

Euroconsult Group
Training

Introducing Euroconsult Group's space training service offering

2021 | 2022

Contents

Our training service offering in a nutshell

Topic 4: Space industry & market dynamics in detail

Contact information

Euroconsult Group presentation

From structuring market trends to training needs

Whatever their form or origin, **space infrastructure ambitions and related procurements follow less and less frequently « dry » or « blind » purchase rationales**, as:

- They are increasingly part of a much broader picture, with related plans no longer limiting themselves to the sheer ownership — or even operational use — of the acquired capacity
- Many national players from emerging countries — either established as space agencies, research centers or even satellite operators — have been mushrooming worldwide since the mid-2000s, translating into a flurry of “domsat” projects strongly hitting the market

...which increasingly places **capacity building issues at the center of related strategies**, as much powerful and efficient vehicles for:

- Fostering inherent skills and a buildup of know-how
- Gaining independence
- Installing greater prominence, visibility and credibility amongst the international space community

General service approach

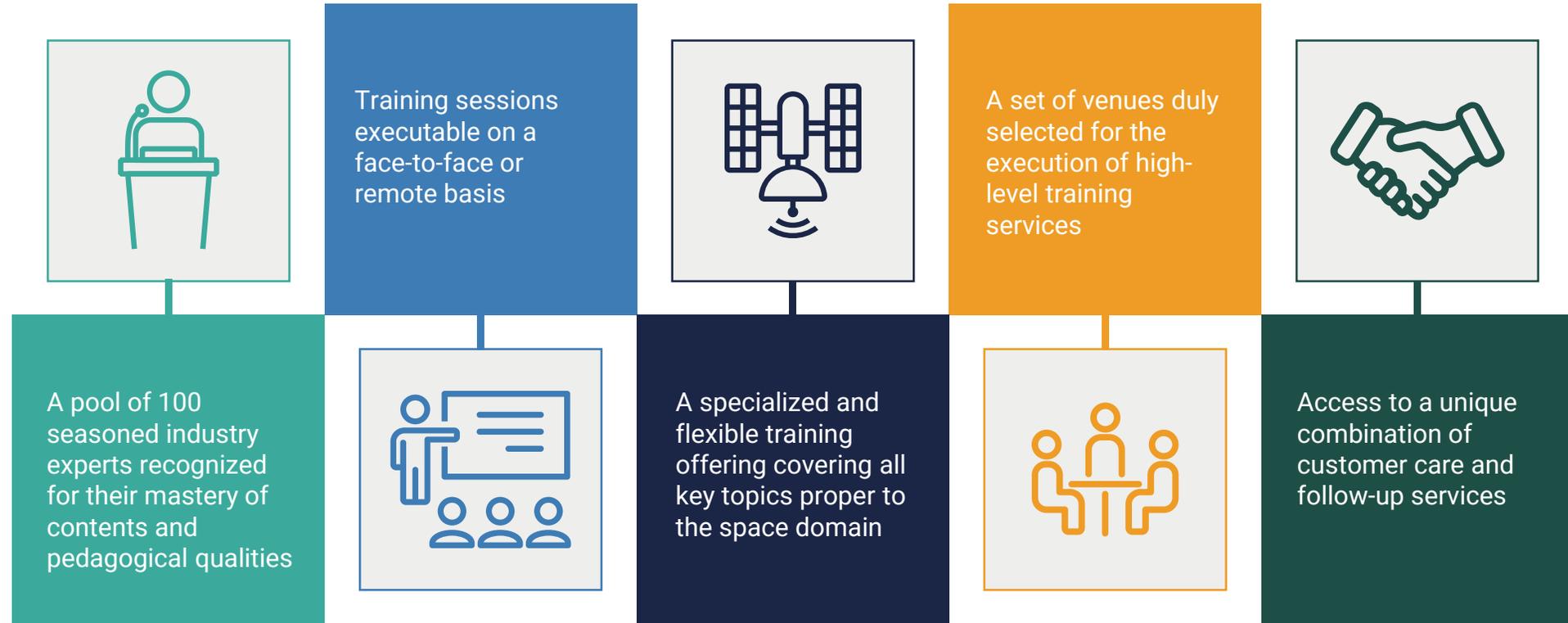
Our training service offer provides **interdisciplinary knowledge transfer to governments, the private sector and not-for-profit organizations wishing to increase their expertise in the space sector.**

