purchases made so far, as of May 22nd 2020 Avio S.p.A. holds # 315,300 own shares, corresponding to 1.20 % of total Avio's share capital (9th August – 22nd May)*

*Daily purchases capped by law at 25% of average daily volumes of the previous 20 trading days

Appendix



LEO demand growth and competitive environment

Overview of LEO Launchers (capacity in tons)



Dedicated launch



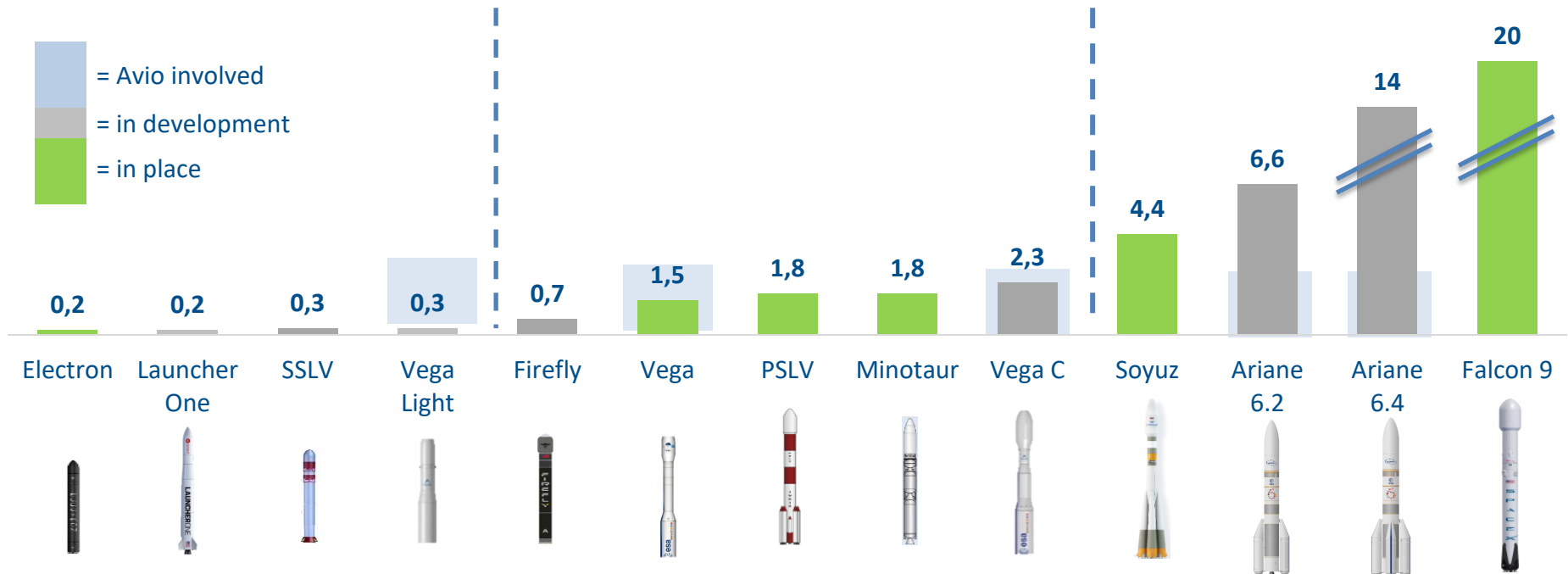
Rideshare

Avg mass 0.5 tons

Mini Launchers (<0.5 tons)

Small Launchers (>0.5, <2.5 tons)

Large Launchers (>2.5 tons)



SOURCE: Launchers' user manuals

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With also private investments in the Space sector continuing to grow rapidly



