



EUROPEAN DEEPTech TRENDS

2024

1.

DEEPTech OUTLOOK FROM AVOLTA

DEEPTeCH OUTLOOK FROM AVOLTA

INTRODUCTION

The European DeepTech ecosystem has shown remarkable resilience and evolution through 2024, maintaining robust investment levels despite global market uncertainties. With projected investments of €9 billion across 454 deals in 2024, the sector demonstrates sustained investor confidence following the post-COVID surge.

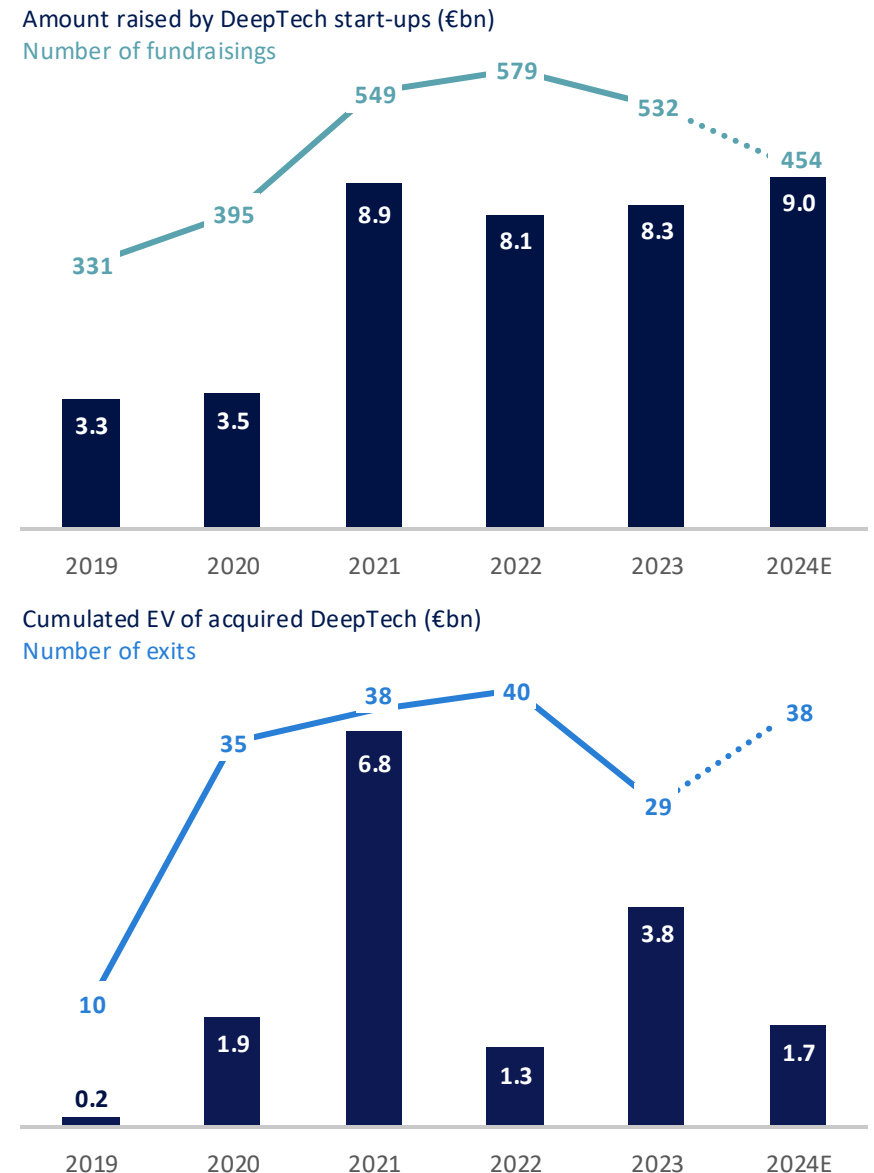
Artificial Intelligence has emerged as the standout segment in 2024, experiencing dramatic growth in investments compared to 2023. This surge reflects the broader global AI revolution and Europe's growing prominence in this field. Meanwhile, Energy & ClimateTech continues to attract substantial funding, underlining Europe's commitment to sustainable innovation.

The ecosystem remains predominantly early-stage, with pre-seed and seed rounds constituting most deals. This suggests a healthy pipeline of innovation but also highlights the need to support companies through later growth stages. France and the United Kingdom continue to lead the European DeepTech landscape, though the ecosystem is increasingly distributed across the continent.

Public entities are playing a crucial role in nurturing the ecosystem, emerging as the most active investors. This public-private partnership approach appears to be a distinctive feature of Europe's DeepTech development, potentially offering a sustainable model for supporting deep technologies from laboratory to market.

On the exit front, while activities have been somewhat constrained, with an expected €1.7 billion in total exit value for 2024, the market shows signs of maturity. Notable transactions, particularly in Space Tech and Energy & ClimateTech, demonstrate growing interest from both European and international acquirers.

Arthur Porré, Managing Partner Avolta, November 19th, 2024.



2.

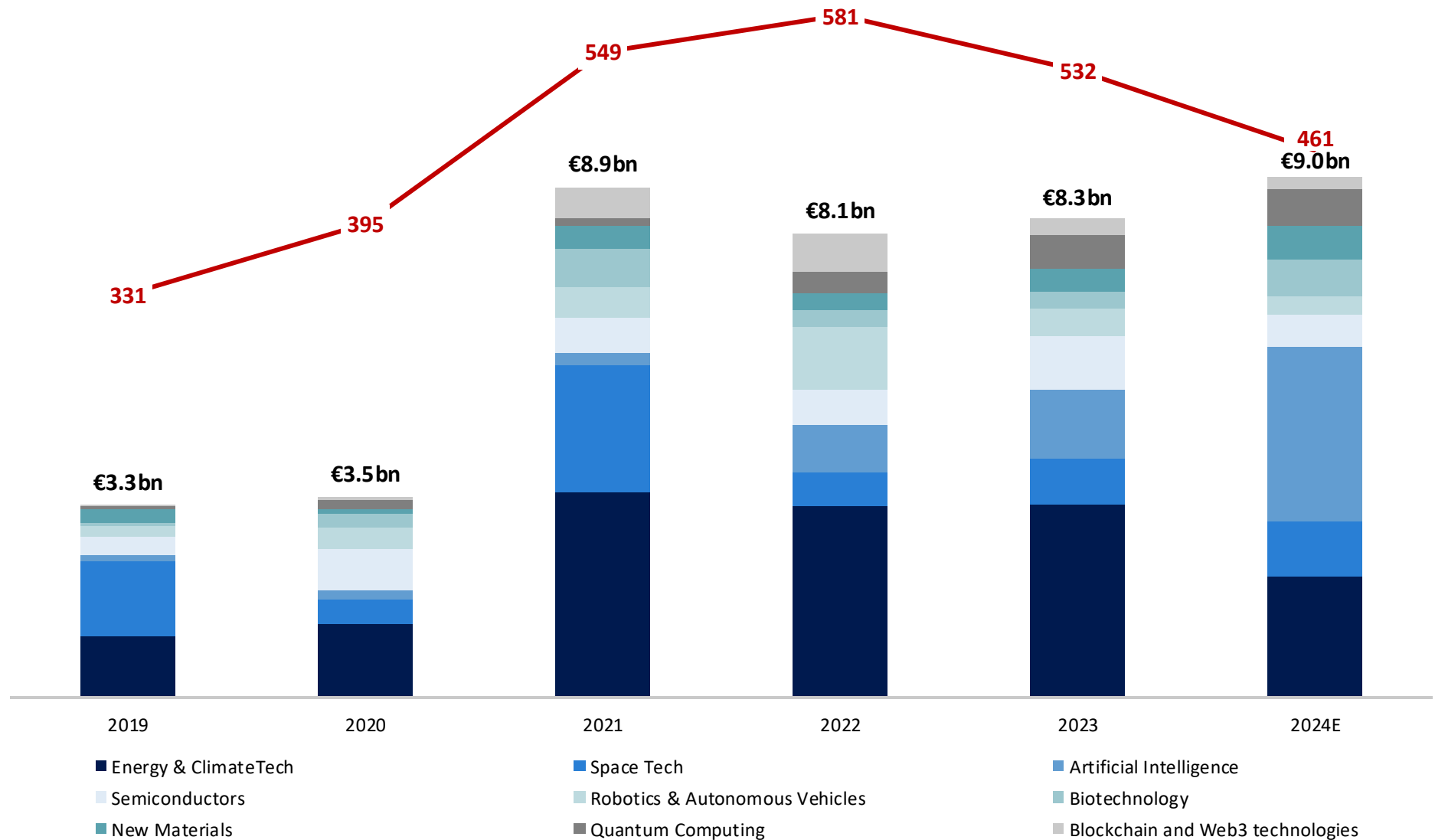
EUROPEAN DEEPTech VC TRENDS

EUROPEAN DEEPTECH VC TRENDS

DEEPTECH INVESTMENTS SURGED POST-COVID AND REMAINED STABLE AFTER

Amount raised by DeepTech across industries (in €bn)