Fully adapted to customers' specific needs, it **customizes both the content and format** of associated training programs **to match customers' specific skill development goals.**

Delivered with an emphasis on **flexibility, accessibility** and **experiential learning**, this tailored service provides both **functional and executive-level training** with **defined outcomes**, among which:

- Interdisciplinary training on all key aspects of the space industry: technical, markets, program management, etc.
- Ability to benefit from prepackaged programs or create a customized program
- Benchmarking, profiling, best practices and lessons learned from key players of the space sector
- Possibility to organize tours of government and private industry facilities and meetings with international executives and officials
- Flexibility in choosing a suitable training location, ranging from on-site training on customer premises, in our offices or in a prestigious third-party location
- Exposure to training in a variety of mediums and formats, from videoconferences to face-to-face seminars, and hands-on exercises, over a few hours, days or week-long sessions

Key customer benefits



Contents

Our training service offering in a nutshell

Topic 4: Space industry & market dynamics in detail

Contact information

Euroconsult Group presentation

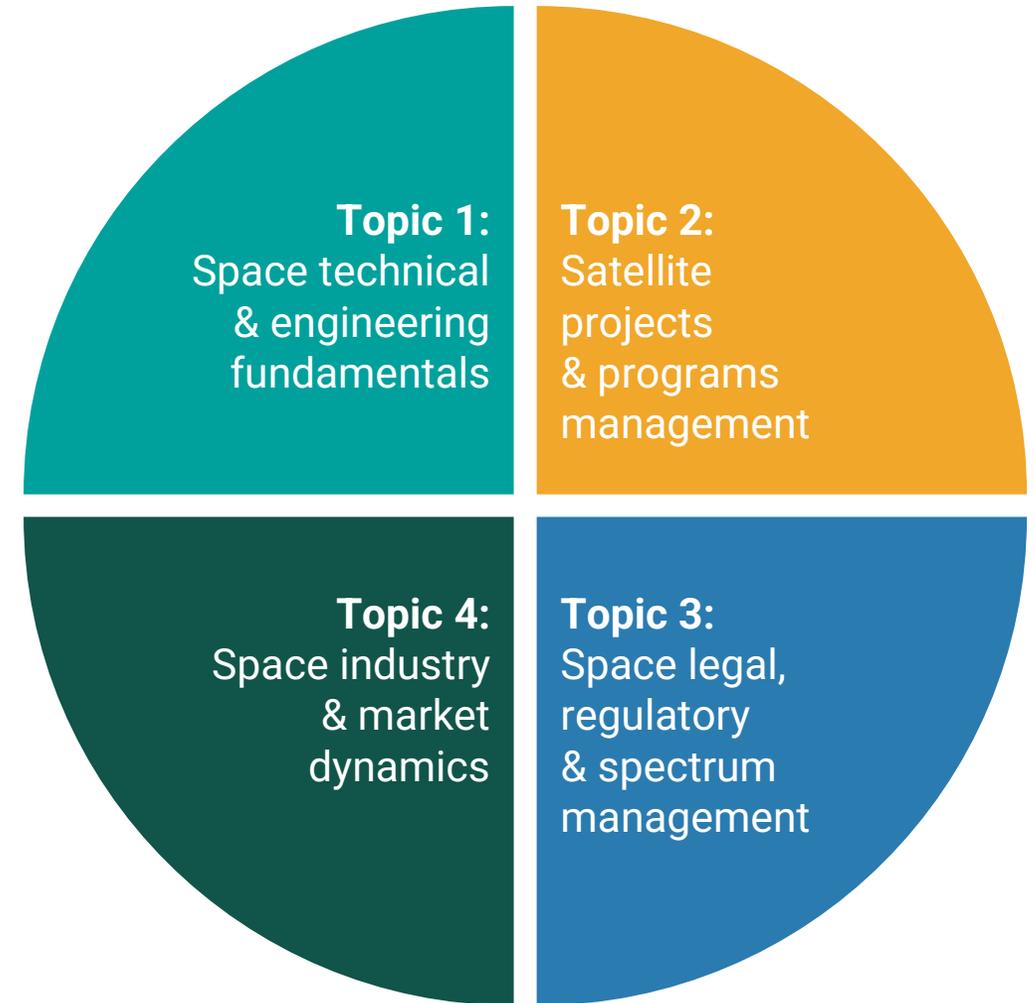
From training topics to delivery modes

Our training service offer is based upon **four main topics** covering, through **38 individual training modules**, the **full spectrum of issues to be considered to operate in the space sector, i.e.:**

- Space technical & engineering fundamentals
- Satellite projects & programs management
- Space legal, regulatory & spectrum management
- Space industry & market dynamics

...available in **two alternative modes** depending upon customer objectives, requirements, and constraints:

- Pre-packaged
- Customized



Training catalog overview

	Topic 1: Space technical & engineering fundamentals	Topic 2: Satellite projects & programs management	Topic 3: Space legal, regulatory & spectrum management	Topic 4: Space industry & market dynamics
Nb. of training modules	17	7	5	9
Typical module duration range*	0.5 to 2 days	0.5 to 2 days	1 to 3 days	1 to 2 days
Typical contents	End-to-end technical and engineering space industry fundamentals	Space program management topics, from business planning to risk management assessment	Legal, regulatory and frequency challenges impacting business plans, investment and programs	Space industry policy, market perspectives and trends
Available delivery formats	Face-to-face or online	Face-to-face or online	Face-to-face or online	Face-to-face or online

* Depending upon customer objectives, requirements, and constraints.

Training catalog details