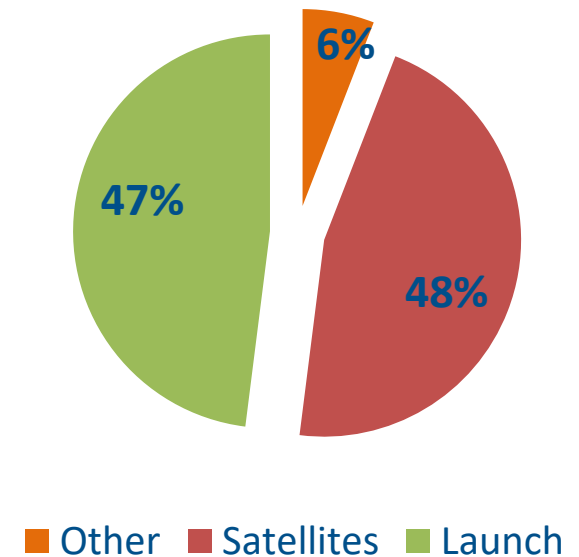
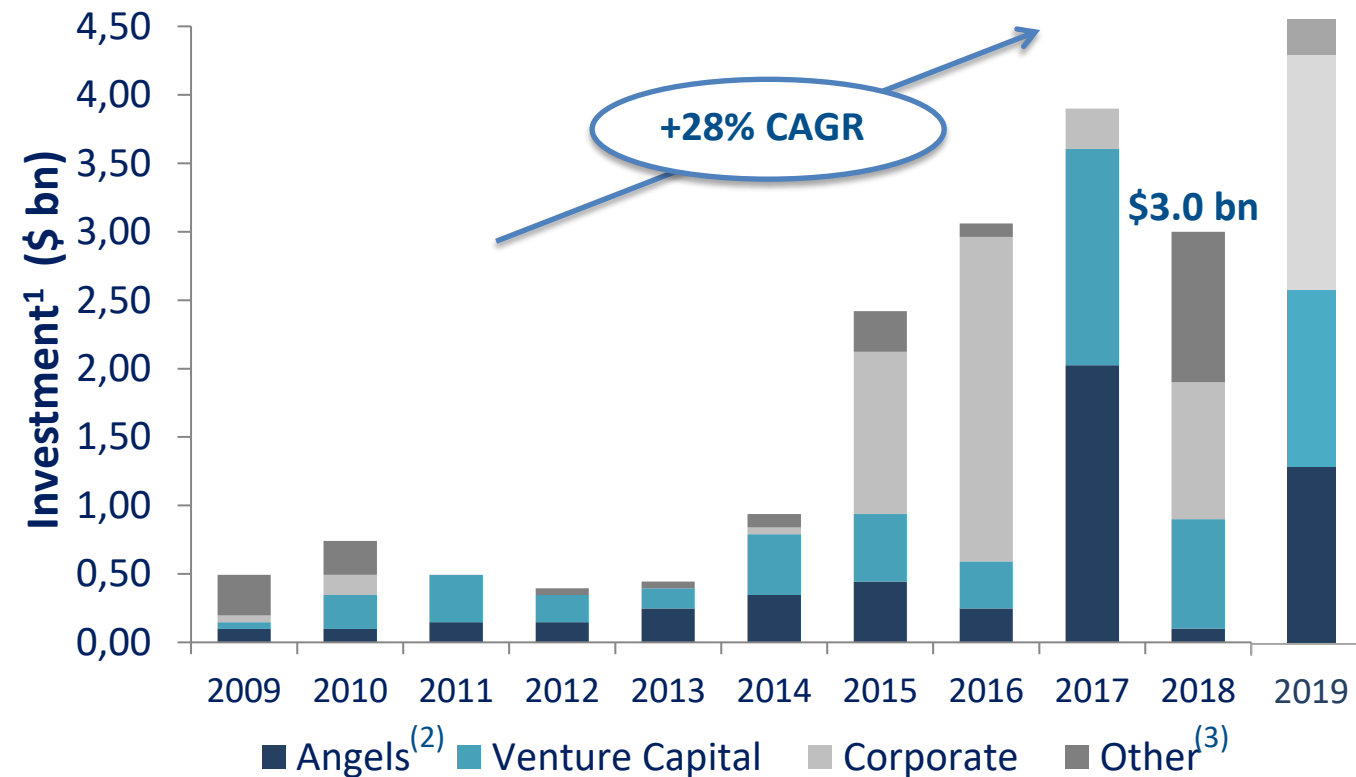
Equity investment in Space Ventures

\$5.8 bn

+28% CAGR

\$3.0 bn

Breakdown of cumulated 2009-2019 investments by sector (% of 28\$ 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 Q4 2019 Investment Report

