July 2026. Technology report.

Exponential Leaders in Catalonia, 2026

ACCIÓ Catalonia Trade & Investment

Generalitat de Catalunya
Government of Catalonia

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ACCIÓ
Generalitat de Catalunya (Government of Catalonia)

Preparation
ACCIÓ Strategy and Competitive Intelligence Unit
ACCIÓ Innovation and Technological Transformation Unit

Barcelona, July 2026

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Foreword

Foreword

We live in a time when innovation is no longer just a strategic option, but an essential condition for progress. The 2025 Nobel Prize in Economics, awarded for the contributions of Philippe Aghion and Peter Howitt on sustained growth through innovation, reminds us that economies which do not generate the spaces, incentives and leadership capable of driving new solutions risk stagnating.

The **Catalonia Exponential Leaders** arises precisely from this conviction: to identify and support companies that do not merely adapt to changes in the market but aspire to transform it. Catalonia Exponential Leaders showcases projects that explore new technologies, pioneer emerging sectors and propose innovative solutions to increasingly complex challenges. In its sixth edition, the programme consolidates a journey that allows a better understanding of the diversity and maturity of the Catalan disruptive ecosystem. The analysis of the first five years has allowed us to identify that Exponential Leaders prioritise consolidating their competitive advantage and technological proposition, growing and being able to scale their solutions.

The 2026 edition confirms the diversity and vitality of Catalonia's innovative fabric. The 175 projects submitted, the 30 finalist projects and the 10 companies recognised as this year's Catalonia Exponential Leaders reflect the strength of an ecosystem of diverse technological fields, which share a common vision: to turn the most advanced innovation into growth, competitiveness and positive impact.

The future of Catalonia is built with companies capable of first imagining it and then making it a reality. You will find good examples of this in this report.

JAUME BARÓ TORRES
SECRETARY FOR BUSINESS AND COMPETITIVENESS AND CEO OF ACCIÓ.MINISTRY OF BUSINESS AND LABOUR OF THE GOVERNMENT OF CATALONIA

The motivation behind the Exponential Leaders 2026 initiatives

Six strategies to accelerate emerging abundance and grow with it

The 30 candidate companies for Catalonia Exponential Leaders 2026 are clear signals of a new era of abundance in Catalonia. Companies capable of maintaining materials in circularity, generating energy from new sources, capturing CO_2, reusing water, creating batteries from common materials, or endowing any object with digital properties.

They also anticipate advances in food, quantum communication, cybersecurity, early diagnosis, personalised healthcare and home-based rehabilitation. Taken together, they show us how technology can transform what is scarce into something accessible, efficient and scalable.

These leaders not only drive this abundance: they also adapt their strategies to grow with it. They do so by redefining the unit of value of their sectors, changing processes, leveraging dominant platforms, scaling models into new territories and contributing to the creation of new standards.

The question they leave us with is as simple as it is powerful: ***what would the world look like if they all succeeded?***

JAVI CREUS
FOUNDER OF IDEAS FOR CHANGE
PARTNER OF THE CEL PROGRAMME

Contribution from partner organisations

Tech Barcelona

In a complex and competitive global context, in which Europe's strategic autonomy is becoming a determining factor for its future, and in which enabling technologies are transforming entire sectors at a dizzying pace, it is more important than ever to identify, recognise and give visibility to the people and organisations leading this transformation.
This conviction is one of the main motivations of **Tech Barcelona** and, at the same time, the main virtue of the Catalonia Exponential Leaders initiative.

MIQUEL MARTÍ
CEO

Barcelona | Barcelona Activa

Barcelona Activa promotes quality employment, entrepreneurial initiative and business competitiveness in order to move towards a city with a diverse, sustainable and inclusive economic model. Always with innovation as a key driver of transformation and creating environments that connect talent, technology and business. Our collaboration with Catalonia Exponential Leaders reinforces this vision and highlights the companies that are committed to innovation and help build a more competitive, resilient ecosystem with international reach.

ANNA MAJÓ
DIRECTOR OF STRATEGIC SECTORS AND INNOVATION

Mobile WorldCapital Barcelona

With Catalonia Exponential Leaders, ACCIÓ highlights a new generation of companies that anticipate the productive future that Catalonia can lead. These are companies capable of turning advanced knowledge into new markets, new industries and new forms of global competitiveness. In a context marked by the acceleration of exponential technologies, the challenge is to build an ecosystem that not only adopts innovation, but also creates it, scales it and projects it to the world.

At the **Mobile World Capital Barcelona Foundation**, we work to make this leap possible and we connect talent, technology, capital and market to transform advanced knowledge into *deep tech* companies with global ambition.

ALBERT MASCARELL
CHIEF OF TECH TRANSFER

ACCIÓ Catalonia Trade & Investment

Generalitat de Catalunya
Government of Catalonia

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1. Definition of disruptive innovation

Disruption [dɪsˈrʌpʃən]

disruption (‘break’, ‘fracture’)

Disruptive innovation

Disruptive innovation is a type of innovation based on the creation of new products, services or business models that render what was previously being done obsolete and achieves a change in consumer habits.

- **It can transform an entire industry** through the replacement or disappearance of previous products and services.
- **It creates new value and improves the customer experience**, often through the destabilisation of the existing market.

Mindset and change of perspective

Technology as an enabler of the solution

Generation of new markets

Scalable solutions

New business models

Creative destruction

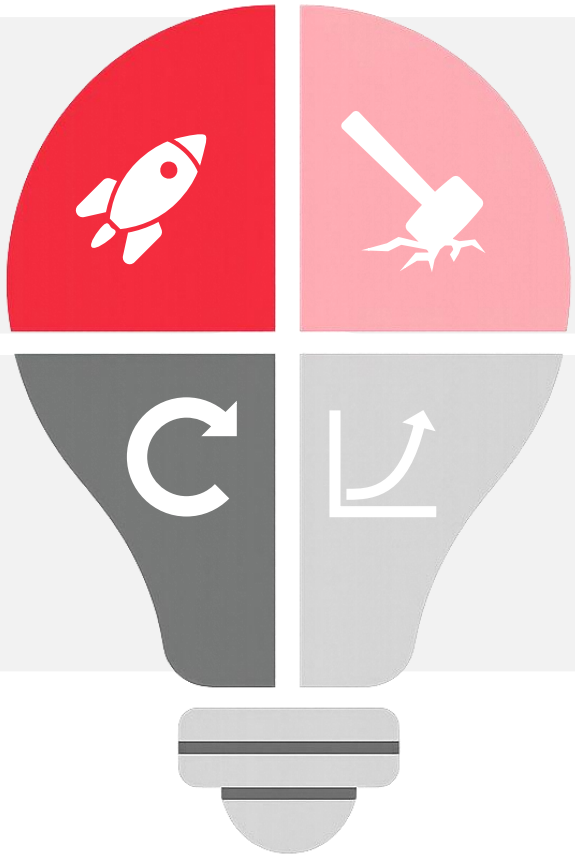
In 2025, the Nobel Prize in Economics recognised the contributions of Aghion and Howitt to the theory of growth based on innovation. The authors draw on the concept of creative destruction, formulated by Schumpeter in 1942. This idea explains how innovation transforms the economy, as it enables the creation of new industries, technologies and business models, and the displacement of others. Their theories show that, without incentives to innovate, economies risk stagnation.

"Innovation drives growth through the destruction of old models to create new ones."

THE NOBEL PRIZE

Innovation
New ideas and technologies drive economic change.

Disappearance of the obsolete
Old models disappear when they cease to be efficient.



Market renewal
New sectors and companies replace traditional activities.

Economic growth
Continuous innovation generates development and competitiveness.

Methodologies and frameworks

Disruptive innovation can be accelerated through different innovation methodologies to enable them to reach the market sooner.