The following slides provide **an overview of each of our 9 individual training modules** in terms of:

- Objectives
- Prerequisites
- Related modules
- Typical duration and delivery format
- Topics covered
- Course director

None of the content presented in this catalogue shall be considered as contractual. Any interested customer is kindly invited to contact us for a **detailed technical and commercial proposal that will be derived from his specific objectives, requirements and constraints**

TOPIC 4: **Space industry & market dynamics**

Training modules list

- 4.1** Introduction to the global space industry & markets
- 4.2** Government space policies, governance & financing
- 4.3** Satellite manufacturing market & players
- 4.4** Space launch service market & players
- 4.5** Ground segment market & players

- 4.6** Satellite communications services market
- 4.7** Satellite Earth observation services market
- 4.8** Satellite navigation services market
- 4.9** “New space” markets & players

MODULE 4.1: Introduction to the global space industry & markets

OBJECTIVE

- The objective of this course is to present the structure and organization of space activities worldwide and the changes in progress in the whole ecosystem, both in the uses of space and in terms of market players.
- Upon completion of this course, trainees will have a better understanding of where their organization is situated in the global space ecosystem.

PREREQUISITES

- No higher education degree (neither technical nor business) required.

RELATED MODULES

To be mastered

To be further

Connected with

1.1, 1.2

TYPICAL DURATION & FORMAT

- 1 day (8 hours)
- Face-to-face or online delivery

TOPICS COVERED

- **The four dimensions of space activities**
 - Satellite services on Earth
 - Space science & exploration
 - Man in space
 - Access to space
- **Overview of the satellite value chain**
 - From satellite systems to satellite services and end-users
- **Changes in the space sector**
 - Disruptive trends along the value chain
 - Impact of “new space” changes on the ecosystem
- **Government and private investors in space activities**
 - Established and newcomer space countries
 - Established and newcomer private satellite operators
- **Space industry to manufacture and launch satellite systems**
 - GEO satellites
 - Small satellites and cubesats
 - Constellations

COURSE DIRECTOR

- Ms. Rachel VILLAIN, Principal Advisor, Euroconsult

MODULE 4.2: Government space policies, governance & financing

OBJECTIVE

- The objective of this course is to present the structuring role and high importance of government for space activities worldwide in terms of civilian and military expenditures.
- Upon completion of this course, trainees will have a better understanding of the key government investors in space and of their rationale for space development.

