

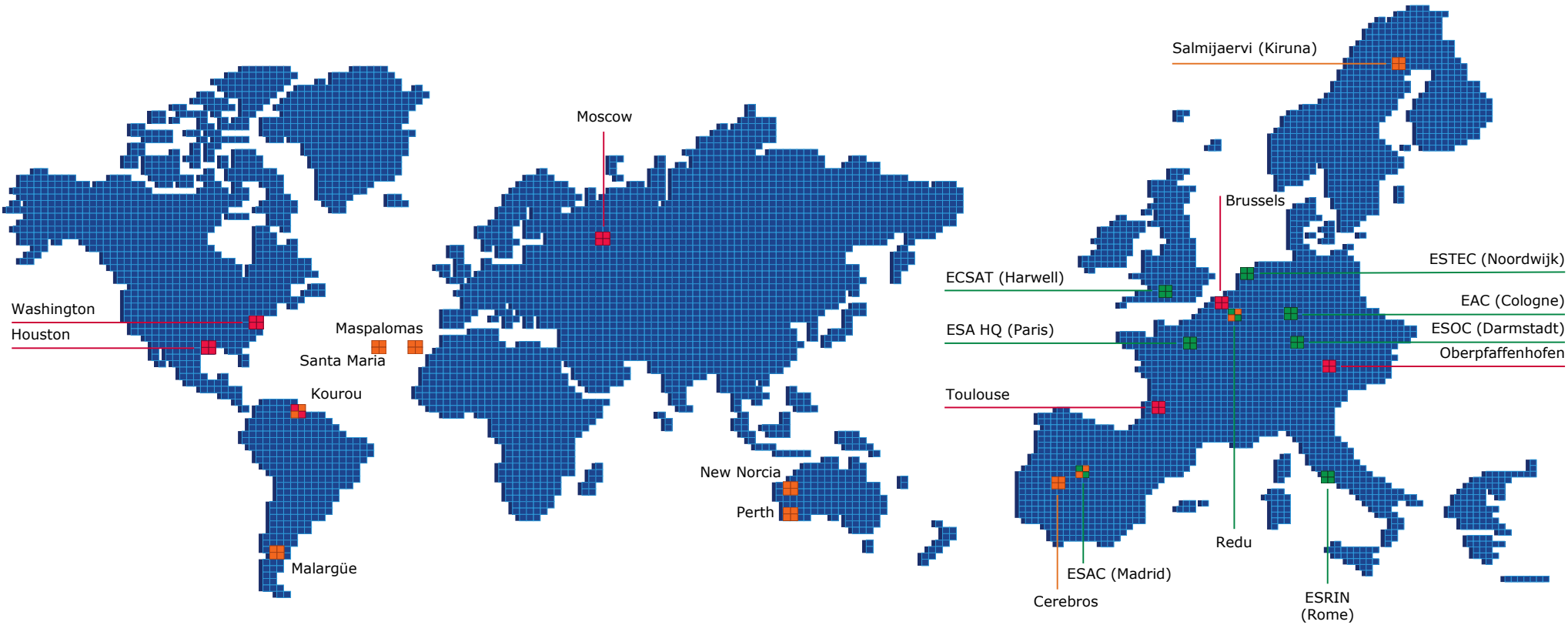
From comets to start ups

Building a SpaceTech Entrepreneurship Ecosystem

Frank M. Salzgeber
Head of Technology Transfer Programme Office

frank.salzgeber@esa.int
www.esa.int/ttp
www.esa.int/bic
#franksalzgeber

ESA OPERATIONS



- ESA sites
- Offices
- ESA Ground Station
- ESA Ground Station + Offices
- ESA sites + ESA Ground Station

ESTEC (NL)