1. ***Business Model Canvas***
2. ***Design thinking***
3. ***Customer discovery***
4. ***Lean startup***
5. ***Scrum***
6. ***Fast Business Prototyping***
7. ***ExO sprint***
8. ***Business evolution***
9. ***Pentagrowth***
10. ***Open Innovation. Corporate Venturing***

Business Model Canvas

The **Canvas model** is a visual tool that helps structure and improve **business models** in a clear manner.
In disruptive innovation, it allows new ideas to be transformed into business models and helps understand how they can reach the market.

- The Canvas model is a strategic tool that enables business models to be visualised and developed on a single page.
- The framework consists of nine boxes:
  1. Key activities
  2. Partners
  3. Resources
  4. Customer segments
  5. Communication channels
  6. Customer relationships
  7. Value proposition
  8. Cost structure
  9. Revenue streams

- Advantages: agility and simplicity.
- Limitations: need to complement it with more quantitative tools.

Source: Asana, Strategyzer

Design thinking

A methodology that places the user at the centre and enables the creation of innovative solutions that respond to their needs.

It is divided into five **stages**, which can be revisited in an iterative way:

Empathise: identify the desires and needs relevant to the user.

Define: organise all the information gathered in order to identify all areas of opportunity from which relevant solutions can be offered to the user.

Ideate: generate as many ideas as possible that address the challenge posed.

Prototype: give form to ideas so that they can be shown to the user, who can provide feedback and indicate the extent to which the solution meets their needs.

Validate or test: present the solution to the user, with the aim of determining whether it addresses their problems and connects with their needs.

Source: IDEO

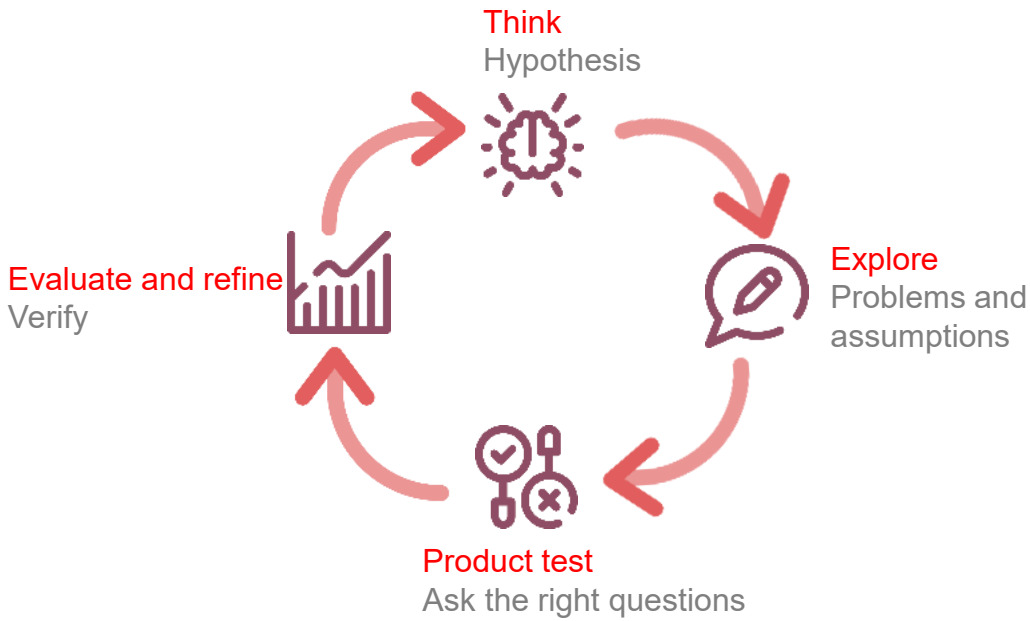
Customer discovery

Customer discovery is the initial process of understanding customers' situations, needs and pain points.

It is applicable both to companies in their early stages and to large organisations developing new products, seeking to target new user groups, or looking to enter new markets.

It is based on **four stages**:

1. **Define the hypothesis**. Formulate a hypothesis that defines both the problem and the proposed solution.
2. **Test problems and assumptions in the hypothesis**. One way of exposing these assumptions is to create a hypothetical persona representing a customer and define aspects such as name, age, career, hobbies, interests and perspectives.
3. **Ask the right questions**. Check with customers whether the intended service or product solves their problem and whether there is a real market for it.
4. **Evaluate and refine**. Reaffirm concepts and uncover new aspects not considered in the hypothesis, which can be incorporated to improve the product or service.



Source: Steve Blank

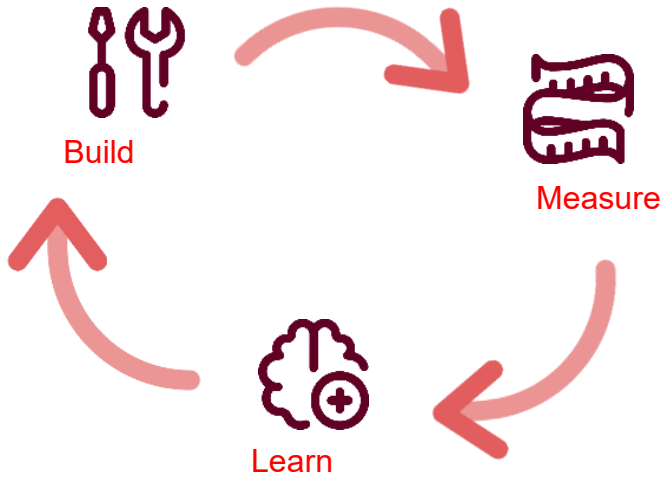
Lean startup is a methodology centred on customer needs.

The methodology starts from an initial prototype and uses user feedback to improve the product until a version is reached that is better aligned with the market.

The **aim** is to create a **scalable business model** through an iterative process that allows the idea to be validated with lower risk and reduced initial investment.

The method *is based on three main steps*: **build, measure and learn**.

- **Build**: transform the idea into a minimum viable product (MVP).
- **Measure**: collect data and customer feedback on the product.
- **Learn**: analyse the results and introduce improvements before repeating the cycle.



Source: *The Lean Startup*, Eric Ries

Scrum

This tool provides a collaborative framework for teams to find adaptive solutions to complex problems.

Scrum is based on **empirical evidence** and **Lean thinking**. It uses an iterative and incremental approach to improve predictability, reduce risk and adapt to change.

It involves cross-functional teams working collaboratively to develop and deliver the product incrementally.

Through partial and regular deliveries, Scrum enables rapid results, prioritisation based on value delivered, and project adjustment based on feedback received.

It is particularly useful in **complex or changing projects** where flexibility, responsiveness, continuous improvement and customer focus are required.

Source: Scrum

Fast Business Prototyping

The methodology consists of designing and building a prototype to validate business hypotheses and the market before actually launching the product or service.

- It allows new business ideas to be tested and iterated rapidly and with limited investment.
- It helps validate the main project hypotheses: business model, market, channels and interest from potential customers.
- It facilitates the identification of weaknesses or aspects that need improvement before the final launch.
- It enables initial feedback to be obtained from users and the product or service to be adjusted according to their reactions.

Fast Business Prototyping **phases**

- Definition of objectives
- Creation of a name and a logo
- Digital simulations and landing page
- Channel selection
- *Benchmark* definition
- Design of advertising creatives
- Digital campaigns
- Prototype optimisation
- Conclusions

Source: Liquid Lab

ExO sprint

The *ExO sprint* process helps organisations, in the face of disruptive environmental change, transform their existing business and generate new initiatives.

In the *ExO sprint* process, organisations prepare to overcome the corporate immune system, which prevents innovation and change, while also developing the organisation's internal capabilities.

Two groups are generated within the *ExO sprint*:

- **Core**: generate initiatives that improve existing ones in order to respond to external disruption.
- **Edge**: generate initiatives different from the company's current business model.