Number of fundraising

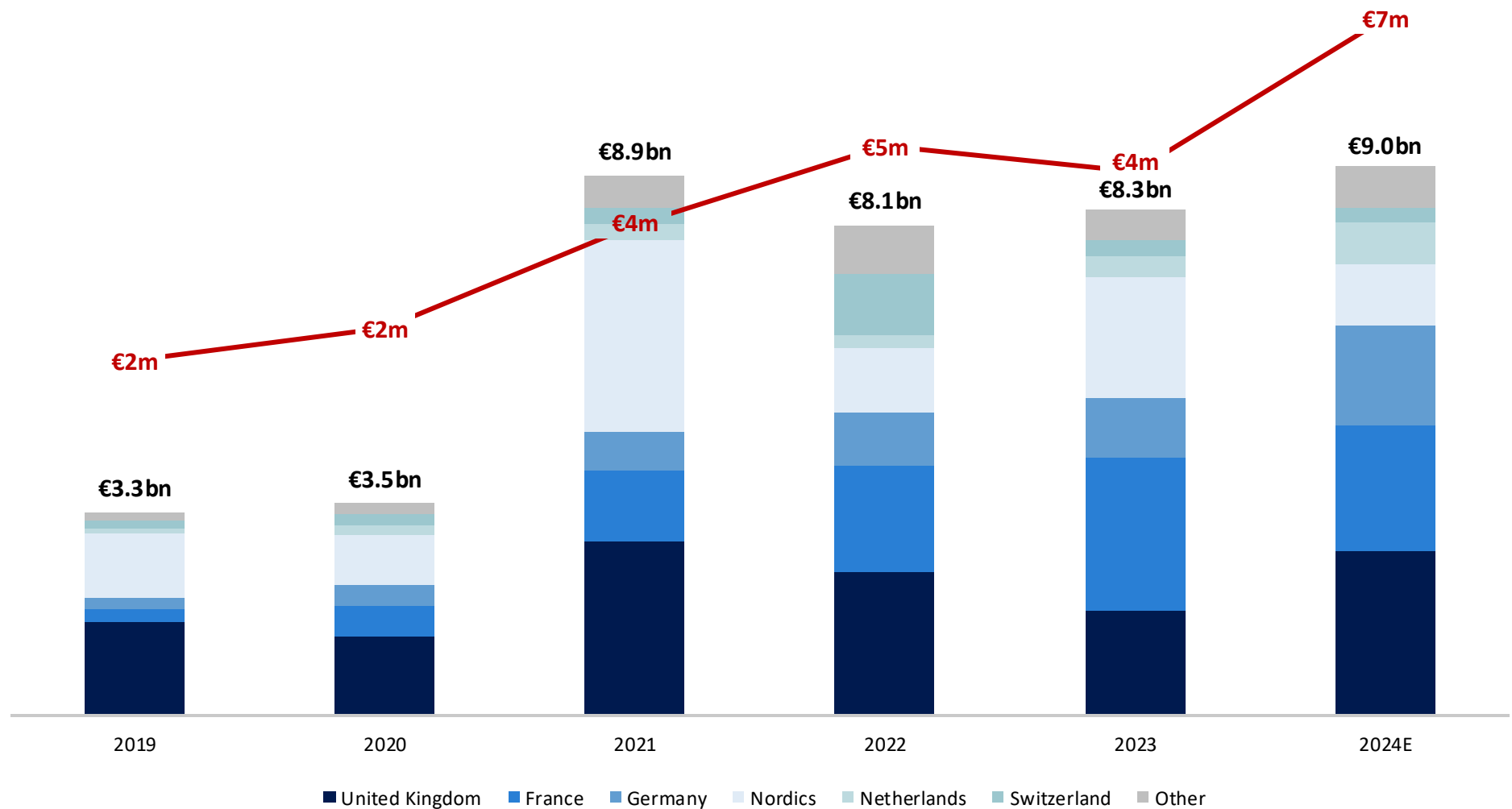


EUROPEAN DEEPTECH VC TRENDS

FRANCE & THE UNITED KINGDOM TOP THE CHARTS

Amount raised by DeepTech across European countries (in €bn)

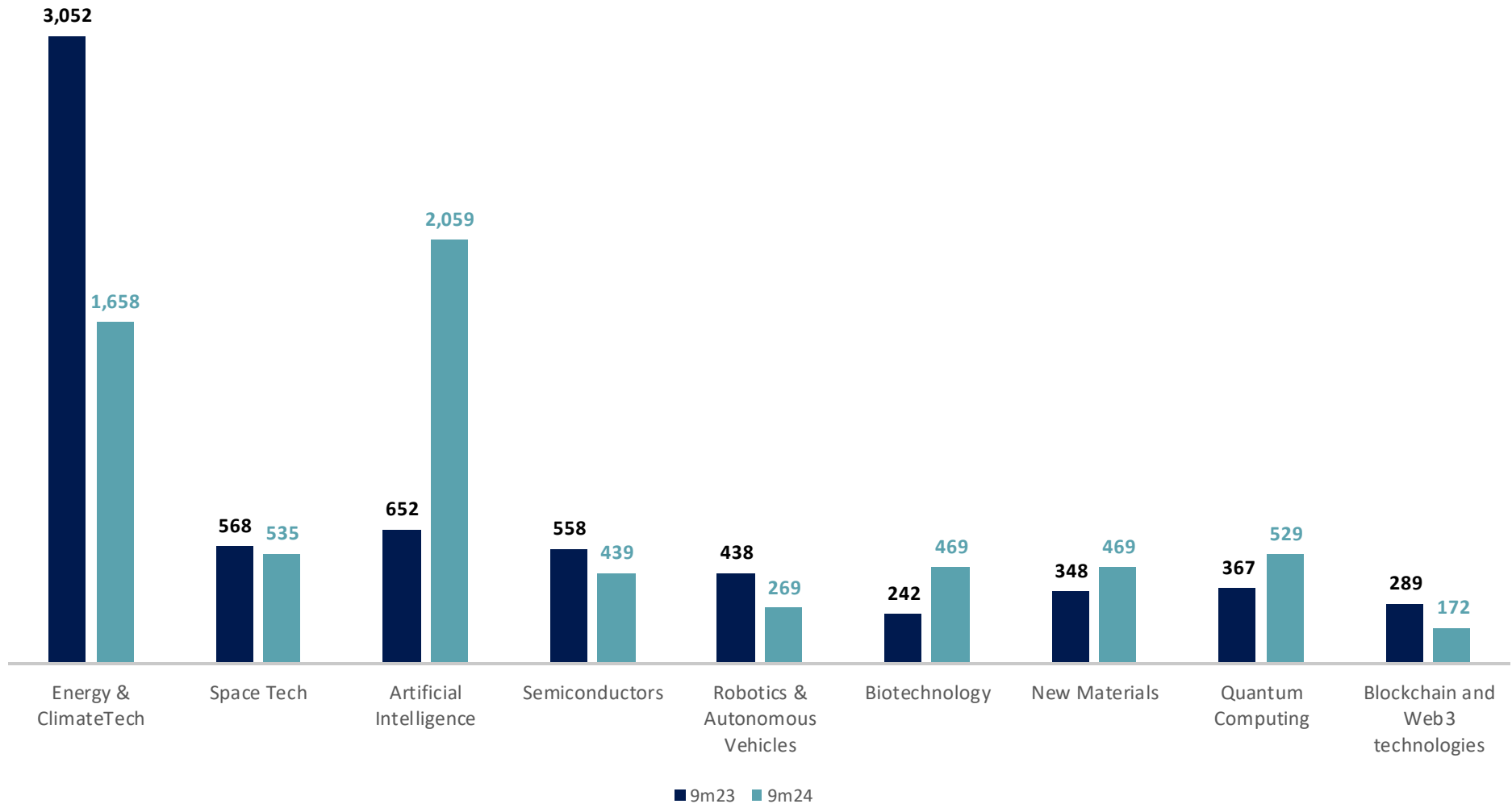
Median value (in €m)



