European Innovation Council

EIC IMPACT REPORT 2022

DISCLAIMER

Deep Tech Europe
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THE
EUROPEAN INNOVATION COUNCIL
IMPACT
REPORT
2022

FOREWORD

Commissioner
MARIYA GABRIEL

Europe is demonstrating an impressive record in innovation and a strong foundation in deep tech innovations and startups thanks to our leadership in science, strong industrial and talent base, and ambitious policies and frameworks conditions.

Building on these strengths, the recent Commission Communication 'A New European Innovation Agenda' puts in place a wide-ranging set of actions - from talent to finance, ecosystems, frameworks and policy - to position the EU as the global leader of deep tech innovation to solve our deepest societal challenges.

The European Innovation Council (EIC) plays a major role in achieving the EU's deep tech innovation ambitions. With a budget of over EUR 10 billion and a mission to identify, support and scale up deep tech innovations, it is creating a pipeline of new technologies and supporting Europe's most promising deep tech startups and scaleups.

To date, the EIC has supported a portfolio of over 1 600 startups that have helped generate 12 deep tech Unicorns and 112 Centaurs here in Europe. EIC companies have attracted over EUR 10 bn of follow-on investment and the valuation of the EIC portfolio of companies stands at over EUR 40 bn.

The pipeline of emerging technologies is also strong, with growing portfolios in critical areas for Europe's future such as renewable hydrogen, cell and gene therapies, precision agriculture, and quantum technologies. The EIC also continues to outperform the market in supporting women-led companies and entrepreneurs from all regions of the EU - factors essential for a balanced and diverse innovation chain better addressing the needs and reflecting capabilities of our citizens.

In 2022, the EIC made a major development by establishing the EIC Fund as an investment vehicle for high-risk, high-potential startups in their early stages of development. Whether it's the energy crisis, the food crisis, or the path towards economic resilience, the EIC is helping to find solutions to these deep societal challenges by identifying investment opportunities and catalysing private investments in deep tech startups that can scale in global markets.

We cannot be complacent, however. By the end of 2022, we are in a more challenging fund-raising environment for early as well as late-stage companies. And I cannot emphasise enough the need to accelerate efforts to increase the representation of women in all levels of the innovation ecosystem in Europe. The EIC must continue to be agile and respond rapidly to changing circumstance, as it did during the outbreak of COVID and in supporting innovators from the Ukraine.

I encourage all of you - who share the ambition to position the EU and its citizens at the forefront of deep tech innovation - to engage with the EIC. Let us come together to leverage the power of deep tech innovation in addressing our most pressing societal challenges.

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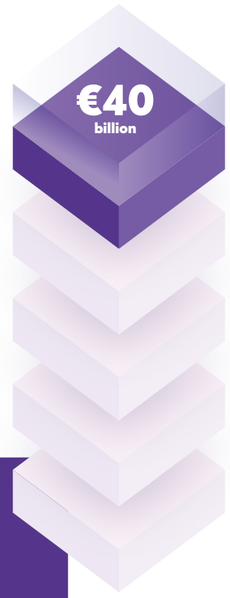
EXECUTIVE SUMMARY

This report reflects the impact of the 1 600 innovative companies and over 500 technology projects funded by the EIC from 2014-2021, including its predecessor programmes.

During this period, the EIC has:



Incentivised over
EUR 10 billion
in follow-on investments in its portfolio companies, primarily from venture capital, corporates, and national promotional banks among others.

Achieved a combined portfolio valuation of
EUR 40 billion
including ***12 Unicorn*** *and* ***112 Centaur*** *company valuations.*

Provided ***EUR 100 million*** *to commercialise groundbreaking ideas through the first set of EIC Transition calls.*

of funding to women-led companies

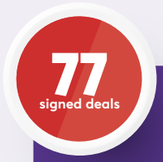
Completed ***92 investment*** *agreements and leveraged nearly* ***EUR 500 million*** *in co-investment alongside the EIC Fund.*

2.6 times
the EIC Fund investment

over ***500*** *research projects.*

around ***1 375*** *innovations.*

35% *demonstrating new market creation potential*



Connected EIC beneficiaries with over ***100*** *corporates and public procurers as well as* ***400*** *potential investors resulting in* ***77*** *signed deals.*

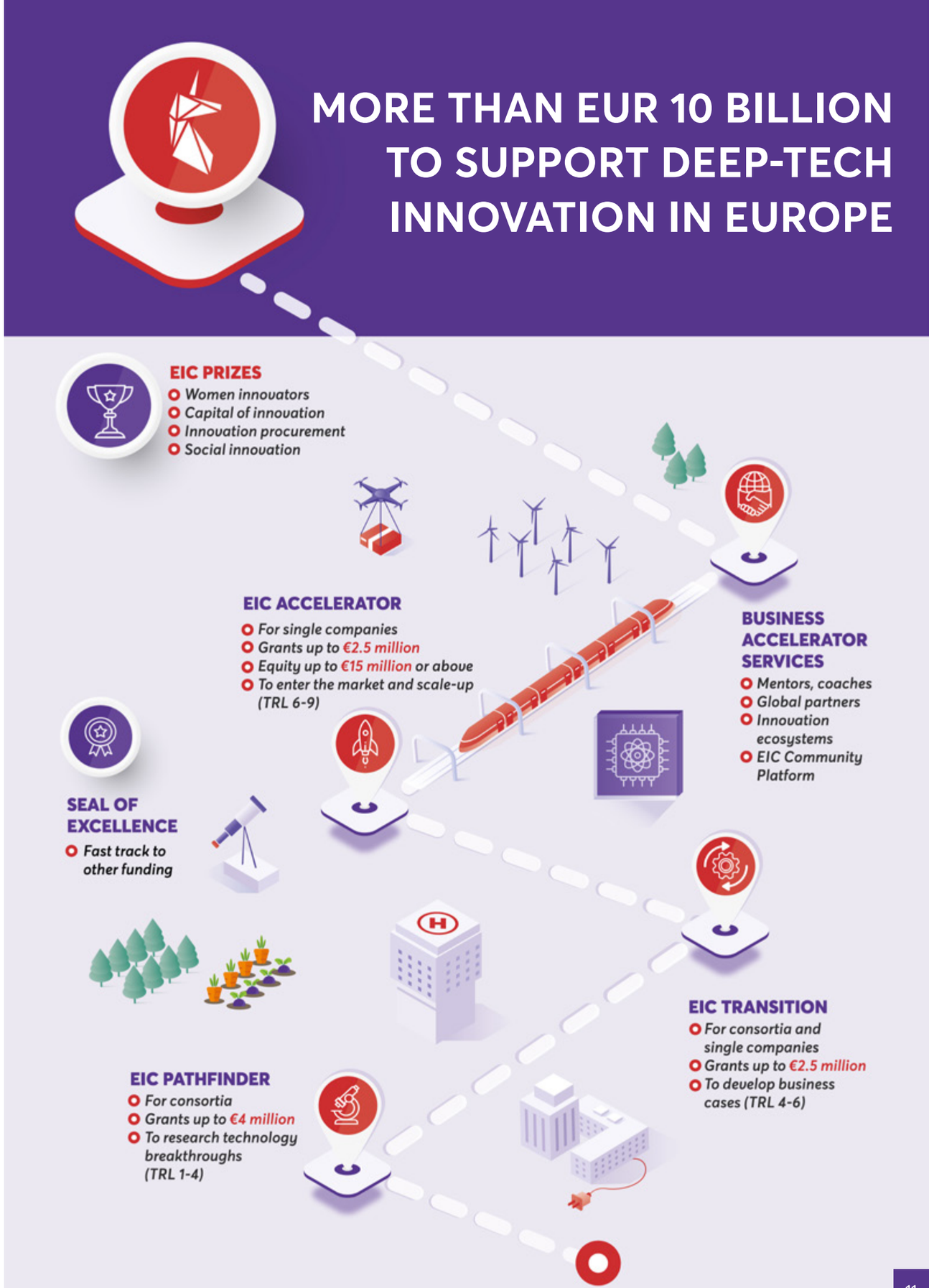
2

THE EUROPEAN INNOVATION COUNCIL AT A GLANCE

The European Innovation Council (EIC) is a flagship initiative of the European Commission with a budget of over EUR 10 bn under the Horizon Europe Programme (2021 – 2027). The EIC solicits the most ambitious ideas of thousands of startups and research teams from across Europe by supporting each stage of the innovation chain. Its overall mandate is to identify, develop and scale up breakthrough innovations.