Source: *ExO Sprint*, Francisco Palao

ExO sprint: the 10 attributes of an exponential organisation

ExO organisations are guided by a Massive Transformative Purpose (**MTP**) and 10 exponential attributes.

MTP: reflects the organisation's aspiration and describes the change it seeks to achieve in the world. It goes beyond the company's mission and vision.

***SCALE*. Attributes for connecting with abundance**

- *Staff on demand:* qualified professionals engaged according to business needs.
- *Community*: a group of people passionate about the MTP.
- *Algorithms:* a set of step-by-step instructions used to automate a task.
- *Leverage assets*: assets used on demand to grow the value proposition.
- *Engagement*: the use of techniques such as reputation systems, rewards or incentives to keep the community active.

***IDEAS*. Attributes for managing abundance**

- *Interface*: users' digital experience with products, services and other systems.
- *Dashboards*: real-time information for running the business.
- *Experimentation*: techniques for evaluating new ideas and hypotheses in an agile manner.
- *Autonomy*: self-organised units with decentralised authority. It can be applied internally and externally.
- *Social Technologies*: technologies used to accelerate and facilitate communication between the team and the community.

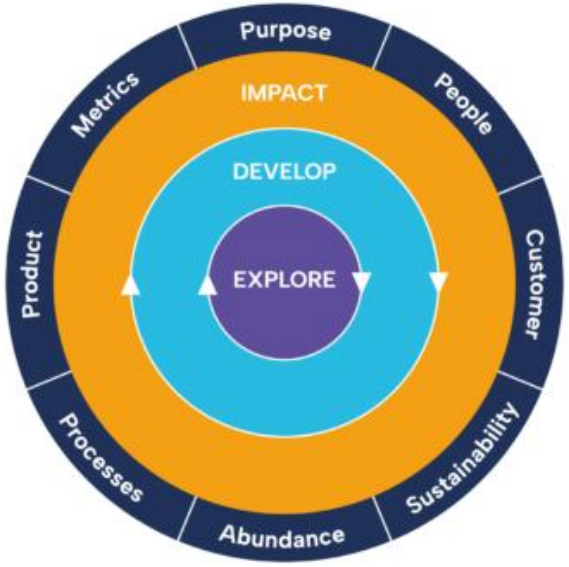
Source: Salim Ismail, Singularity University

Business Evolution

This purpose-driven methodology enables an initiative to be developed and scaled in order to generate a positive impact on society.

The eight pillars are:

- **Purpose:** defines the reason for the initiative's existence and the value it seeks to create.
- **People:** includes both the internal team and the external communities that can contribute to the project.
- **Customer:** identifies the users who use or pay for the solution, as well as their needs and behaviours.
- **Abundance:** refers to the resources, technologies and opportunities that can accelerate growth.
- **Sustainability:** incorporates a balanced impact perspective across planet, people and economic benefit
- **Processes:** defines how work is organised to deliver the solution efficiently.
- **Products:** specifies how the solution is designed at each phase, from prototype to optimised product.



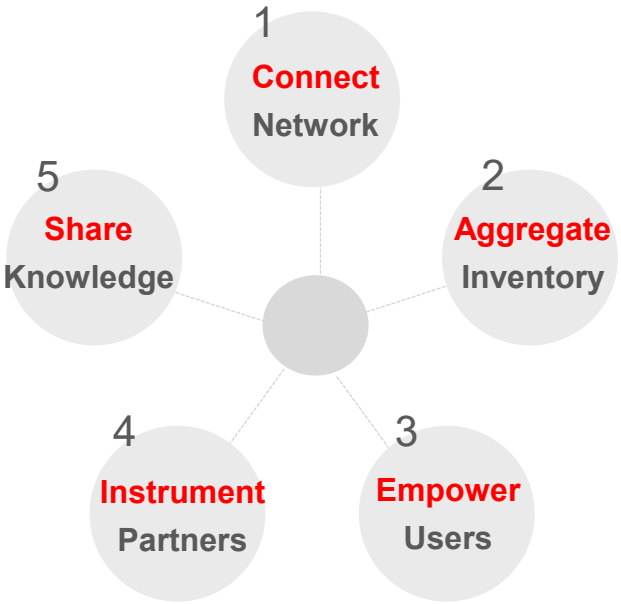
Source: Evolution Alliance

Pentagrowth

The Pentagrowth methodology helps organisations create accelerated growth strategies, generated through the recombination of their internal assets with other elements available within the ecosystem.

It is based on **on five growth levers**:

1. Connect – network: the number of nodes to which an organisation is connected is directly proportional to its growth potential.
2. Aggregate – inventory: the less internal effort an organisation requires to expand its available offering, the greater its growth potential.
3. Empower – users: the more an organisation leverages the capabilities of its users, the greater its growth potential.
4. Instrument – partners: the more an organisation enables third parties to develop their offerings on top of its business, the greater its growth potential.
5. Share – knowledge: the larger the community that regards shared resources as its own,, the greater its capacity for growth.

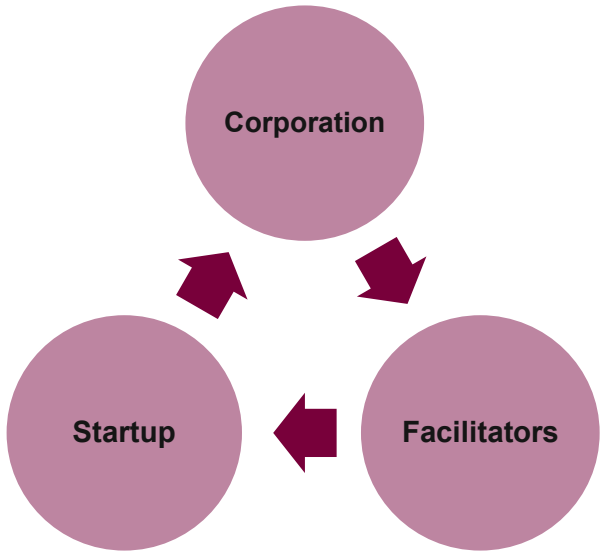


Source:
Pentagrowth

Open Innovation. Corporate Venturing

Corporate Venturing is a tool for attracting and adopting innovation, based on the open innovation paradigm, which assumes that companies can and should use external ideas to advance their technology.

Corporate Venturing ecosystem



- **Corporate venturing** enables corporations to collaborate with startups and external innovators in order to access new ideas, markets and capabilities.
- It includes mechanisms such as **challenge prizes, hackathons, incubators, accelerators, corporate venture capital, strategic partnerships and acquisitions.**
- A **facilitator** is required to create this ecosystem, which may be a company, a public administration, a university or a research centre.

Open innovation

Corporate Venturing

Mechanisms

- Acquisition of startups
- Venture capital
- Corporate incubators and accelerators
- Strategic partnerships
- Scouting missions
- *Hackathons*
- Challenges and prizes
- Resource sharing

Source: Open Innovation. IESE

2. Catalonia Exponential Leaders 2026 Programme

Catalonia Exponential Leaders

The **Catalonia Exponential Leaders** are the most disruptive Catalan companies with the greatest positive impact on society, selected from among all participants in the programme.

