

Madrid Region

Semiconductor Startups

Q4 2022

In partnership with:

Information Sources

- + [Startup Radar madri+d](#) the Madrid Region innovative entrepreneurial ecosystem platform including two Databases (Dealroom and Fundación madri+d) unique in size and representativeness of innovative startups, incubators, accelerators, venture capital investments,...
- + 2022 Report [Semiconductors and Electronics Forecast Database](#), Gartner
- + 2022 Report [Semiconductor industry outlook](#), Deloitte
- + 2022 Report Ministerio de Asuntos Económicos y Transformación Digital
- + 2022 Report [Europe's urgent need to invest in a leading-edge semiconductor ecosystem](#), Kearney
- + 2022 [Semiconductor industry pulse report](#), KPMG
- + 2022 [Russia-Ukraine war: Impact on the semiconductor industry](#), KPMG



Microelectronics sector in the world: sector on the rise, sustained growth

🇪🇸 Growth in the sector is expected to reach 13.6% in 2022

Semiconductor Revenue Forecast, Worldwide, 2021-2023 (Billions of U.S. Dollars)

| | 2021 | 2022 | 2023 |
|---------------|-------|-------|-------|
| Revenue (\$B) | 595.0 | 676.0 | 700.5 |
| Growth (%) | 26.3 | 13.6 | 3.6 |

Source: 2022 Report Semiconductors and Electronics Forecast Database, Gartner



The great challenge : the shortage of components and their manufacture

- Shortages in the sector can be one of the great challenges of the 21st century at a global level:
 - Semiconductors have become a truly essential industry. Together with other traditionally essential industries such as food, energy, or logistics, the chip shortage of 2020 and 2021 and its potential consequences revealed the importance of the sector
 - The semiconductor industry will experience strong growth, as steps are taken to address chip and manufacturing shortages, manage lead times, hire specialized engineering and design, and strengthen supply

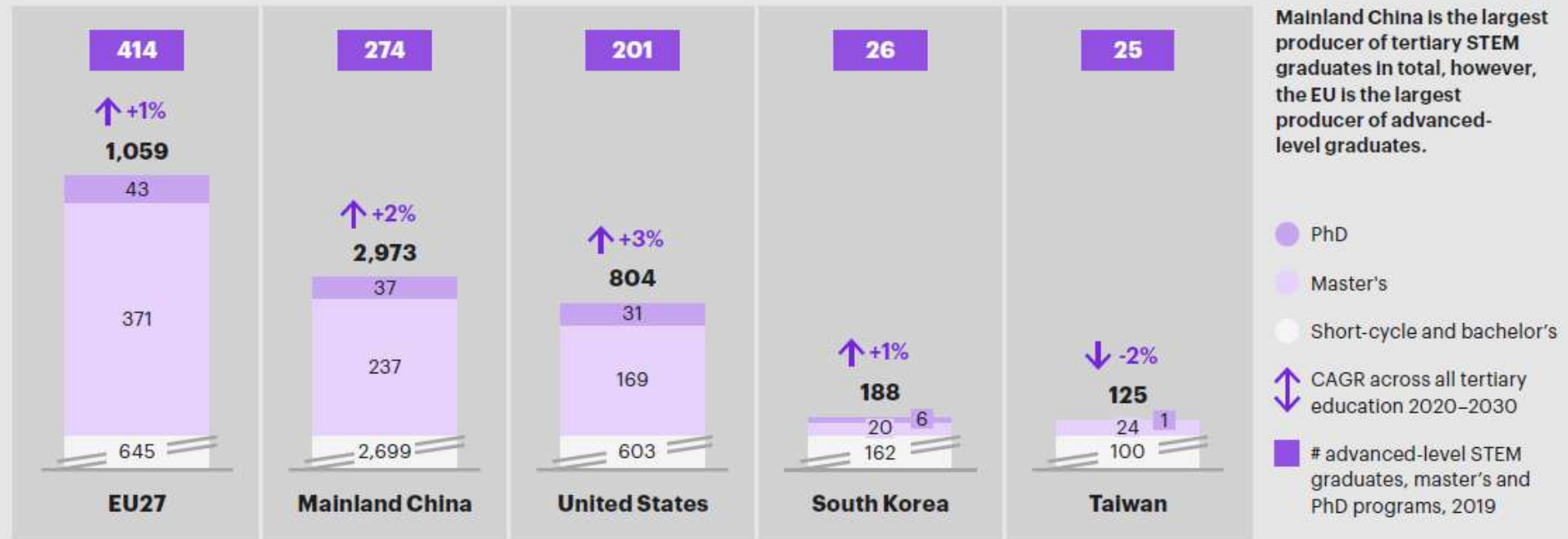


Microelectronics in Europe: an ambitious bet for the talent

- ⊕ Europe leads the generation of highly qualified professionals in the sector

**Access to advanced STEM talent will be crucial to power the high-tech sector in the next decade;
EU is a leading global supplier of advanced talent**

Advanced-level STEM graduates forecast by country¹



Some data about the sector, globally and in Spain

- ⊕ Global semiconductor shortages triggered by supply bottlenecks stemming from the pandemic have highlighted the need to accelerate autonomy in chip manufacturing.
- ⊕ The key for the sector is price stability, which is expected to stabilize in 2023.
- ⊕ Europe leads the generation of talent in the sector, although its great challenge is production capacity of microelectronic components, dominated by Asian markets.
- ⊕ In Spain, the large market for microchips is in electric vehicles whose sales are booming.
- ⊕ The implementation of the PERTE for Microelectronics and Semiconductors is a timely response to the need to increase the production capacity of semiconductors and achieve great strategic autonomy.



The microelectronics sector in Spain: PERTE opens up many possibilities to make Spain a leading actor

✚ Spain is committed to the sector and to its new framework of opportunities, which can be summarized as:

1. **Budget:** 12.2 million euros to be invested until 2027 - the highest investment of the ten strategic projects approved to date.
2. **Objectives:** to develop design and production capacities of the microelectronics and semiconductor industry in Spain and promote national and EU strategic autonomy in this sector.
3. **4 axes PERTE:** scientific capacity, design, manufacturing plants, ICT industry.