PREREQUISITES

- No higher education degree (neither technical nor business) required.

RELATED MODULES

To be mastered

4.1

To be further

Connected with

3.1

TYPICAL DURATION & FORMAT

- 1 day (8 hours)
- Face-to-face or online delivery

TOPICS COVERED

- **Governments investing in space activities**
 - To develop domestic technology base and industry
 - To procure operational satellite systems and services
- **Governance models of space activities**
 - Established space countries
 - Newcomer space countries
- **Budgets & programs by domain**
 - Space science & exploration
 - Space transportation
 - Human spaceflight
 - Satellite applications: communications, navigation, Earth observation, meteorology
 - Specific military applications: ELINT, IMINT, SSA

COURSE DIRECTOR

- Mr. Simon SEMINARI, Principal Advisor, Euroconsult

MODULE 4.3: Satellite manufacturing market & players

OBJECTIVE

- The objective of this course is to present the various markets and key players in satellite manufacturing, whatever the satellite application, mass, size, orbit, etc. may be.
- Upon completion of this course, trainees will have learned the structure and organization of the satellite manufacturing industry, as well as its key players with their distinctive offerings.

PREREQUISITES

- No higher education degree (neither technical nor business) required.

RELATED MODULES

To be mastered

4.1

To be further

2.4

Connected with

n/a

TYPICAL DURATION & FORMAT

- 1 day (8 hours)
- Face-to-face or online delivery

TOPICS COVERED

▪ Structure of the satellite manufacturing industry

- By company: large aerospace contractors, pure players, vertically-integrated satellite operators (satop)
- By client: government agencies and/or commercial satop
- By product: satellite platforms, payloads and ground systems

▪ Technology roadmap per type of satellite systems

- Geostationary communications satellites
- Small satellite constellations for communications & Earth observation
- Cubesats/nanosats for technology demonstration and for operational missions

▪ Key players by country type

- Established space country
- Emerging space country

COURSE DIRECTOR

- Ms. Rachel VILLAIN, Principal Advisor, Euroconsult

MODULE 4.4: Space launch service market & players

OBJECTIVE

- The objective of this course is to present the various markets and key players in space transportation, whatever the orbital destination of the spacecraft may be.
- Upon completion of this course, trainees will have learned the structure and organization of the space launch market, as well as its key players with their distinctive offerings.

PREREQUISITES

- No higher education degree (neither technical nor business) required.

RELATED MODULES

To be mastered

4.1

To be further

1.6, 1.7

Connected with

n/a

TYPICAL DURATION & FORMAT

- 1 day (8 hours)
- Face-to-face or online delivery

TOPICS COVERED

- **Structure of the space launch service industry**
 - Government-backed launch service providers
 - Privately-owned launch service companies
 - Dedicated and multi-vehicle spaceports
- **Technology roadmap per type of launch systems**
 - Heavy lift launchers
 - Medium lift launchers
 - Small launchers
- **Key success factors for launch services**
 - Anchor client
 - Launch rate
 - System's reusability
 - Spaceport

COURSE DIRECTOR

- Ms. Rachel VILLAIN, Principal Advisor, Euroconsult

MODULE 4.5: Ground segment market & players

OBJECTIVE

- The objective of this course is to present the various markets and key players in the ground segment of a satellite system, either to communicate with a satellite and/or to receive the data from Earth, atmospheric and scientific observation.
- Upon completion of this course, trainees will have learned the structure and organization of the ground segment market, as well as its key players.

PREREQUISITES

- No higher education degree (neither technical nor business) required.