50 years of expertise in Space technologies with consistent track record



Ammunitions

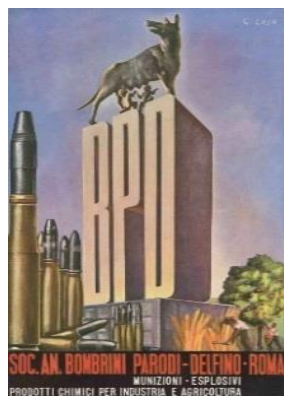
**Ariane 1-3
Separation
motors**

**Ariane 4
9.5 ton
boosters**

**Ariane 5
230 ton
boosters**

**Vega
Launch
system**

**VegaC Ariane6
VegaC Space
Light Rider Vega E**



1912

1968

1990

2000

2012

2020

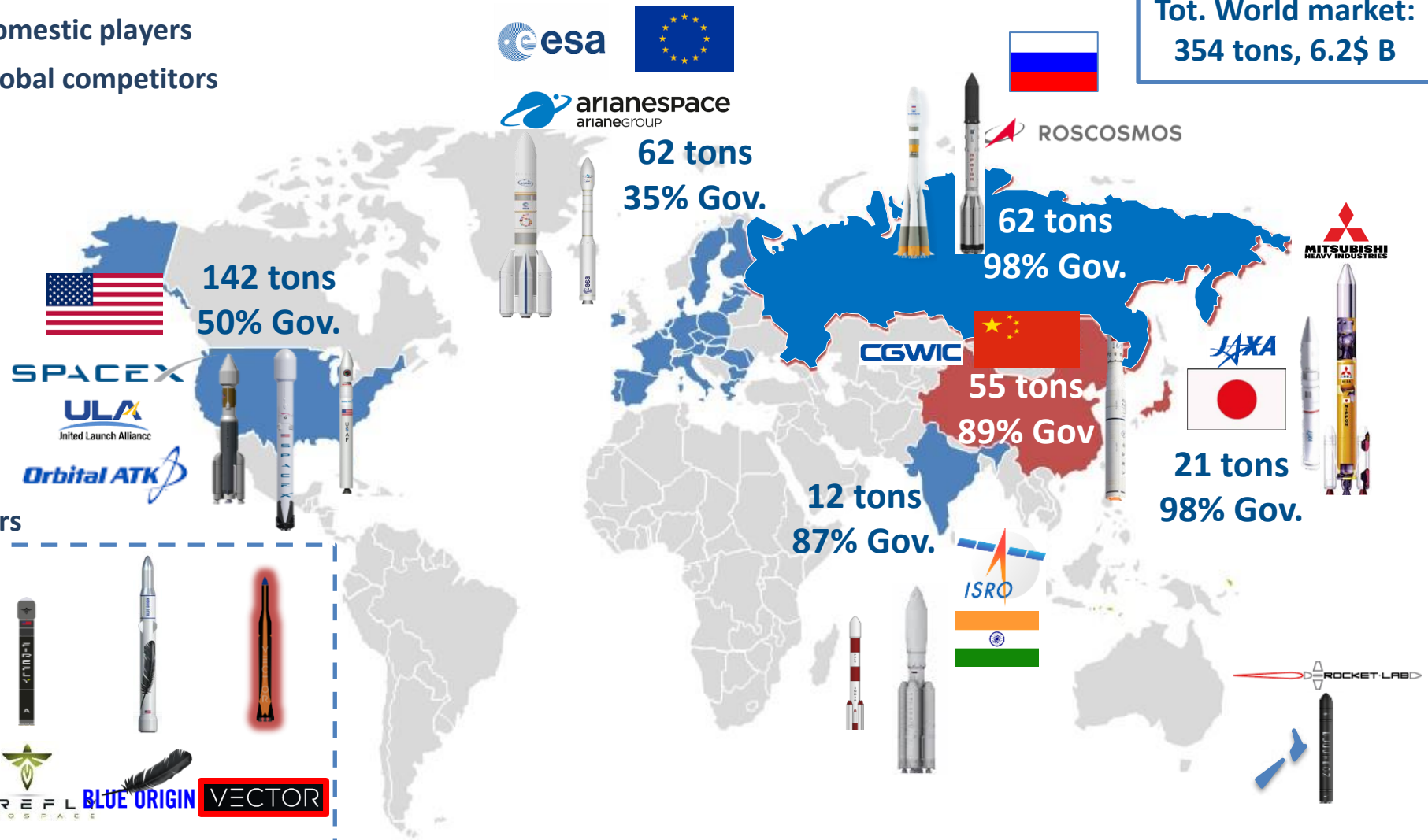
2025

Launch capabilities concentrated in a few countries. Export capacity essentially in Europe and USA