EUROPEAN DEEPTECH VC TRENDS

ARTIFICIAL INTELLIGENCE IS THE HOTTEST TOPIC OF 2024 SO FAR

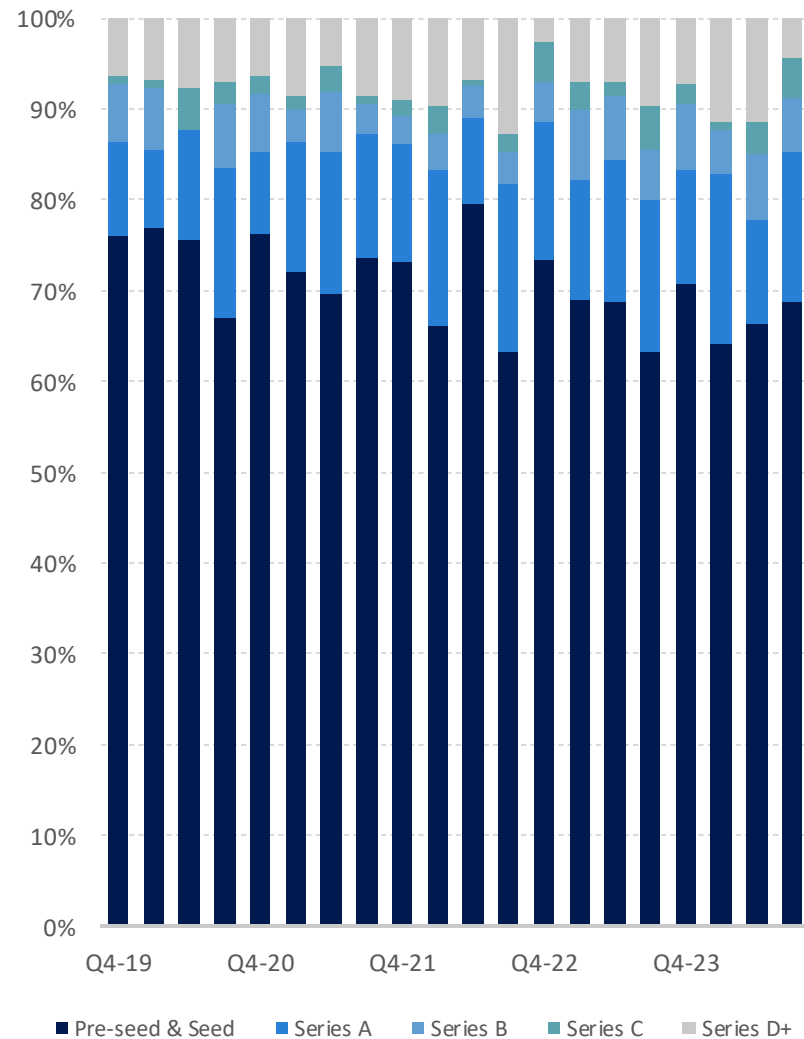
Amount raised by DeepTech sub-industries in first 3 quarters of 2024 vs 2023 (in €bn)



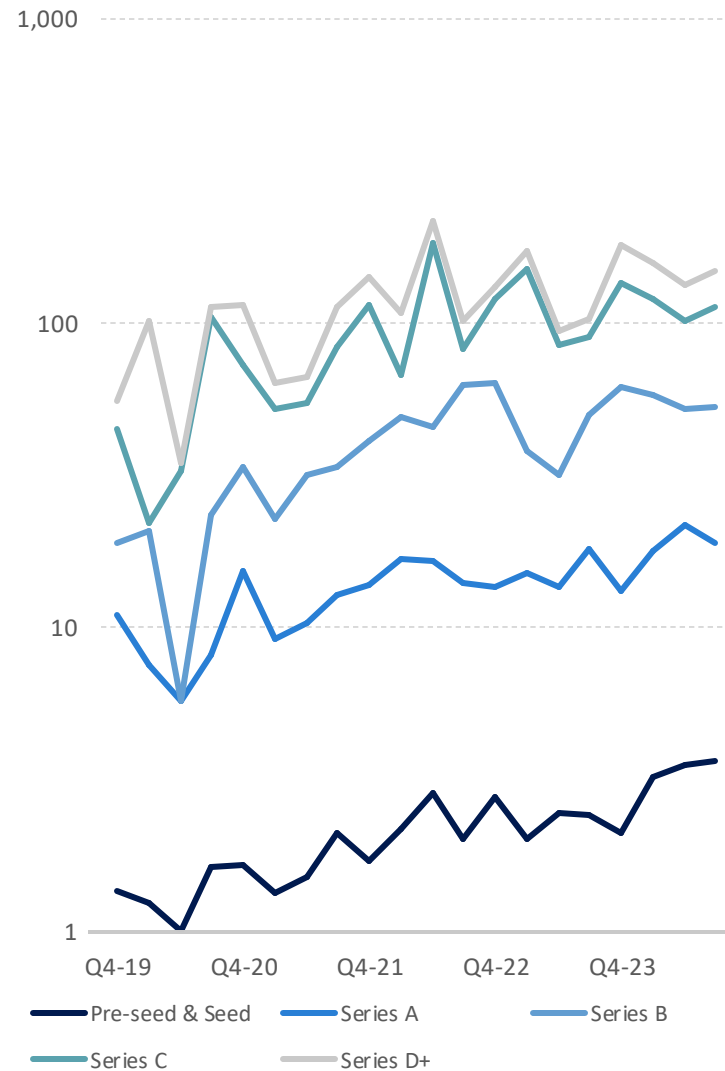
EUROPEAN DEEPTECH VC TRENDS

EUROPEAN DEEPTECH IS STILL MAINLY EARLY-STAGE

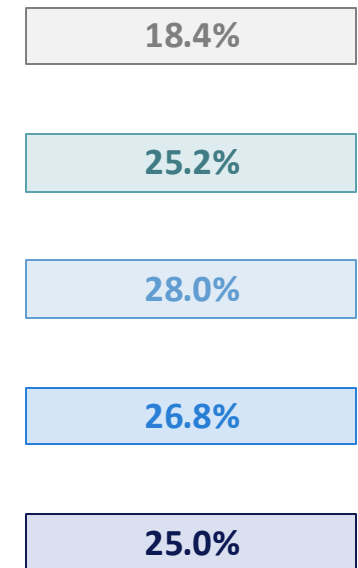
Number of fundraising by Series stage (in %)



Median fundraising amount by Series stage (in €m)















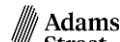












Median Dilution • Last 5y (%)



EUROPEAN DEEPTech VC TRENDS

TOP 5 FUNDRAISINGS PER SUB-INDUSTRY IN 2024YTD • 1/3

ARTIFICIAL INTELLIGENCE

| COMPANY | COUNTRY | SERIES | DATE | FUNDING (€M) | INVESTORS |
|--|---|-----------------|--------|--------------|---|
|  WAYVE |  | Series C | May-24 | 955 |  Microsoft  NVIDIA.  SoftBank |
|  MISTRAL AI |  | Series B | Jun-24 | 468 |  bpi france  Lightspeed  IBM |
|  poolside |  | Series B | Oct-24 | 455 |  Adams Street  HSBC  Redpoint. |
|  DeepL |  | Series D+ | May-24 | 273 |  atomico  Index Ventures  ivp |
|  H |  | Pre-Seed & Seed | May-24 | 73 |  Accel  CREANDUM  elaia |