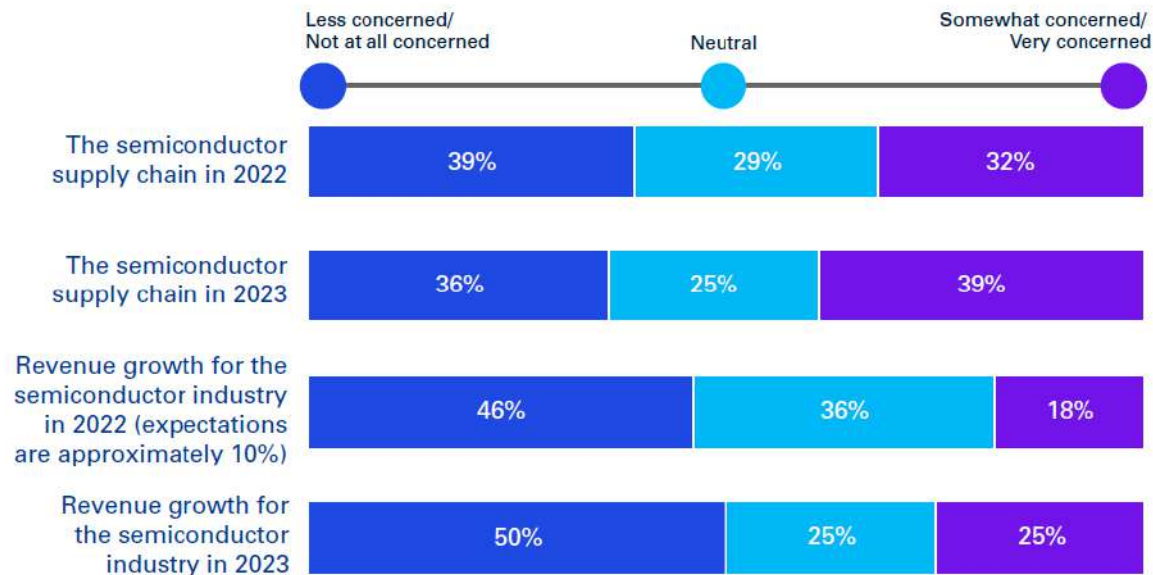
The microelectronics sector in Spain: PERTE opens up many possibilities to make Spain a leading actor

3. **Actions:** in all the levels of the value chain, from design to manufacturing.
4. **Strategy:** reinforce R&D and innovation capacities, chip design, construction of semiconductor manufacturing plants and revitalization of the electronics and information technology (ICT) industry. The participation of Spanish companies in strategic projects developed at European level (IPCEIs) will be supported.
5. **Creation of the Microchips Fund:** initially endowed with 200 million euros to finance startups and scaleups in the sector in Spain and strengthen their position in the National and European markets.



Russia-Ukraine war impact in the semiconductor and microelectronics industry

Concern that the Russia-Ukraine war will materially impact the semiconductor supply chain and revenue growth



Source: KPMG/GSA semiconductor pulse survey 2022

Expectations when the semiconductor supply shortage will ease

2022 Outlook survey (fourth quarter 2021)



2022 Pulse survey (second quarter 2022)



Sources: KPMG Global Semiconductor Industry Survey findings 2022 and KPMG/GSA semiconductor pulse survey 2022
Percentages do not sum to 100% due to rounding.

Source: [Semiconductor industry pulse report](#) (KPMG)



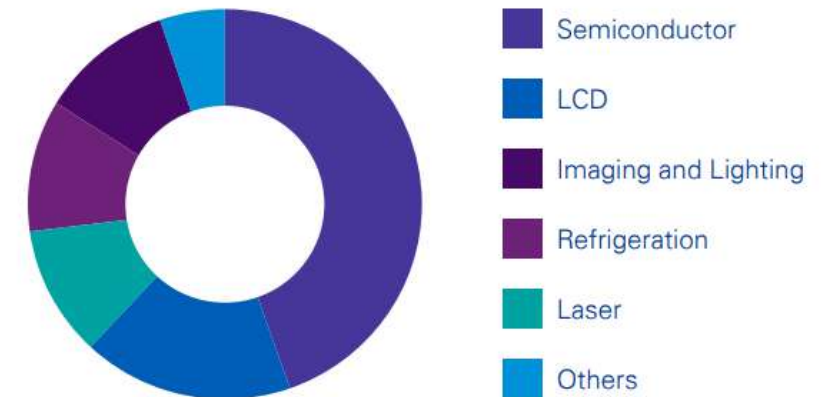
Russia-Ukraine war impact in the semiconductor and microelectronics industry

Level of concern about the impact of geopolitical matters on the global semiconductor industry and ecosystem

| (averages on a 1–5 scale with 1=not at all concerned and 5=very concerned) | Percentage of respondents somewhat/very concerned | Average score: Second quarter 2022 | Average score: Fourth quarter 2021 |
|---|--|---------------------------------------|---------------------------------------|
| The prominence of Taiwan in the supply chain | 50% | 3.5 | 4.1 |
| The nationalization of semiconductor technology and intellectual property | 50% | 3.5 | 3.9 |
| Potential long-term geopolitical uncertainty, especially in Europe, due to the Russian government's invasion of Ukraine | 46% | 3.4 | N/A |
| Tariffs and new/renegotiated trade deals | 29% | 2.9 | 3.6 |
| Global tax reform | 29% | 2.5 | 3.2 |
| The sanctions against, and potential decoupling of, Russia from the global economy | 14% | 2.5 | N/A |
| Climate change legislation and reporting regulation | 18% | 2.4 | 3.1 |

Sources: KPMG Global Semiconductor Industry Survey findings 2022 and KPMG/GSA semiconductor pulse survey 2022

Global neon usage by application



Source, EMR, "Global Neon Gas Market Outlook"

Source: [Semiconductor industry pulse report](#) (KPMG)

[Russia-Ukraine war: Impact on the semiconductor industry](#) (KPMG)

Nr. of semiconductor startups and scaleups and employment (2022_{YTD})



+ Europe

2,673 startups

Employment created: 200 K

+ Spain

164 startups (6,1% of Europe)

Employment created: 1,6k (0,8% of Europe)

+ Madrid Region

50 startups (30,5% of Spain)

Employment created: 616 (38,5% of Spain)

Total Value of Semiconductor Startups and Scaleups created between 2015 and 2021 (2022_{YTD})