- Domestic players
- Global competitors

Tot. World market:
354 tons, 6.2\$ B

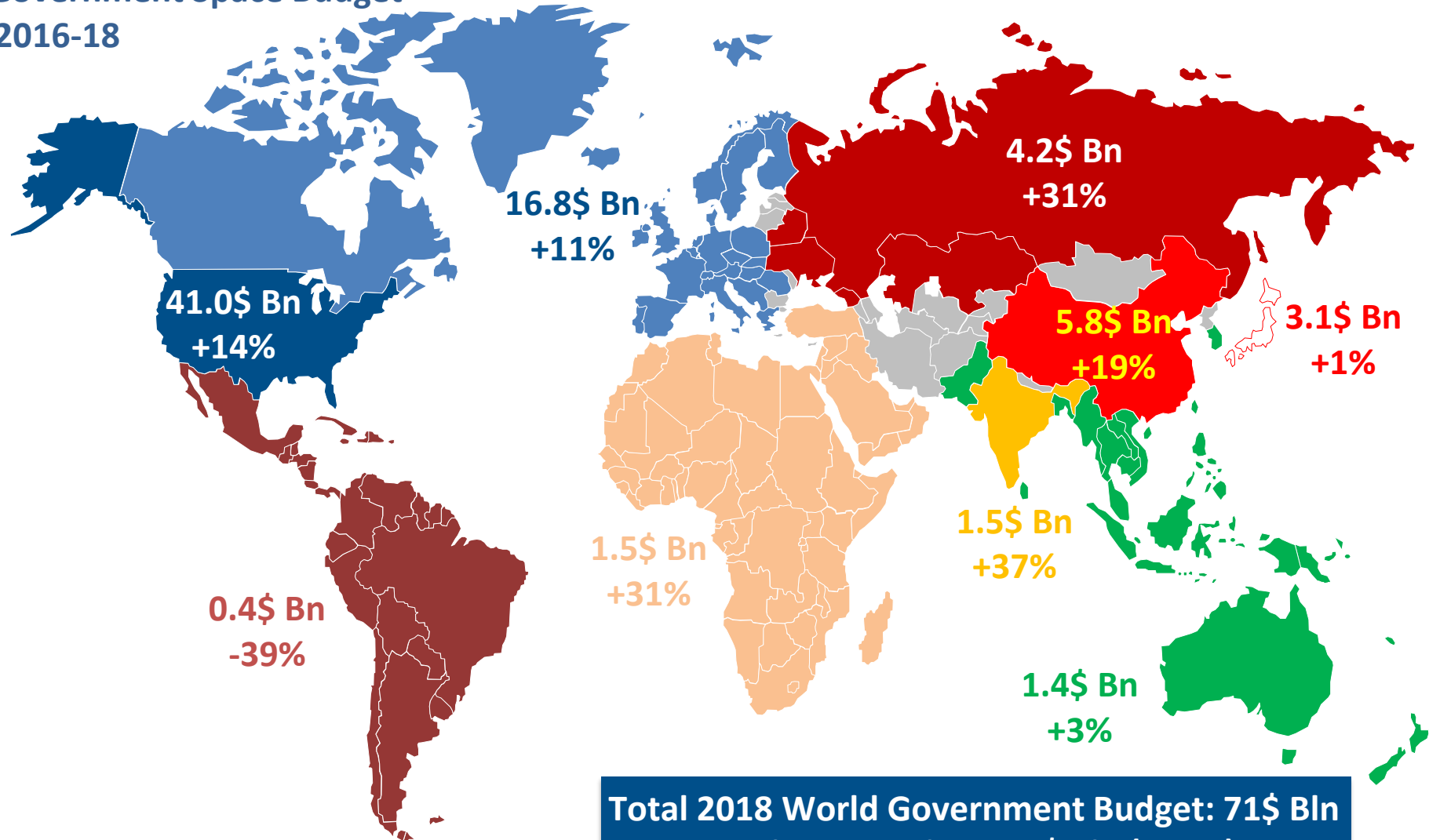


SOURCE: Avio elaboration on Gunter Space data

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World Governments' Space Budgets are growing steadily