A majority of the funding is awarded through 'open' calls with no pre-defined thematic priorities. This enables support for any technologies and innovations that cut across scientific, technological, sectoral and application fields or represent novel combinations. This is complemented by a 'challenge driven' approach informed by the work of EIC Programme Managers. These direct funding towards EU policy priorities for transitioning to a green, digital and healthy society including associated strategies such as **RePowerEU**, the **New Industrial Strategy** and the **European Health Union** while accounting for the inputs of stakeholders, experts and the EIC Board regarding the value proposition and likely impacts of such an intervention.

The EIC **Pathfinder** supports deep tech research and development. The EIC **Transition** carries ideas from lab to business. The EIC **Accelerator** supports startup development and scaling up, including through the **EIC Fund** which provides investments from seed to early growth. In addition, the EIC awards **Seals of Excellence** to the many startups that go through the competitive evaluation process, meet the stringent criteria for support, but fall just below the threshold to be awarded a portion of the available budget.



Support from the EIC goes beyond funding. All beneficiaries receive access to tailor-made Business Acceleration Services. This facilitates connections and support that can help scale-up EIC-supported companies and enable researchers to take the first steps towards commercialising their results.

An independent **EIC Board provides advice on the overall strategy of the EIC**. It is composed of leading innovators, venture capitalists, business executives and academics to ensure it remains fully focused on the needs of innovators.

An in-house team of EIC **Programme Managers**, bring expert insights to guide and connect projects and companies in areas including quantum, healthcare, energy, electronics, space, construction and agritech.

***Mark Ferguson**,*
Interim Chair of the EIC Board

I am incredibly proud to lead such an impressive EIC Board of outstanding individuals, with a combined talent covering every angle of the innovation chain from across Europe and beyond. The Board steers and monitors EIC programmes with the aim of providing the best support to innovative researchers and entrepreneurs and deep tech companies, whether spin offs, start-ups, or small and medium-sized enterprises. The EIC collaborates and co-funds with other European and national programmes as well as private investors and larger companies, not only to crowd in investment and support but also to provide a smooth and efficient continuum to Europe's best researchers and entrepreneurs. This enables them to grow rapidly and scale their innovations into sustainable companies across all deep tech sectors. In so doing, these innovative deep tech companies are not only solving today's societal challenges e.g. in health, climate, food, digital, manufacturing, space, etc. but they are also growing the economy and ensuring European leadership and strategic autonomy in the industries of the future.

***Jean-David Malo**,*
Director of the Executive Agency for EIC and SMEs (EISMEA)

If we were to reduce the mission of the EIC to three words, it would be **innovation for impact**; behind every aspect of the programme is the aim to have a profoundly positive European and global impact. I am incredibly proud to say – as this report shows – that we have been able to achieve our goal, in challenging circumstances. And as our most talented innovators and entrepreneurs accelerate their ambitions to realise ground-breaking technologies, we will continue to focus on elevating the positive impact of the EIC… to enable excellent research, to guide from transition to business … to develop and grow deep-tech startups and SMEs… and most importantly to translate deep-tech innovation into a positive impact on the daily lives of European citizens.

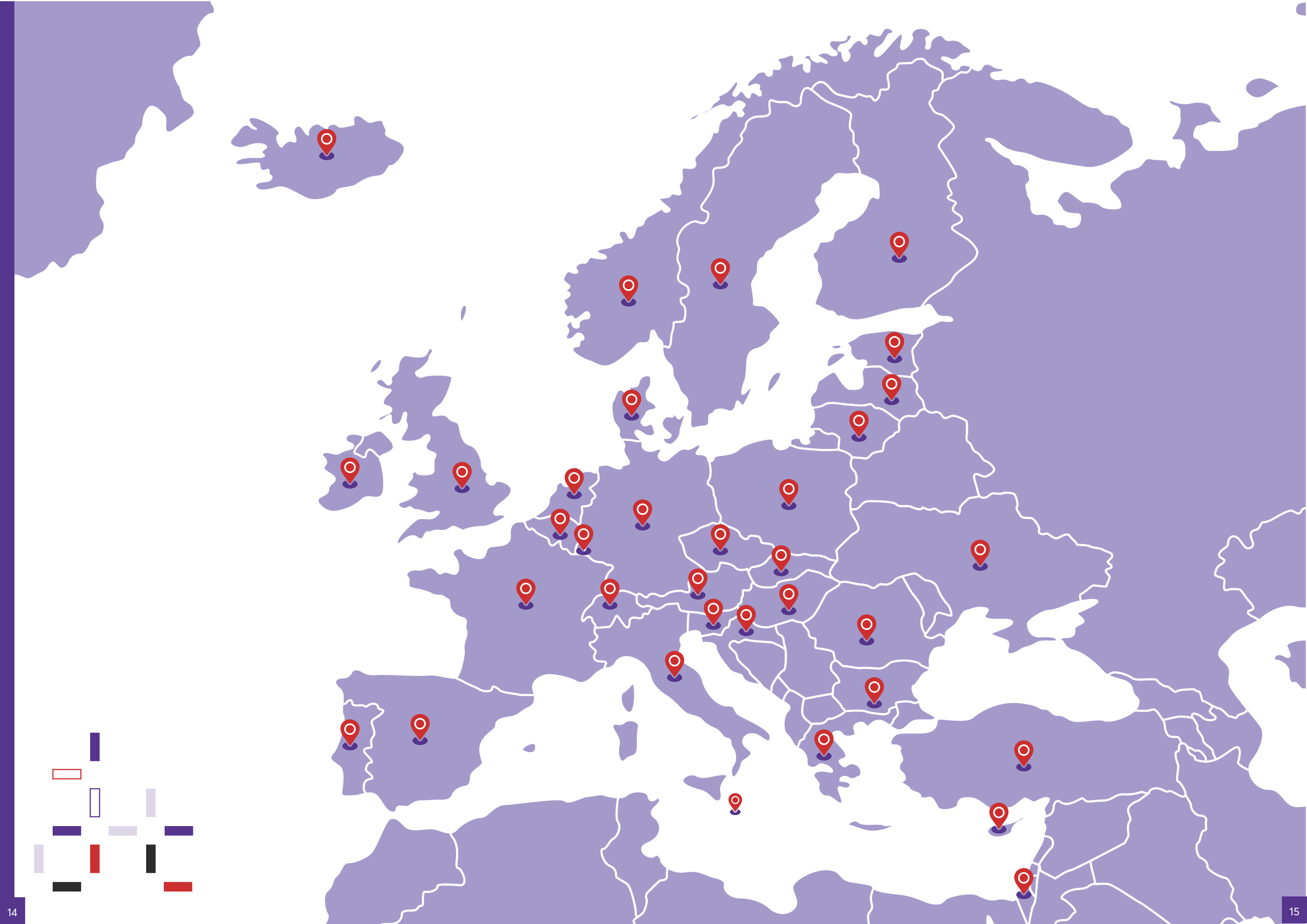
The EIC portfolio at a glance

The EIC - with its principles of innovation, excellence and impact - supports the most promising innovations from across the EU and beyond. The support covers early-stage research to commercialisation, with risk levels that are generally beyond the appetite of commercial investors.