**Europe's largest space
centre, technical heart of the
European Space Agency**



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European Space Agency**



Just rocket science

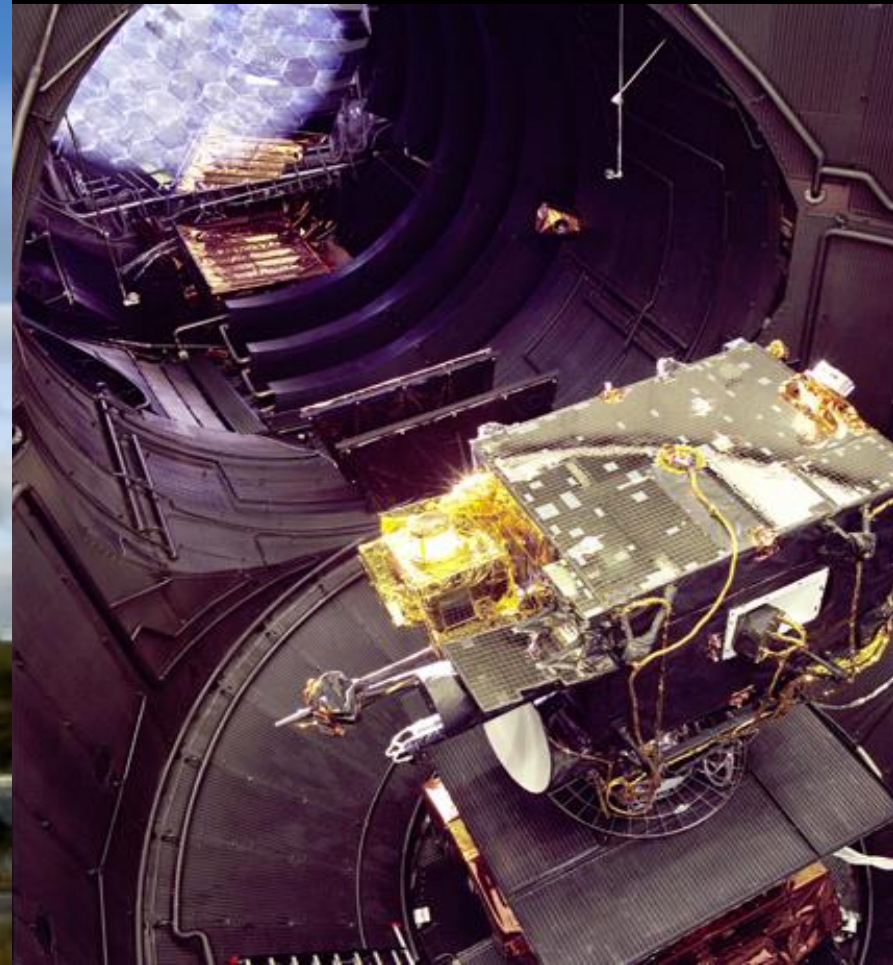
Ariane 5 and Soyuz



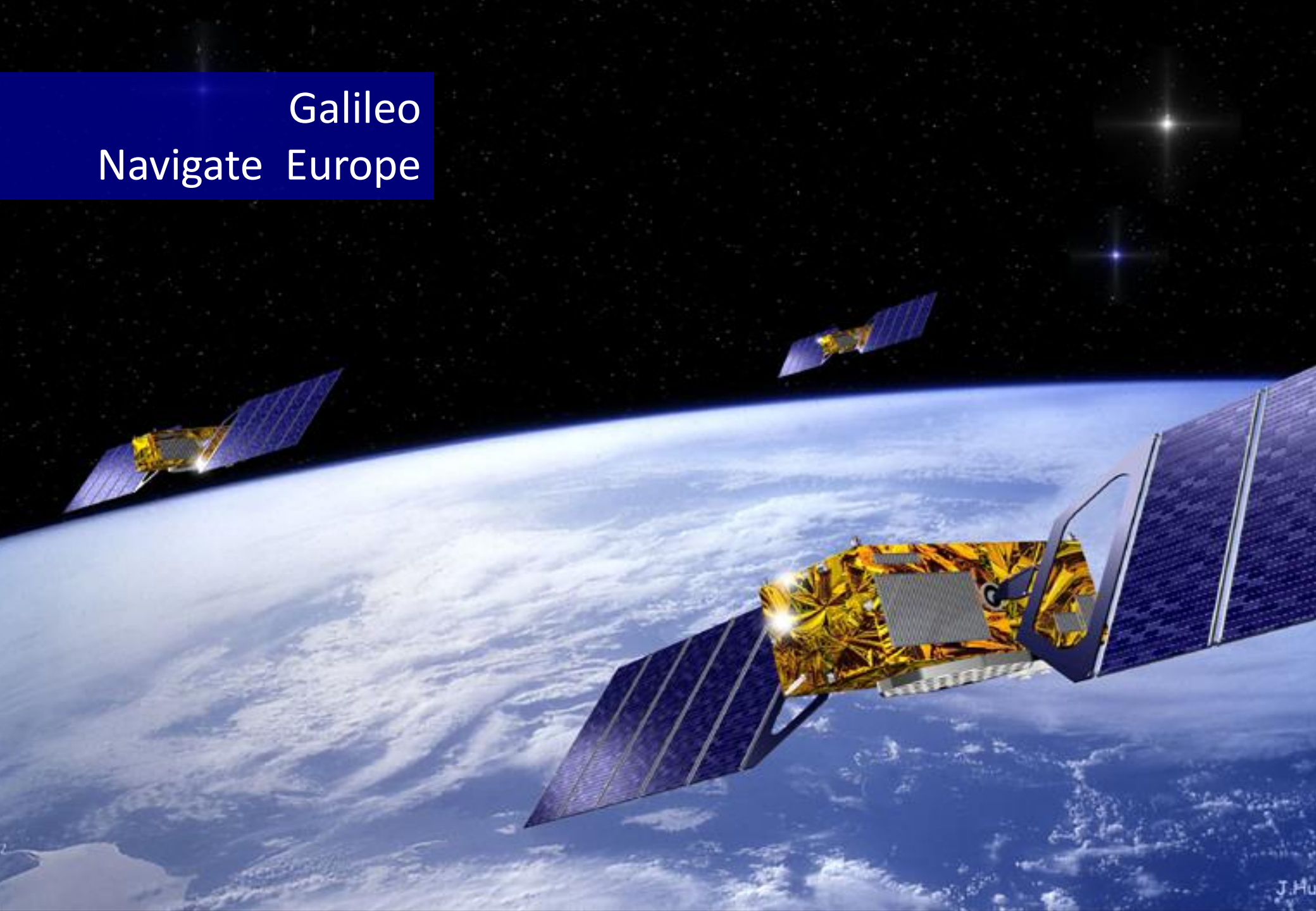
14th March 2016 Next stop Mars
#ExoMars



Telecommunication and connecting people

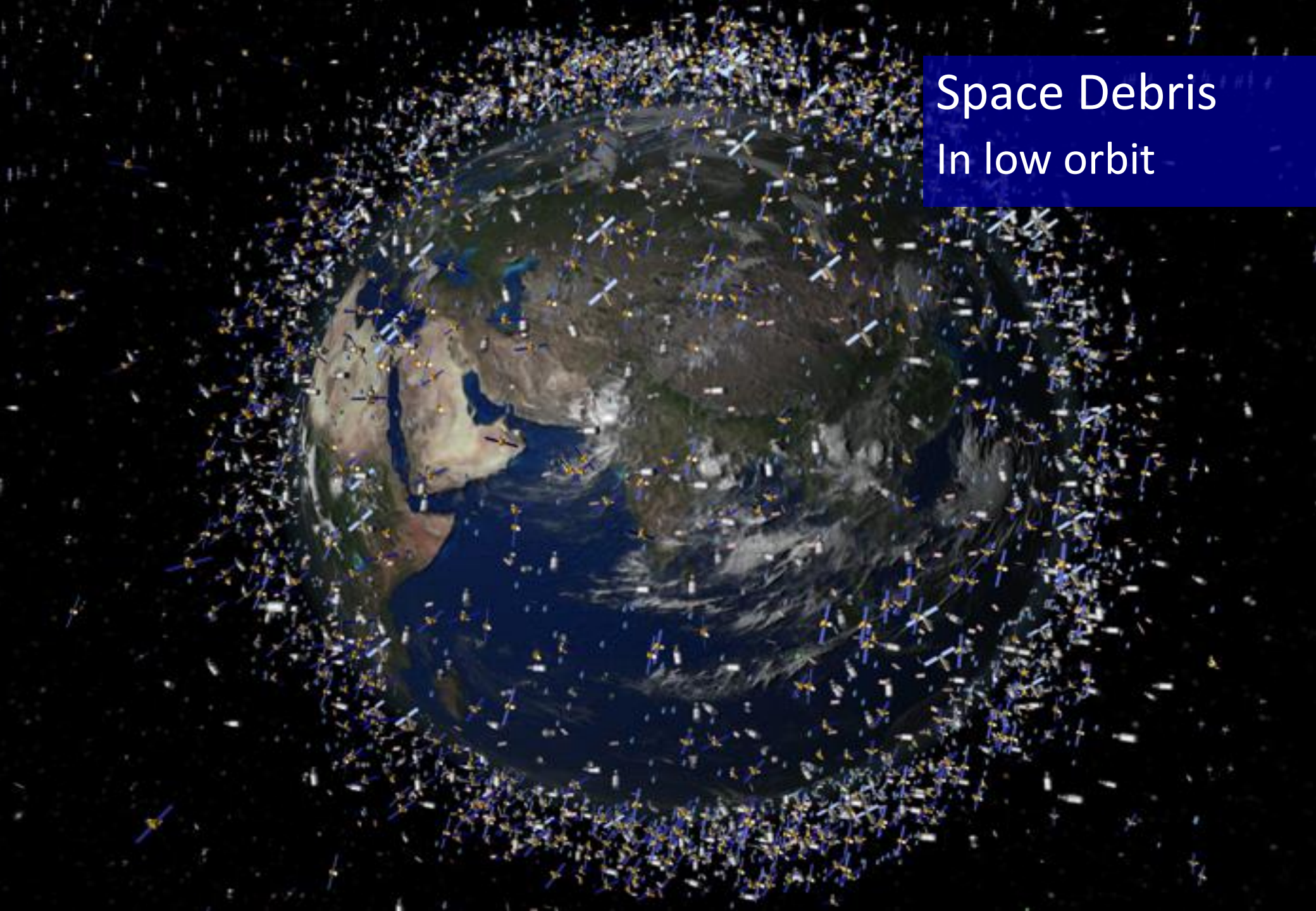


Galileo
Navigate Europe



Space Debris

In low orbit





Moon village
Ready for the gold rush



International Space Station



Earth Observation is more than Big Data



space solutions®

Planting a tree

