

startup
radar
madri+d

Madrid Region

Healthtech Startups

Q3 2023

 fundación para el
conocimiento
madri+d



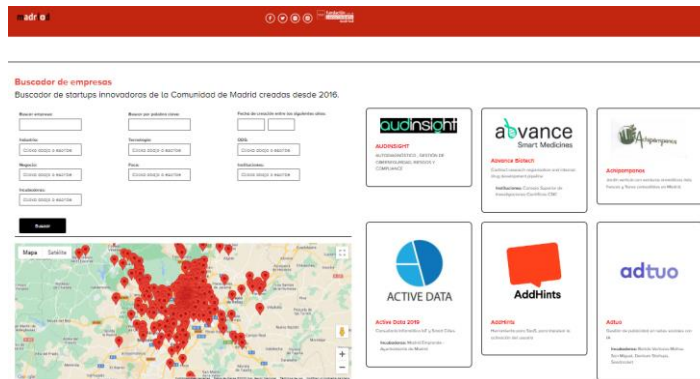
Industry
Report

In partnership with:

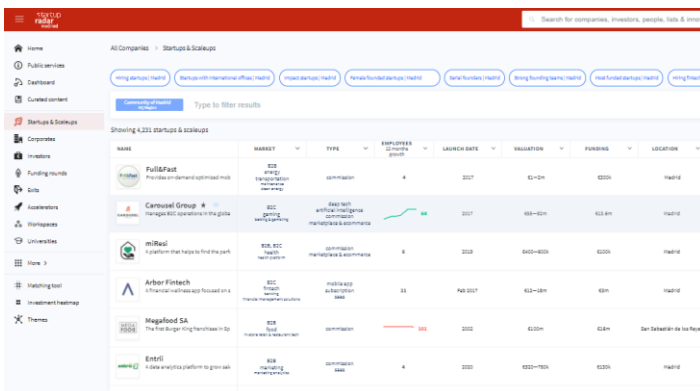
 **dealroom.co**

The Madrid Region Startup Ecosystem Platform

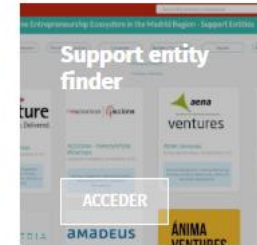
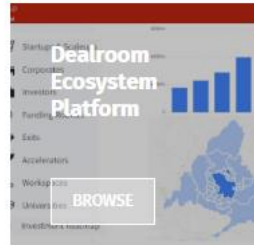
Ecosystem Platforms: Tools, Maps and Databases



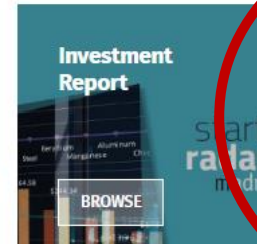
Platform on Dealroom



Ecosystem Platforms



Reports

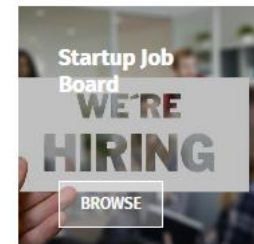


2 Annual reports:

- Ecosystem Report (industries, technologies,...)
- Investment Report

+ Industry Reports

Startup Tools



Tools for startups:

- Job search
- Investors
- Public Financing
- Events agenda

PESTEL Factors – Healthtech

Political

- ⊕ UE4Health ([see workplan 2023](#))
- ⊕ Cluster 1 HEALTH. Horizon Europe [here](#)
- ⊕ PERTE Salud de Vanguardia 2021 [here](#)
- ⊕ NEOTEC CDTI [here](#)
- ⊕ RIS3 Community of Madrid [here](#)
- ⊕ Biomad I+D+i [here](#)
- ⊕ Cluster Madrid e-Health [here](#)

Economic

- ⊕ Supply crisis
- ⊕ High inflation / Stagflation
- ⊕ Rising energy cost
- ⊕ High health care costs
- ⊕ Access to financing or investment needs
- ⊕ Reduced taxes on health products

Sociocultural

- ⊕ Population aging
- ⊕ Post-pandemic health awareness
- ⊕ Growth of wellbeing needs
- ⊕ Risks of access to public health care
- ⊕ Morality on invasive health advances

Technological

- ⊕ Expenditure and support on R&D for Health technological development
- ⊕ Advances in AI, IoT and other digital and deep technologies in healthcare and biotechnology
- ⊕ Interoperability and cybersecurity for medical and health care data
- ⊕ Rapprochement between the researcher, technologist and entrepreneur

Environmental

- ⊕ Waste disposal programs
- ⊕ Awareness against climate change
- ⊕ Recycling culture
- ⊕ Environmental policies
- ⊕ Sustainable and low emission awareness

Legal

- ⊕ [Ley de Startups 2022](#)
- ⊕ [RD 192/2023, productos sanitarios](#)
- ⊕ [RD 1090/2015; ensayos clínicos con medicamentos](#)
- ⊕ [Reglamento para crear el Espacio Europeo de Datos Sanitarios](#)
- ⊕ [Modelos de utilidad; Patente nacional; Patente Europea](#)
- ⊕ Legal liability in the event of health problems caused by technologies

Challenges – Healthtech startups

- ⊕ **Regulations and Compliance:** Startups must comply with strict regulations at both the national and international level to ensure the safety and efficacy of products and services.
- ⊕ **Reimbursement and Financing:** Obtaining Financing and Reimbursement from healthcare systems and insurers can be a lengthy and complicated process for startups.
- ⊕ **Secure management of healthcare data.** Startups must comply with data privacy regulations, such as GDPR in the EU, and ensure the security of patient information.
- ⊕ **User and Healthcare Professional Adoption:** Resistance to change and the need to demonstrate clear benefits to physicians, patients and other healthcare professionals are key factors.
- ⊕ **Interoperability** between existing healthcare systems and new technologies
- ⊕ **Competition:** Startups must differentiate themselves and demonstrate their unique value in the market.
- ⊕ **Ethics of Artificial Intelligence (AI):** Companies must address responsibly i.e. automated decision making and data privacy.
- ⊕ **Evidence:** Demonstrating the efficacy and safety of new products and therapies through rigorous clinical studies .
- ⊕ **Regulatory Approval** from regulatory agencies, such as the FDA or the EMA, can be a lengthy and costly process.
- ⊕ **Expansion into international markets** can be complicated by regulatory and cultural differences and also by specific market needs

Research lines – Healthtech

+ Digital Health

- Telemedicine And Smart Devices For Chronic Patient Care
- Devices for the improvement of movement in people with nervous system impairment.
- Monitoring of elderly and dependent persons
- Monitoring of patients and environmental variables
- Motivation and acceptance of the use of technology in elderly people
- Decision support system for diabetes

+ Personalized medicine

- ICT for personalized medicine
- Personalized allergy treatment
- Serious physical rehabilitation games
- Personalized cancer therapy
- Genetic test data reuse and integration
- Promotion of healthy lifestyles and cardiometabolic risk prevention
- Neurological pathologies rehabilitation therapies

+ Advanced Diagnostics

- Optical biosensors, biochemical diagnostic systems
- Chronic allergy diagnostics
- Point-of-Care and Point-of-Need devices
- Detection and prevention of social isolation
- Early detection of resistant infectious diseases
- Wearables and algorithms for diagnostics based on movement patterns
- Coding of clinical data with terminologies
- Early detection of epileptic seizures
- Serious games for detection of neurological disorders

+ Brain Health

- Alzheimer's, Parkinson's, Epilepsy
- Neuroimaging
- Understanding memory impairment in aging and dementia
- Wireless power transmission in implanted devices for epilepsy and Parkinson's disease
- Acoustics and Neuroscience
- Computational neuroscience
- Biomarkers immunotherapy
- Nutritional differences and cognitive monitoring
- Prevention and detection of cognitive impairment through analysis of mobile application use

Research lines – Healthtech

+ Surgery of the future

- Real-Time Hyperspectral Imaging for Intraoperative Brain Tumor Detection
- Image-Guided Therapies for Safer Minimally Invasive Surgeries
- Telesurgery
- Wireless Operating Room
- Colorectal Biomarker Detection in Breath and Blood
- Robotics in the operating room
- Image-based tracking and navigation for surgery assistance through augmented and mixed reality
- New techniques for processing and analyzing laparoscopic images and videos
- Recharging the battery of implantable devices by means of light