Through this initiative, we aim to demonstrate that Catalonia is home to pioneering companies in **transformation and adaptation to disruption**, which serve as an inspiring example and a benchmark for the wider Catalan business community.

www.accio.gencat.cat/ca/serveis/innovacio/catalonia-exponential/catalonia-exponential-leaders

Characteristics of the Catalonia Exponential Leaders

1. Imagining futures with a **positive impact**.
2. Creating **new markets** from disruptive ideas.
3. Incorporating **exponential technologies** into projects.
4. Developing scalable, high-impact **business models**.
5. Inspiring and **building communities** around them.
6. Leveraging **external assets** for growth.
7. Using **collaborative tools** and fostering **autonomy**.
8. Applying **experimentation** with a customer-focused approach.
9. Promoting an **innovative culture** within the company.

www.accio.gencat.cat/ca/serveis/innovacio/catalonia-exponential/catalonia-exponential-leaders

Characteristics of CEL companies (I)

To review the first five years of the CEL programme, a survey was conducted among the finalist companies from 2021–2025. The findings are presented in the report **"Characteristics of CEL Companies" by Ideas for Change** and indicate that companies exhibit different growth **strategies** and**needs** depending on their **level of maturity**, **scalability** and **innovation model**, resulting in **four typologies** with specific **challenges** and **priorities**.

Deep Fit

***Deep tech*and life sciences**
Companies with a high degree of technological specialisation and long development cycles.

- Innovation based on intellectual property and regulation
- High capital requirements
- Technical and scientific validation
- Access to major strategic partners

Focus: consolidating competitive advantage and technological credibility.

Deep Growth

Fast-growing deep tech
Companies in a phase of rapid expansion and hypergrowth.

- Scalability and rapid growth
- Partnerships and international expansion
- Professionalisation of organisational structures
- Constant adaptation to the market

Focus: growing without losing efficiency or organisational structure.

Corporate Innovation

Established companies
Mature organisations driving continuous innovation and transformation.

- Open innovation and collaboration
- Internationalisation and diversification
- New business models
- Technological adaptation and AI

Focus: innovating while maintaining stability and competitiveness.

Lean Startup

Rapid validation and adaptation
Agile companies focused on the market and rapid monetisation.

- Continuous validation and pivoting
- Flexibility and modularity
- Commercial scalability
- Access to markets and funding

Focus: adapting quickly and scaling solutions.

Source: "Characteristics of CEL Companies", Ideas For Change, December 2025.

Characteristics of CEL companies (II)

CEL companies do not follow a single growth path. Depending on their **level of maturity** and the type of challenge they face, they require different **strategies** and forms of **support**, which are provided through the CEL programme.

01

How companies evolve

Evolution from initial validation to a consolidated strategy.

Adaptation to the market, the customer and scalability potential

Transition from the solution into a scalable component of the business

Building sustainable competitive advantages over time

Companies combine different strategies depending on their stage of maturity.

02

Value of the CEL programme

Specialised **support** tailored to the company's profile and stage of development

Connection with key stakeholders and sector-specific opportunities

Support for internationalisation and access to funding

Environments for validation, innovation and accelerated growth

The programme delivers greater value when it is adapted to the challenges of each company.

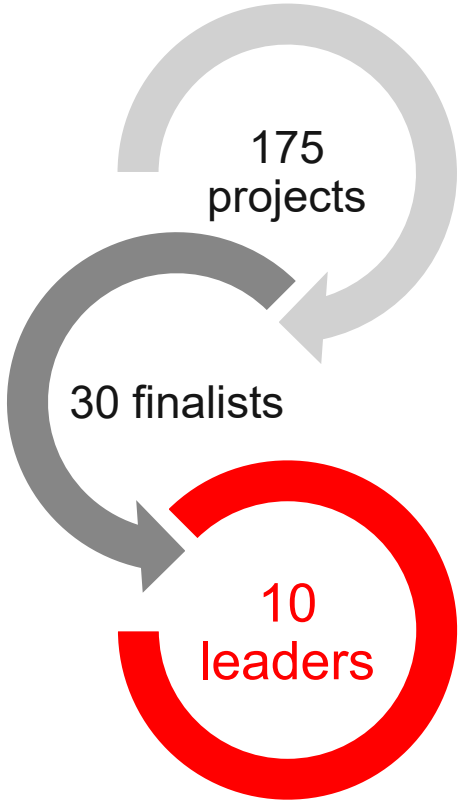
Source: "Characteristics of CEL Companies", Ideas For Change, December 2025.

Catalonia Exponential Leaders 2026

The **Catalonia Exponential Leaders** programme recognises Catalan companies that create disruptive solutions and generate new markets with positive impact.

In this 6th edition, two categories were established: **established companies** and **emerging companies** (***spin-offs*** and **startups**). **175 projects** were submitted (70% startups and 30% established companies).

From these, the **30 companies with the most disruptive projects** were selected and, finally, the **10 companies selected as Catalonia Exponential Leaders**.



The **Catalonia Exponential Leaders** are **inspiring role models** of distinctive projects with strong growth potential that are shaping the future of Catalonia today.

3. The 30 finalists of Catalonia Exponential Leaders 2026

The 30 finalists of Catalonia Exponential Leaders 2026, by sector

Food, Agriculture, Wines, caves and beverages

Agrin'pulse
cyanoterra
Novameat
Planet BIOTECH
PLESH
VALLFORMOSA

ICT and electronics, Audiovisual

AKO
allpriv
ARQ QUANTUM TECHNOLOGIES
Evidenze Knowledge in Health
GROUP SALTO Intelligent Technology
Gestmusic We are Banijay
ignion
PuSensing
shinephi
SLIMOP SPACE
SPASCAT
THINEX ROTIMPRES

Health and healthcare services, Biotechnology

DyCare
fetaLife TECHNOLOGIES
NANOLIGENT
punto.
WIVI VISION®

Chemistry and plastics, Energy, Water

electraqua
NEOSANIX BIOTECH INNOVATIONS
wattium

Machinery and equipment, Packaging

Alier
FLUIDRA POSITIVE POOL
gasN2 ENGINEERING SUSTAINABILITY

Consultancy and business services

OUTRIGO

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The 30 finalists of Catalonia Exponential Leaders 2026 (II)

E

Agrin'Pulse is revolutionising agricultural machinery with autonomous and electrified robots that automate field tasks and improve efficiency, sustainability and the competitiveness of the agricultural sector.

C

AKO transforms professional refrigeration with IoT and data analytics solutions that enable real-time monitoring and management of the cold chain, improving efficiency and safety.

C

ALIER promotes a circular and decarbonised industrial model based on recycling, renewable energy and waste valorisation, transforming the paper industry into a sustainable and efficient platform.

E

Allpriv develops AI- and blockchain-based cybersecurity solutions to protect connected medical devices, strengthening hospital security and ensuring the integrity of critical healthcare systems.

E

Arq Quantum Technologies develops quantum communication and quantum internet technologies and drives ultra-secure and scalable digital infrastructures for the future of telecommunications.

Cyanoterra is transforming microalgae production with a platform based on biotechnology and AI to develop sustainable, high-value functional ingredients for the food and nutraceutical industry.

E

DyCare focuses on AI-based digital rehabilitation with a platform that monitors movements in real time and enables personalised, accessible and scalable treatments.

E

Electraqua introduces electrochemical reactors to remove persistent pollutants from water using only air and electricity, enabling a more sustainable and efficient treatment process.

E

Evidenze creates a federated data space based on AI that transforms clinical data into medical evidence to accelerate research, improve diagnosis and enable more personalised and efficient medicine.

C

FetaLifeintroduces a liquid fetal incubator for extremely premature babies that replicates the uterine environment and opens a new generation of safer and less invasive neonatal care solutions.

E

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C Established company

E Emerging company

CataloniaConnects

The 30 finalists of Catalonia Exponential Leaders 2026 (III)

C

Fluidra redefines the traditional swimming pool model with Positive Pool, an intelligent and connected ecosystem that integrates AI, IoT and digital solutions to optimise the use of water, energy and resources.

C

GasN2 develops industrial decarbonisation technologies based on CO_2 capture and utilisation, heat pumps and mineralisation to reduce emissions and electrify energy-intensive processes.

C

Gestmusic develops KAI, a generative AI applied to audiovisual production that analyses content and metadata to reduce narrative selection time and enhance creativity in entertainment.