 **Europe**

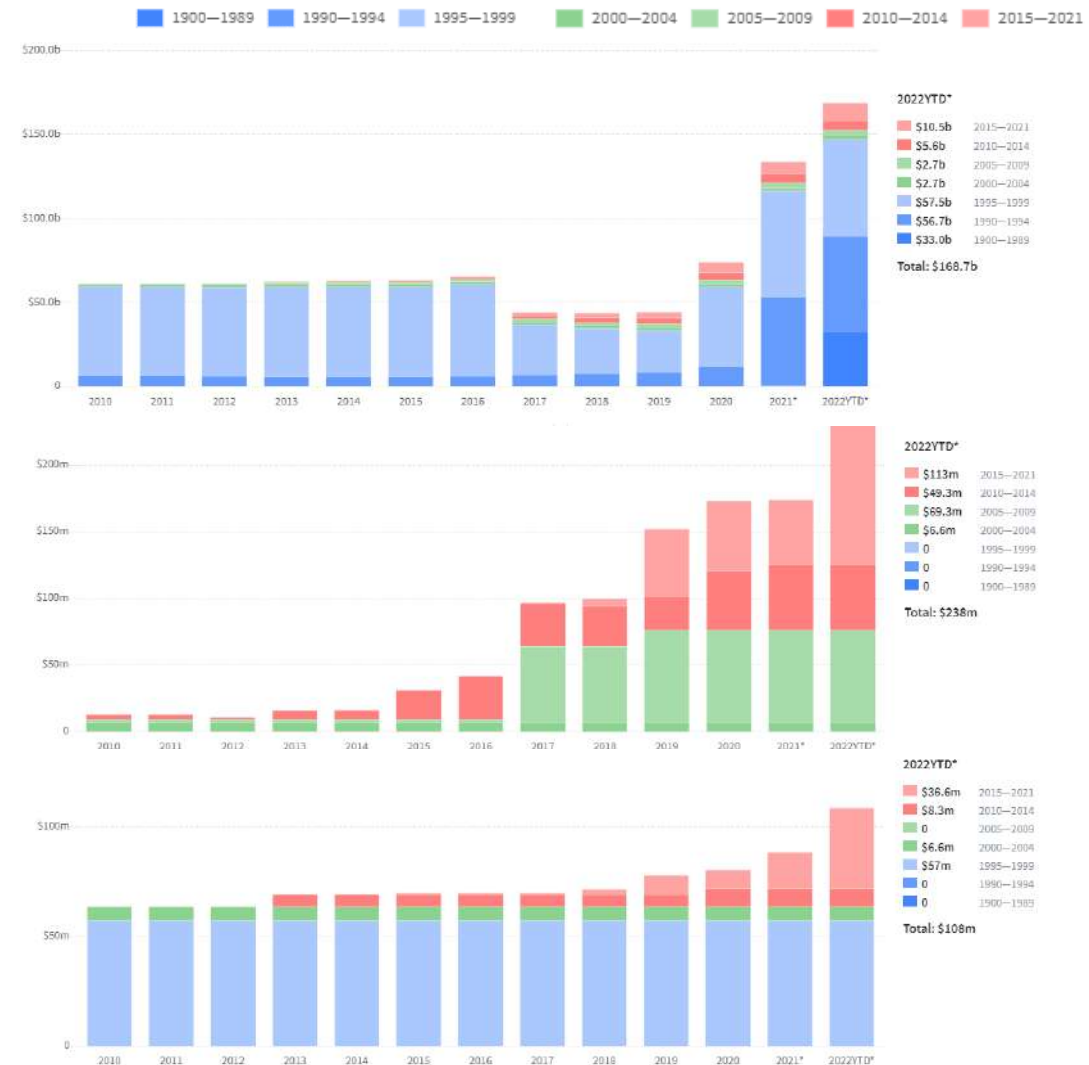
\$ 168 b

 **Spain**

\$ 238 M (0.15 % of Europe)

 **Madrid Region**

\$ 108 M (45 % of Spain)



Source: Data of Startup Radar madri+d and Dealroom for [Europe](#), [Spain](#) and [Madrid Region](#)

SEMICONDUCTOR STARTUPS IN MADRID REGION

BY TYPE OF PRODUCT OR SERVICE

[See Landscape in
Startup Radar madr+d](#)

Sensing, Photonics & Nanodevices

Combined funding € 8.4M



Safety, Security and Connected Devices

Combined funding € 2M



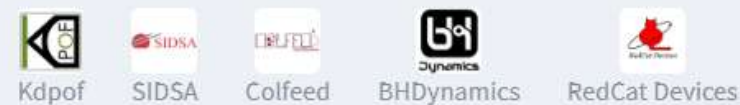
Power electronics, Thermal control and Propulsion

Combined funding € 5.2M



Communication chips and devices

Combined funding € 2.2M



SEMICONDUCTOR STARTUPS IN MADRID REGION

BY INDUSTRY

[See Landscape in
Startup Radar madri+d](#)