+ Nanomedicine

- Micro- and nanophotonic applications for diagnostics
- Functionalization and biofunctionalization of surfaces
- Detection by label-free technology
- Protein isolation
- Allergen identification
- Allergy diagnosis using microarrays
- Stimuli-sensitive multifunctional nanocarriers

+ Advanced therapies

- Manufacture of gels for drug or cell vehicles
- Physical exercise in specific populations
- Electroceuticals for neurological and psychiatric diseases
- Standardization methods for classification of clinical procedures
- Radiomatic therapy monitoring
- Organs and tissues on a chip
- In vitro platforms for cellular análisis
- Artificial pancreas
- Rehabilitation of musculoskeletal injuries

+ Regenerative medicine

- Laser Techniques for Tissue Engineering
- Biofunctionalization of prosthesis
- Fabrication of functionalized scaffolds
- Cell and tissue characterization
- Fiber fabrication for tendon and ligament regeneration

Some opportunities for startups in Healthtech

- + **Telemedicine and virtual care:** Telemedicine platforms, virtual care tools and electronic medical record management solutions.
- + **Mental health and wellness:** Developing applications and services for monitoring, diagnosing and treating mental health problems, as well as promoting emotional wellness.
- + **AI and health data analytics:** AI and data analytics can be used to improve clinical decision making, early disease diagnosis and healthcare management. Advanced algorithms and data analytics tools for the healthcare sector.
- + **Wearables:** Devices such as smart watches and sensors, offer opportunities for continuous health monitoring, data collection and early disease diagnosis.
- + **Medical robotics:** Robotics are used in surgery, rehabilitation and long-term care. Surgical robots, rehabilitation assistants and assistive devices for people with disabilities.
- + **Precision medicine:** Focuses on personalized treatments based on genetics and the development of patient-specific therapies.
- + **Digital health for the elderly:** The aging population creates opportunities in the development of digital health technologies for seniors, as well as solutions for home care.

Some opportunities for startups in Healthtech

- **Blockchain in healthcare:** Blockchain technology can improve the security and interoperability of health data in electronic medical records.
- **Global health:** Solutions such as mobile telemedicine to improve access to healthcare in remote areas and infectious disease tracking applications.
- **Digital medical education and training:** Online medical education and digital training platforms for healthcare professionals are growth areas.
- **Women's health:** applications for fertility management, pregnancy monitoring and women's health support.
- **Health economics and cost analytics:** Tools and platforms to help healthcare systems manage costs, improve efficiency and make data-driven decisions.
- **Genomic Editing Therapies:** Gene delivery and genomic editing tools, such as CRISPR-Cas9, open the door to personalized treatments and potential cures for genetic diseases.
- **Cell Therapy and Gene Therapies:** offer innovative approaches to the treatment of diseases, such as cancer and rare diseases.
- **Biomarkers and Molecular Diagnostics:** The discovery and validation of biomarkers enable earlier and more accurate diagnosis of diseases.

Some opportunities for startups in Healthtech

- **Precision Medicine:** Precision medicine uses genomic and other data to tailor treatments to individual patient characteristics.
- **Data analysis tools and personalized therapies. Immunotherapy:** Immunotherapy is used in the treatment of cancer and other immunological diseases. Creation of more effective immune therapies.
- **Synthetic Biology:** Synthetic biology involves the construction of new biological systems and the engineering of microorganisms for industrial, medical and environmental applications.
- **Regenerative Medicine:** Focuses on the repair or replacement of damaged tissues and organs.
- **Drug Development and Drug Discovery:** Startups can focus on identifying therapeutic targets and designing molecules.
- **Bioinformatics and Genomic Data Analysis:** Key in the interpretation of genomic data and the identification of health-relevant patterns and associations.
- **Microbiome and Microorganism Therapy:** The study of the human microbiome and therapy with microorganisms (such as probiotics) have applications in digestive health and beyond.

Healthtech startup support entities in Madrid Region

ECOSYSTEM HEALTHTECH

     	   
       	        
           	      
Public Incubators, Accelerators & R&D Institutions	Selected corporate & private Accelerators & Facilitators

>5 startups supported

Support to Madrid HEALTHTECH startups

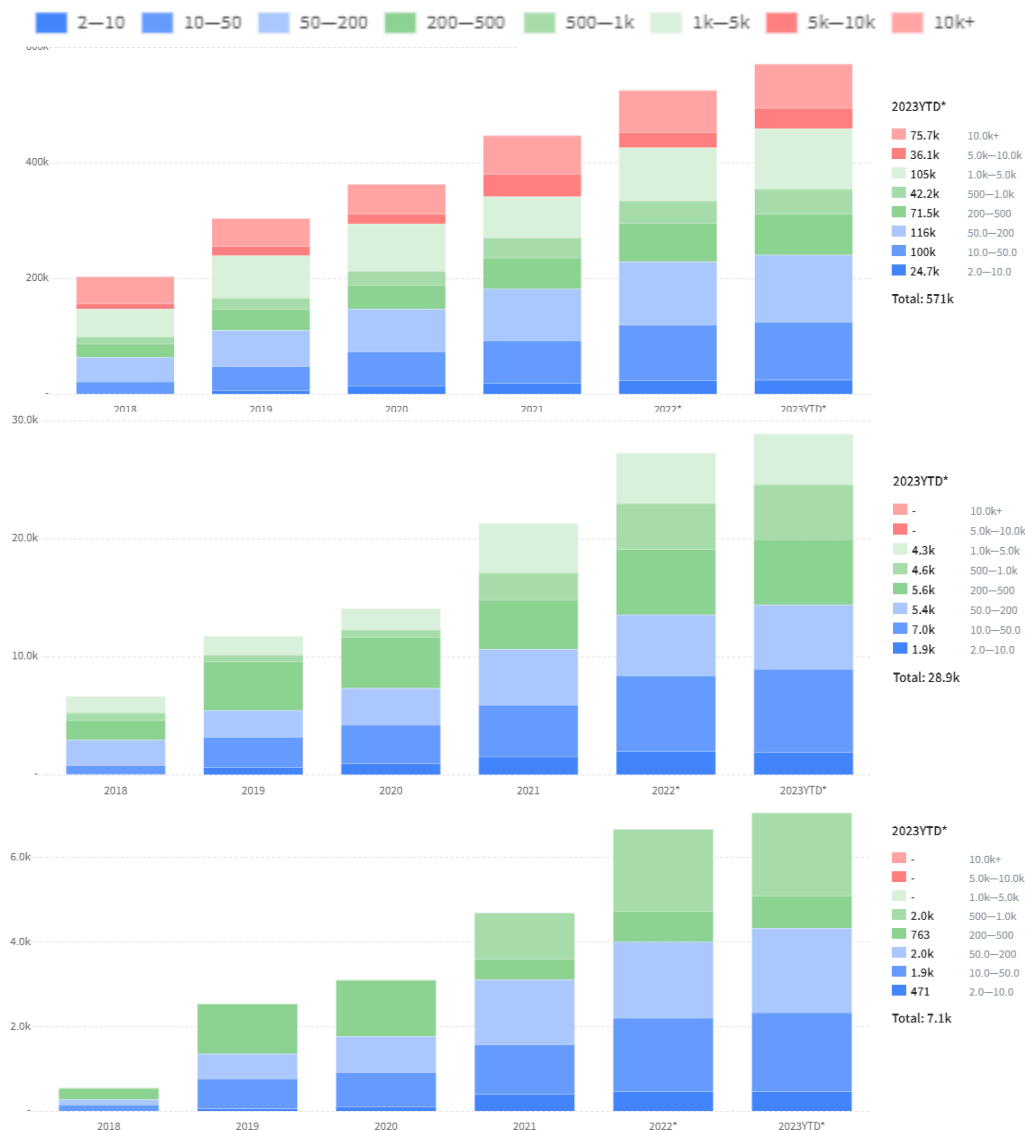
1 startup supported

Incentives
and State
Aid

Public financial instruments for Startups
PERTE for state-of-the-art Health
EU4Health



Jobs created by startups in Healthtech (2023_{YTD})



+ Europe

14,844 startups

Jobs: 571 K

+ Spain

1,123 startups (7.6% of Europe)