C

Group Saltó integrates social robotics, AI and IoT into SOM Care, an advanced telecare platform that connects dependent individuals, professionals and home environments to improve autonomy and socio-healthcare support.

C

Ignion has developed VIRTUAL ANTENNA®, a technology that enables the integration of multiple wireless connectivity solutions in compact IoT devices, improving the efficiency, sustainability and scalability of connectivity.

E

Nanoligent Nanoligent introduces a new architecture for targeted cancer therapy based on protein-drug nanoconjugates that deliver treatments selectively within the tumour, thereby improving efficacy and reducing toxicity.

E

NeoSanix creates biosafe and One Health disinfection solutions based on biotechnology that eliminate viruses, bacteria and pathogens without toxicity or corrosion, improving biosecurity across different industries.

E

Novameat develops a micro-extrusion technology that recreates meat texture using plant protein, enabling reduced energy consumption and promoting more sustainable food.

C

Outrigo has developed OASYS, a *deep tech* platform that integrates AI and automation to coordinate critical engineering decisions, reducing redesigns, development time and risks in industrial systems.

E

PLANeT Biotech develops natural bioactive molecules that increase crop resilience to drought and heat, improving agricultural yield with reduced water and fertiliser consumption.

ACCIÓ Catalonia Trade & Investment

Generalitat de Catalunya Government of Catalonia

C Established company

E Emerging company

CataloniaConnects

The 30 finalists of Catalonia Exponential Leaders 2026 (IV)

E

PLESH has created Zero Up, a functional formulation technology that enables structural sugar reduction in indulgent snacks while maintaining taste, texture and consumer experience.

E

PulSensing designs mixed-signal ASICs based on photonics and quantum technology for particle detection and secure communications, improving precision in medical diagnostics and critical digital infrastructures.

E

Punto Health integrates AI and digital biomarkers into a cognitive health platform that enables early detection, remote monitoring and personalised support for people with cognitive impairment.

E

Shinephi develops a *plug-and-play* optical module based on photonics that converts conventional microscopes into high-precision 3D imaging tools for advanced semiconductor inspection.

E

SLIMOP Space develops ultra-light optical telescopes and terminals based on photonics for Earth observation and laser space communications, reducing cost, weight and energy consumption in NewSpace missions.

E

Spascat transforms Earth observation data into operational information for land management through AI and accessible satellite geoinformation for public administrations and companies.

C

Thinex develops flexible printed electronics that integrate sensors, NFC/RFID and touch interfaces directly onto everyday surfaces and products, enabling a new generation of sustainable smart objects.

C

Vallformosa drives a digital and industrial ecosystem to transform the wine sector using AI, IoT and regenerative agriculture, connecting growers, operations and markets in a more sustainable and resilient model.

E

Wattium develops high-power batteries based on NaFeC chemistry, free of lithium and critical materials, capable of charging in under 5 minutes to accelerate fully renewable power grids.

E

WIVI Vision applies AI, big data and immersive 3D environments to visual health to detect visual disorders in under 10 minutes and deliver personalised, gamified therapies.

4. The 10 Catalonia Exponential Leaders 2026

The 10 Catalonia Exponential Leaders 2026

ARQ QUANTUM TECHNOLOGIES: Enabling the Quantum Internet

ARQ QUANTUM TECHNOLOGIES

Deep tech startup that designs and builds quantum repeaters for a quantum internet.

www.linkedin.com/company/arquantum/

FIELD OF ACTIVITY

Quantum technology · Photonics

TECHNOLOGIES

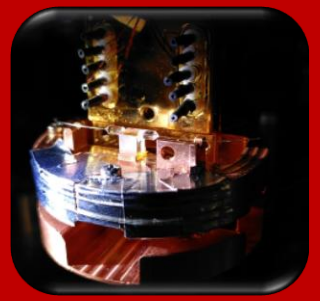
Quantum technologies

Telecommunications

Cybersecurity

#QuantumTechnology #QuantumNetworks #Photonics

DISRUPTIVE PROJECT



Arq Quantum develops quantum repeaters that make the future **quantum internet** possible, a network that will enable capabilities such as **distributed computing**, **precision sensing** and intrinsically **secure communications**.

HOW DO THEY DO IT?

They combine **solid-state quantum memories and entanglement sources** with **native multiplexing**, compatible with the telecommunications fibre networks already deployed. Multiplexing increases the rate of entanglement distribution, a key factor in achieving long-distance communications.

CHALLENGE ADDRESSED

Overcoming the **distance** and **scalability limitations** of quantum communications to enable a **secure quantum internet** with **continental-scale reach**.

TARGET SECTORS

ICT and electronics

R&D

Note: The identification of target sectors and technologies has been carried out in accordance with the classifications established by ACCIÓ to ensure consistency in monitoring data.

EVIDENZE: Knowledge in Health

Evidenze
Knowledge in Health

Company specialising in clinical research, health data and the digital transformation of the healthcare sector.

www.evidenze.com

FIELD OF ACTIVITY

Health

TECHNOLOGIES

Artificial intelligence

Digital health

Data space

#HealthData #ArtificialIntelligence #PrecisionMedicine

DISRUPTIVE PROJECT

Evidenze Data Space connects and transforms real-world **healthcare data** into actionable **clinical evidence**, accelerating **research**, **diagnosis**, **personalised medicine** and healthcare **decision-making**.

HOW DO THEY DO IT?

Through **AI**, **synthetic data** and a **federated data space** that connects and promotes collaboration among hospitals, research centres and other stakeholders within the healthcare system.

CHALLENGE ADDRESSED

Overcoming the **fragmentation of healthcare data** to enable **more efficient research**, more accurate **diagnoses** and better **clinical decision-making**.

TARGET SECTORS

Health and healthcare services

ICT and electronics

R&D

Note: The identification of target sectors and technologies has been carried out in accordance with the classifications established by ACCIÓ to ensure consistency in monitoring data.

FETALIFE TECHNOLOGIES: Liquid incubator for fetal life support

Biomedical *Spin-off* of HSJD, HCB and UB specialising in fetal and neonatal medicine.

www.fetalifetech.com

FIELD OF ACTIVITY

Health

TECHNOLOGIES

Med tech / Health tech

Digital health

#NeonatalCare #IncubadoraLiquida #MedTech

DISRUPTIVE PROJECT

FetaLife is developing Europe's first **liquid fetal incubator**, a technology that replicates the **maternal intrauterine environment** to improve **survival rates** and reduce **complications** in extremely premature babies.

HOW DO THEY DO IT?

Through a **liquid incubator**, **real-time monitoring** and **miniaturised extracorporeal support** that enables a progressive physiological transition after birth.

CHALLENGE ADDRESSED

Reducing the high **mortality rate** and **complications** associated with extreme prematurity, particularly in **babies born between 22 and 25 weeks** of gestation.

TARGET SECTORS

Health and healthcare services

Biotechnology

Note: The identification of target sectors and technologies has been carried out in accordance with the classifications established by ACCIÓ to ensure consistency in monitoring data.

FLUIDRA: Transforming water into a better world

FLUIDRA POSITIVE POOL

Global leader in aquatic solutions.

www.fluidra.com/es

FIELD OF ACTIVITY

Capital goods and consumer goods

TECHNOLOGIES

- Artificial intelligence
- Sustainable and frontier materials
- Robotics

#WaterEfficiency #EnergyEfficiency #Decarbonization

DISRUPTIVE PROJECT

Positive Pool transforms the traditional swimming pool model into an **intelligent ecosystem** that optimises the consumption of water, energy, CO_2 and chemicals, with measurable social and environmental impact.

HOW DO THEY DO IT?

Through **AI**, **IoT** and **digital twins** that monitor and optimise swimming pools to make them more efficient, connected and sustainable.