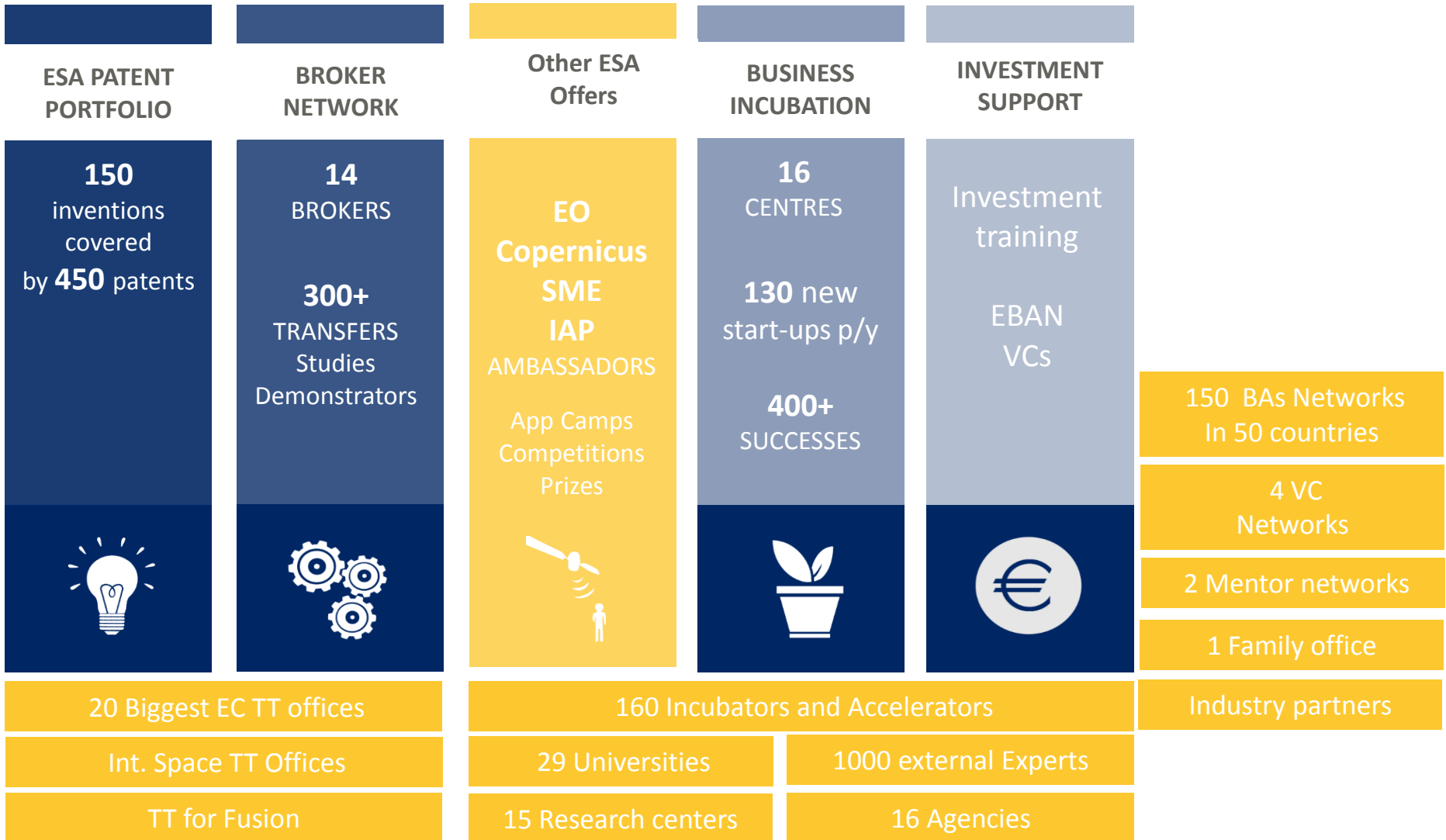


BUILDING EUROPEAN SPACETECH START-UP ECO SYSTEM



IN 2006

BUILDING EUROPEAN SPACETECH START-UP ECO SYSTEM



Store History
One of over 320 spin-offs
ESA has supported





Adaptix
One of over 400 entrepreneurs
ESA has supported

KINEXON

precision technologies

KINEXON ESNC winner 2013
One of over 400 entrepreneurs
ESA has supported



Bauvorhaben 2-3 Jahre vor Baubeginn entdecken!

Die aktuellste Plattform zu Bauvorhaben dank neuester Technik | sämtliche Bauphasen | hohe Datenqualität

TESTACCOUNT

Bauphase: Erdarbeiten

Neubauprojekt entdeckt

Veränderung in Bauphase

3Mio+

Bauprojekte

50tsd+