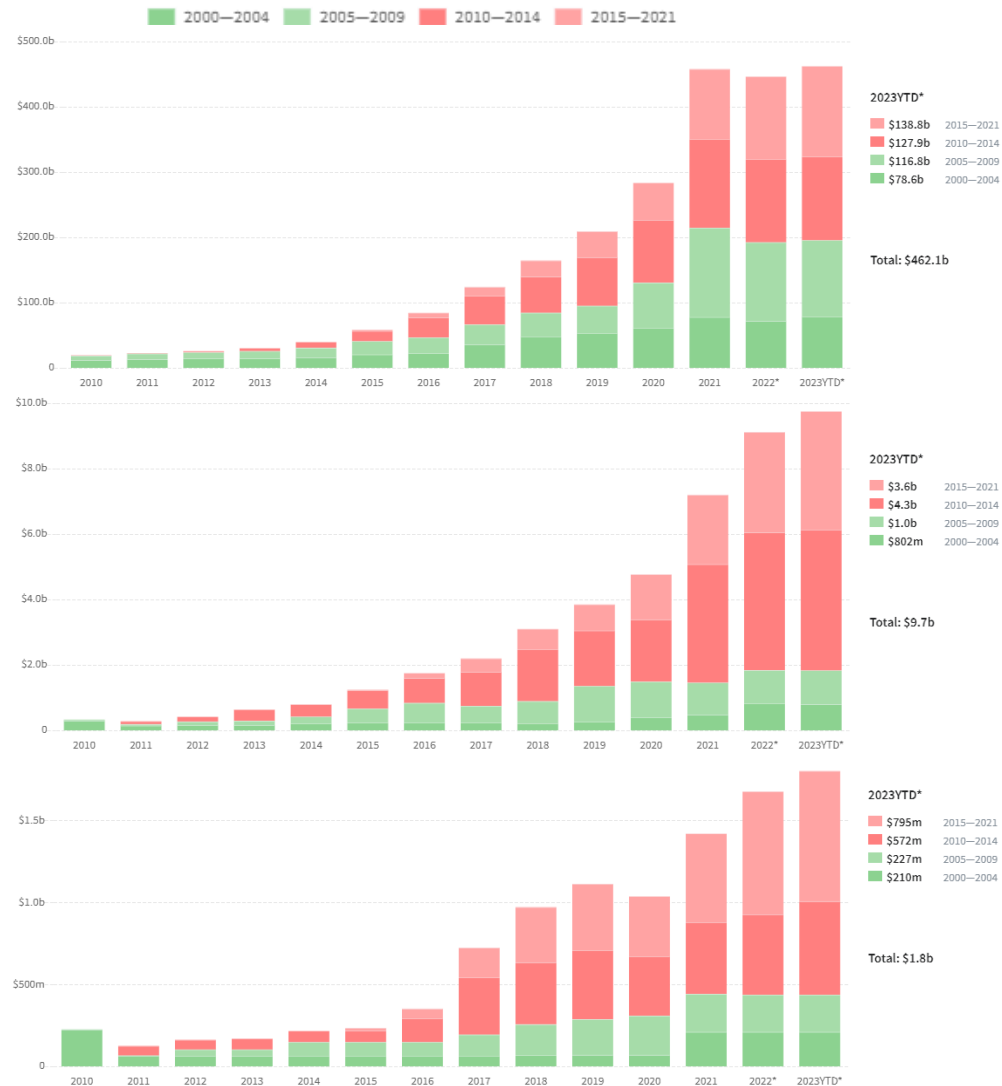
Jobs: 28.9 K (5% of Europe)

+ Community of Madrid

309 startups (27.5% of Spain)

Jobs: 7.1k (24.6% of Spain)

Total valuation of Healthtech startups (2023_{YTD})



🇪🇺 **Europe**

462,100 M\$

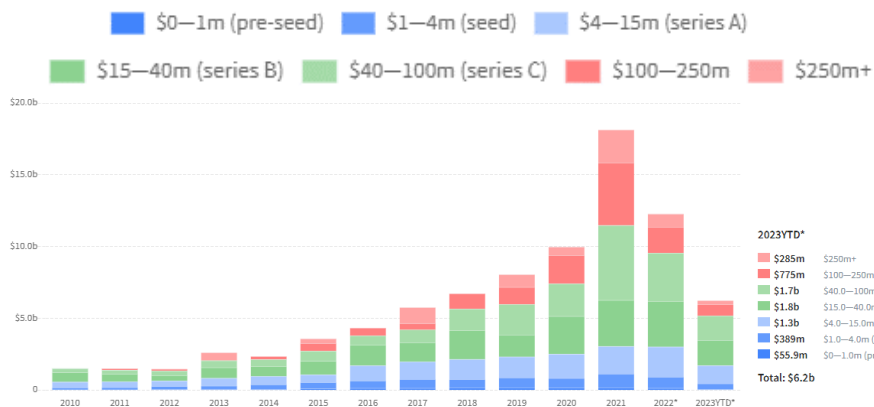
🇪🇸 **Spain**

\$ 9,700 M (2% of european startups valuation)

🇪🇸 **Community of Madrid**

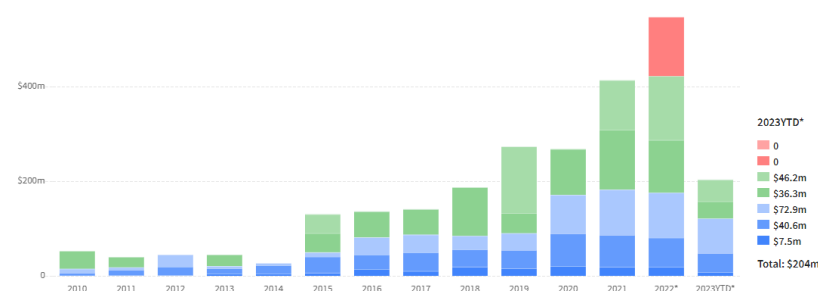
\$ 1,800 M (18.6% of spanish startups valuation)

Investment obtained by Healthtech startups (2023YTD)



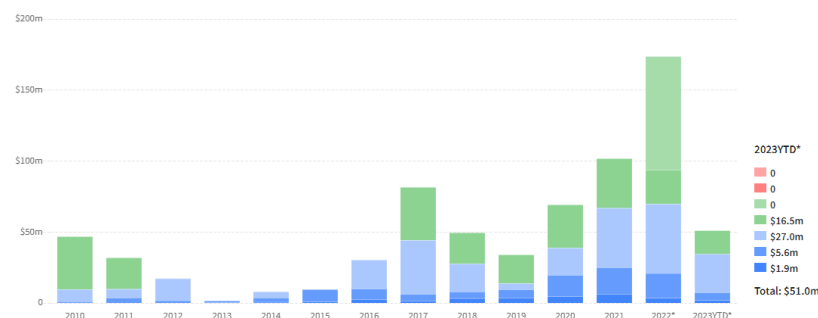
Europe

\$ 12,300 M (2022)
\$ 6,200 M (2023YTD)



Spain

\$ 547 M (4.4% of Europe in 2022)
\$ 204 M (3.3% of Europe in 2023YTD)



Community of Madrid

\$ 174 M (31.8% of Spain in 2022)
\$ 51 M (25% of Spain in 2023YTD)