Since 2014, **EUR 5 bn** has been provided through the EIC and its predecessor programmes in support of:

- **503** EIC Pathfinder research projects on emerging technologies supported by the EIC Pathfinder between 2014-21, involving over 3 000 European and international partners
- **55** EIC Transition projects to create spinouts and commercial opportunities from research results through the EIC Transition, piloted in 2019-20 and introduced as a key strand of the EIC's offer in 2021.
- Over **1 600** startups and SMEs supported by the EIC Accelerator from 2014 to 2021, with grants up to EUR 2.5 m.
- **230** Accelerator companies including **90 companies** from 2021 selected for equity investments worth up to EUR 15 m each through the EIC Fund.
- **92** signed investment agreements worth EUR 260 m.
- **142** new Seals of Excellence awarded in 2021 to companies that meet the rigorous EIC criteria and are recommended for national, regional and private funding.

These EIC supported companies and projects cover all countries of the European Union and beyond, contributing to EU policies and priorities, and in achieving UN Sustainable Development Goals. However, while there are a number of projects and companies supported in central and eastern Europe there remains significant untapped potential for deep tech in these countries, and the EIC is taking active steps to promote this.



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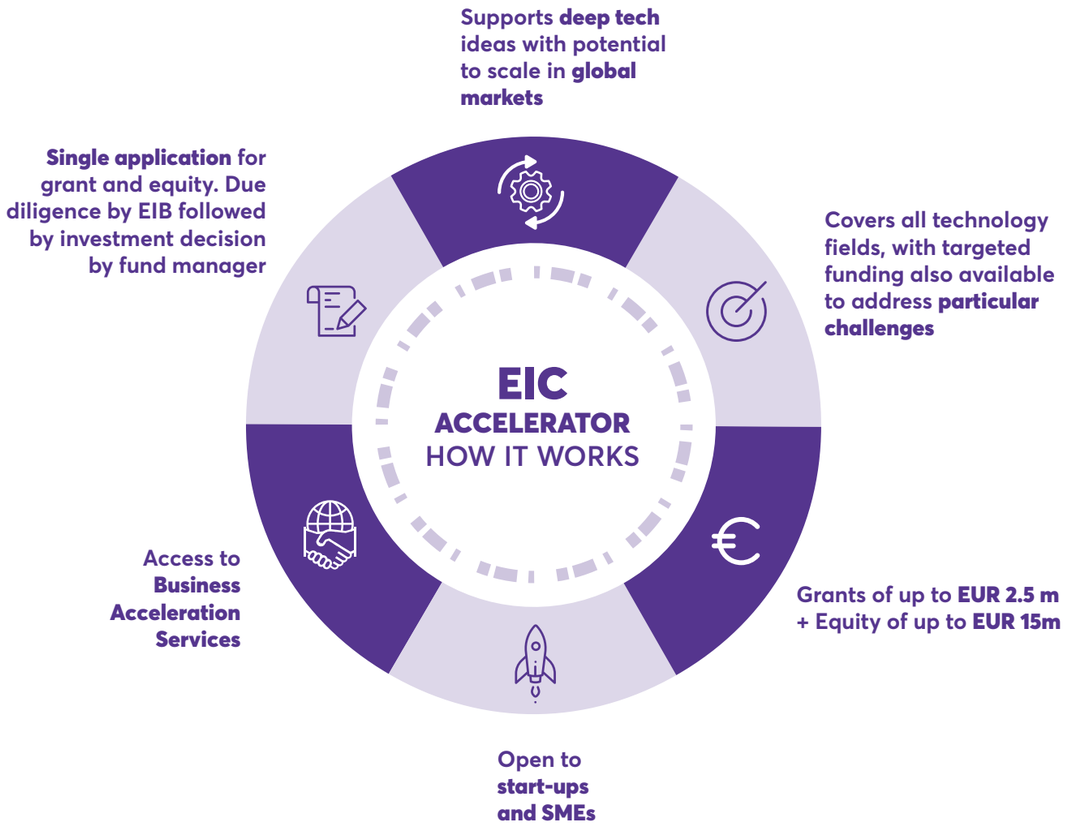
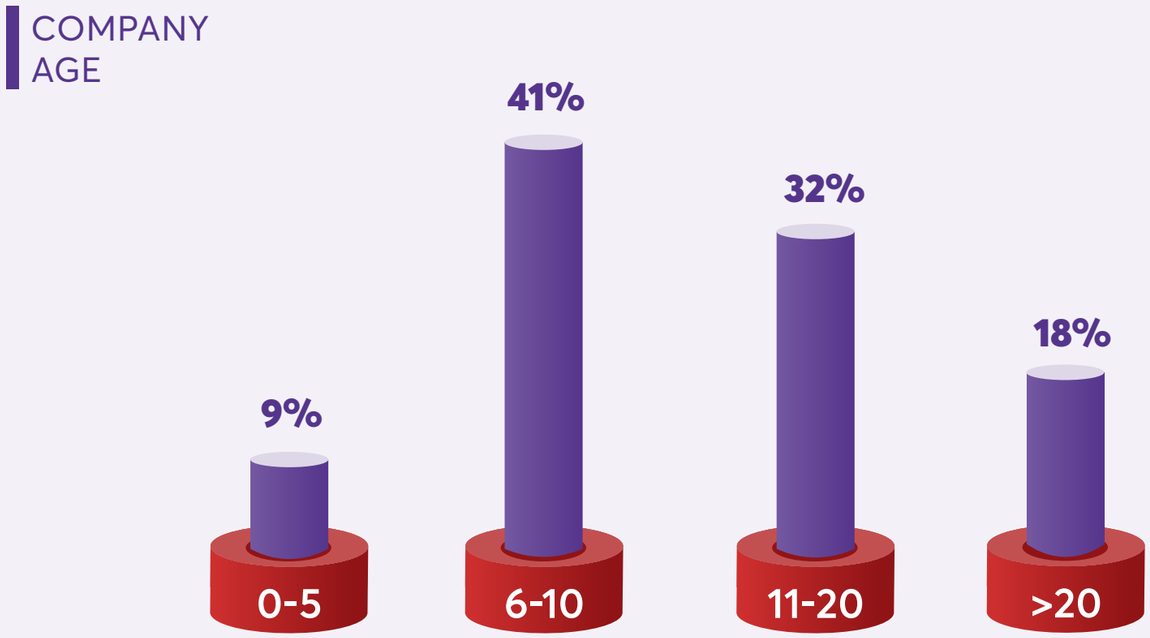
KEY IMPACTS

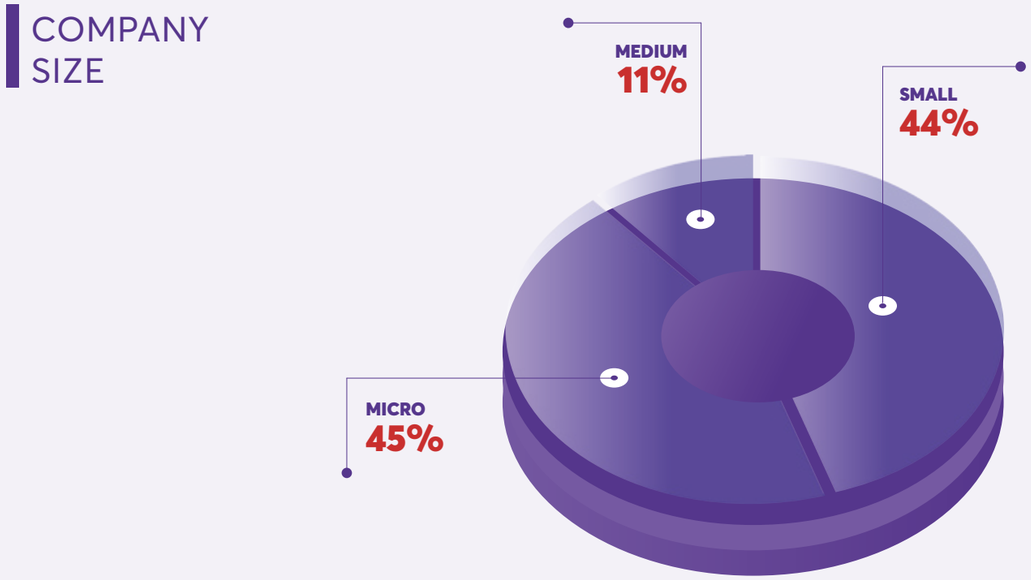
3.1

Scaling companies to become global deep tech leaders

EIC Accelerator supports startups and small and medium-sized enterprises (SMEs). Over 40% of EIC Accelerator-supported companies were between 6 and 10 years old, at the time of receiving EIC support and a majority of these were small or micro enterprises (see images on page 17).