SEMICONDUCTORS

| | | | | | |
|---|---|---------------|--------|-----|---|
|  black semiconductor |  | Growth Equity | Jun-24 | 254 |  Ministry of Economic Affairs, Industry, Climate Action and Energy of the State of North Rhine-Westphalia  Federal Ministry for Economic Affairs and Climate Action |
|  NEARFIELD INSTRUMENTS |  | Series C | Jul-24 | 135 |  TEMASEK  Innovation Industries  M&G Investments |
|  AXELERA |  | Series B | Jun-24 | 62 |  SAMSUNG ELECTRONICS  Innovation Industries  VERVE VENTURES |
|  EFFECT PHOTONICS |  | Series D+ | Mar-24 | 35 |  Innovation Industries  INVESTNL |
|  NL TECHNOLOGY |  | Series D+ | May-24 | 29 |  Jolt Capital  ngp capital  Swisscanto |


























BLOCKCHAIN & WEB3 TECHNOLOGIES

| | | | | | |
|---|---|-----------------|--------|----|--|
|  CELESTIA |  | Series D+ | Sep-24 | 91 |  1k(x)  BainCapital |
|  DWF LABS |  | Series D+ | Jul-24 | 36 |  DWF LABS |
|  KIN CAPITAL |  | Pre-Seed & Seed | Feb-24 | 32 |  KIN CAPITAL  AVES LAIR |
|  HIVE |  | Series A | Mar-24 | 12 |  Ragtime  scventures by Standard Chartered |
|  GLOBAL DIGITAL ASSETS |  | Pre-Seed & Seed | Feb-24 | 1 |  GLOBAL DIGITAL ASSETS |

EUROPEAN DEEPTech VC TRENDS

TOP 5 FUNDRAISINGS PER SUB-INDUSTRY IN 2024YTD • 2/3

NEW MATERIALS

| COMPANY | COUNTRY | SERIES | DATE | FUNDING (€M) | INVESTORS |
|--|---|-----------------|--------|--------------|---|
|  BioBTX |  | Series D+ | Jun-24 | 42 |  Cardano Capital  ECONOMIC BOARD GRONINGEN  covestro |
|  UNITED FIBER |  | Series D+ | Mar-24 | 40 |  INDITEX  Goldwin  YOUNGONE |
|  Bcomp |  | Series C | Apr-24 | 36 |  VERVE VENTURES  BMW i Ventures  ALUMINUM |
|  Calyxia |  | Series B | Sep-24 | 32 |  bpi france  ASTANOR VENTURES  LOMBARD |
|  cusp.ai |  | Pre-Seed & Seed | Jun-24 | 27 |  Lightspeed  NORTHZONE  hoxton ventures |

BIOTECHNOLOGY

| | | | | | |
|---|---|----------|--------|----|---|
|  Formo |  | Series B | Sep-24 | 55 |  Seven Ventures  REWE GROUP  IEQT VENTURES |
|  BASECAMP RESEARCH |  | Series B | Oct-24 | 55 |  singular |
|  constructive.bio |  | Series A | Sep-24 | 53 |  Paladin  Ahren  Fine Structure VENTURES |
|  Infinite Roots |  | Series B | Jan-24 | 53 |  red alpine  REWE GROUP  英資本 BUSINESS CAPITAL |
|  LabGenius |  | Series B | Apr-24 | 42 |  atomico  LU+  OBVIOUS |




















ENERGY & CLIMATE TECH

| | | | | | |
|---|---|---------------|--------|-----|--|
|  Stegra |  | Growth Equity | Jan-24 | 300 |  Siemens Financial Services  Mubea  IMAS Foundation |
|  sunfire |  | Series D+ | Mar-24 | 215 |  GIC  BlueEarth  lightrock |
|  newcleo |  | Series A | Sep-24 | 135 |  AZIMUT  Exor Ventures  INGEROP |
|  IC INERATEC |  | Series B | Jan-24 | 118 |  High-Tech Gründerfonds  SAFRAN  HONDA |
|  GeoPura |  | Series D+ | Feb-24 | 67 |  BARCLAYS  SWEN Capital Partners  SIEMENS energy |

EUROPEAN DEEPTECH VC TRENDS

TOP 5 FUNDRAISINGS PER SUB-INDUSTRY IN 2024YTD • 3/3

QUANTUM COMPUTING

| COMPANY | COUNTRY | SERIES | DATE | FUNDING (€M) | INVESTORS |
|--|---|-----------|--------|--------------|--|
|  QUANTINUUM |  | Series D+ | Jan-24 | 273 |  MITSUI GLOBAL INVESTMENT  Honeywell JPMORGAN CHASE & CO. |
|  river lane |  | Series C | Aug-24 | 70 |  Amadeus Capital Partners  edbi CAMBRIDGE INNOVATION CAPITAL |
|  planqc |  | Series A | Jul-24 | 50 |  DeepTech & Climate Fonds |
|  AQEMIA |  | Series A | Jan-24 | 30 |  elaia  bpi france EURAZEO |
|  MULTIVERSE COMPUTING |  | Series A | Mar-24 | 25 |  COLUMBUS VENTURE PARTNERS  QUANTONATION |

SPACE TECH

| | | | | | |
|---|---|-----------|--------|-----|---|
|  The Exploration Company |  | Series B | Oct-24 | 150 | Balderton.  OMNES  IEQT  RED RIVER WEST |
|  ICEYE |  | Series D+ | Apr-24 | 85 |  SOLIDIUM  MOVE CAPITAL  BW BLACKWELLS CAPITAL |
|  isaraerospace TECHNOLOGIES |  | Series C | Jun-24 | 64 |  NIF |
|  unseenlabs — THE BRIGHT SIGHT |  | Series C | Feb-24 | 62 |  bpi france  OMNES  360 CAPITAL |
|  DORBIT |  | Series C | Sep-24 | 50 |  United Ventures  European Investment Bank  SERAPHIM |



















ROBOTICS & AUTONOMOUS VEHICLES

| | | | | | |
|---|---|-----------------|--------|-----|--|
|  verne |  | Series A | Feb-24 | 100 |  RIMAC  KIA  SiteGround |
|  IX |  | Series B | Jan-24 | 91 |  IEQT VENTURES  SAMSUNG  SKAGERAK CAPITAL |
|  M |  | Pre-Seed & Seed | Feb-24 | 23 |  Hummingbird  NORTHZONE  H2H VENTURES |
|  H55 |  | Series C | Jul-24 | 17 |  Québec |
|  CARTKEN |  | Pre-Seed & Seed | Jul-24 | 9 |  MITSUBISHI ELECTRIC  Volex  MAGNA |

EUROPEAN DEEPTech VC TRENDS

PUBLIC ENTITIES ARE LEADING THE WAY FOR EUROPEAN DEEPTech FUNDING

Top 10 active investors in European DeepTech in the past 5 years

| | Country | Artificial Intelligence | Bio-technology | Blockchain & Web3 | Energy & ClimateTech | New Materials | Quantum Computing | Robotics & Auto. Vehicles | Semi-conductors | Space Tech | Total |
|---|---|-------------------------|----------------|-------------------|----------------------|---------------|-------------------|---------------------------|-----------------|------------|-------|
|  |  | 2 | 8 | - | 25 | 34 | 30 | 7 | 40 | 16 | 162 |
|  |  | 6 | 7 | - | 17 | 12 | 11 | 10 | 9 | 18 | 90 |
|  |  | 2 | 1 | - | 6 | 5 | 12 | 4 | 10 | 10 | 50 |
|  |  | - | - | - | 41 | 1 | - | 2 | 2 | 4 | 50 |
|  |  | - | - | 1 | - | - | 3 | 2 | 2 | 29 | 37 |
|  |  | - | 1 | - | 5 | 1 | - | - | 22 | - | 29 |
|  |  | - | 1 | - | 10 | 3 | 1 | - | 13 | - | 28 |
|  |  | 2 | 1 | - | 7 | 3 | 2 | 3 | 3 | 7 | 28 |
|  |  | 1 | 2 | - | 4 | 5 | 5 | 2 | 3 | 5 | 27 |
|  |  | - | - | - | - | - | 24 | - | 3 | - | 27 |