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

Some investment data on startups in the sector in Madrid

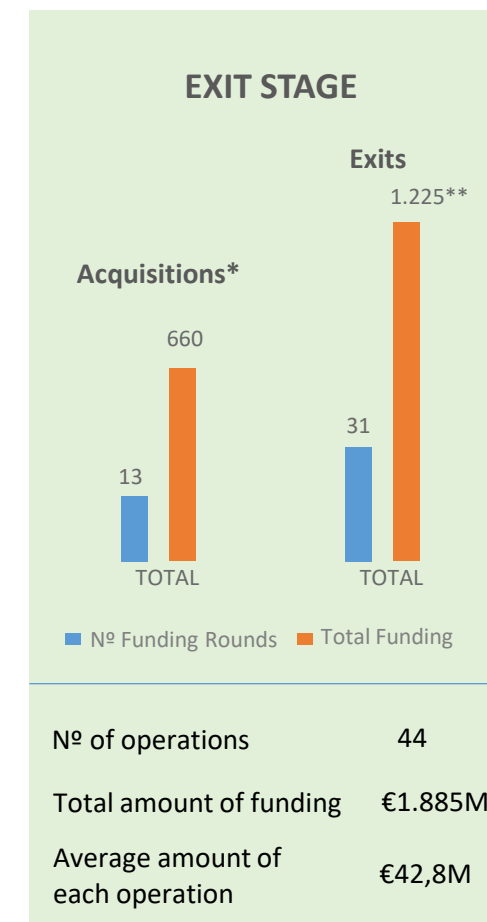
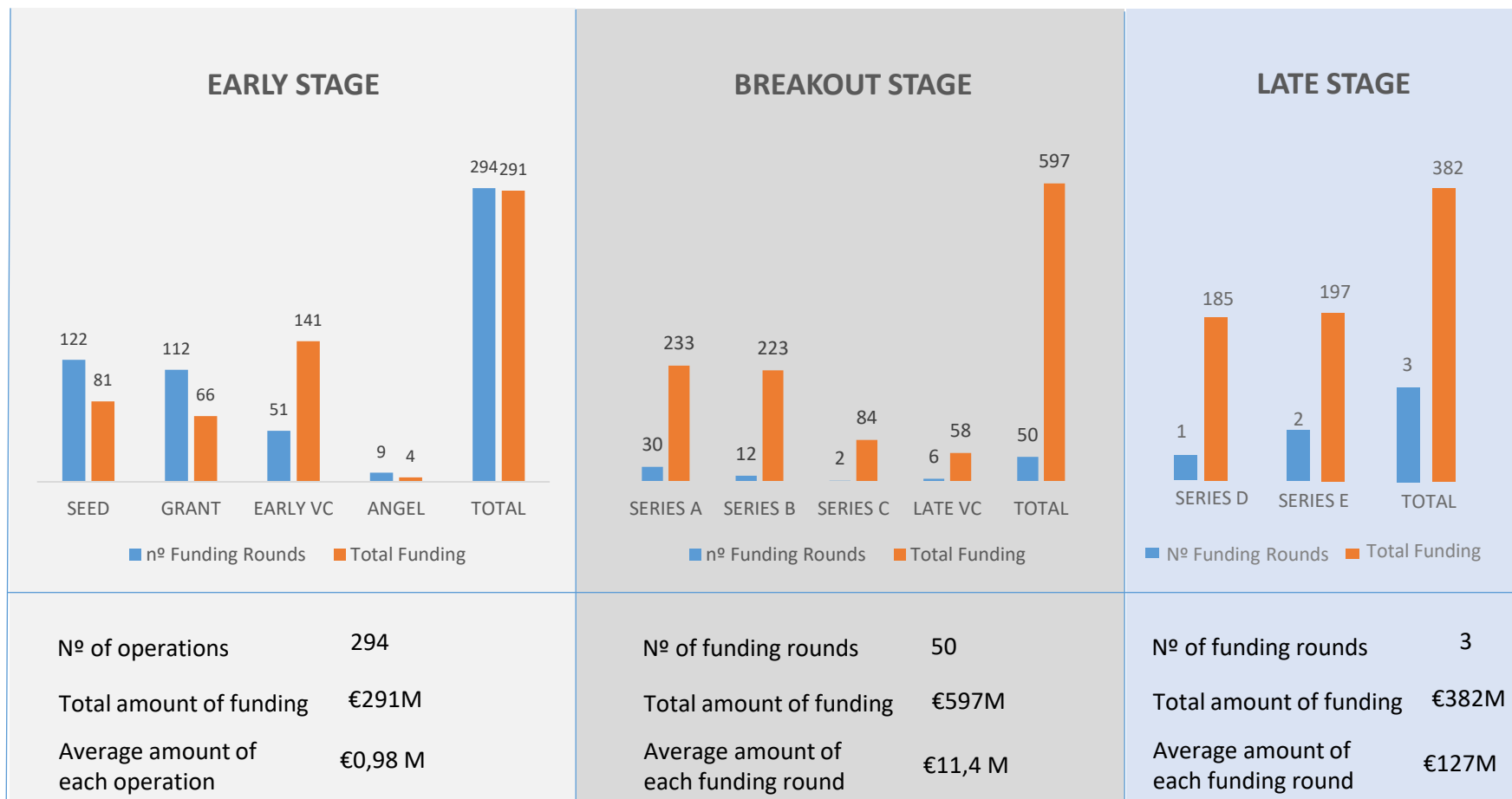
List of 2022/2023 Funding Rounds

NAME	LAST ROUND	VALUATION	DATE
Atrys Health Biomedical company dedicated to...	€72.5m PRIVATE PLACEMENT VC	€37-55m	Jun 2022
Savana Savana is a unique company at lev...	€22.0m LATE VC	€88-132m	Apr 2022
Cocoon Bioscience Specializes in the manufacturing o...	€15.0m EARLY VC	€60-80m	Mar 2023
Idoven AI-powered detection and precisio...	€12.0m SERIES A	€48-72m	Jun 2022
Life5 (formerly Getlife) Fast and flexible online life insura...	€10.0m SERIES A	€40-60m	Jun 2023
ifeel Offering the all-in-one emotional ...	€10.0m SERIES A	€40-60m	Nov 2022
Wooptix Creates light field and wavefront p...	€10.0m SERIES B	€40-60m	Jul 2023
TherapyChat Makes professional support easier...	€6.5m SERIES A	€26-39m	Oct 2022
Life5 (formerly Getlife) Fast and flexible online life insura...	€6.0m SEED	€40-60m	May 2022
Senniors Trusted home care for the elderly ...	€5.3m EARLY VC	€21-32m	Dec 2022
Devon Labs Works to solve patients' unmet m...	€4.5m EARLY VC	€18-27m	Jul 2022
Marsi bionics Developing disruptive innovative t...	€4.5m EARLY VC	€18-27m	Jun 2023
Geodesic Technology for the disinfection an...	€3.0m EARLY VC	€12-18m	Feb 2023

List of 166 Investors in the sector sector

List of Exits in startups in the sector

Investment phases of 183 Healthtech funded startups of the Community of Madrid



* Minority acquisitions and other operations

** Only 6 exits with amount in dealroom

Source of Funding Rounds: [Startup Radar madri+d](#) data and Dealroom

Source of Exits: [Startup Radar madri+d](#) data and Dealroom

Some Madrid Region companies with higher valuations



Is a unique company at leveraging AI to generate global and Deep Real-World Evidence, thus enabling a data-driven healthcare.

97M-145M \$ Valuation



A pre-commercial, medical device company designing and manufacturing catheter-based systems for treatment of supra-ventricular tachycardias.

79M-119M \$ Valuation



Biotechnology company developing therapies based on adult stem cells.

25M € Valuation



Specializes in the manufacturing of high-performance growth factors and enzymes using an automated platform leveraging cocooned insects as natural, low-cost bioreactors.

66M-99M \$ Valuation



A biotechnology company that is aiming to revolutionize embryology.

25M € Valuation



IDOVEN

AI-powered detection and precision medicine for cardiology.

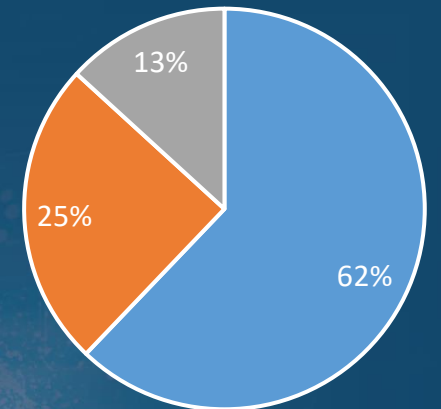
25M € Valuation

Types of clients B2B / B2C and main products

CLIENTS B2B	PRODUCTS
Health care providers	Hospitals, clinics, physician offices and healthcare facilities
Pharmaceutical companies	Research and development services, clinical trials, laboratory technology, supply chain logistics or IT solutions to support drug research and production.
Health insurance companies	Solutions for claims management, insurance data analysis and fraud detection, as well as tools to improve customer service.
Diagnostic laboratories	Equipment and software solutions for laboratory testing, sample analysis and reporting.
Healthcare technology companies	Strategic collaborations or acquisitions to complement their existing offerings.
Governments and public health organizations	Solutions for disease tracking, health emergency management, and population-level health data collection and analysis.
Academic and research institutions	Technology and equipment for conducting scientific research and clinical studies.
Medical device companies	Components, technology or services to incorporate into their own products.
Employee health care providers	Solutions for employee health management, such as wellness programs and workplace health care.
Logistics companies	Supply chain of medical and pharmaceutical products.
Healthcare Consultants	Research and data analysis services to support your projects and analysis.