energy



CEDRION



Next-Tip



MICRO ELECTROCH



DIFFERENTIAL PO



Heatconv



Elytt



Sensia



DASEL

telecom



SIDSA

semiconductors



Multispectral M



Chargy



Ommatidia LIDAR



SP Control Tech



Alteria Automat



Madrid Space



SIGNALS



ADVANCED THERMA



SIGFOX



Luz wavelabs

space



Airelectronics



RedCat Devices

transportation



Autodrive Solut



Relo@ble



Paracell produc

health



Alcyon Photonic



A4Cell



Cyclomed Techno



VidaApp



PLANE LIGHT

enterprise software



NIT



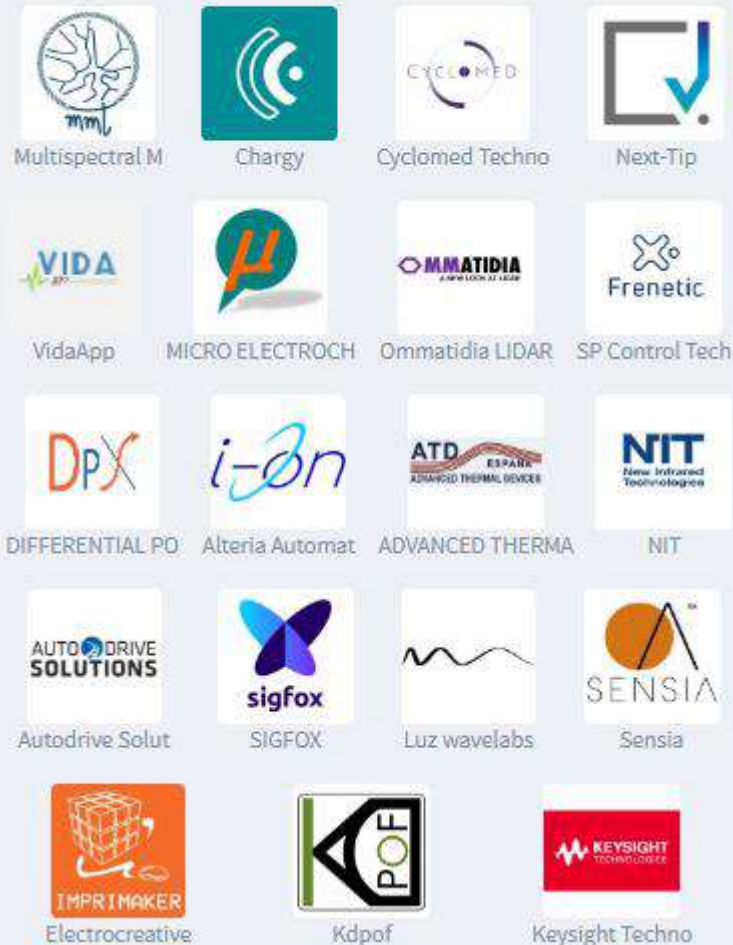
Pírus Networks

SEMICONDUCTOR STARTUPS IN MADRID REGION

BY TECHNOLOGY

[See Landscape in
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deep tech



nanotech



hardware



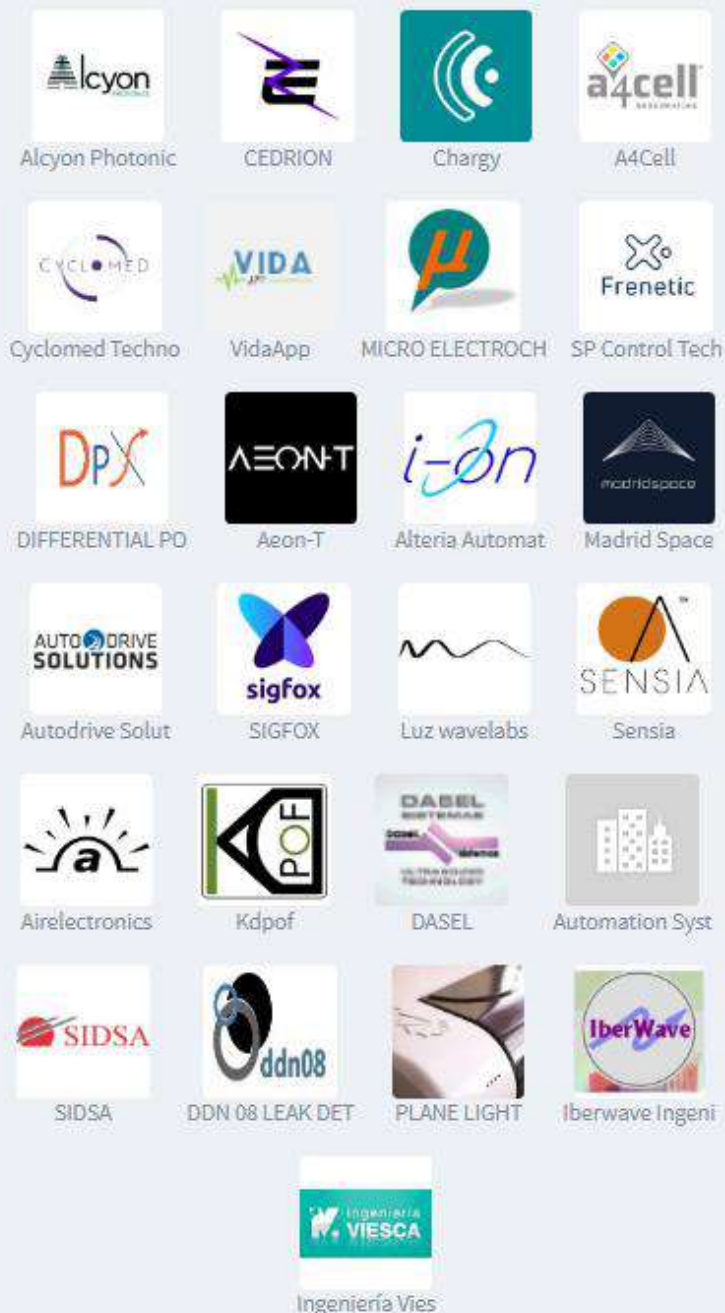
iot internetofthings



SEMICONDUCTOR STARTUPS IN MADRID REGION BY INCOME STREAMS

[See Landscape in
Startup Radar madri+d](#)