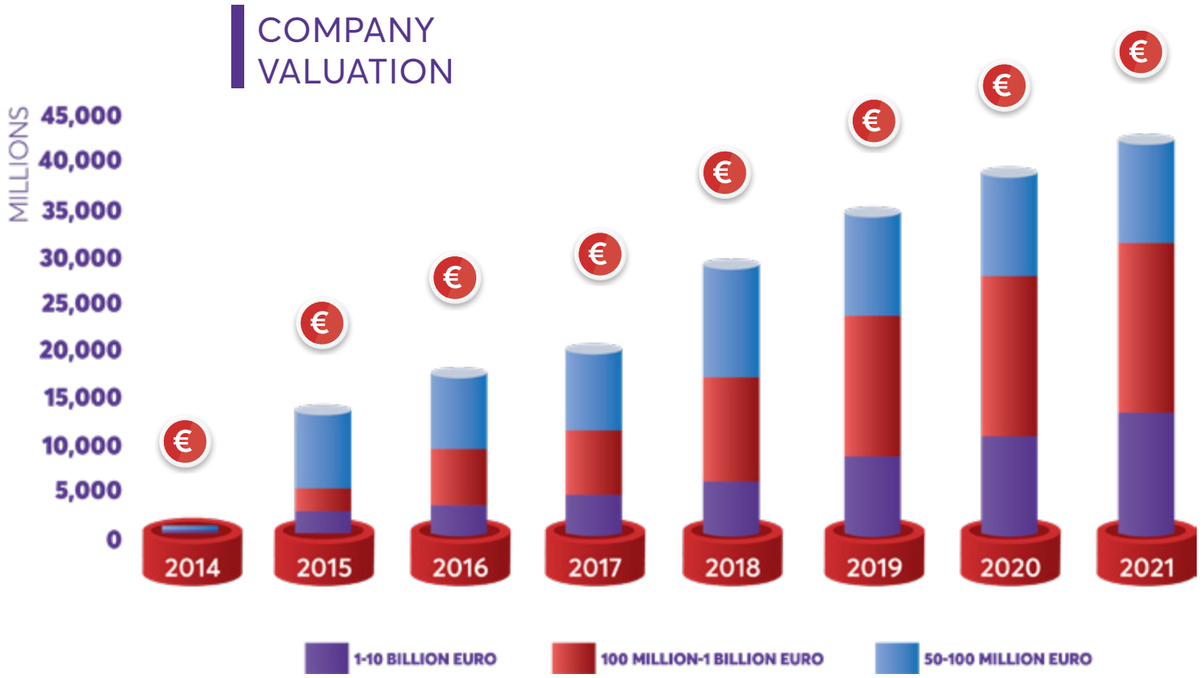
A total of **6 800 jobs** have been created by EIC portfolio companies following receipt of EIC support, which has allowed them to grow, become more capital intensive, strengthen their intangible assets and improve their short-term liquidity.

Key impacts of EIC support on company growth

Within three years of receipt of EIC support, companies have experienced:

- ***44%** employment growth*
- ***109%** increase in investment in intangible assets (e.g. R&D investment, Intellectual Property Rights and goodwill)*
- ***67%** increase in tangible assets (e.g. equipment and buildings)*
- ***140%** increase in liquidity (e.g. short-term bonds and other short-term debt instruments).*

EIC portfolio companies have gone on to raise over **€10 billion in follow-on investments** in the period following initial funding, with a resulting portfolio valuation of over **EUR 40 bn** (see image below).



This includes **12 Unicorn** and **112 Centaur** valuations.

3.2

Attracting investments into european deep tech

The EIC provides both non-dilutive grant funding and investments for individual startups and SMEs through the Accelerator. To date, over 1 600 companies have been supported across the 27 EU member states, alongside investments in current and/or formerly associated countries to **the Horizon Europe and Horizon 2020 programmes**.

This support is attracting much larger investments in deep tech companies and projects in Europe. The first **EUR 260 m** in investments through the EIC Fund has resulted in **92 investment agreements**.

48 investments by the EIC Fund have been sufficiently mature to leverage just under **EUR 500 m** in **co-investments** by private and other funds, resulting in a **leverage of 2.6 times** the value of the EIC Fund equity investments. 2022 also saw the largest investment round involving the EIC Fund: a **EUR 100 m** fundraising round by SiPearl.

44 investment agreements signed by the EIC Fund have taken the form of **convertible loans**. These act as a bridge to the next fundraising round, which is expected to fall within 12-18 months of receiving EIC support.

Furthermore, 'grant first', a new form of support, under Horizon Europe, helps companies mature their ideas into an investible proposition. In 2021, **47 companies received 'grant-first' funding**, with an expectation of raising funds within 18-24 months.

The EIC Fund was restructured in 2022, which resulted in some delays in investment decisions. Since September 2022 it has been fully functional and is in the process of taking investment decisions on 179 companies selected by the EIC Accelerator for equity support in 2021 and 2022.

Spotlight on the EIC Fund

The EIC Fund is the investment arm of the Accelerator programme, with a mandate to invest in all startups and SMEs selected through the EIC Accelerator evaluation process to receive blended (grant and equity) or equity-only financing. Following its restructuring as an Alternative Investment Fund (AIF), the EIC Fund is now rapidly clearing the backlog of investment decisions, and is set to become the largest early-stage, deep tech investor in Europe, leveraging EUR 10 bn to crowd in EUR 30 to 50 bn from private investors. Investment decisions are taken and managed by an external Alternative Investment Fund Manager, fully compliant with the **AIFM Directive** following a due diligence performed by the **European Investment Bank** (EIB) and in line with the **EIC Fund's Investment Guidelines**, endorsed by the European Commission.

Krisztina Kovacs-Schreiner,
CEO of EIC beneficiary company LIXEA

By utilising the EUR 2.3 m EIC grant and the EUR 2 m convertible loan from the EIC Fund, we managed to translate our technology from laboratory to pilot scale, set up our operations and started producing samples for prototyping within two years. Quite simply, we would not be here without the support of the EIC's Accelerator Programme.

The EIC investment is also an important indicator of quality and reliability for investors. A seal of approval if you like. Our technological and commercial potential along with the environmental and socio-economic impacts have been scrutinised during the application process and throughout the two-year project. We are in the process of fundraising and since most private investors are familiar with the EIC scheme, it provides us with a competitive edge over other startups.

Q&A with OR RETZIN,

CEO of EyeControl, EIC Accelerator beneficiary and EIC ambassador

EyeControl is a pioneer of medical technology specialising in innovative communication solutions that address unmet healthcare needs, implement disruptive AI technologies that connect people and bridge information gaps. The company received over EUR 2m in Accelerator support from 2020 – 2022 and has been selected for equity support from the EIC.

1. Tell us about the development and growth journey of Eyecontrol

Our innovation started as a simple brainstorming among friends: EyeControl's co-founders all have personal connections to individuals with Locked-in syndrome - a condition in which a patient is aware but cannot move or communicate verbally. Fourteen years ago, my grandmother died from the neurodegenerative disease Amyotrophic Lateral Sclerosis (ALS), and I started volunteering at Israel's ALS non-profit, where I met the organisation's CEO, who was an ALS patient himself. The idea started as a volunteer initiative during my time with the non-profit.