CLIENTS B2C	PRODUCTS
Individual patients and consumers	Primary customers in a B2C model in the healthcare sector. Healthcare services, pharmaceuticals, medical devices, health apps and more.
Family Caregivers	Parents, spouses or children looking for solutions to improve the care and well-being of their loved ones.
Athletes and fitness enthusiasts	Health-related products and services such as fitness tracking apps, nutritional supplements and exercise equipment..
Seniors	Solutions such as home care and health monitoring devices.
Patients with chronic diseases	Specific solutions for the management and monitoring of diabetes, hypertension,...
Mental health service users	Mental health applications, online therapists and telepsychiatry services.
Alternative and complementary medicine users	Herbal medicine, acupuncture or meditation.
Women and women's health	Solutions such as contraception, menstrual cycle tracking and prenatal care.
Wellness and lifestyle customers	Services related to nutrition, fitness, beauty and wellness.

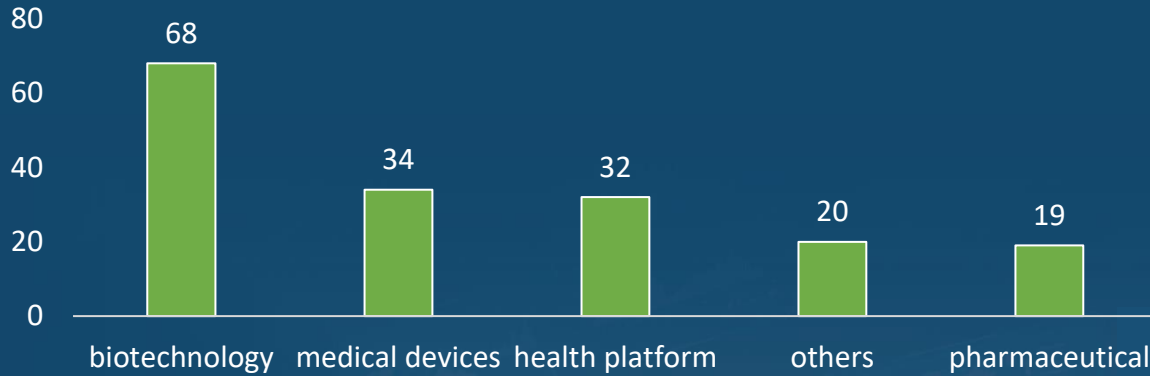
TYPES OF CLIENTS
(Healthtech Madrid startups)



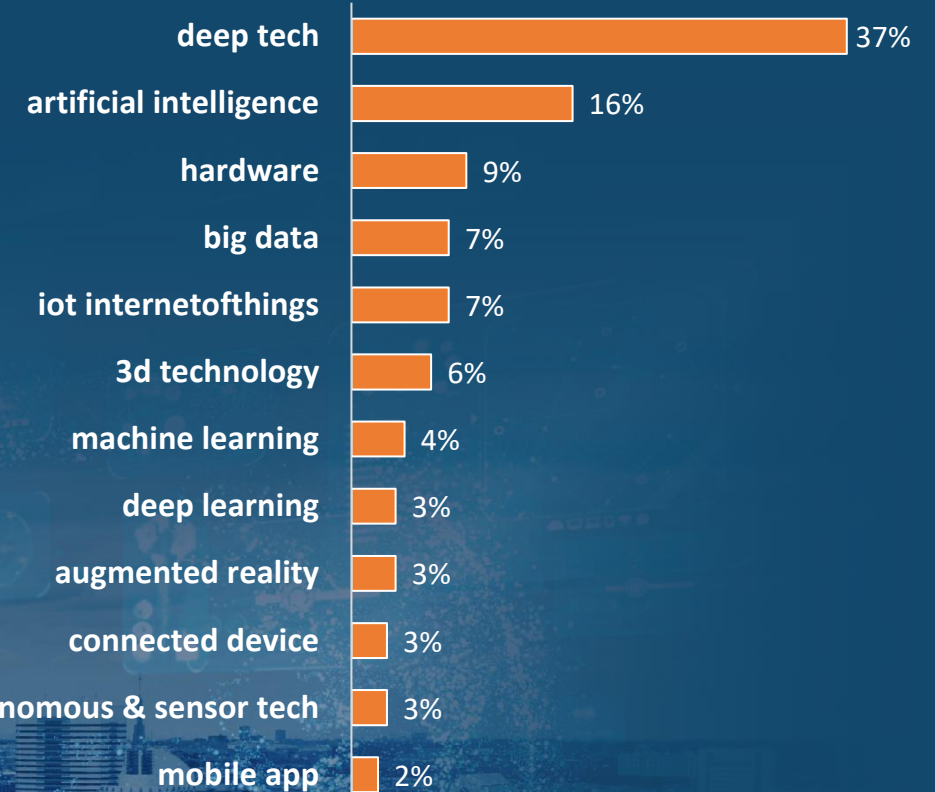
■ B2B ■ B2C ■ B2B & B2C

B2B: Sub Industries, technologies, revenue models and growth stage

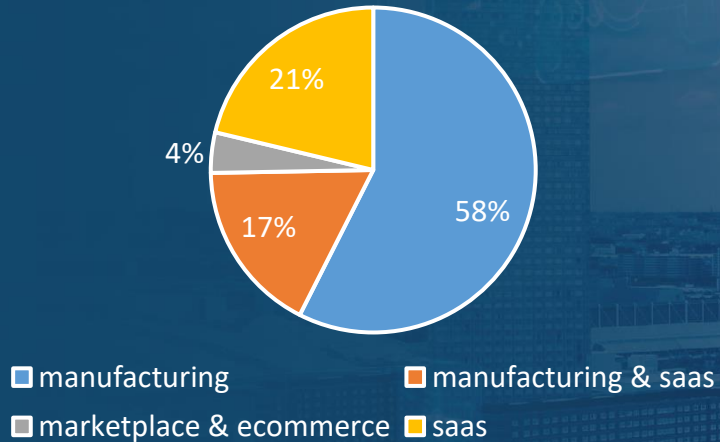
B2B by sub industry (nr. of startups)