Aktualisierte Bauprojekte diesen Monat

3000+

Hinzugefügte Bauprojekte diesen Monat

200tsd+

Firmenprofile

Copernicus Master winner 2015
One of over 400 entrepreneurs
ESA has supported

TRACK RECORD @ ESA BIC BAVARIA LOCATIONS

105

Startups
Incubated

1,300

Hightech Jobs
Created

>100 Mio.

Total Annual Turnover
of all Startups

87 %

Survival Rate
after 5 Years

At ESA BIC Bavaria, start-ups can choose from four different locations: the headquarters at Oberpfaffenhofen and branch offices in Ottobrunn, Nürnberg, and Berchtesgadener Land.

Nürnberg

Oberpfaffenhofen

Ottobrunn

Berchtesgadener Land





TODAY

TOMORROW

1

GLOBAL SATELLITE INDUSTRY REVENUES IN CONTEXT

2	Apple	\$ 182,8 billion
4	Amazon	\$ 89,0 billion
5	Google	\$ 66,0 billion
7	Coca Cola	\$ 46,0 billion
8	McDonald's	\$ 27,4 billion
10	Facebook	\$ 12,5 billion
11	Avis	\$ 8,5 billion

GLOBAL SATELLITE INDUSTRY REVENUES IN CONTEXT

1	Satellite industry total	\$ 203 billion
2	Apple	\$ 182,8 billion
3	Satellite services	\$122,9 billion
4	Amazon	\$ 89,0 billion
5	Google	\$ 66,0 billion
6	Satellite ground equipment	\$ 58,3 billion
7	Coca Cola	\$ 46,0 billion
8	McDonald's	\$ 27,4 billion
9	Satellite manufacturing	\$ 15,9 billion
10	Facebook	\$ 12,5 billion
11	Avis	\$ 8,5 billion
12	Satellite launch	\$ 5,9 billion