CHALLENGE ADDRESSED

Turning every swimming pool into a space that generates **real value** for **society** and the **planet**, and redefining **water as a driver of health, sustainability and social progress**.

TARGET SECTORS

- Water
- Health and healthcare services
- Energy
- ICT and electronics

Note: The identification of target sectors and technologies has been carried out in accordance with the classifications established by ACCIÓ to ensure consistency in monitoring data.

GASN2ITROGEN: One boiler switches off, a future lights up

gasN2
ENGINEERING SUSTAINABILITY

Industrial SME specialising in decarbonisation technologies for industrial processes.

www.gasn2.com/es/

FIELD OF ACTIVITY

Industrial gases and energy solutions

TECHNOLOGIES

- Decarbonisation and CO_2 capture
- Artificial intelligence
- Internet of Things

#Decarbonization #CarbonCapture #IndustrialInnovation

DISRUPTIVE PROJECT

GasN2 develops **high-temperature heat pumps** that provide an alternative to gas boilers and enable genuine **industrial decarbonisation**.

HOW DO THEY DO IT?

Through **natural refrigerants**, with **no direct CO_2 emissions** and **energy efficiency** three times higher than that of a gas boiler.

CHALLENGE ADDRESSED

Reducing the high **CO_2 emissions** generated by industrial processes without compromising **business competitiveness** or **operational performance**.

TARGET SECTORS

- Energy
- Waste
- Chemicals and plastics
- Health
- Food

Note: The identification of target sectors and technologies has been carried out in accordance with the classifications established by ACCIÓ to ensure consistency in monitoring data.

IGNION: We can protect what we can connect

ignion

Deep tech company specialising in wireless connectivity for IoT devices, based on its patented Virtual Antenna® technology.

www.ignion.io/

FIELD OF ACTIVITY

Wireless connectivity

TECHNOLOGIES

Wireless connectivity

Internet of Things

#WirelessConnectivity #IoT #VirtualAntenna

DISRUPTIVE PROJECT

Virtual Antenna® is a **miniaturised antenna** technology that enables the integration of **multiple wireless connectivity solutions** into compact devices, reducing size, complexity and development time.

HOW DO THEY DO IT?

Through **Virtual Antenna®** technology and the **Oxion™ platform**, which simplifies the design of IoT devices and connected electronics.

CHALLENGE ADDRESSED

Overcoming the **size**, **complexity** and **cost** limitations of traditional antennas to enable **more efficient and scalable wireless connectivity**.

TARGET SECTORS

ICT and electronics

R&D

Note: The identification of target sectors and technologies has been carried out in accordance with the classifications established by ACCIÓ to ensure consistency in monitoring data.

NANOLIGENT: The Master Key for Metastatic Cancer

NANOLIGENT

Spin-off of the UAB and IR Sant Pau developing targeted therapies for the treatment of aggressive and metastatic tumours.

www.nanoligent.com/

FIELD OF ACTIVITY

Health

TECHNOLOGIES

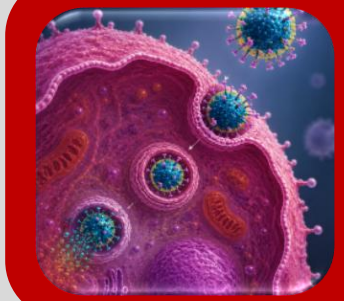
Biotechnology

Nanotechnology

Personalised medicine

#TargetedTherapy #Biotechnology #Oncology

DISRUPTIVE PROJECT



A new **biotechnology platform** aimed at the treatment of a broad range of highly aggressive and metastatic **CXCR4+** tumour types.

HOW DO THEY DO IT?

Through a **protein-drug nanoconjugate** capable of: Self-assembling in an ordered manner into **nanoparticles**, providing greater stability and tumour biodistribution while achieving high **selectivity** to target and eliminate only CXCR4+ tumour cells.

CHALLENGE ADDRESSED

Improving the **treatment of aggressive and metastatic tumours**, where current therapeutic options have limited efficacy and significant adverse effects.

TARGET SECTORS

- Biotechnology
- Health and healthcare services
- Pharmaceutical industry

Note: The identification of target sectors and technologies has been carried out in accordance with the classifications established by ACCIÓ to ensure consistency in monitoring data.

NOVAMEAT TECH: The protein that changes everything

Novameat

FoodTech company specialising in advanced technologies for the production of plant-based proteins.

www.novameat.com/es/

FIELD OF ACTIVITY

Food

TECHNOLOGIES

- Biotechnology
- Sustainable and frontier materials
- *FoodTech*
- Bioeconomy

#FoodTech #AlternativeProteins #SustainableFood

DISRUPTIVE PROJECT

NovaMeat develops a technology platform capable of creating **plant-based alternatives** that replicate the **texture**, **structure** and **experience** of eating meat, facilitating the **large-scale adoption of alternative proteins**.

HOW DO THEY DO IT?

Through a **proprietary micro-extrusion technology** that generates **complex plant-protein structures** with lower energy consumption and greater production efficiency.

CHALLENGE ADDRESSED

Reducing **dependence** on a model of **animal protein** production characterised by high **resource consumption**, **emissions** and **environmental impact**.

TARGET SECTORS

- Food
- Raw materials
- R&D
- Health and healthcare services

Note: The identification of target sectors and technologies has been carried out in accordance with the classifications established by ACCIÓ to ensure consistency in monitoring data.

PLANeT BIOTECH: More crop per drop

Spin-off of CRAG specialising in innovative solutions for agriculture.

www.planet-biotech.com/

FIELDS OF ACTIVITY

Food | Agriculture

TECHNOLOGIES

Biotechnology | *AgriTech* | Bioeconomy

#Agritech #ClimateResilience #SustainableAgriculture

DISRUPTIVE PROJECT

PLANeT Biotech develops a new generation of **bioactive molecules** that **increase** crop resilience to **drought** and **extreme heat**, improving agricultural yields while using fewer resources.

HOW DO THEY DO IT?

Through **bioactive molecules** that act as **biostimulants**, with a **scientifically validated mechanism of action demonstrated** across different crops and environmental conditions.

CHALLENGE ADDRESSED

Addressing the **loss** of **agricultural productivity** caused by **drought**, **extreme heat** and the growing **scarcity** of **resources** in a context of **climate change**.

TARGET SECTORS

Agriculture | Food | Biotechnology | Water

Note: The identification of target sectors and technologies has been carried out in accordance with the classifications established by ACCIÓ to ensure consistency in monitoring data.

WIVI VISION: Innovation to improve visual health and people's quality of life

HealthTech company specialising in visual assessment and rehabilitation based on AI, big data and gamified 3D environments.

www.wivivision.com/es/

FIELDS OF ACTIVITY

Health | Technology

TECHNOLOGIES

Artificial intelligence / Big data

Immersive technologies

Digital health

#VisualHealth #EarlyDetection #VisualRehabilitation

DISRUPTIVE PROJECT

WIVI transforms **visual assessment and rehabilitation** into an **immersive digital experience** that enables personalised training programmes tailored to each user's progress.

HOW DO THEY DO IT?

Through artificial intelligence, big data, immersive 3D environments and **proprietary algorithms** that, through visual challenges or video games, analyse more than **110 visual parameters** in real time.

AI 3D

CHALLENGE ADDRESSED

Overcoming the limitations of **traditional visual diagnostic processes**, which are slow and subjective, making the **early detection of often undiagnosed visual disorders** more difficult and affecting 4 out of every 10 people.

TARGET SECTORS

Health and healthcare services

ICT and electronics

R&D

Note: The identification of target sectors and technologies has been carried out in accordance with the classifications established by ACCIÓ to ensure consistency in monitoring data.