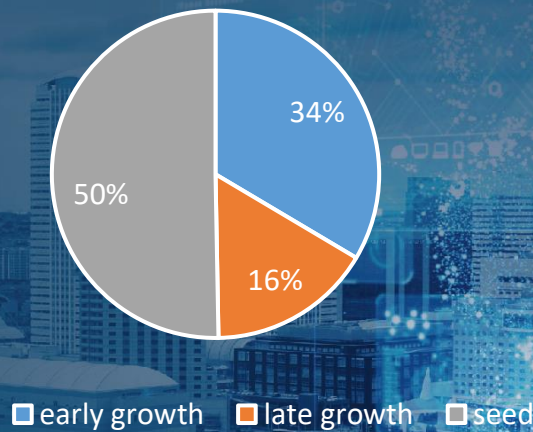
B2B startups by technology



B2B revenue models

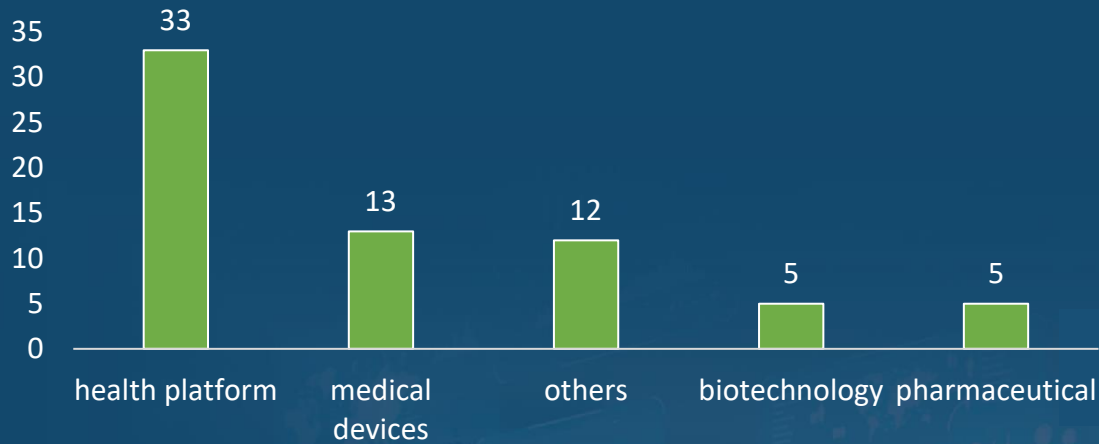


Growth phase of B2B startups

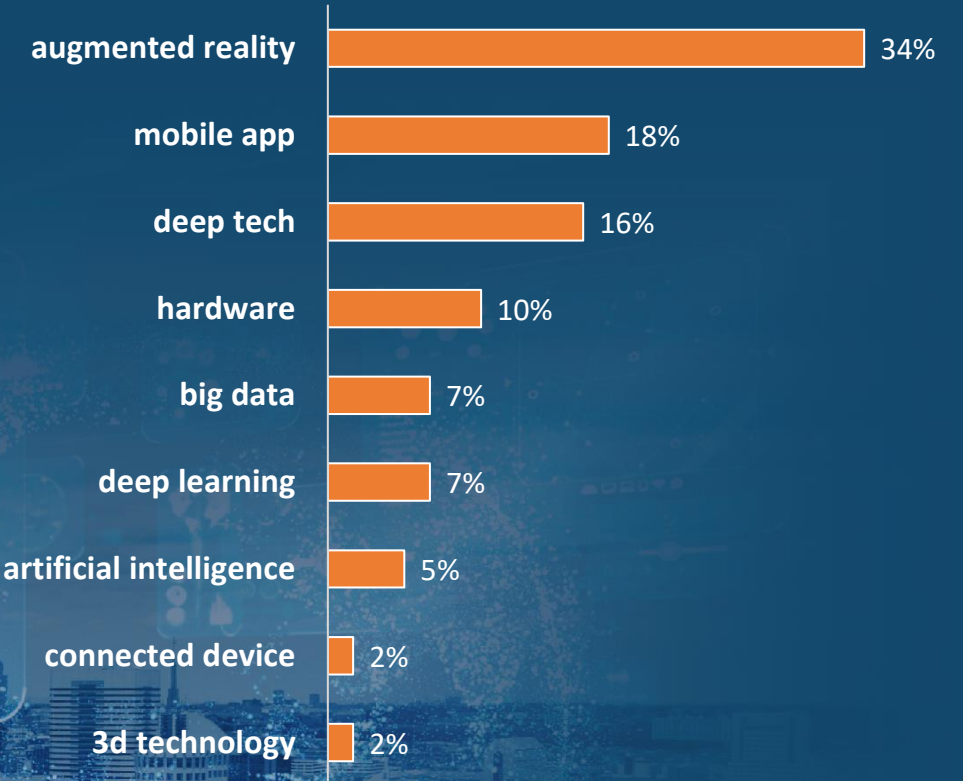


B2C: Sub Industries, technologies, revenue models and growth stage

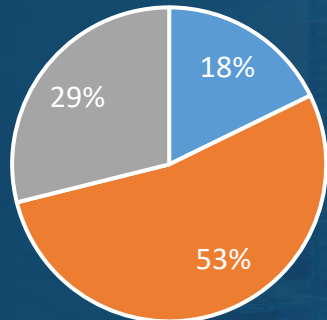
B2C by sub industry (nr. of startups)



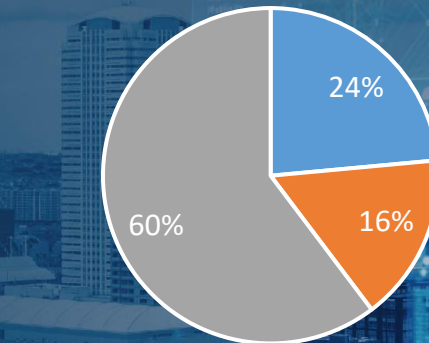
B2C startups by technology



B2C revenue models



Growth phase of B2C startups



■ manufacturing ■ marketplace & ecommerce ■ saas

■ early growth ■ late growth ■ seed

HEALTHTECH STARTUPS OF THE COMMUNITY OF MADRID BY TYPE OF CLIENT (B2B)

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

B2B

Combined funding €535M



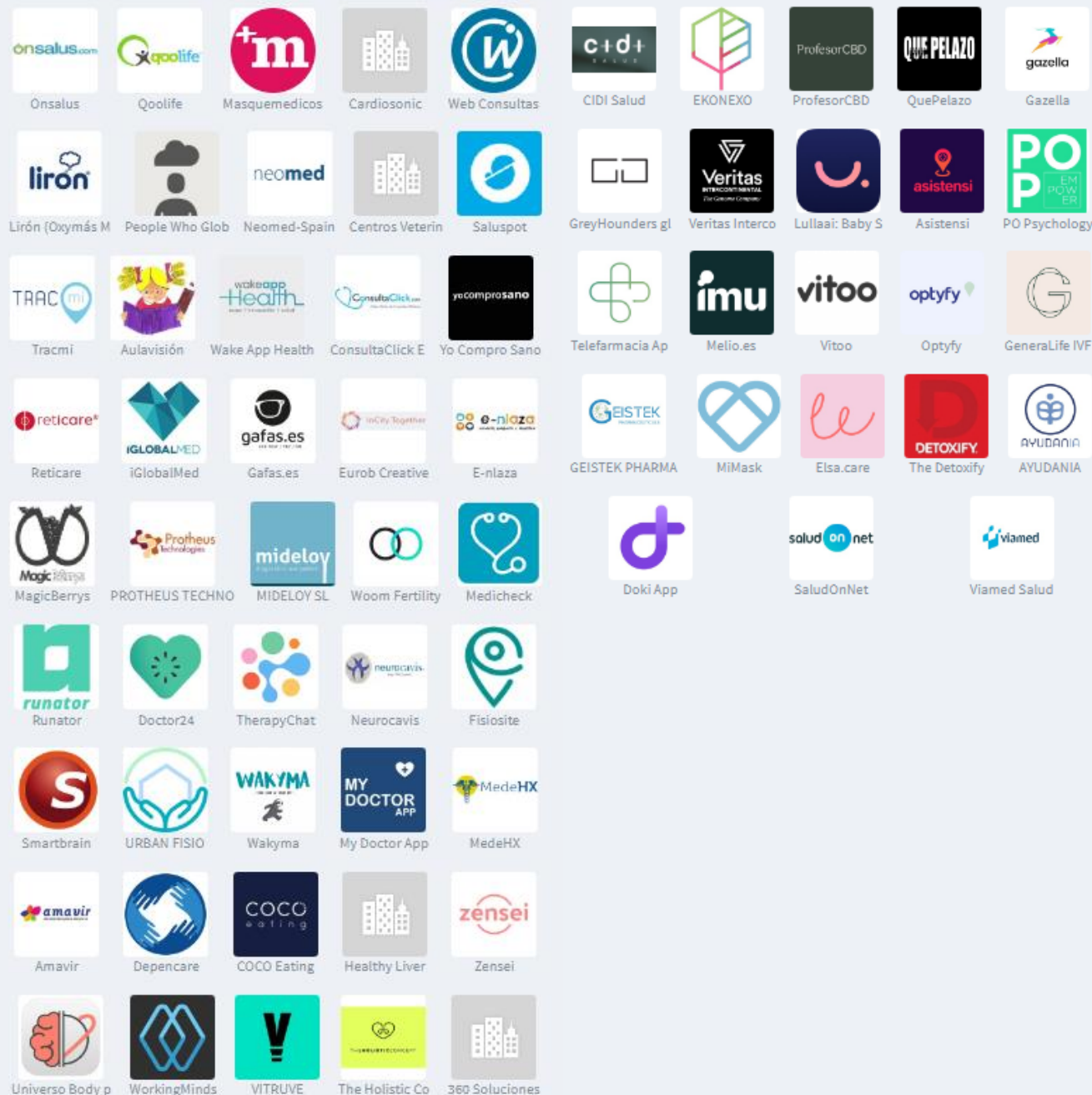
HEALTHTECH STARTUPS OF THE COMMUNITY OF MADRID

BY TYPE OF CLIENT (B2C y B2B/B2C)