RELATED MODULES

To be mastered

4.1

To be further

1.8

Connected with

TYPICAL DURATION & FORMAT

- 0.5 day (4 hours)
- Face-to-face or online delivery

TOPICS COVERED

- **Structure of the ground segment market**
 - Value chain in the satellite ground station market
 - Gateways for satellite communication networks
 - User terminals for satellite communication networks
 - Satellite data reception stations
- **Technology roadmap for ground stations**
 - High Throughput Satellites & broadband constellations
 - Traditional Cassegrain vs. flat electronic antennas
 - Satellite operation as a service, network digitization
- **Key players for global ground segment services**
 - Incumbent and new pure players
 - Cloud service providers
 - Vertically-integrated companies

COURSE DIRECTOR

- Ms. Rachel VILLAIN, Principal Advisor, Euroconsult

MODULE 4.6: Satellite communications services market

OBJECTIVE

- The objective of this course is to describe qualitatively and quantitatively the various markets for satellite communications (satcom) services and their growth dynamics.
- Upon completion of this course, trainees will have learned the structure and dynamics of key market verticals for satcom services.

PREREQUISITES

- No higher education degree (neither technical nor business) required.

RELATED MODULES

To be mastered
4.1

To be further
1.9 to 1.12

Connected with
3.2

TYPICAL DURATION & FORMAT

- 1 day (8 hours)
- Face-to-face or online delivery

TOPICS COVERED

▪ Overview of the satcom services market

- Value chain from bandwidth to managed services
- Market players: GEO operators, constellations, service providers, end users' terminals
- Competition and complementarity with terrestrial networks
- Changes in satcom services: price, capacity, market access
- Regional focus on satcom systems & service providers

▪ Market dynamics by vertical

- Backhauling & trunking
- Consumer broadband access
- Enterprise & government private networks
- Mobile connectivity (in-flight, maritime)
- TV broadcasting

COURSE DIRECTOR

- Mr. Nathan de RUITER, Managing Director, Euroconsult Canada

MODULE 4.7: Satellite Earth observation services market

OBJECTIVE

- The objective of this course is to describe qualitatively and quantitatively the various markets for satellite-based Earth observation (EO) data and value-added services (VAS).
- Upon completion of this course, trainees will have learned the structure and dynamics of key market verticals for satellite Earth observation.

PREREQUISITES

- No higher education degree (neither technical nor business) required.

RELATED MODULES

To be mastered

4.1

To be further

1.14 to 1.16

Connected with

3.3

TYPICAL DURATION & FORMAT

- 1 day (8 hours)
- Face-to-face or online delivery

TOPICS COVERED

▪ Overview of the EO services market

- Value chain: from satellite systems to data & VAS
- Data producers: government & privately-owned companies
- VAS providers
- Regional focus on EO satellite systems and services

▪ EO data and VAS market by vertical

- Satellite sensors and applications by vertical

▪ Market dynamics by vertical

- Defence & maritime
- Agriculture, natural resources & environment
- Infrastructure & energy
- Disaster management, insurance & finance

COURSE DIRECTOR

- Mr. Adam KEITH, Affiliate Principal Advisor, Euroconsult

MODULE 4.8: Satellite navigation services market

OBJECTIVE

- The objective of this course is to describe qualitatively and quantitatively the various commercial markets for satellite navigation (satnav) services permitted by the global navigation satellite systems (GNSS).
- Upon completion of this course, trainees will have learned the structure and dynamics of key market verticals for satellite navigation.

PREREQUISITES

- No higher education degree (neither technical nor business) required.

RELATED MODULES

To be mastered
4.1

To be further

Connected with

TYPICAL DURATION & FORMAT

- 0.5 day (4 hours)
- Face-to-face or online delivery

TOPICS COVERED

▪ Value chain for satnav services

- Government-funded global systems (U.S., Russia, China, and Europe)
- Regional augmentation systems (India, Japan, ...)
- Installed base of GNSS devices
- VAS by vertical

▪ Value added services by satnav verticals

- Consumer solutions (location-based services)
- Transportation (road)
- Other verticals (agriculture, geomatics, ...)

▪ Key changes in satnav services

- Alternative technologies
- In-space applications

COURSE DIRECTOR

- Ms. Rachel VILLAIN, Principal Advisor, Euroconsult

MODULE 4.9: “New space” markets & players

OBJECTIVE

- The objective of this course is to describe the emerging markets for new space activities and new applications and/or the new players that compete/cooperate with established players.
- Upon completion of this course, trainees will have learned the key markets and players of the new space economy.