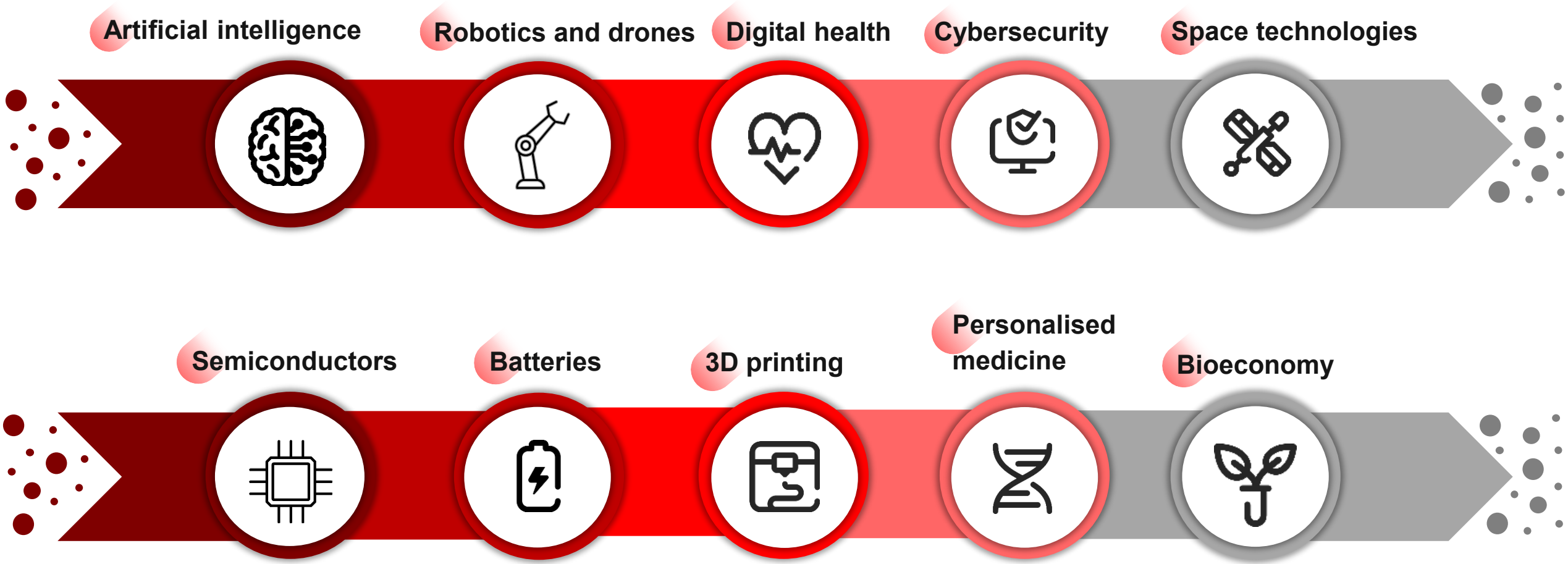
5. Global trends

Introduction

In a constantly evolving world, emerging technologies continue to transform organisations. 2026 is shaping up to be a pivotal year in the full maturation of technologies that will redefine business models and drive sustainability. At the same time, **dual-use technologies** will become even more important because of both their civilian applications and their role in ensuring security.

This analysis provides an overview of the emerging technology landscape and identifies the **10 technology trends for 2026**, with the aim of helping organisations and individuals anticipate change, identify opportunities and prepare to lead in a technologically disruptive future. Likewise, the **10 Catalonia Exponential Leaders** are concrete examples of how these emerging technologies can be applied to generate real solutions, drive change and lead transformation.

ACCIÓ's selection of technology trends for 2026



Consult the technology report "10 Technology Trends for 2026" (ACCIÓ, 2025).

Technology trends for 2026 (I)

1: Artificial intelligence

Productivity and automation serving businesses and users

Artificial intelligence is consolidating its position as a key technology for businesses. Its ability to analyse data, automate processes and anticipate behaviours will drive efficiency, productivity and new business models.

Key concepts include...

- Agentic AI
- Generative AI
- Multimodal models
- *Large Language Models (LLM)*
- Adaptive AI
- Advanced virtual assistants

2: Robotics and drones

Intelligent automation in physical and industrial environments

Robotics is evolving towards increasingly autonomous, intelligent and adaptable systems. Adoption will accelerate in industrial, logistics and service environments, improving productivity, safety and operational capabilities.

Key concepts include...

- Humanoid robotics
- Collaborative robots (cobots)
- Autonomous drones
- Autonomous mobile robots (AMRs)
- Advanced manipulation
- Autonomous operations

Technology trends for 2026 (II)

3: Digital health

Evidenze Knowledge in Health
fetaLife TECHNOLOGIES
WIVI VISION®

Technology serving more personalised and efficient healthcare

Digital health will continue to transform patient-centred prevention, diagnosis and monitoring. The growing use of health data and digital tools will enable more personalised, efficient and connected healthcare.

Key concepts include...

- Health data spaces
- Personalised medicine
- Digital diagnostics
- Digital therapeutics
- Remote monitoring
- Artificial intelligence in healthcare

4: Cybersecurity

ARQ QUANTUM TECHNOLOGIES

A constant challenge in an increasingly connected world

Cybersecurity will be essential for protecting data, systems and infrastructures against increasingly sophisticated threats. Its application will be cross-cutting, ensuring secure, resilient and reliable digital environments.

Key concepts include...

- Quantum cybersecurity
- Post-quantum cryptography
- Quantum Key Distribution (QKD)
- Digital identity
- Critical infrastructure protection
- Cyber resilience

Technology trends for 2026 (III)

5: Semiconductors

ignion

The technological foundation of the digital industry

Semiconductors will continue to be essential to digital and industrial transformation. Their development will be crucial for advancing strategic technologies such as artificial intelligence, advanced communications and the electronics of the future.

Key concepts include...

- Photonic chips
- Integrated photonics
- AI chips
- Semiconductor design
- Technological sovereignty
- Advanced chip manufacturing

6: Space technologies

Space as a driver of new services and opportunities

Space technologies are enabling new applications in communications, Earth observation and navigation. Their evolution will generate high-value services for sectors such as industry, mobility, energy and environmental management.

Key concepts include...

- Satellite constellations
- Low Earth Orbit (LEO) satellites
- Earth observation
- Space communications
- Advanced navigation
- Space economy

Technology trends for 2026 (IV)

7: Batteries

Energy storage for the energy transition

Batteries will be a key component in the electrification of transport and the deployment of renewable energy. Their evolution will enable energy to be stored more efficiently, safely and sustainably, contributing to the decarbonisation of the economy.

Key concepts include...

- Sodium-ion batteries
- Stationary energy storage
- Transport electrification
- Renewable energy integration
- Second life for batteries
- Alternative materials

8: 3D printing

More flexible, customised and sustainable manufacturing

3D printing continues to evolve beyond prototyping and is gaining importance in industrial production. Its ability to manufacture complex, customised parts with less waste will make it a key technology for reindustrialisation.

Key concepts include...

- Metal 3D printing
- Additive manufacturing
- 3D bioprinting
- Advanced materials
- On-demand production
- Distributed manufacturing

Technology trends for 2026 (III)

9: Personalised medicine

Treatments tailored to the characteristics of each patient

Personalised medicine is transforming healthcare through the integration of health data, genomics and artificial intelligence. This will enable the development of more accurate diagnoses and more effective, preventive and personalised treatments.

Key concepts include...

- Advanced therapies
- Gene therapy
- Cell therapy
- CAR-T immunotherapies
- Regenerative medicine
- Genomics

10: Bioeconomy

Biological resources driving a more sustainable economy

The bioeconomy will gain prominence as an alternative to fossil-based resources, fostering new materials, products and processes based on renewable biological resources. Its development will contribute to the ecological transition, circularity and the decarbonisation of industry.