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

B2C

Combined funding € 65M

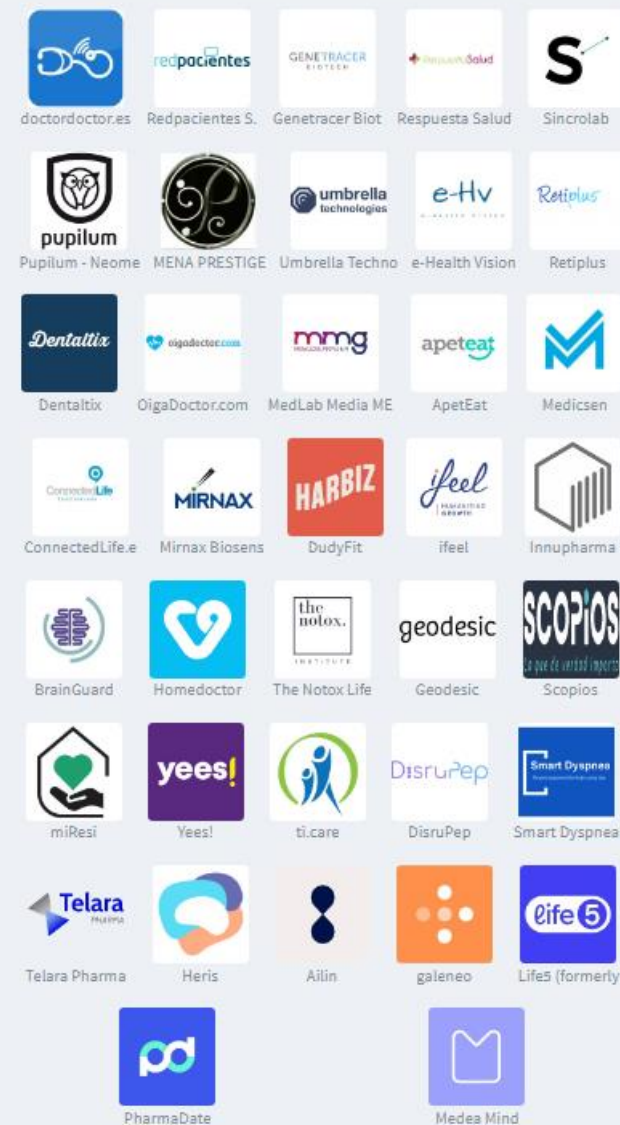


B2C

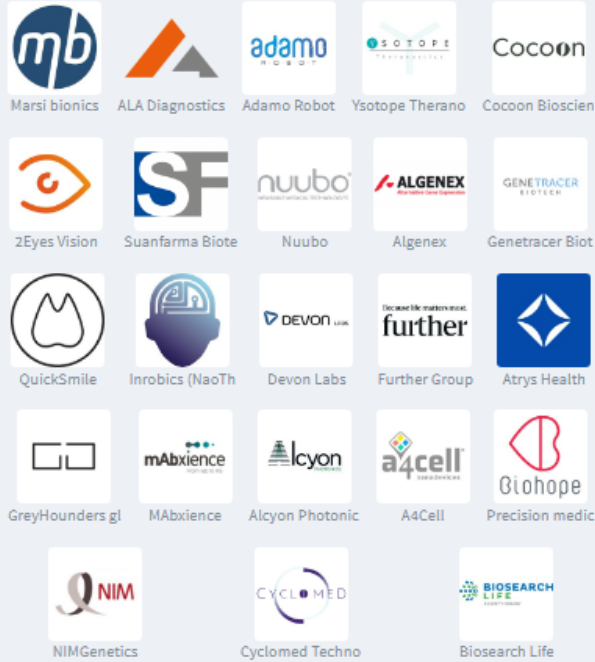
Combined funding € 65M

B2B / B2C

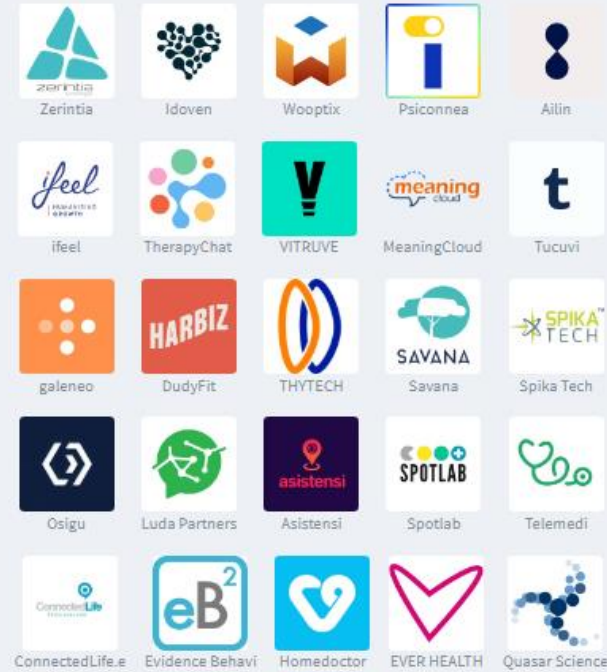
Combined funding € 61M



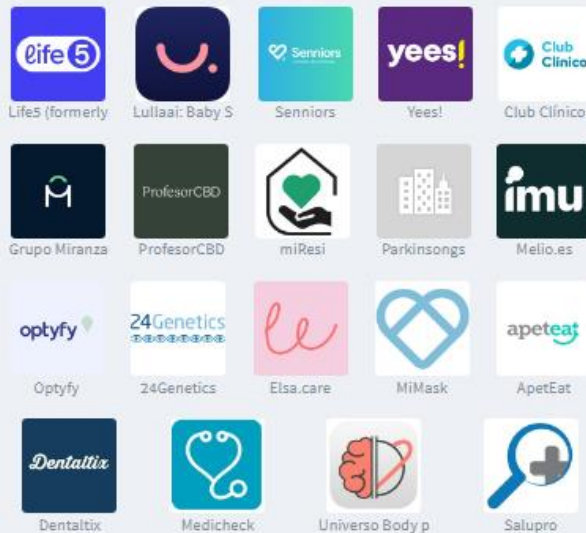
manufacturing



saas



marketplace & ecommerce



HEALTHTECH STARTUPS OF THE COMMUNITY OF MADRID BY TYPE OF BUSINESS MODEL

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

Types of products and services

+ BIOTECHNOLOGY

- **Genomic Editing Therapies:** Modification of genes to treat genetic diseases.
- **Cell Therapy and Gene Therapies:** Therapies that use stem cells or genetic modifications to treat diseases.
- **Vaccine Development:** Research and development of vaccines for a variety of diseases.
- **Bioproduct Production:** Production of therapeutic proteins, monoclonal antibodies and other biological products.
- **Pharmaceutical biotechnology:** Use of biotechnology to develop protein-based drugs, monoclonal antibodies and gene therapies.

+ HEALTH PLATFORMS

- **Telemedicine and Online Consultations:** Platforms that allow patients and physicians to connect for online medical consultations.
- **Electronic Health Records (EHR):** Electronic health record systems used to store and manage patient medical records digitally.
- **Mobile health apps:** Mobile apps for health tracking, medication management and wellness promotion.
- **Mental health platforms:** online platforms offering mental health, therapy and emotional support services.
- **Physical activity tracking platforms:** Apps and devices that allow users to track their physical activity and health.
- **Enterprise telemedicine platforms:** Solutions for companies that offer healthcare and wellness services to employees.
- **Health information platforms:** Platforms that provide health information, resources and decision-making tools for consumers.

+ MEDICAL DEVICES

- **Diagnostic devices:** Equipment used for the diagnosis of disease, such as MRIs, CT scans and blood tests.
- **Medical implants:** Implantable devices such as pacemakers, prostheses, intraocular lenses.
- **Health monitoring devices:** Portable devices for continuous health monitoring, such as glucose monitors, blood pressure monitors and heart rate monitors.
- **Medical instrumentation:** Equipment used in medical procedures, such as endoscopes, surgical lasers and anesthesia machines.
- **Rehabilitation devices:** Equipment and devices used in physical therapy and rehabilitation, such as exoskeletons and occupational therapy devices.
- **Life support devices:** Equipment used in intensive care units, such as ventilators and vital sign monitors.
- **Medical imaging devices:** Equipment for medical imaging, i.e. X-ray machines, ultrasounds.
- **Assistive mobility devices:** Motorized wheelchairs, mobility devices and assistive products.