2018 Government Space Budget Delta 2016-18



Total 2018 World Government Budget: 71\$ Bln
Forecasted 2025 Budget: 85\$ Bln (+20%)

Managed by a team of Investors

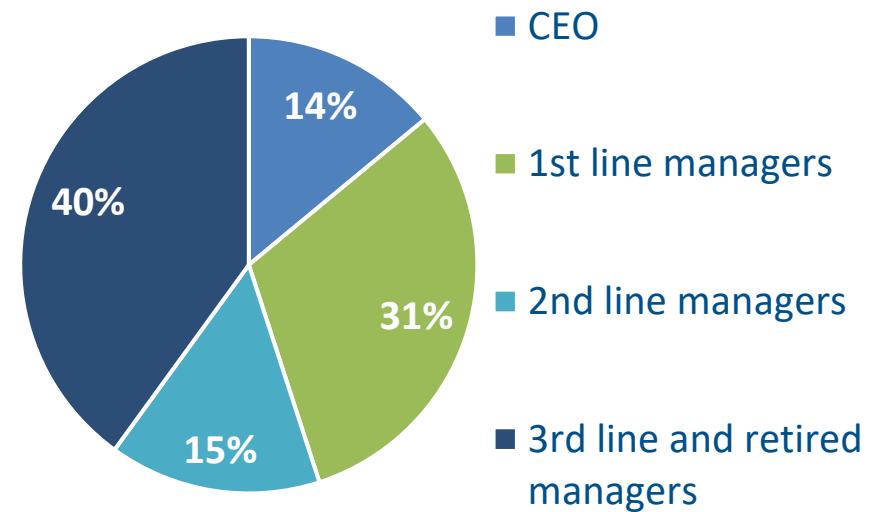


4% share in Avio

70 Avio managers as equity partners



InOrbit shareholding breakdown



Space launch has three main sub-segments by type of orbit



GEO - Geostationary Earth Orbit

Altitude 36,000km



Annual avg volume :
30 launches, 160 tons



Mature market

MEO - Medium Earth Orbit