PREREQUISITES

- No higher education degree (neither technical nor business) required.

RELATED MODULES

To be mastered

To be further

Connected with

TYPICAL DURATION & FORMAT

- 0.5 day (4 hours)
- Face-to-face or online delivery

TOPICS COVERED

- **Business logic of new space markets**
 - Startup fundraising
 - Value propositions
 - Time to market
 - Existing customers or Blue Ocean Strategy
 - Creative destruction
- **Key players of the new space economy**
 - Venture capital
 - Small satellites and small launch vehicles
 - COTS satellite electronics
 - New technologies
 - Government as a customer

COURSE DIRECTOR

- Mr. Maxime PUTEAUX, Principal Advisor, Euroconsult

Contents

Our training service offering in a nutshell

Topic 4: Space industry & market dynamics in detail

Contact information

Euroconsult Group presentation

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Your contact point

Mr. Pierre VALENTI

Senior Affiliate, Training Services
Euroconsult Group

Contact details

Mail: training@euroconsult-ec.com
Cell: +33 6 27 69 73 82

Career abstract

Pierre VALENTI has spent most of his 25-year career in the space sector, leveraging a proven track record and practical knowledge of all key functions associated with marketing and sales at large including business planning and development, business intelligence and market research.

His previous experience includes a ten-year tenure (1999-2009) as Marketing & Sales Manager with the Telecommunications Satellites business unit of Airbus Defense & Space, Space Systems. He also acted as Arianespace's Marketing Director from 2009 to 2011. In addition to this solid industrial experience, Mr. VALENTI also worked for such renowned consultancies as Accenture (1994-1996), Euroconsult (1996-1998) and Satconsult (2011-2012). More recently, he served as Deputy Managing Director (2012-2013), then Managing Director (2014-2019) of the Institut Aéronautique & Spatial (IAS), a training agency operating under the French Aerospace Industries Association. In 2020, he decided to join forces with Euroconsult to develop a dedicated training service offering.

Mr. VALENTI is a French national born in Paris in 1968. He has been based and working in Toulouse since 2001.