commission



subscription



advertising



selling own inventory

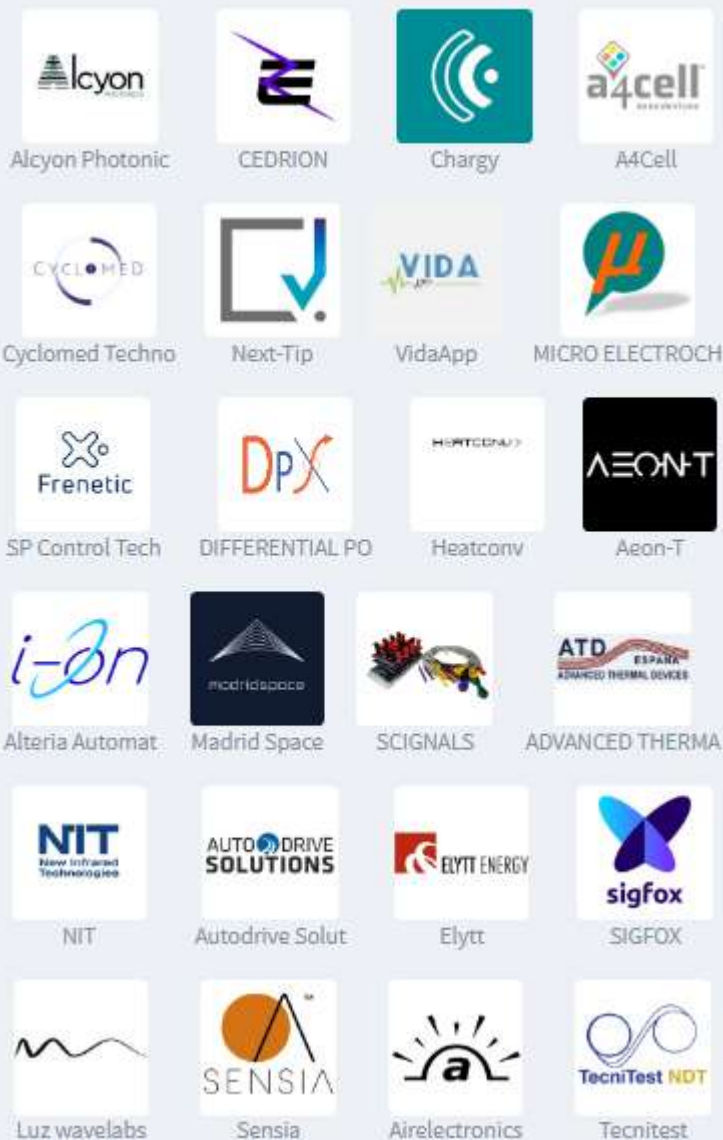


SEMICONDUCTOR STARTUPS IN MADRID REGION

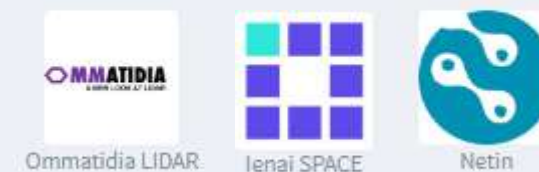
BY BUSINESS MODEL

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manufacturing



saas



marketplace & ecommerce

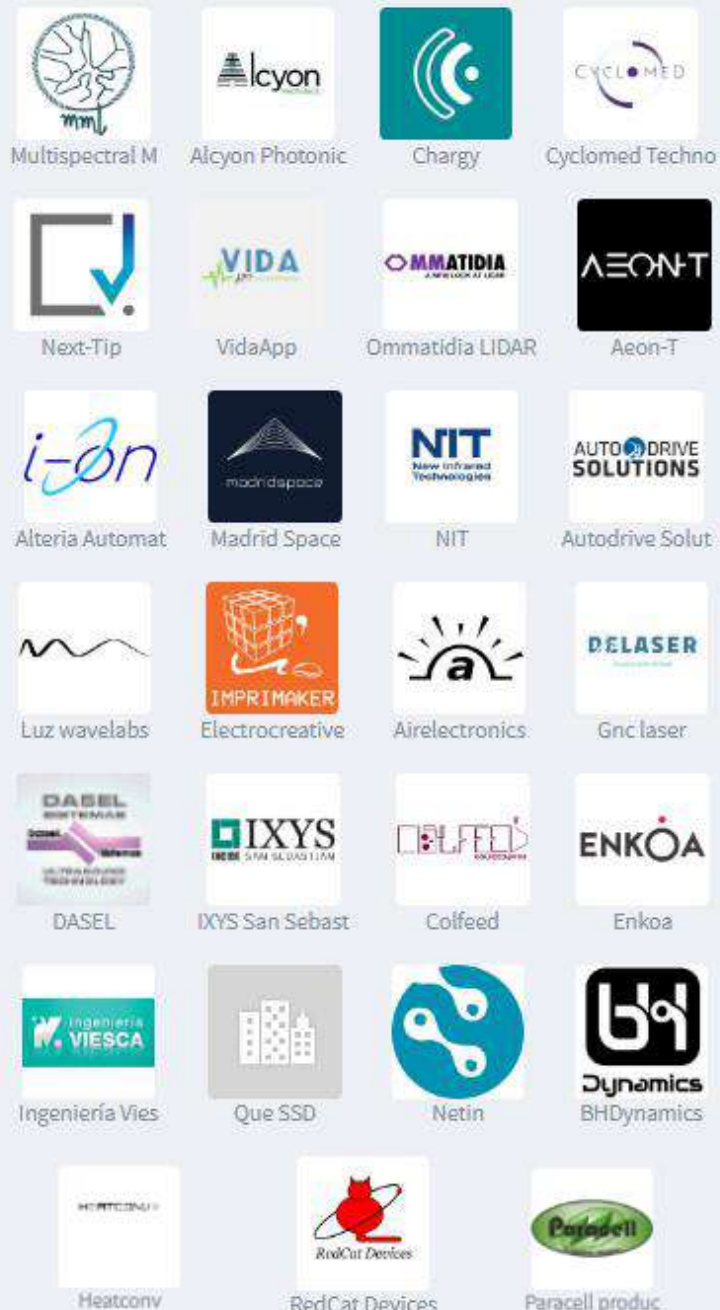


SEMICONDUCTOR STARTUPS IN MADRID REGION

BY EMPLOYEES RANGE

[See Landscape in
Startup Radar madr+d](#)

2-10



11-50












51-200



SEMICONDUCTOR STARTUPS IN MADRID REGION

LAST FUNDING ROUNDS

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Startup Radar madri+d](#)

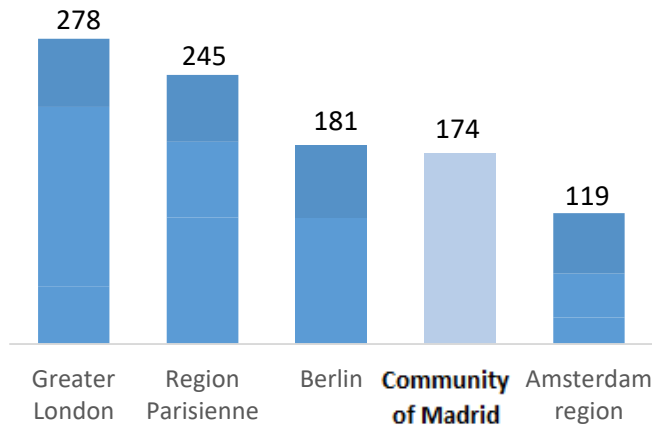
| NAME | VALUATION | LAST ROUND | DATE |
|--|-----------|------------------|----------|
|  Alcyon Photonics Alcyon Photonics designs high-per... | \$9—13m | €2m EARLY VC | Jul 2022 |
|  Chargy Focuses on design and develops h... | \$5—7m | €1.1m SEED | Apr 2022 |
|  A4Cell Develops New technology named ... | \$5—8m | €1.3m EARLY VC * | Dec 2021 |
|  Cyclomed Technologies A Spanish deeptech company exp... | - | €100k | Sep 2021 |
|  A4Cell Develops New technology named ... | \$5—8m | €1.2m SEED | Jan 2021 |
|  Next-Tip Designs, develops, scales-up and ... | \$2—3m | €400k SEED | Dec 2020 |
|  Cyclomed Technologies A Spanish deeptech company exp... | - | €170k | 2020 |
|  SP Control Technologies A power electronics company spe... | \$6—9m | €1.3m SEED | Aug 2019 |
|  A4Cell Develops New technology named ... | \$5—8m | €345k SEED * | Jul 2019 |