EUROPEAN DEEPTech VC TRENDS

24 EUROPEAN DEEPTech UNICORNS, PRIMARILY FOCUSING ON ENERGY & CLIMATE Tech






Energy & Climate Tech

| Unicorn | Country | Funding to date |
|---------------------------------|---|-----------------|
| northvolt |  | 7,001 |
| Stegra |  | 2,405 |
| VERKOR |  | 1,870 |
| climeworks |  | 709 |
| * ARRIVAL |  | 574 |
| newcleo NEW |  | 562 |
| SONO MOTORS |  | 109 |




Artificial Intelligence

| Unicorn | Country | Funding to date |
|----------------------------------|---|-----------------|
| WAYVE NEW |  | 1,189 |
| MISTRAL AI |  | 973 |
| poolside NEW |  | 569 |
| DeepL |  | 373 |
| stability.ai |  | 210 |
| synthesia |  | 142 |


Blockchain & Web3

| Unicorn | Country | Funding to date |
|------------------|---|-----------------|
| [LEDGER] |  | 531 |
| DFINITY |  | 148 |
| CELESTIA |  | 142 |
| ZYBER 365 |  | 91 |
| ARQIT |  | 75 |


Robotics & Autonomous Vehicles

| Unicorn | Country | Funding to date |
|-------------------------|---|-----------------|
| EXOTEC SOLUTIONS |  | 405 |
| einride |  | 322 |
| TTTech |  | 259 |

New Materials

| Unicorn | Country | Funding to date |
|------------------|---|-----------------|
| O C Si AI |  | 225 |

Biotechnologies

| Unicorn | Country | Funding to date |
|-------------------|---|-----------------|
| TOUCHLIGHT |  | 114 |

Quantum Computing

| Unicorn | Country | Funding to date |
|------------------------------------|---|-----------------|
| QUANTINUUM NEW |  | 588 |

3.

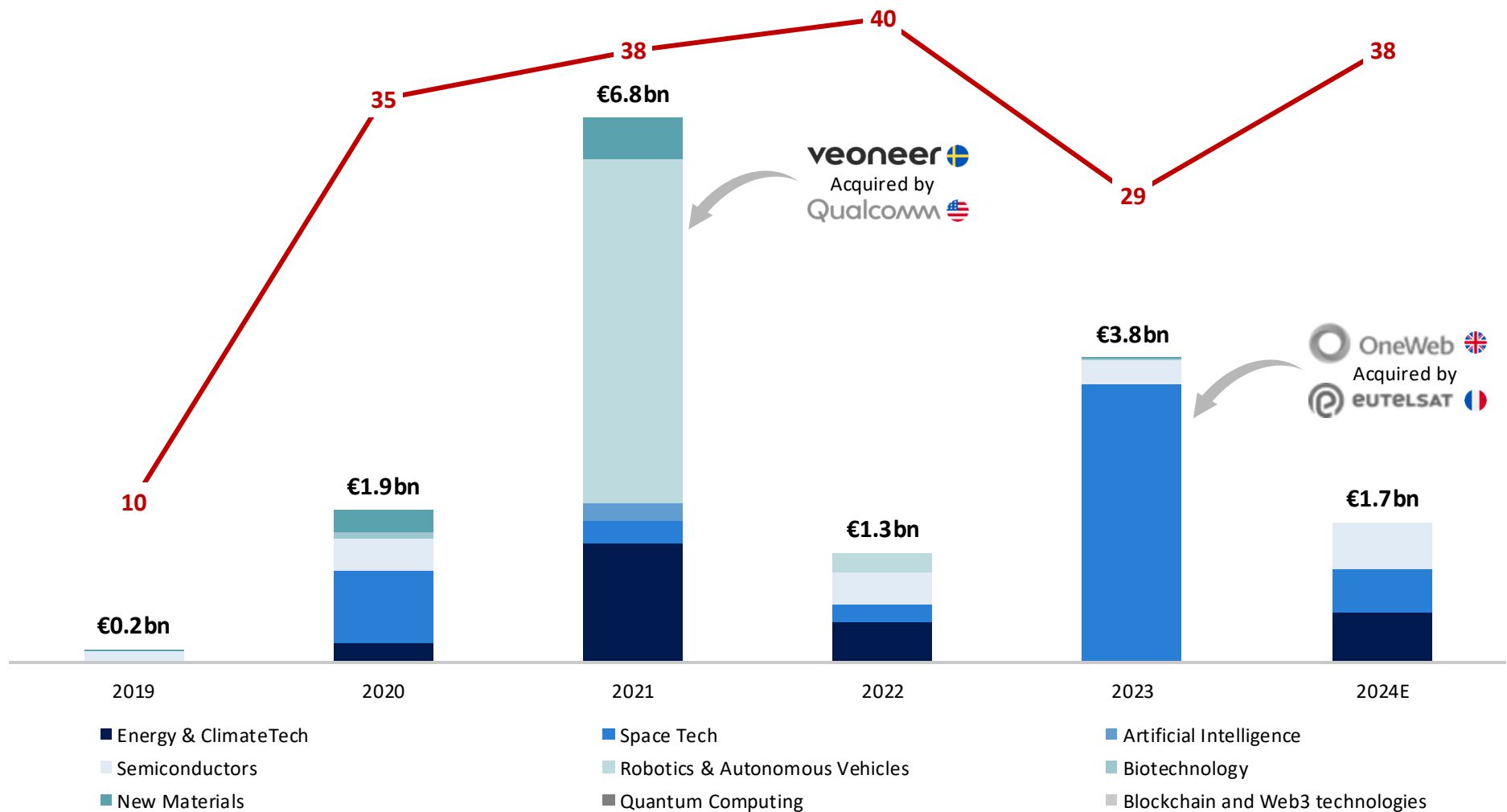
EUROPEAN DEEPTech EXIT TRENDS

EUROPEAN DEEPTECH EXIT TRENDS

EUROPEAN DEEPTECH EXITS ARE SCARCE

Total exit value across industries (in €bn)