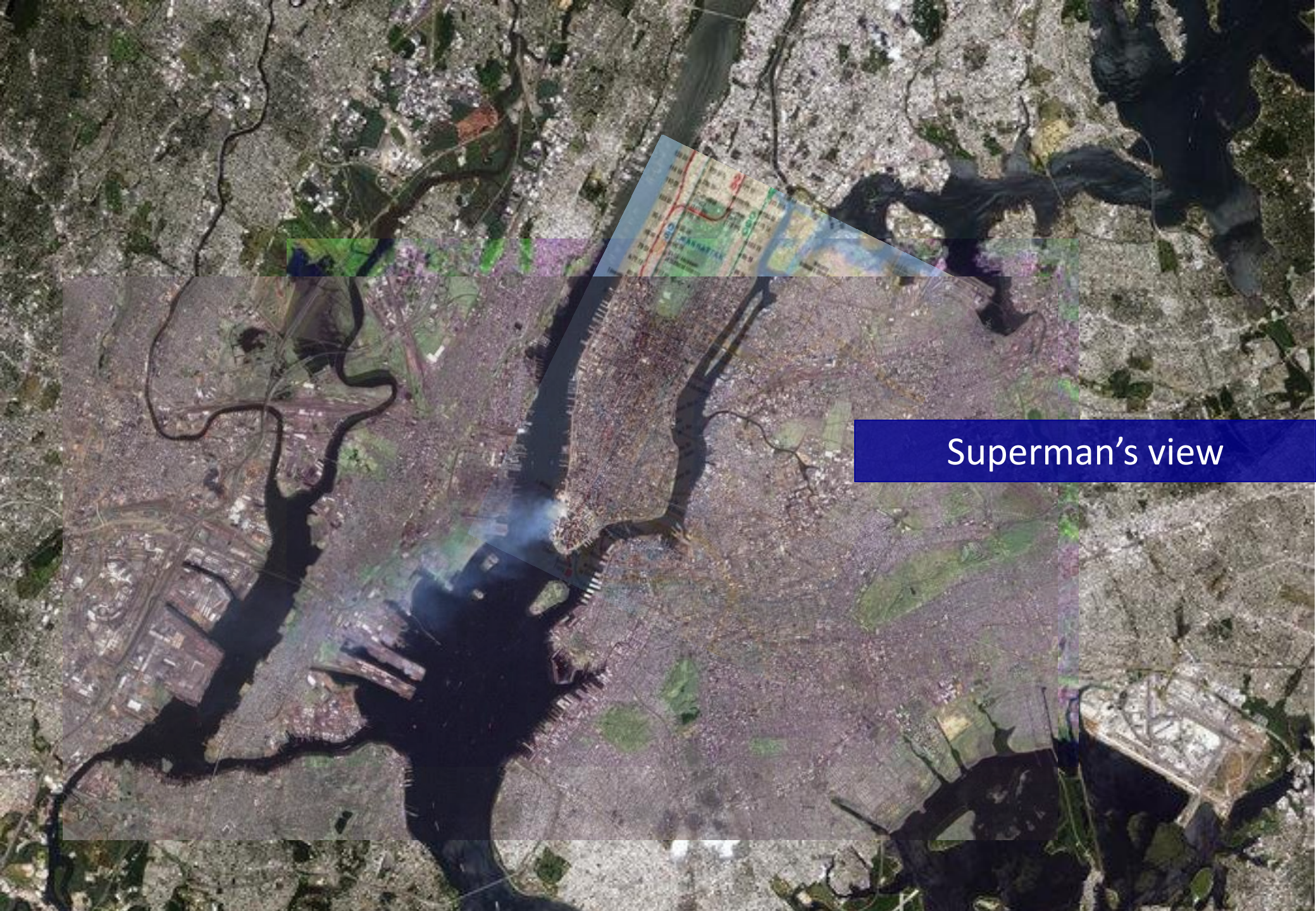
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Imago Mundi



Superman's view



Moving from
1 to 1 to n to n

Moving space
to the cloude



Buying a satellite today



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The one-stop-shop for all your CubeSat and nanosat systems...

- Home
- CubeSat Structures
- Communication Systems
- Power Systems
- Solar Panels
- Attitude Control Systems
- Antenna Systems
- On Board Computers
- Launch Adapters
- Support Equipment
- CubeSat Cameras
- CubeSat Kits and Buses
- Ground Stations
- Training Simulator
- Propulsion & Pressurisation

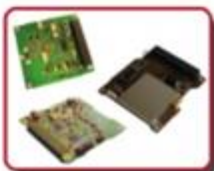
- QB50
- QB50 & CubeSatShop
- QB50 Subsystems
- QB50 Challenges
- QB50 Satellites & Services
- Custom Solutions
- FAQ
- Vendor Information

Welcome to the CubeSatShop, the one stop webshop that offers a broad range of products for CubeSats and nanosatellites in general. The webshop offers standardized, off-the-shelf components and subsystems from a variety of manufacturers.

Categories



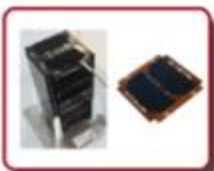
CubeSat Structures



Communication Systems



Power Systems



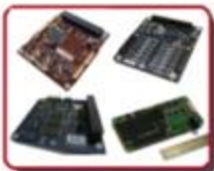
Solar Panels



Attitude Control Systems



Antenna Systems



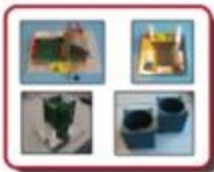
Command & Data Handling



Cameras & Payloads



Launch Adapters



Support Equipment



CubeSat Kits and Buses



Training Simulator



Your Systems
or Products on
CubeSatShop?