Key features

Madrid Region stands out for the breadth and quality of its support ecosystem

The Community of Madrid is 4th in Europe in nr. of entities supporting innovative entrepreneurship: universities & academia, corporates, R&D Centers, accelerators, events, workspaces,... make up one of the most attractive environments for startups.

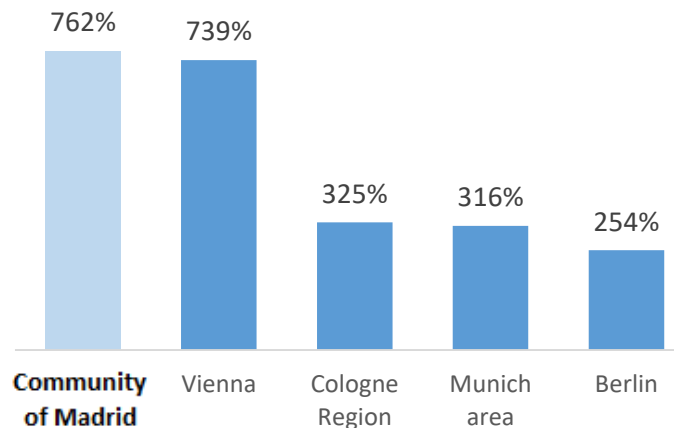
Nr. of Supporting Entities



The highest increase in VC & investment growth in Europe last year

Madrid Region startups raised over €2.3B in 2021, an increase of 4.8x since 2020. Relative growth has been especially important in new funds raised, nr. of investment rounds, venture capital, B2B and series C, D and E.

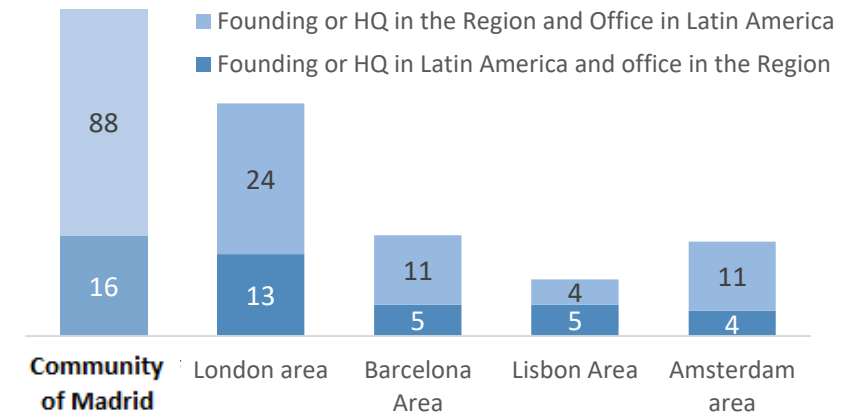
12 Months change in funding



One of the most promising prospects for start-ups, technology and innovation investment

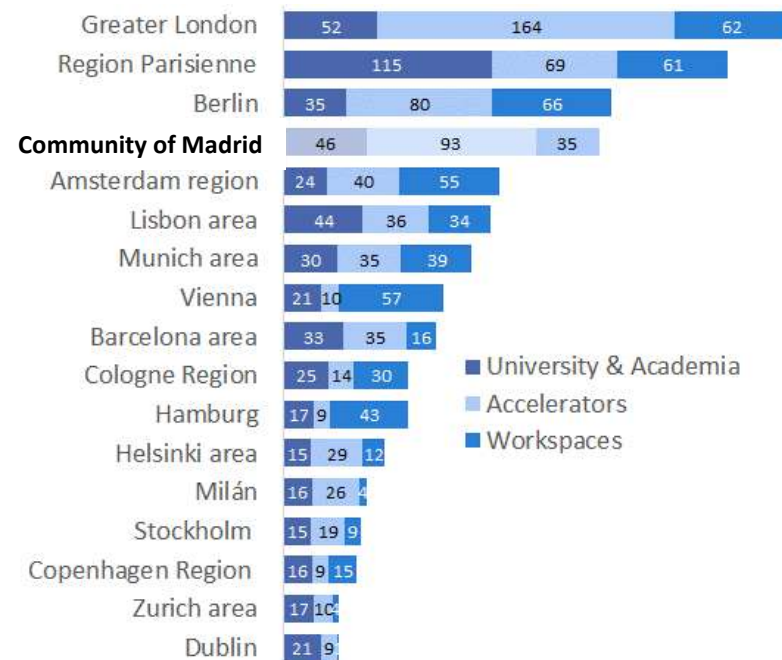
International connections are especially important in Madrid both attracting talent and in search for new markets, being the 2nd European region for employment in the high-tech sector and the main startup bridge between Europe and Latin America.