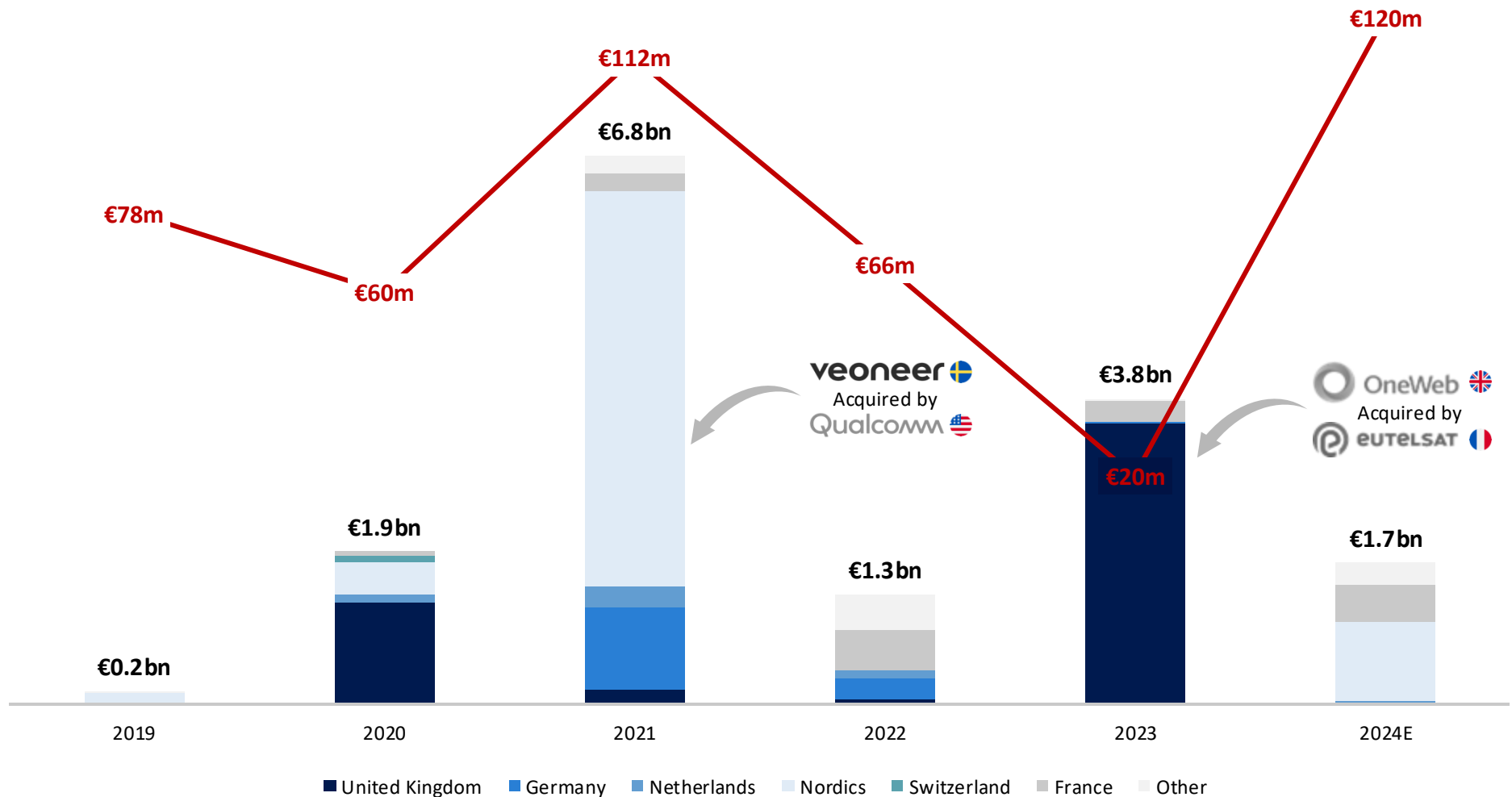
Number of exits



EUROPEAN DEEPTECH EXIT TRENDS

EXCEPT COUPLE OF MEGADEALS IN THE UK AND THE NORDICS, NO CLEAR DYNAMIC STANDS OUT

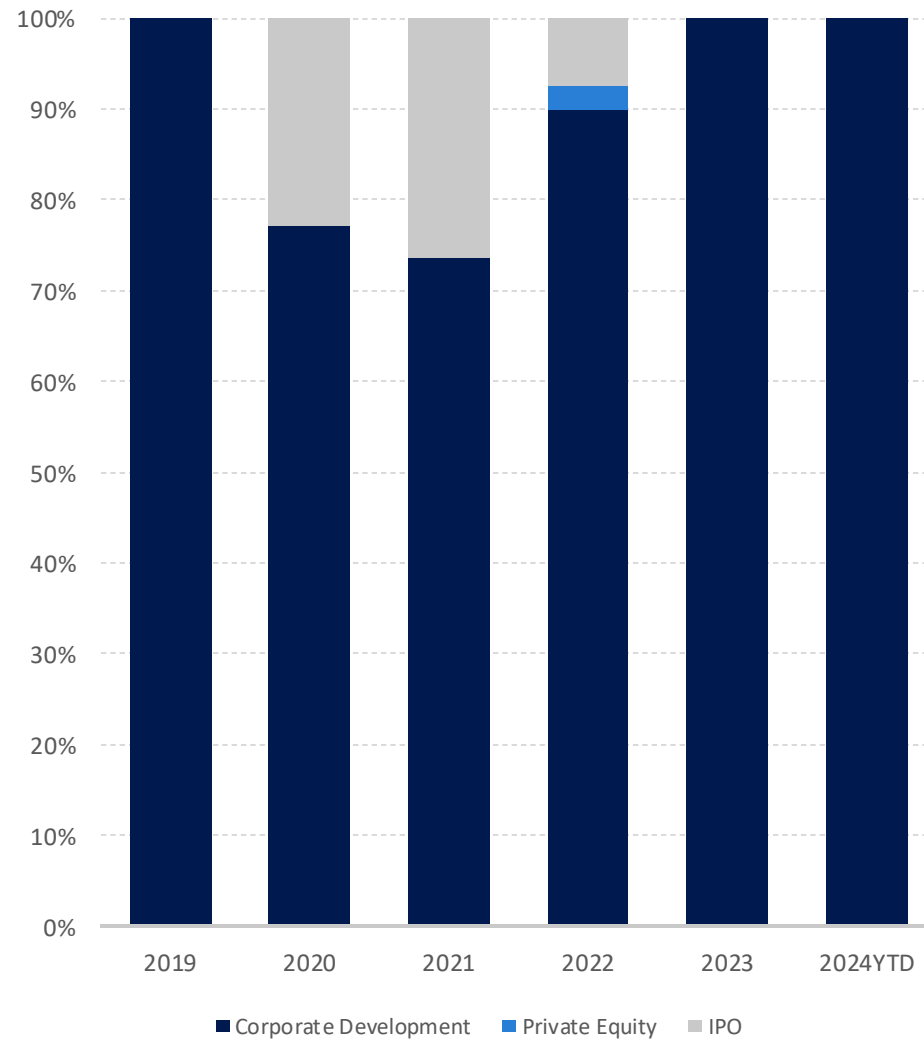
Amount raised by DeepTech across European countries (in €bn)
Median value (in €m)



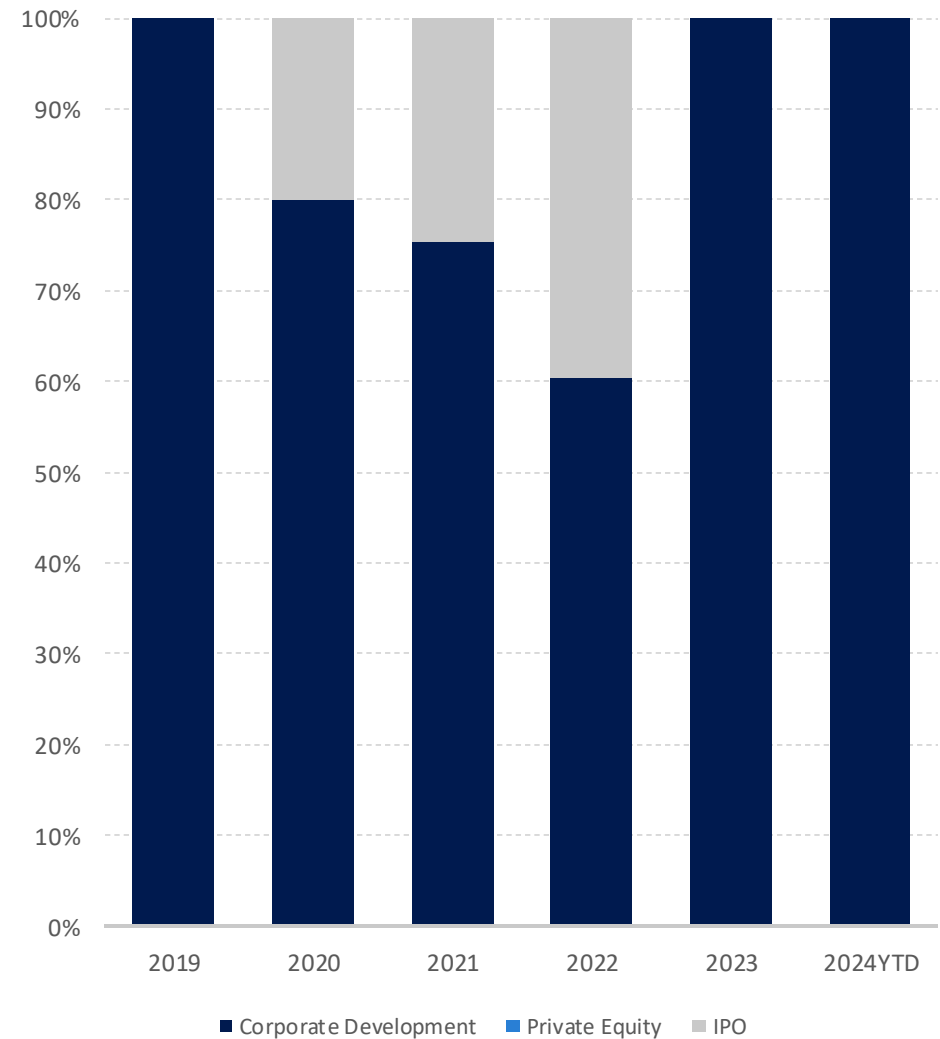
EUROPEAN DEEPTech EXIT TRENDS

IPO SAW A SURGE IN THE FREE-MONEY ERA, BUT STRATEGICS REMAIN THE MAIN EXIT VECTORS

Distribution of exit deals per type of transaction (in %)