Altitude 3,000-22,000km



Annual avg volume :
12 launches, 19 tons



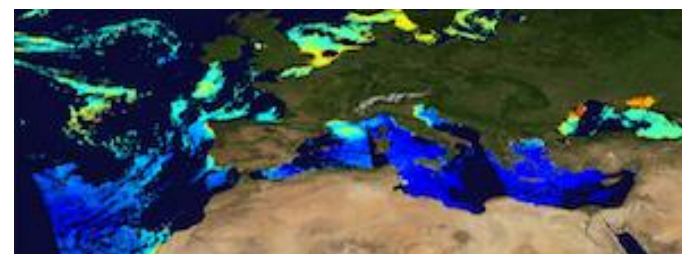
Niche market

LEO - Low Earth Orbit

Altitude 500-2,000km

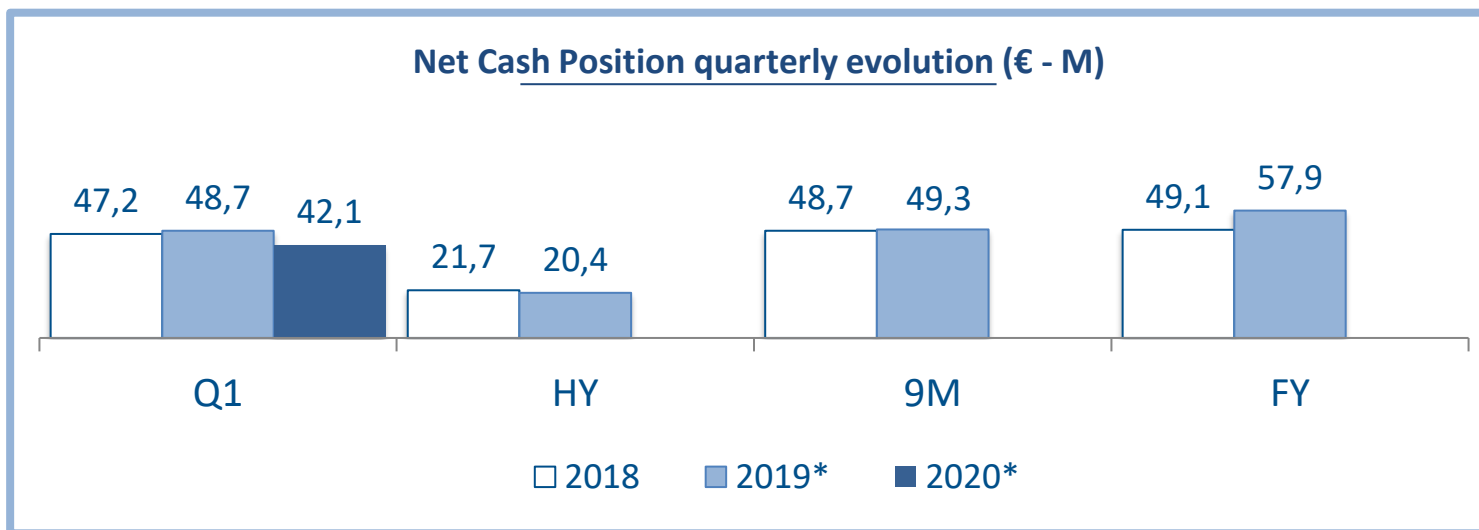
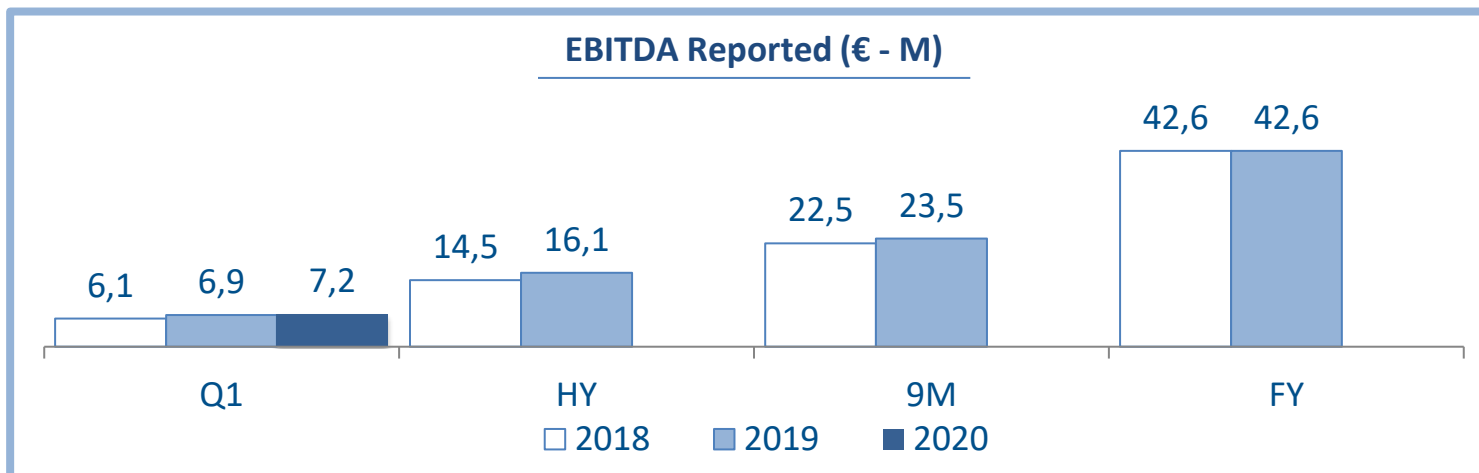


Annual avg volume :
55 launches, 60 tons



Booming demand

Quarterly pattern of Reported EBITDA and Net Cash Position



* Include effects of IFRS 16



Contacts

+39 0697285158

+39 3420726648

investor.relations@avio.com