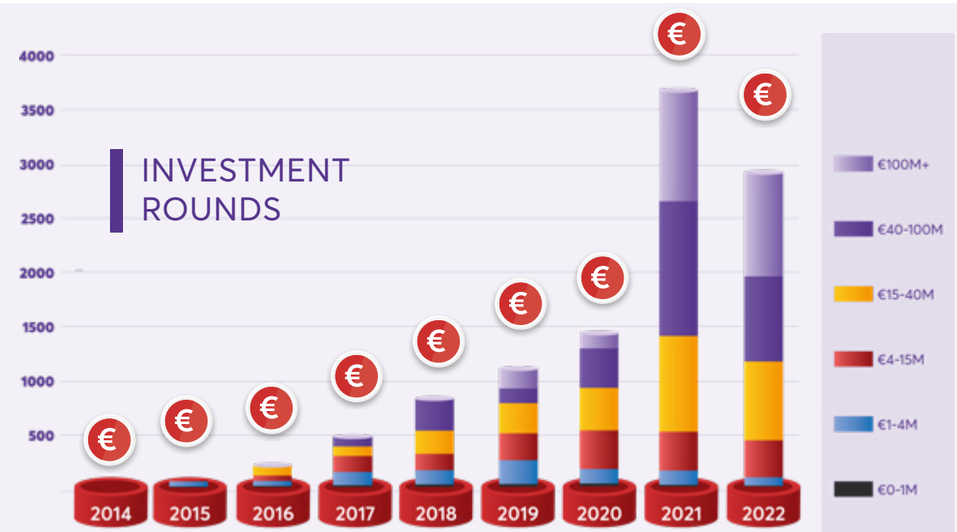
2. Has EIC support helped to attract further private investment?

The EIC has been an integral part of our company's growth. Being associated with an organisation as prestigious and reputable as the EIC has reinforced our relationships: both encouraging existing investors and creating an ongoing pipeline for new investors, who view the EIC's involvement with our company as validation of our status and growth potential. Our previous funding round was closed shortly after winning the EIC Accelerator, an accolade that instilled confidence and commitment in the participating investors. Multiple conferences and pitch events initiated by the EIC have played an important role in attracting strategic partnerships.

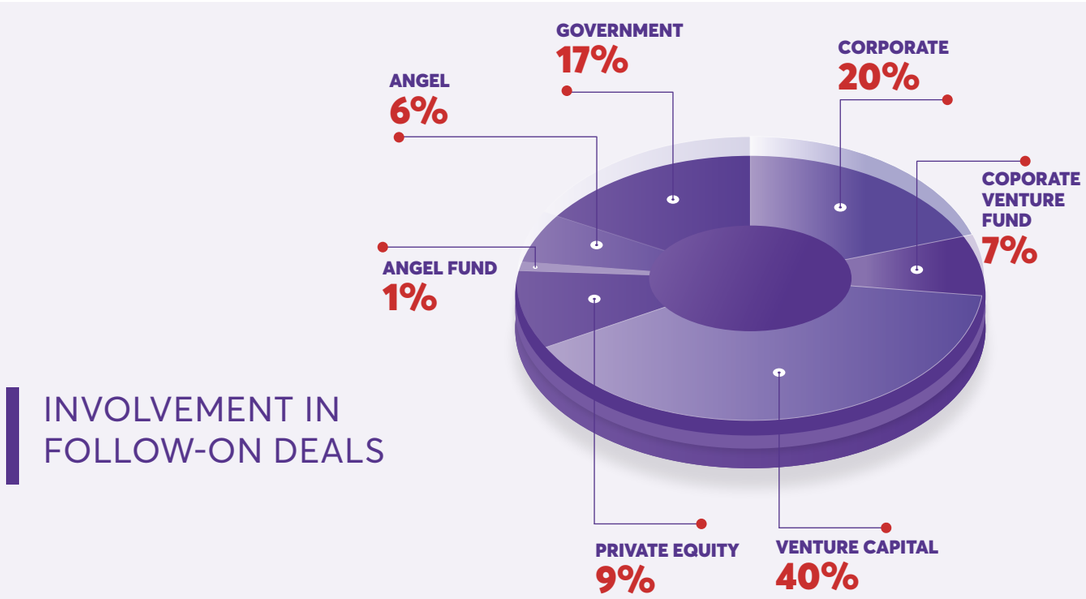
3. Have you used the Business Acceleration Services of the EIC?

We recently participated in the Overseas Trade Fairs European Pavilion at the Florida International Medical Expo (FIME), which was an excellent opportunity to meet our EIC counterparts while promoting to the US market and provided extensive and personalised matchmaking services to encourage our networking opportunities with relevant stakeholders. Additionally, we have received coaching and mentoring on our investor deck. One of our EIC coaches is still a close colleague and collaborator; this relationship, initiated by the EIC, has lasted many years and led to many shared opportunities for which we are very grateful.

The increasing prestige of EIC support has resulted in **follow-on investment of EUR 10 bn** across the portfolio (see image below). These follow-on investments have **trended upwards towards larger deal sizes** with Series B, C or above seeing a notable uplift in 2021 – a trajectory that has been maintained in the year-to-date. This trend underlines the effectiveness of the EIC evaluation and interview process in identifying scalable deep tech companies. It also helps address the well-known fundraising challenge faced by new companies.



Much of the follow-on funding is in the form of venture capital, but the business-to-business (B2B) nature of a majority of portfolio companies and its relevance to large corporates is underlined by the **share of corporates and corporate VCs** in follow-on deals, now approaching **30%** (see image below).



3.3

Connecting to the market

The EIC's **Business Acceleration Services** connect portfolio companies and researchers with corporates, investors, buyers, accelerators and venture builders through four main strands of activity:

- The **Corporate Partnership Programme** connects EIC-funded innovators with large corporates to collaborate and develop new business models and opportunities. EIC beneficiaries obtain scale, resources, sales channels, connections and forge new business opportunities, while corporates can identify new emerging technologies and have access to great ideas that can positively impact their business.
- The **Innovation Procurement Partnership Programme** connects EIC innovators with public and private buyers. Utility companies, hospitals or cities have a lot to gain from EIC-funded deep tech innovations that can help raise the living standards of citizens. EIC beneficiaries have met with over 100 public and private procurers and 5% of the SMEs have sealed a business deal within 12 months of such an event.
- **The Investors Partnership Programme** connects EIC beneficiaries with investors through pitching events. It has a database of more than 400 investors, including Venture Capitalists (VCs) and business angels and it collaborates with organisations or stock exchanges like Nasdaq or Euronext and national promotional banks such as BPI France.
- **Connecting academia and business** provides researchers with tailor-made support from world-class coaches as well as concrete business tools and training sessions to transform their ideas into successful businesses.

Best practice

From an EIC Corporate Day to the adoption in multiple countries in just one year

Founded in 2012, Nanolike is a highly innovative small company specialised in measurement technologies. As a spin-off of the Laboratory of Physics and Chemistry of Nano-objects (CNRS / INSA / University of Toulouse), its success illustrates the potential of European nanotechnology to bridge the gap from lab to market, growing steadily and creating highly skilled jobs in Europe. Nanolike has been supported by the Accelerator with EUR 1.8 m and a range of business acceleration services.

Since meeting at the Holcim / EIC Corporate Day, Holcim and Nanolike followed the best-practice path of a corporate-startup collaboration with a first exchange of ideas and numbers, an NDA signature, the development of a Proof of Concept (PoC) and key performance indicators (KPIs), followed by signature of first contracts, to be replicated in 70 countries where the corporation develops its activities - an example of EIC and corporate-startup collaboration at its best.