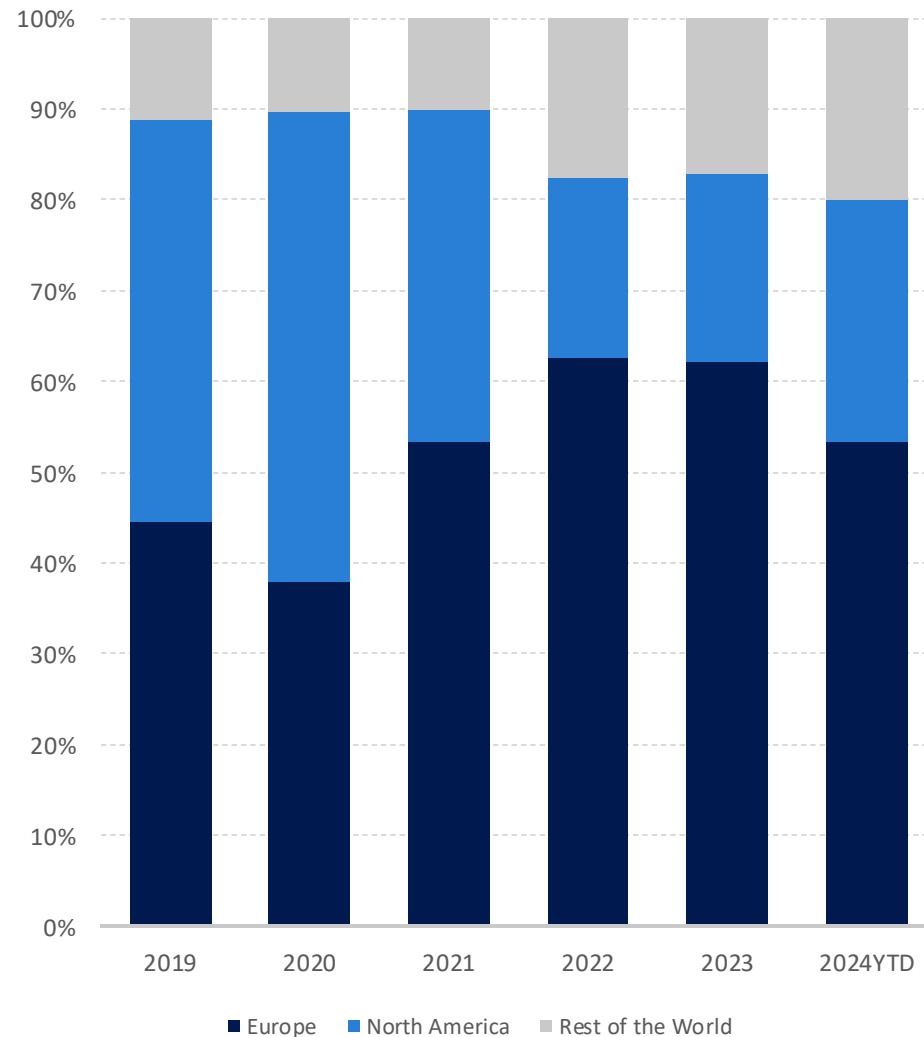
Distribution of disclosed exit value per type of transaction (in %)



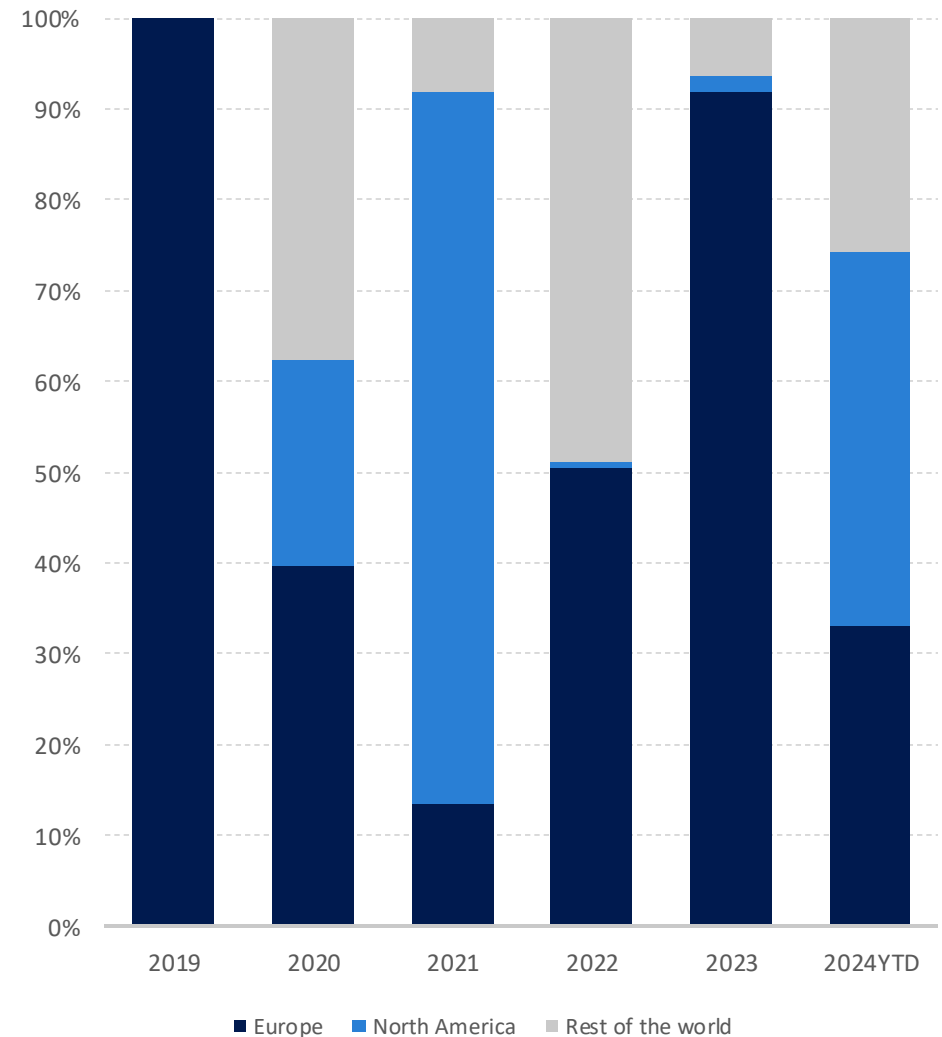
EUROPEAN DEEPTech EXIT TRENDS

EUROPEAN CENTRIC DYNAMICS ALTHOUGH LARGEST DEALS ARE UNDERTAKEN BY FOREIGNERS

Distribution of exit deals per origin of acquirers (in %)

































Distribution of disclosed exit value per origin of acquirers (in %)