Contents

Our training service offering in a nutshell

Topic 4: Space industry & market dynamics in detail

Contact information

Euroconsult Group presentation

Leading independent group

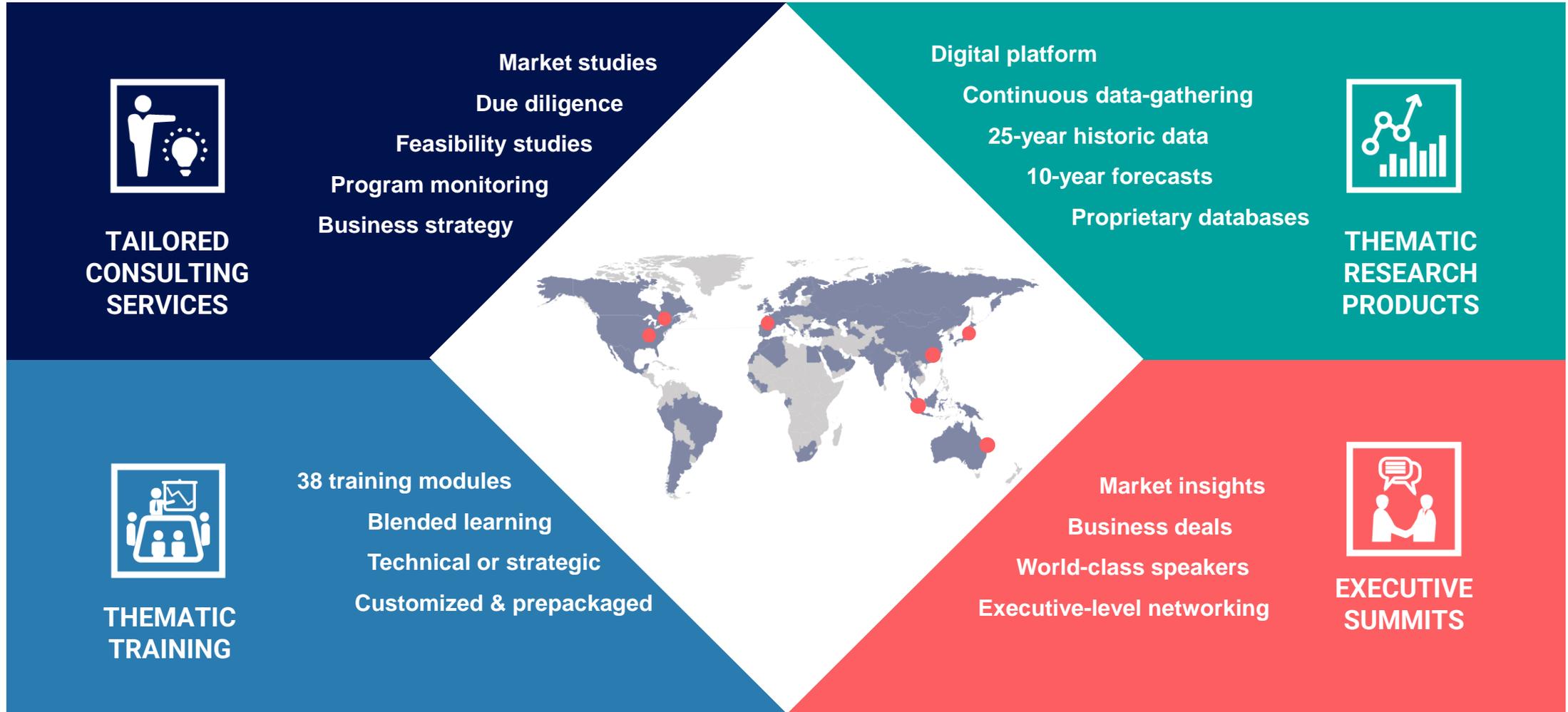
Euroconsult Group is the **leading global consulting group** specializing in the **space sector** and **satellite enabled verticals**.

Euroconsult Group



- Privately owned
- Fully independent
- 40 years of experience
- 7 global locations
- 600 clients
- A team of over 100 multidisciplinary experts

Four complementary activities



Key facts & figures 2020

70+ consulting missions
in **20+** countries

15 market studies
published

600 clients on 4 business
lines

38 years
experience in the business

3 million
Data points collected, monitored and
updated across space markets and
applications

85% of our activity
realized for international
clients

70 experts working over
7 countries

100%
Self-owned

100%
Dedicated to
space

Euroconsult

Our expertise

Our **expertise and skills** enable us to focus on the unique requirements of each of our projects.

Our **independence** guarantees our **commitment** to optimize value creation for our clients.

Euroconsult

Corporate strategy

Strategic assessments

Government programs & policies

Market assessment

Due diligence

Training

Feasibility studies

RFI/RFP process

Satellite & ground segment construction monitoring

Program management & operations support

Satconsult
Member of Euroconsult Group

Our leadership



Steve Bochinger
COO

Part of EC Executive team since 2004
20 years of experience ; lead role for institutional and industrial affairs



Lorraine Whitfield
Chief Events & Marketing Officer

Part of EC Executive team since 2008
20 years of experience in events organization, marketing and sales



Susan Irwin
Managing Director, USA

Part of EC Executive team since 2010, 35 years of experience in the telecom and space industry

Pacôme Révillon
CEO

Euroconsult CEO since 2004
20 years of experience in strategic and financial oriented process in the space industry



David Chégnion
Managing Director, Satconsult

Satconsult MD since 2018
25 years of experience in the space industry, with executive positions in leading aerospace groups



Experienced
& international
management team

Nathan de Ruiter
Managing Director, Canada

Part of EC Executive team since 2008
15 years of experience in strategic and financial oriented process



Laurent Valignon
VP Business Development, Satconsult

Part of SATC Executive team since 2008
20 years of experience in the space sector



Euroconsult Group

Training



training@euroconsult-ec.com



euroconsult-ec.com



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