Haarlem (NL) municipality uses EIC portfolio to find a food waste management solution

Thanks to the strategic collaboration between the EIC and the EU Urban Agenda, the Haarlem municipality – having scanned the EIC portfolio – is piloting innovative AI solutions for food waste management in six restaurants through a partnership with EIC beneficiary, Orbisk. This startup provides hospitality organisations with a complete insight into their food stream, allowing them to cut their waste in half.

Valentina Schippers-Opejko,
Coordinator of the Urban Agenda Partnership on Innovative and Responsible Public Procurement for EU

The EIC is a gateway to accessing a cross-cutting portfolio of top-notch innovators across Europe. The solutions offered by EIC beneficiaries can contribute to the modernisation of services provided by cities and regions for the benefit of the European citizens. To tackle our increasing urban challenges, I encourage all regional players to take part and benefit from the Innovation Procurement Partnership Programme.

Manuel Ausaverri,
Director of Strategy, Innovation and Presidential Cabinet of Indra, leading global technology company and partner for EIC Corporate Day on 6 and 7 July 2021

To develop our innovation model, Indra has an ecosystem of startups, entrepreneurs, universities, researchers, and research centres. The EIC is the perfect partner for us for three main reasons:

- *EIC beneficiaries have developed breakthrough deep tech technologies and game changing innovation - this is precisely what Indra is looking for when collaborating with startups*
- *The EIC has so many companies in its portfolio, so when opening a call to attract startups, we knew that we were going to be able to find startups answering to our challenges*
- *Last but not least, the EIC Corporate Day was a great opportunity to discover first, and then to meet and engage with startups in very quick one-to-one meetings*

24 European startups pitched in front of our Innovation Committee. With more than 200 attendants in less than six months, we had signed nine non-disclosure agreement agreements. Right now, we have three main business lines open with them, with very promising results. All in all, the EIC is a key partner to have and we are looking forward to collaborating again.

EIC and Caixa Bank offer agritech innovations to farmers

As part of a pilot project, the European Innovation Council (EIC), CaixaBank and AgroBank (the branch of CaixaBank focus on agro sector) are collaborating on an Innovation Procurement initiative that offers EIC-funded companies the chance to reach final customer and help rural areas develop by using innovative solutions and sustainable technologies in agriculture.

Thanks to this pilot, ten selected EIC-funded companies will get access to the market using the commercial and financial know-how of one of the largest banks in Europe. The initiative is a first pilot that could be replicated in other sector and geographical areas in Europe.

Key Impacts

Meetings for beneficiaries have been organised with:

- ***100+** corporates*
- ***100+** public and private buyers*
- ***400** investors*
- ***40+** accelerators, incubators, venture builders*

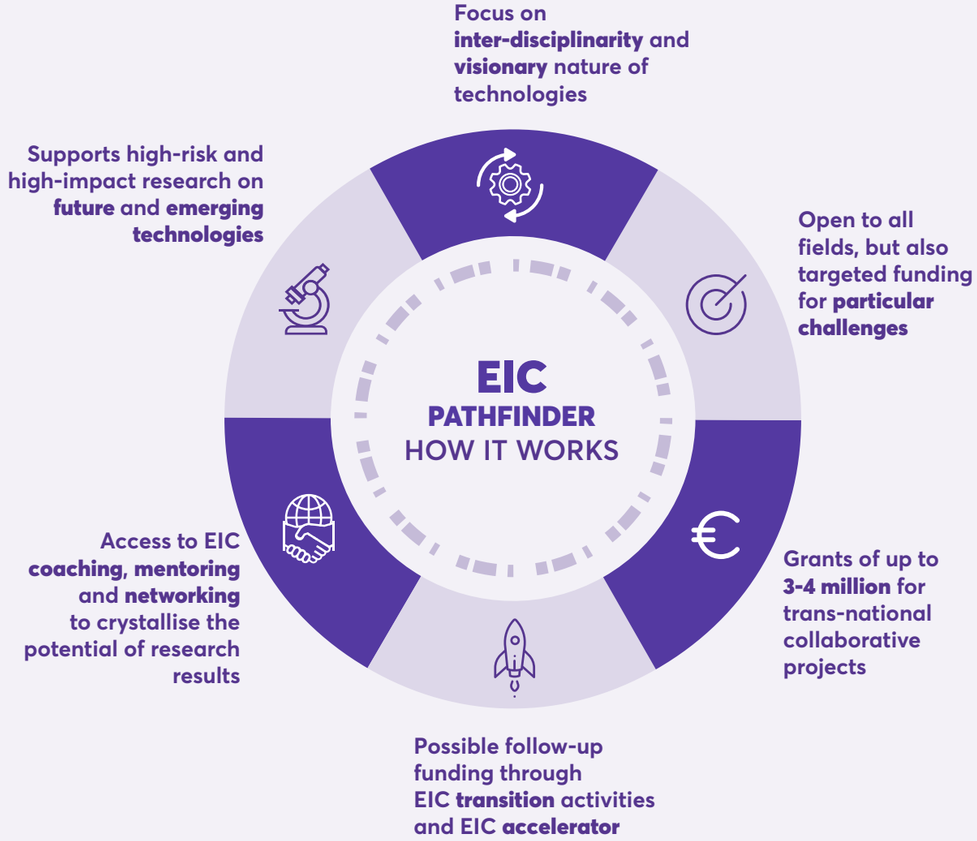
***77 deals** have been signed alongside 496 follow-on discussions as a result of this support.*

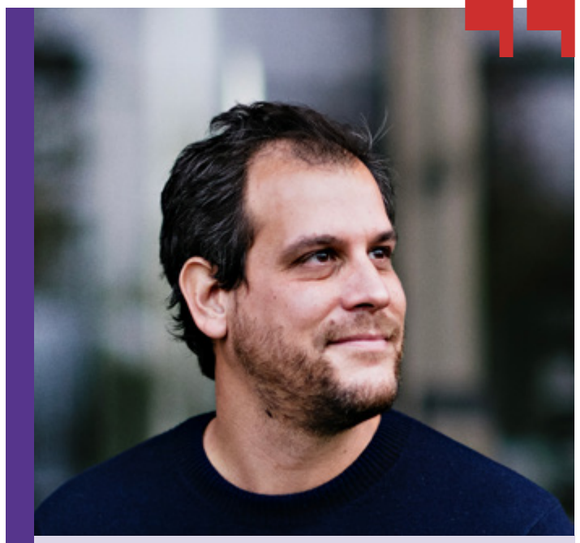
3.4

A pipeline of breakthrough technologies

The **EIC Pathfinder** supports research teams in taking forward breakthrough deep tech projects with a high degree of scientific and technological ambition and risk. With over EUR 1.5 bn of funding since 2014, the EIC has supported over 500 collaborative projects across EU Member States and associated countries, involving over 3 500 European and international partners.

These projects span disciplines and build a critical mass of European capability in emerging fields of science and technology. Recent examples include technologies for services or devices that have 'awareness inside', the development of tools to measure and stimulate activity in brain tissue, and the engineering of living materials.





Nicolas Heuzé,
Co-founder and CEO of Sweetech, which raised EUR 6 m in September 2022

The support we received from the EIC Pathfinder facilitated the development of our break-through technology which allows for the first time ever to produce large-scale, permanent, 100% clean electricity from osmotic power.

According to independent analysis, there are over **1 375 innovations** emerging from this portfolio with over **90% likely to result in new or significantly improved products or processes** and over 35% demonstrating new market creation potential.