EUROPEAN DEEPTech EXIT TRENDS

NOTABLE EXITS IN THE PAST 12 MONTHS

| Date | Target | Country | Industry | EV (€m) | Acquirer |
|--------|--|---|----------------------|---------|--|
| Sep-23 |  OneWeb |  | Space Tech | 3,400 |  EUTELSAT |
| Mar-24 |  AKER CARBON CAPTURE |  | Energy & ClimateTech | 346 |  slb |
| Sep-24 |  NIL TECHNOLOGY |  | Semiconductors | 300 |  瑞儀光電股份有限公司 Radiant Opto-Electronics Corporation |
| Jun-24 |  PRELIGENIS |  | Space Tech | 220 |  SAFRAN |
| Mar-24 |  CIVITANAVI SYSTEMS® |  | Space Tech | 200 |  Honeywell |
| Jul-24 |  unity ^{SC} |  | Semiconductors | 155 |  MERCK |
| Apr-24 |  P2X solutions |  | Energy & ClimateTech | 86 |  ALPIQ |
| Aug-24 |  convion |  | Energy & ClimateTech | 72 |  HD KOREA SHIPBUILDING & OFFSHORE ENGINEERING |
| Feb-24 |  OXIGN |  | Semiconductors | 31 |  MPS |
| Jan-24 |  FIRST LIGHT ADVANCED IMAGERY |  | Space Tech | 19 |  OXFORD INSTRUMENTS |

4.

AVOLTA

AVOLTA IS A LEADING EUROPEAN M&A & FUNDRAISING ADVISOR IN THE TECH INDUSTRY



Top 3

Tech Small-Cap
M&A & Fundraising
Advisor in Europe



130

Successful
transactions



€3bn

Aggregate value of
transactions



70%

International
transactions



20

Tech
bankers



6

Partners



12

Years since inception



30

Reports on the tech
industry

AVOLTA DEEPTech CREDENTIALS

STRONG TRACK-RECORD IN DEEPTech TRANSACTIONS



5.

FRANCE DEEPTECH

FRANCE DEEPTech

ABOUT

- ❑ Uniting **Deeptech** pioneers to foster an **entrepreneurial, collective,** and **scientific** response to contemporary challenges, ensuring sovereignty and freedom for our future
- ❑ Composed of **300 members**, which **collectively raised €5bn** and **employs 10,000+** people



Michel De Lempdes
President



Romain Roullis
General Manager



Henry Lachappelle
Business Development

SOME MEMBERS...

Investment funds



Startups



Research Institutes & Partners



... AND INITIATIVES

- ❑ **Peer-Led Thematic Workshops** focused on addressing the unique challenges faced by Deeptech startups and scaleups.
- ❑ **Strategic Networking Events** bringing together startups, SMEs, mid-sized companies, industrial leaders, and expert partners from research institutions and consulting firms.
- ❑ **Comprehensive Deeptech Intelligence Sharing** providing crucial data and analysis on Deeptech developments across France, Europe, and globally to guide stakeholder actions.
- ❑ **Advocacy and Interest Representation** engaging with French and European public authorities to champion Deeptech interests and enhance funding opportunities for startups and scaleups.

6.

SCOPE OF RESEARCH

SCOPE OF RESEARCH

SOURCE & METHODOLOGY

SOURCES

- ❑ **Dealroom:** for deals and segments
- ❑ **Pitchbook:** for valuations
- ❑ **Specialized press:** for valuations
- ❑ **Press releases:** for valuations

SELECTION CRITERIA

- ❑ **Location:** in Europe (including United Kingdom)
- ❑ **Creation year:** after 1995
- ❑ **Business line:** service providers excluded
- ❑ **Transaction date:** last 5 years
- ❑ **Round:** are included the following and only:
 - **Fundraising:** Angel, Seed, Series A to I, Early VC, Late VC, Growth Equity VC
 - **Exits:** IPO, Merger & Acquisition, Buyout & Growth Equity Non-VC

CALCULATION

- ❑ **Projections:** for unfinished period, values are annualized. $V_{\text{ESTIMATED}} = V_{\text{ACTUALS}} \times 12 \div \text{MONTH}_{\text{ACTUALS}}$
- ❑ **Enterprise Value:** calculated as Equity Value + Net Financial Debt when legal information is found
- ❑ **Dilution:** New Money \div Post-Money Valuation

SCOPE OF RESEARCH

SEGMENTS • ¹/₂

ARTIFICIAL INTELLIGENCE 🤖

- ❑ Focuses on advanced AI technologies, particularly GenAI solutions, including model development, computing infrastructure, synthetic data generation, and privacy-enhancing technologies
- ❑ Encompasses both fundamental AI infrastructure (computing layer) and highly-specialized applications

BIOTECHNOLOGY 🧬

- ❑ Focuses on biological and biochemical innovations
- ❑ Includes drug discovery using AI, biosensors for medical and environmental applications, bioplastics, biomaterials
- ❑ Encompasses synthetic biology, fermentation technologies, lab-grown materials, and brain-computer interfaces

BLOCKCHAIN AND WEB3 TECHNOLOGIES 🔗

- ❑ Focuses on decentralized technology infrastructure
- ❑ Includes Layer 1 and Layer 2 solutions, rollups
- ❑ Covers crypto infrastructure and Web 3.0 foundational technologies

ENERGY & CLIMATE TECH ⚡

- ❑ Covers clean energy technologies and climate change solutions
- ❑ Includes hydrogen-related technologies (production, storage, fuel cells), battery innovations (EV batteries, solid-state), carbon management (capture, storage, utilization), and nuclear technologies (fusion and fission)
- ❑ Also encompasses renewable energy solutions like wave energy and sustainable industrial processes

NEW MATERIALS 🧱

- ❑ Focuses on advanced material development
- ❑ Includes graphene and other advanced materials
- ❑ Emphasizes materials with novel properties for industrial applications

SCOPE OF RESEARCH

SEGMENTS • 2/2

QUANTUM COMPUTING

- ❑ Focuses on quantum technology development
- ❑ Includes quantum computers, processors, and sensors
- ❑ Emphasizes quantum photonic chips and related quantum computing infrastructure

ROBOTICS & AUTONOMOUS VEHICLES

- ❑ Centers on autonomous system development
- ❑ Includes self-driving vehicles, autonomous delivery systems, and mobile robots
- ❑ Covers essential components like LiDAR, radar, cameras, and specialized software
- ❑ Includes simulation and labeling technologies for autonomous system development

SEMICONDUCTORS

- ❑ Encompasses the full semiconductor ecosystem
- ❑ Includes chip design and manufacturing, memory and storage solutions
- ❑ Covers specialized semiconductors like photonic chips, neuromorphic processors, and GaN chips
- ❑ Includes supporting technologies like lithography, testing equipment, and engineering tools

SPACE TECH

- ❑ Covers the entire space industry value chain
- ❑ Includes launch vehicles, satellites (communication, earth observation), space exploration technologies
- ❑ Features specialized areas like in-space manufacturing, debris removal, mission control systems
- ❑ Also covers space infrastructure like propulsion systems and materials designed for space use

RESEARCH TEAM



Arthur Porré
Founding Partner



Alexandre Meiers
Vice President



Olivier Saint-Marc
Associate

Disclaimer

The information contained in this document has been produced by Avolta, based on market & legal data and third-party information. While Avolta has made every effort to ensure the reliability of the data included in this document, Avolta cannot guarantee the accuracy of the information collected and presented. Therefore, Avolta cannot accept responsibility for any decision made or action taken based upon this document or the information provided herein.

This presentation is for the exclusive use of the people to whom it is addressed and is intended for general information purposes only. It is not intended to constitute legal or other professional advice and should not be treated as such.

Appropriate legal advice must be sought before making any decision, taking any action or refraining from taking any action in reliance on the information contained in this presentation. does not assume any responsibility for any person's reliance upon the information contained herein.

© Copyright Avolta 2024



With 130 deals executed for €3bn in total over the last 12 years, Avolta is one of the most active Tech M&A advisors in Europe. Based on this expertise, Avolta's team of 20 people has maximised the value of each deal in terms of valuations and overall conditions – this due to its time-tested sectorial methodology and expert negotiating skills.