- Bio-based materials
- Bioplastics
- Biofabrication
- Biorefineries
- Biomass valorisation
- Circular economy

Relation of the Catalonia Exponential Leaders with ACCIÓ's 2026 technological trends

AI

Evidenze Knowledge in Health
gasN2 ENGINEERING SUSTAINABILITY
FLUIDRA POSITIVE POOL
WIVI vision®

Robotics and drones

FLUIDRA POSITIVE POOL

Digital health

Evidenze Knowledge in Health
fetaLife TECHNOLOGIES
WIVI vision®

Cybersecurity

ARQ QUANTUM TECHNOLOGIES

Space technologies

Semiconductors

ignion

Batteries

3D printing

Personalised medicine

NANOLIGENT

Bioeconomy

Novameat
Planet BIOTECH

Relation of the Catalonia Exponential Leaders with the RIS3CAT 2030 domains

The **RIS3CAT 2030** (Strategy for Smart Specialisation of Catalonia) is the strategic framework of the Government of Catalonia to promote innovation and economic, social and environmental transformation in Catalonia. It promotes sustainable, inclusive development based on innovation to address major country challenges related to sustainability, digitalisation, social cohesion and competitiveness.

FOOD

A sustainable, fair, equitable and healthy food system

ENERGY AND RESOURCES

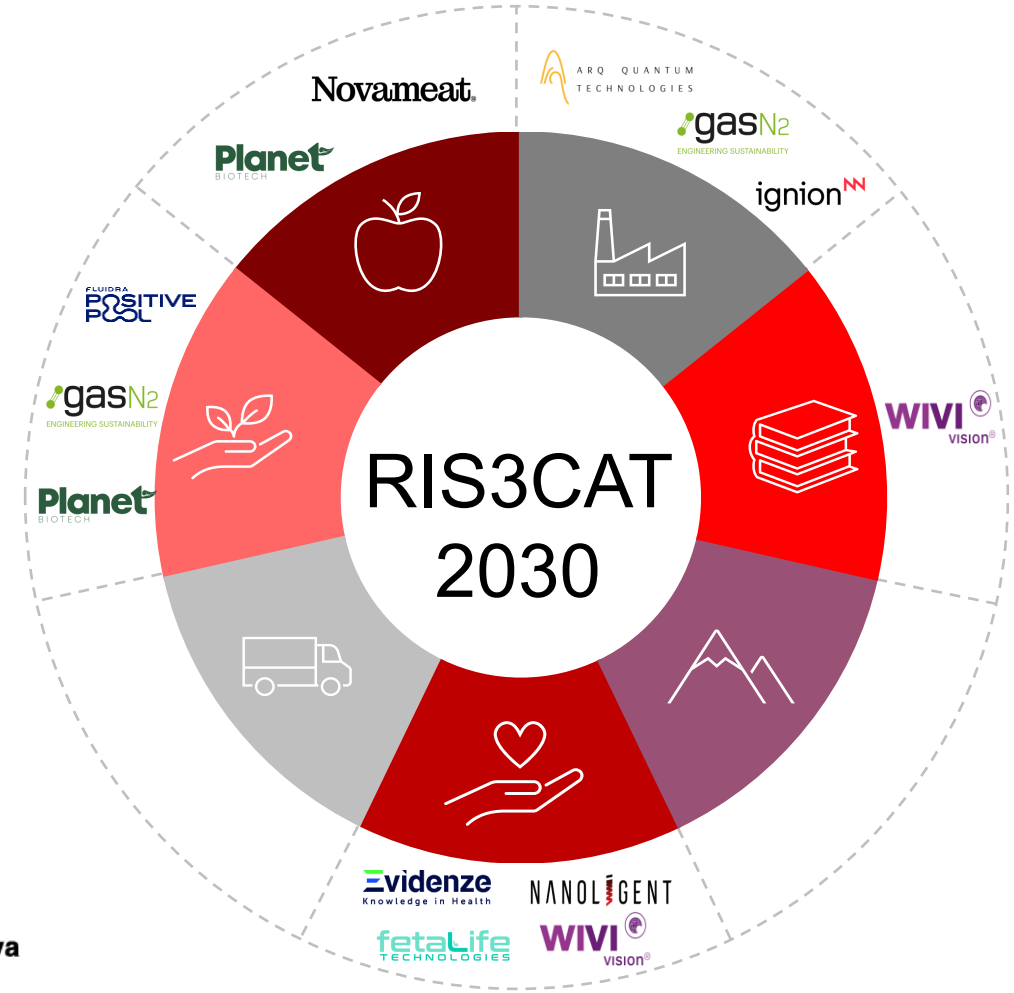
A net-zero emission, environmentally respectful energy and resource system

MOBILITY AND LOGISTICS

A sustainable mobility and logistics system

COMMUNITY HEALTH

A universal, sustainable and resilient health and social care system



INDUSTRY

A sustainable and competitive industrial system

EDUCATION AND KNOWLEDGE GENERATION

A reflective, forward-looking, inclusive and responsive education and knowledge generation system

CULTURE AND TERRITORY

An inclusive cultural system integrating people, territory and history

ACCIÓ Catalonia Trade & Investment

Generalitat de Catalunya
Government of Catalonia

CataloniaConnects

From trend to reality: AI is becoming the key technology in Catalonia

4 of the 10 Catalonia Exponential Leaders use artificial intelligence in the development of their solutions, transforming products, processes and business models.

More than half of the 30 finalist projects have AI as a core technology for their disruptive solutions.

- The sectoral impact is diverse and spans areas such as health, water, energy, waste and industry, demonstrating the cross-cutting applicability of AI.

Evidenze Knowledge in Health · Fluidra Positive Pool · gasN2 Engineering Sustainability · WIVI Vision®

The Catalonia Exponential Leaders consolidate the use of AI, a growing trend in Catalonia

Catalonia has 488 companies dedicated to AI

IA and *Big Data,* are the most widely used technologies among the 2,403 Catalan startups

4 out of 5 technology *hubs* established in Catalonia develop AI

Note: Data on the number of companies and technology *hubs* correspond to 2024, while startup data correspond to 2026

Catalonia Exponential Leaders companies 2021–2026

The Catalonia Exponential Leaders companies 2021–2026

2021

AAM Advanced Air Mobility · HumanITcare · PEPTOMYC · VEnvirotech · BitMetrics · Kilimanjaro Quantum Tech · Premium · Vottun · Heura · Natural Machines · Satelliot · X1 Wind · Honext · NBD Nostrum Biodiscovery · Seat:Code · Zyrcular Foods

2022

able human motion · bmat Music Innovators · Fregata Space · innovamat · Kave Home · allread · Flax&Kale · GP Innova · Integra therapeutics · Uriach

2023

Aldoratech · Avinent · Concentrol Chemical Solutions · Mimark · Roka Fura Dada · Aortyx · Busup · Jolt · Mitiga · sener

2024

blindstairs · magnetika · Ocean Ecostructures · UOBO · suara Cooperativa · Cuatrecasas · Navozyme · Oniria Therapeutics · ScentXP · timeisbrain

2025

4BLUETECH · ADmit Therapeutics · estabanell Energy in Cloud · MatHolding Vegga · protofy.xyz · Sequentia Decode · Discover · Disrupt · sycai medical · Casa Batlló Gaudí Barcelona · UniSCool · YPlasma Actuators Tech

2026

ARQ Quantum Technologies · Evidenze Knowledge in Health · fetaLife Technologies · Fluidra Positive Pool · gasN2 Engineering Sustainability · ignion · Nanolygent · Novameat · Planet Biotech · WIVI Vision

ACCIÓ Catalonia Trade & Investment

Generalitat de Catalunya Government of Catalonia

CataloniaConnects

Thank you!

More information about the sector and related news:

https://www.accio.gencat.cat/en/serveis/innovacio/innovacio-oberta-disruptiva/

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