Key impact of Pathfinder portfolio delivered (2014 – 2021)

- ***100** awards of Intellectual Property Rights (IPR)*
- ***7 010** publications*
- ***5 200** publications in peer reviewed journals*
- ***3 121** publications in high-impact journals*
- *Over **800** companies (43% SMEs) involved in projects*
- ***70%** of projects likely to result in a new or significantly improved products*
- ***21%** of projects likely to deliver a new or significantly improved processes*

Multiwave Technologies®

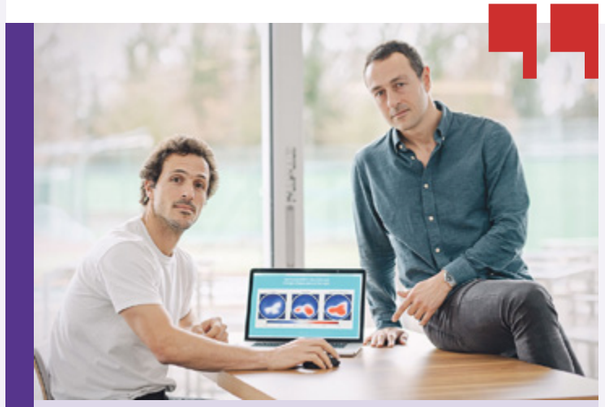
Multiwave Technologies AG brings to market an ultra-portable MRI device to democratise medical imaging. The Geneva-based company with a research arm in Marseille was founded by brothers Tryfon and Panos Antonakakis (pictured left) in 2015, initially as a metamaterial design software company.

The M-Cube project supported by the EIC Pathfinder was the catalyst for Multiwave's pivot to a medical imaging device manufacturer, initially for accessories for ultra-high field 7 Tesla MRI (the world's highest performing MRI scanners) and subsequently to make MRI both affordable and accessible to all.

INNOVATION RADAR PRIZE

The company has raised more than EUR 16 m to date from initiatives of the European Commission H2020 Framework Programme, of which EUR 5.5 m is dilutive capital and EUR 10.5 m is non-dilutive capital. It was also the winner of the **Innovation Radar Prize** 2018 in the category "Best Young SME" for its metamaterial technology that improves the signal captured by state-of-the-art MRI systems.

In the summer of 2022, Multiwave delivered its first ultra-portable MRI devices to Mount Sinai Hospital in New York (USA) and Brighton and Sussex Medical School (UK). It plans to deliver another ten devices to leading research institutions in Europe and the US by the end of 2023, by which time it also expects to receive the coveted FDA 510(k) approval to be followed by CE marking. Multiwave enters the third year of an extremely successful partnership with Aix-Marseille University's Amidex Foundation, through which it aims to continue delivering its goal to make MRI accessible to all.



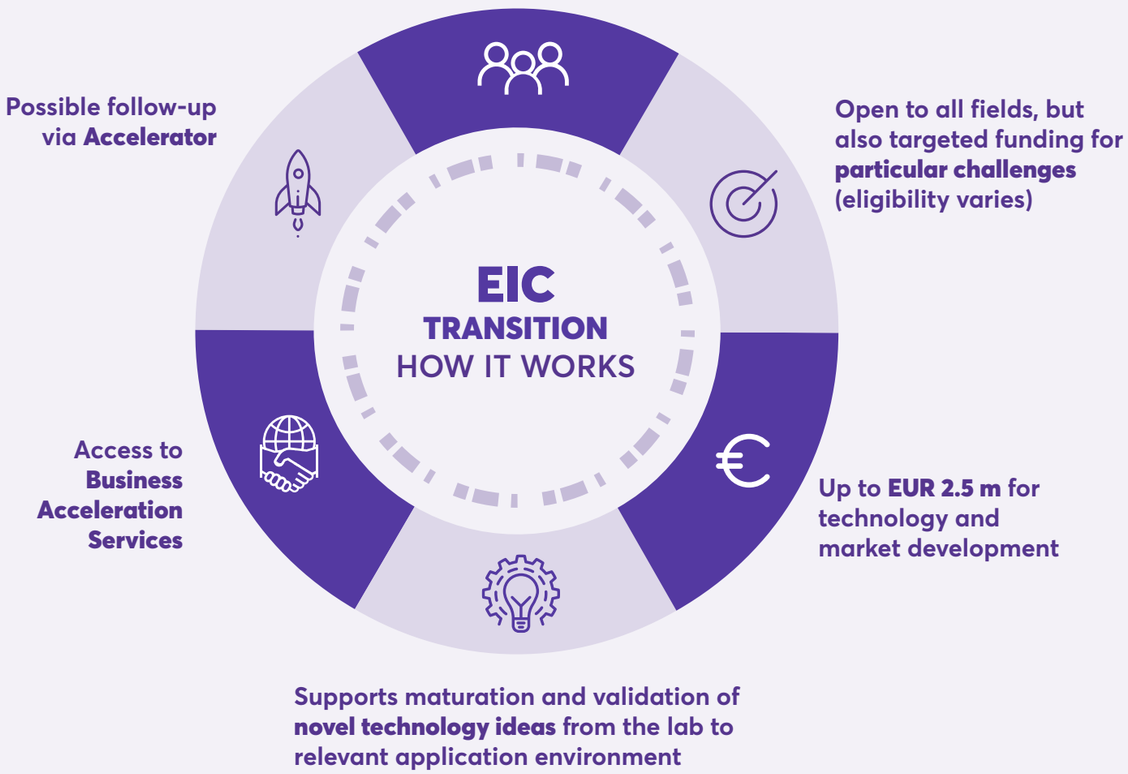
***Tryfon and Panos Antonakakis**,*
Founders and co-CEOs of Multiwave

The M-Cube project and our ongoing collaborations with Aix-Marseille University and the Amidex Foundation in France, and Leiden University Medical Centre in the Netherlands, has enabled us to bring innovations from lab to market and attract investors who believe in our technologies just as much as we do.

3.5

Priming the next generation of startups

The **EIC Transition** is the newest element of the EIC toolkit. Introduced in 2021, this new instrument enables researchers and SMEs to exploit promising deep tech research results, demonstrate and mature the technology, develop business plans for specific applications and look towards commercialisation. The first set of Transition calls under Horizon Europe awarded EUR 45m to exploit ground-breaking research results emerging from the European Research Council (ERC) and the EIC Pathfinder. The majority involved a commercial partner and a large percentage were looking to establish a spinout and obtain either Accelerator or VC funding as their company grows.



INCYPROnext

Application of proteins in diagnostics and therapeutics

Proteins are not only one of life's main building blocks, but also key tools for many industrial applications, ranging from drug discovery and diagnostics to chemical production processes. The main limitation of proteins is their low stability at non-physiological conditions, losing structural integrity and activity under relevant conditions. But proteins have massive potential, i.e. in the context of protein targets linked to diseases, point-of-care diagnostics and protein therapeutics.

This EIC Transition-supported project (previously an ERC Proof of Concept) has developed a radically new technology for stabilising proteins. Their innovation combines structural and molecular biology as well as chemistry to provide a highly effective and efficient technology for the stabilisation of a broad range of proteins, allowing the company to offer B2B services to customers in the pharma, biotech, research and industrial processes segments, as well as start their own internal drug discovery and development pipeline. With EIC Transition support, the project will validate the INCRYPROnext technology in a real operating environment.

Saskia Neubacher,
CEO of Incircular, INCRYPROnext consortia member

The EIC Transition supports Incircular at a time in its development where it is most valuable. Starting as a university spin-off, it gives us the means to build a solid foundation for the future of our company. Proteins are powerful biomolecules with a huge potential. Our goal is to provide robust proteins for a broader use, including entirely new applications, in pharma, diagnostics and biotech.

3.6

Supporting female founders and innovators

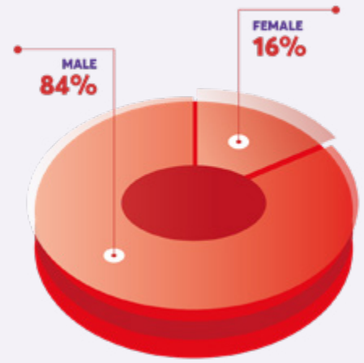
Since 2020, the EIC has introduced a number of measures to actively promote and support the role of women entrepreneurs and researchers to boost Europe's innovation capacity and ensure the relevance of its outputs to all citizens.