+ PHARMACEUTICAL

- **Drugs and drug therapies:** Drugs for a wide variety of diseases and medical conditions.
- **Clinical research:** Conducting clinical trials to test the efficacy and safety of new drugs and therapies.
- **Over-the-counter (OTC) products:** Products available without a prescription, such as pain relievers, antihistamines and dietary supplements.
- **Skin care and beauty products:** Pharmaceutical and cosmetic skin care products, including creams, lotions and anti-aging treatments.
- **Women's health products:** Pharmaceuticals related to women's health, such as contraceptives and hormone therapies.
- **Oral health care products:** Pharmaceutical and dental products, such as toothpastes, mouthwashes and teeth whitening products.

HEALTHTECH STARTUPS OF THE COMMUNITY OF MADRID

BY TYPE OF PRODUCT OR SERVICE

[See Landscape on
Startup Radar madrí+d](#)

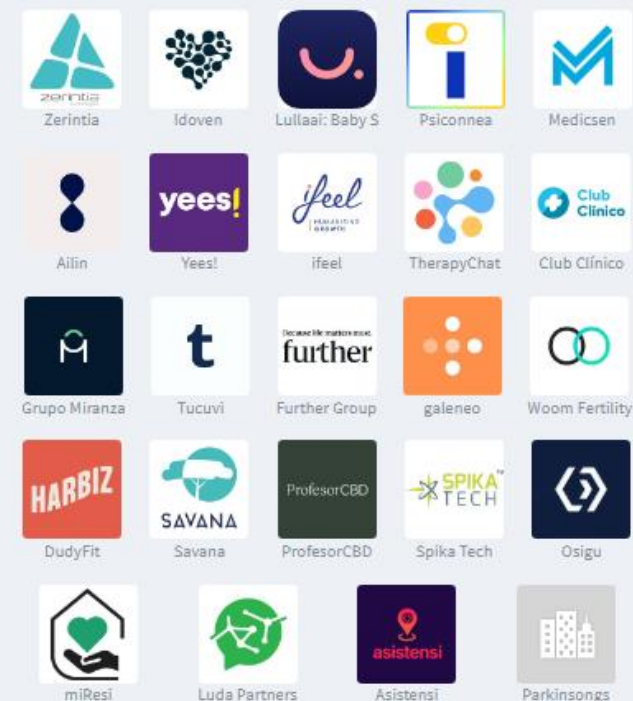
biotechnology



pharmaceutical



health platform



medical devices



Main Health technologies

- ✚ **Artificial Intelligence (AI):** AI is used for medical data analysis, clinical decision making, medical imaging diagnosis, disease prediction and personalized care.
- ✚ **Machine Learning:** Is a branch of AI used to develop algorithms that can learn and improve from data. It is applied in medical diagnostics, health outcomes prediction and patient data management.
- ✚ **Natural Language Processing (NLP):** NLP is used to analyze and understand human language in electronic medical records, patient reports and customer service chatbots.
- ✚ **Internet of Things (IoT):** IoT-connected medical devices, such as wearable health monitors, collect real-time data that can be used for patient monitoring and health management.
- ✚ **Blockchain:** Is used to ensure the security and integrity of healthcare data, such as electronic medical records and immunization records.
- ✚ **Virtual Reality (VR) and Augmented Reality (AR):** These are used in medical training, rehabilitation therapy and surgery planning.
- ✚ **Telemedicine:** Enable online medical consultations and remote patient monitoring.
- ✚ **Medical robotics:** Robots are used in assisted surgery, rehabilitation and assistance to people with disabilities.
- ✚ **Advanced biotechnology:** Includes techniques such as genome editing and gene therapy to develop personalized treatments.
- ✚ **Bioinformatics:** Used for the analysis and interpretation of genomic and proteomic data.
- ✚ **Cloud Computing:** Enables secure storage of medical data and access to processing resources for data analysis applications.
- ✚ **3D Printing:** Used in the fabrication of anatomical models, customized prostheses and medical devices.
- ✚ **Biometric sensors:** Used to measure physiological signals, such as heart rate and body temperature.
- ✚ **Remote monitoring technologies:** Enable the tracking of patients in their home environment and the transmission of data to healthcare professionals.
- ✚ **Genomic sequencing technology:** Used in medical research and genetic diagnosis.
- ✚ **Telecare and home automation:** Technologies that enable the elderly to live independently and receive care at home.
- ✚ **Medical imaging sensors:** Includes technologies such as computed tomography, magnetic resonance imaging and ultrasonography.
- ✚ **Health information technology (HIT):** Electronic health record (EHR) management systems and care management tools.

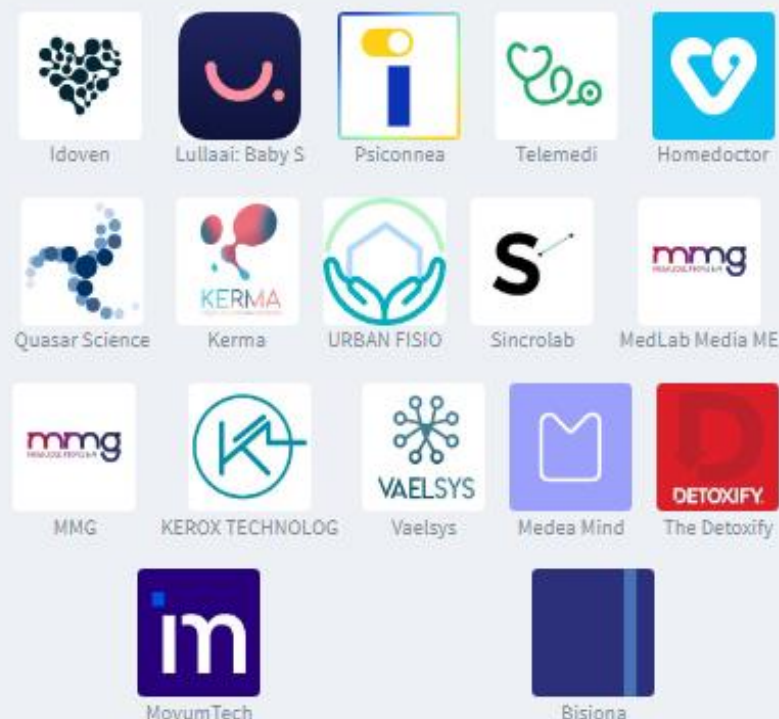
deep tech



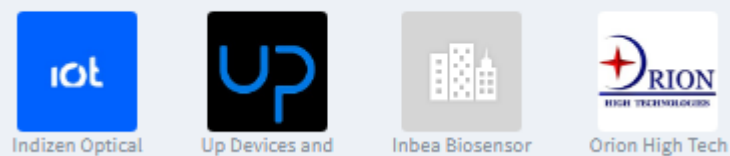
big data



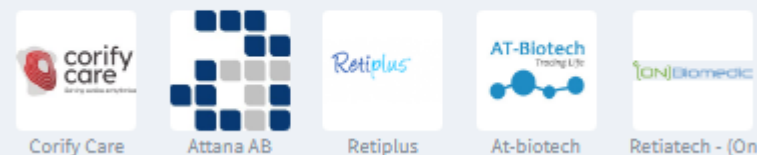
artificial intelligence



iot internetofthings



hardware



HEALTHTECH STARTUPS OF THE COMMUNITY OF MADRID BY TYPE OF TECHNOLOGY

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HEALTHTECH STARTUPS OF THE COMMUNITY OF MADRID

BY TYPE OF TECHNOLOGY (cont.)

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Startup Radar madr+d](#)

virtual reality



nanotech



3d technology



connected device



mobile app



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

Knowledge partners

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

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

INDUSTRIES & TECHNOLOGIES

Industries and Technologies knowledge Partners to date are referenced here:

<https://ecosystem.madrimasd.org/intro>

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