CubeSatShop.com is an ISIS initiative

Login to Cubesatshop

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Shop News

New products from MAI



Maryland Aerospace Inc. is introducing new products that are now available on the CubeSat Shop. Among them is the first star tracker to be available on the shop, as well as new sun sensors, Earth sensor, reaction wheels and an upgraded version of the MAI-400 integrated ADACS.

Invest - The best solution to demonstrate technology in space



If you have an IOD/IOV technology and you are in search of a mission service, or if you would like to offer an IOD/IOV P/L host

2



We care



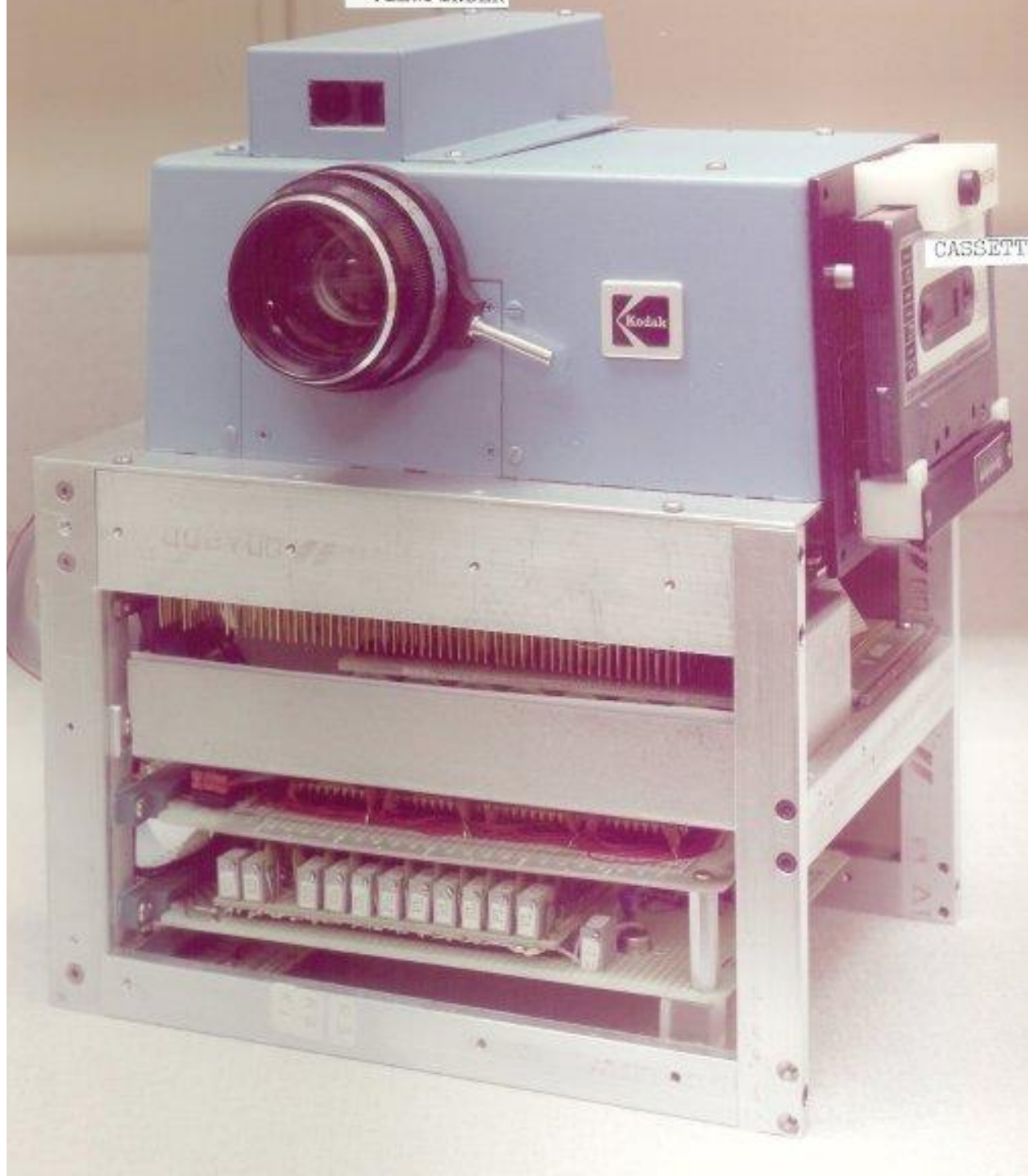
ideas

3



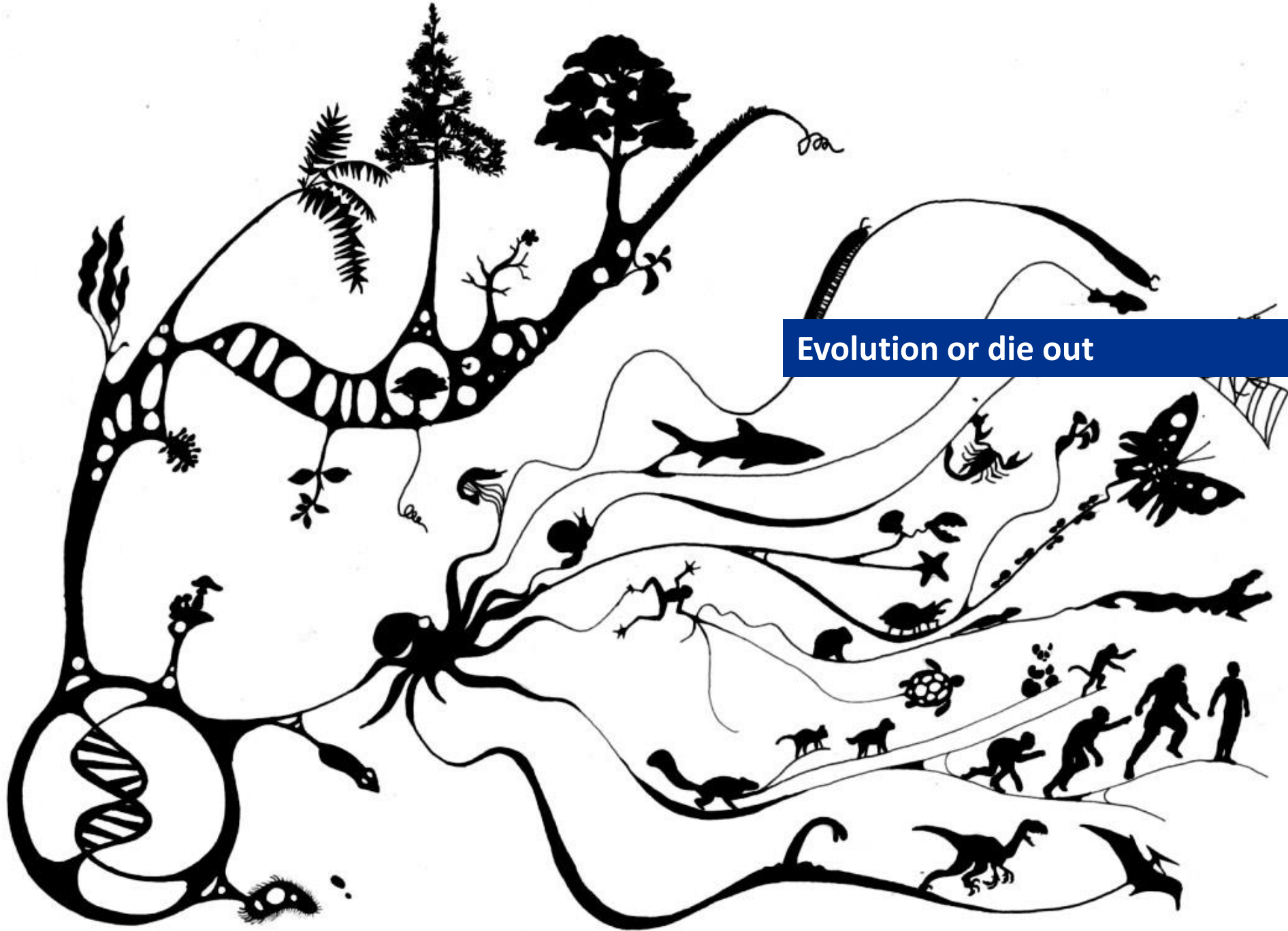
Where do we get the new ideas from?

Our engineers?



Kill Zombie companies





Evolution or die out

Philips and the fish

HIGH TECH CAMPUS EINDHOVEN
TURNING TECHNOLOGY INTO BUSINESS





No fear and little respect

Johannes Salzgeber, 5 Years



**UNEMPLOYEE
OF THE YEAR**



The Cambrian explosion
...of start-ups



Gardener of your vineyard

6





Stay curious like a kid

frank.salzgeber@esa.int

patents@esa.int

www.esa.int/ttp

www.esa.int/bic