LATAM connections of Startups in European hubs

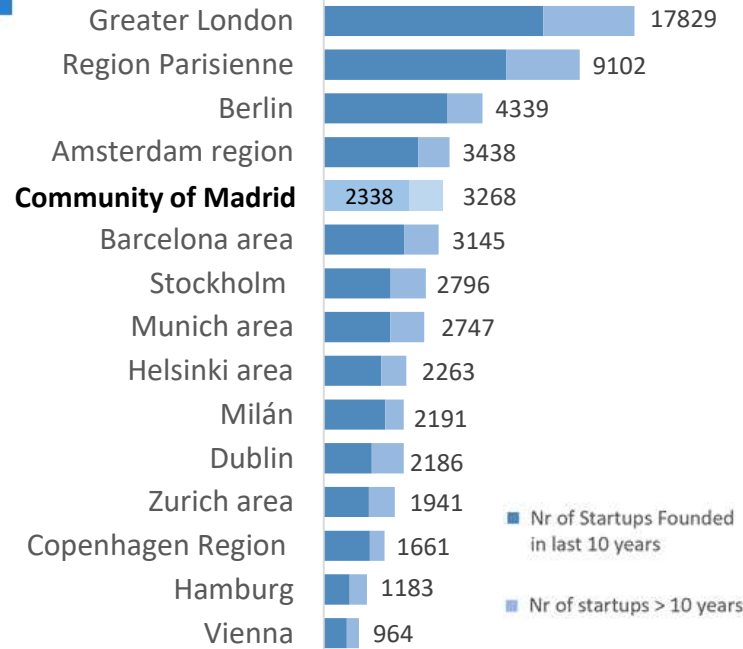


Madrid Region ranks #4 in Europe by size of its support ecosystem, #5 by nr. of startups and growing investment continues to boost its value, with great growth potential

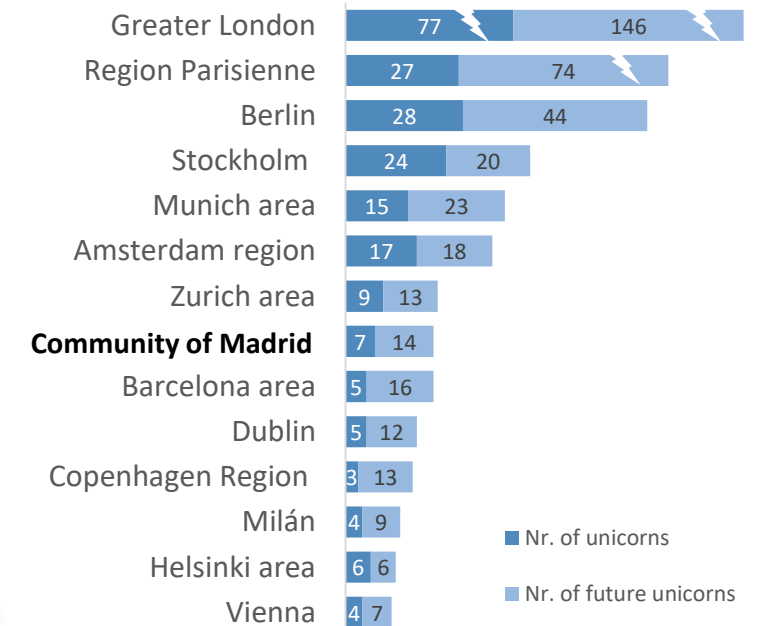
Nr. of Ecosystem support entities



Total Nr. of tech companies and of those founded in last 10 years



Nr. of unicorns & future unicorns



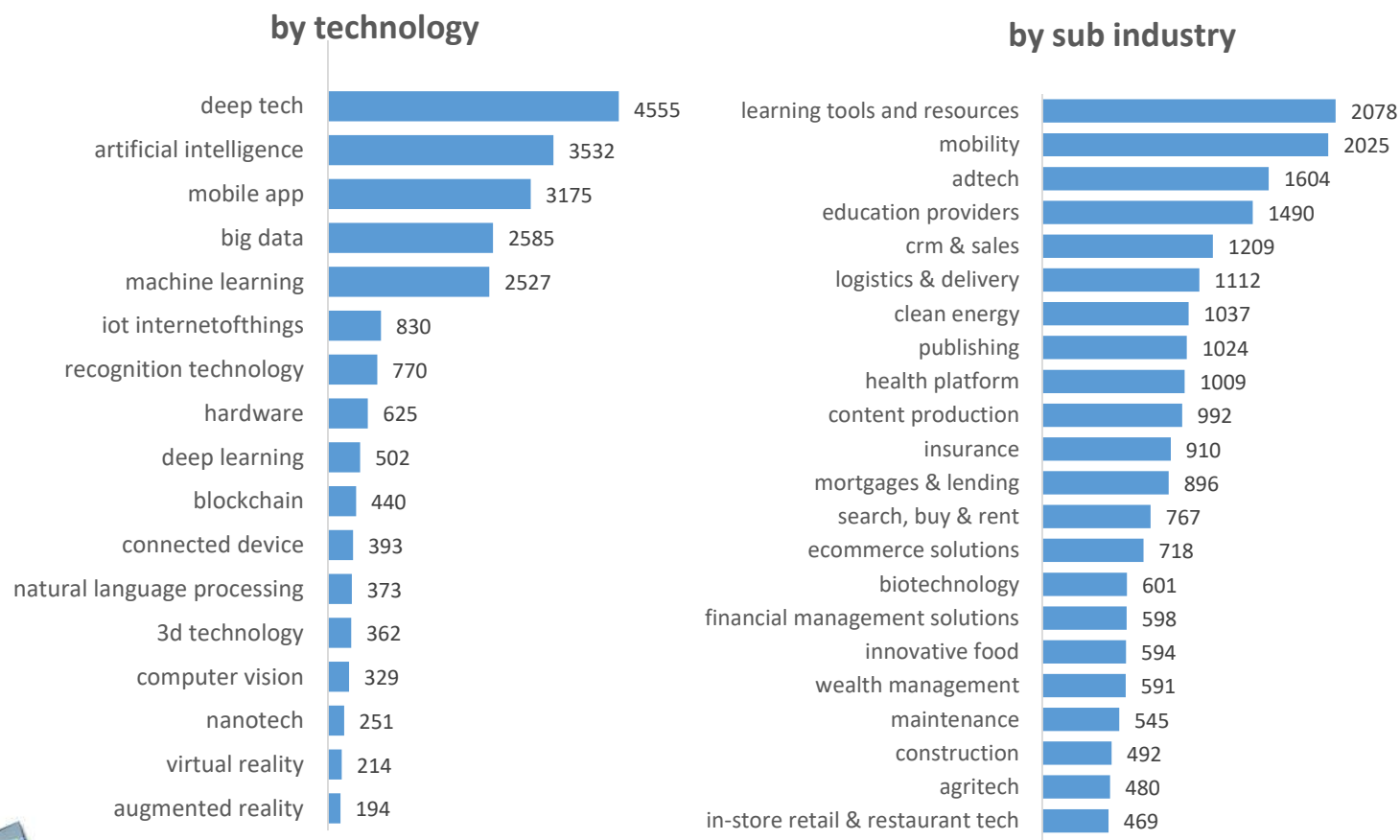
Find here the [Ecosystem Metrics](#) of main European startup hubs

Source: Startup Radar madri+d & Dealroom.co



Deep tech, AI, mobile app, big data, machine learning,... strongly boost startup employment

Total Nr. Of Jobs



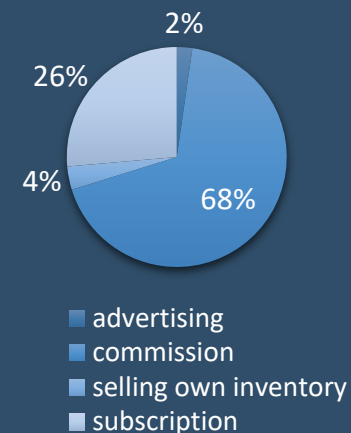
Find Madrid Region tech companies with more than one employee founded since 1995 [here](#)

Source: Startup Radar madri+d & Dealroom.co

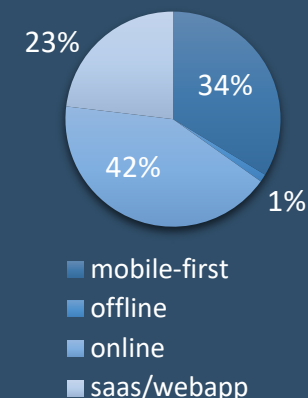
Distribution of Jobs

By business type

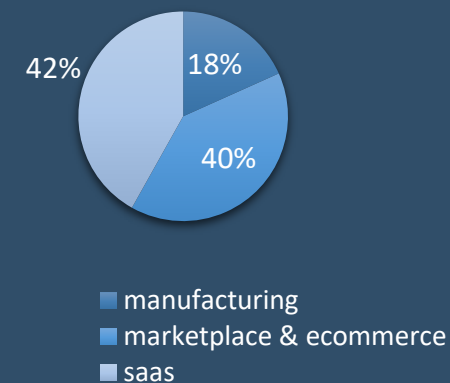
by Income stream



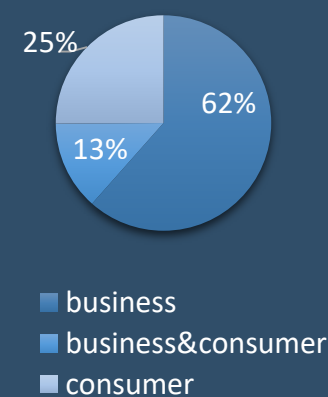
by Delivery Method



by Revenue Model



By client focus



Madrid is home to major corporations, corporate VC funds and accelerators...

Nr. of new startups supported*

| | | |
|--------|--|--|
| >10 |  wayra Telefónica Innovation  FONDO EMPRENDEDORES  Google for Startups  CAMPUS MADRID A Google SPACE  BBVA Open Innovation |  TETUAN VALLEY  SeedRocket  EMPRESA & SOCIEDAD FUNDACION |
| 5 - 10 |  CUATRECASAS ACELERA  enagas emprende  Correos labs  EDP STARTER ACCELERATION PROGRAM  Startme UP  Sacyr iChallenges  ChemoStart Innovative projects in health  fundación innovación bankinter  IMPULSA |  DEMIMUM startups  DRAPER 31  BLOOMIUM — Where talent & business grow —  Conector Startup Accelerator  UNLTD SPAIN  IS DI ACCELERATOR  IMPACT ACCELERATOR |
| <5 |  TrenLab  fundación línea directa  aena ventures  THE HOP  FUNDACIÓN PROSEQUIR Come In Open Innovation Progr  INNOVATION acciona  fi boost  DISRUPLIVE imagine · incubate · innovate  ÁNIMA VENTURES  HANGAR 51  BAR LAB VENTURES  MAS ventures  impulsa vision  rtve  cemex ventures  Barrabés  Indraventures  openvia by globave |  Top Seeds Lab  EATABLE ADVENTURES  theventure.city  elewit  GT-EX GLOBAL ROBOT EXPO  UNLIMITECK COMPANY BUILDER  atelier  BY ISEM  ÁTICCO  ufounders  KAIROS VENTURE GROUP  Lanzate  insur.space  Konsen |
| | <div>Selected corporate Accelerators</div> <div>Selected private Accelerators, Builders & Spaces</div> | |

*Only startups founded 2016-YTD, with HQ in Madrid Region

Find all Madrid Region-based corporate and private accelerators by choosing “Corporate” and “Private accelerators” categories [here](#)

Source: Startup Radar madri+d & Dealroom.co

... universities, research organisations and public incubators & accelerators

| Nr. of new startups supported* | | | |
|---|--|--|-------|
| >30 |  |         | >15 |
| 10-30 |  |     | 10-15 |
| <10 |                 |           | <10 |
| Universities, R&D & Health Institutions | | Public Incubators, Accelerators & Spaces | |

*Only startups founded 2016-2021 to date, with HQ in Madrid Region

Find all Madrid Region-based universities and public accelerators by choosing “Academia & Research” and “Public accelerators” categories [here](#)

Source: Startup Radar madri+d & Dealroom.co

The most complete and detailed picture of Madrid Region's tech ecosystem

<https://www.madrimasd.org/emprendedores/startup-radar-madrid>

startup
radar
madri+d



fundación para el
conocimiento
madri+d



dealroom.co

Knowledge partners

Startup Radar database is kept up-to-date with the support of a growing number of Knowledge Partners:

SPIN OFF DATA

- Madrid Region Universities
- R&D Institutions
- Science Parks & hospitals (ITEMAS Network)

INDUSTRIES & TECHNOLOGIES

Knowledge Partners to date are:

- AI & Cybersecurity: EIT Digital
- PropTech: Sacyr iChallenges
- Deep Tech: Cyclomed Technologies
- Education: Sek Lab
- Fashion: Atelier
- Food & Agritech: Bloomium
- Health: EIT Health
- Scaleups: Empresa y Sociedad
- Las Rozas Innova