This includes the prioritisation of women CEOs invited to Accelerator interviews and dedicated initiatives including **WomenTech EU**, to support early stage deep tech startups funded and led by women and its **Women Leadership Programme** to provide coaching and mentoring to EIC-funded women entrepreneurs. The EIC also awards an annual **EU Prize for Women Innovators**, to recognise and promote women entrepreneurs, who have founded a successful company and brought their innovation to market. Futhermore, the EIC ensures gender parity in the membership of the EIC Board as well as in the expert juries and evaluators who assess applications for EIC funding.

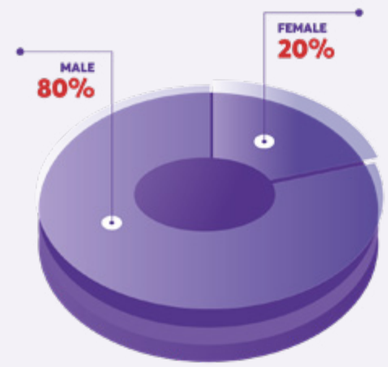
In sum, this has resulted in 20% of the companies funded by the EIC Accelerator being female-led in 2020 and 2021, and the share of female-led EIC Pathfinder projects reaching 24% with over 30% of researchers also female. Accelerator figures are an improvement on the **overall industry trends** in 2021, which saw 89% of all funding going to male-led startups, 9.3% to mixed teams, and just 1.8% to female-led startups.

There is much more to be done however, and the EIC Board has **set a specific KPI** for the EIC to track and further increase support going to female-led startups.

ACCELERATOR

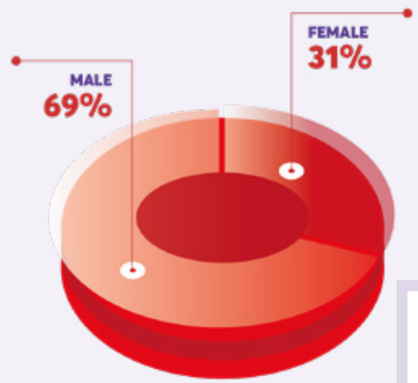


2014-2021 successful projects shared by CEO gender

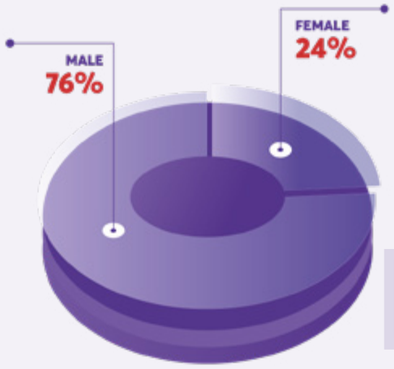


Accelerator 2021

PATHFINDER



Research staff in pathfinder projects



Female coordinators

Margaret Rae,
Founder and Managing Director of Accelerator beneficiary Konree Innovation

The Women Tech EU award and its Women Leadership Programme (WLP) has quite simply been of incredible practical and positive support. The funds have helped us to build the technology bringing us closer to patenting. They have also facilitated customer traction far from home and provided advice to really understand what our funding requirements will be over the next three to five years.

The WLP provided access to diverse coaches and mentors deep in the startup world, often those that have built companies themselves, or invested in and advised startups. This has been of tremendous help to eliminate distractions and focus in on the business strategy. If anyone out there is thinking of applying to this programme, I wholeheartedly encourage you to do so. The application itself is in-depth but useful - it helps you think of the bigger picture, refine your message and ultimately accelerate forward!

4

BUILDING THE NEXT GENERATION OF DEEP TECHNOLOGIES

The EIC has a diverse portfolio of startups, scale-ups and cutting-edge deep tech projects, ensuring deep tech innovation will support the EU's priorities of green and digital transition, health and wellbeing of EU citizens and strategic autonomy in critical technologies. A majority of the EIC supported companies are impact focused, contributing to the wider set of UN Sustainable Development Goals (SDG) with the most commonly addressed covering the goals of Affordable and Clean Energy, Climate Action, and Good Health and Wellbeing.

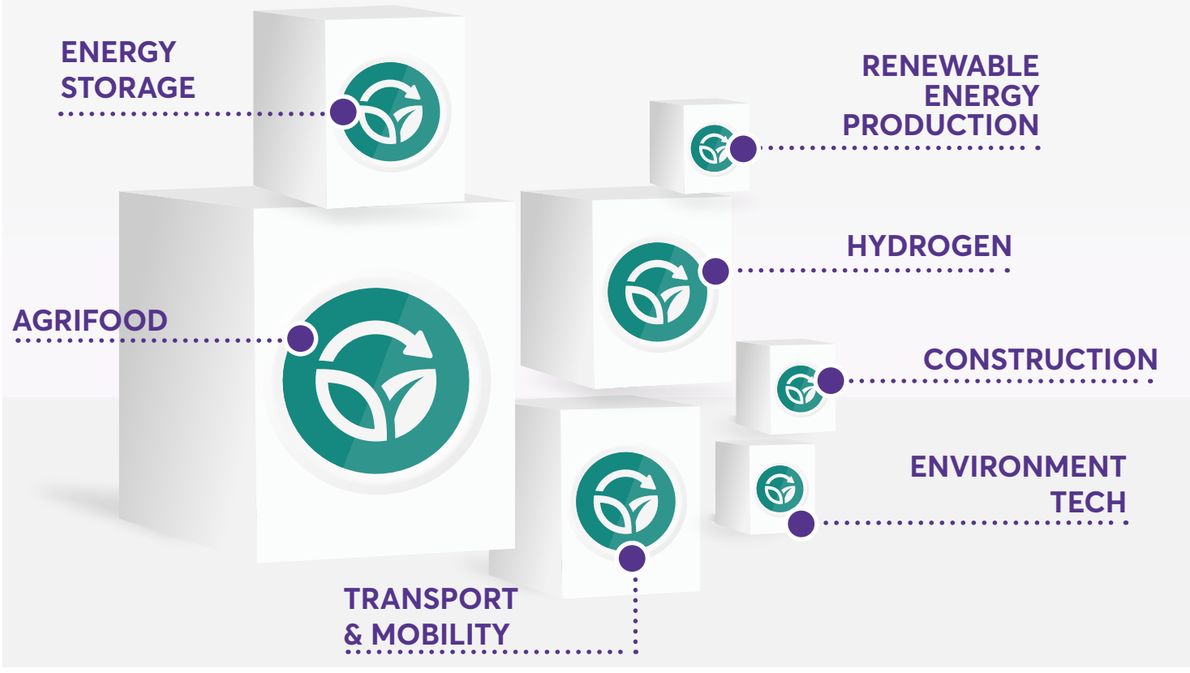
4.1

Supporting a sustainable future

Europe is at the forefront of the green transition, with the '**Fit for 55**' package aiming to reduce EU emissions by 55% by 2030 and achieve climate neutrality by 2050. Recent global trends also prompt further action to increase the EU's self-sufficiency in areas of energy and food security.

The EIC's portfolio is making a major contribution to this transition to a more resource-efficient and competitive economy.

KEY GREEN TECHNOLOGIES AND RELATIVE SCALE



The EIC has – through the Green House Gas (GHG) programme, one of the Business Acceleration Services - encouraged and enabled companies to reduce their green house gas emissions and efficiently reduce their carbon footprint. The reduction commitments set by over 130 beneficiaries currently account for a reduction of 550 tonnes of CO2 or 37% over a five-year period.

The Programme also aimed to support co-creation of carbon footprint reducing solutions between EIC beneficiaries and corporates, regions and other peer companies. During the first two years of the GHG Programme, 174 corporates and regions representatives were involved in designing GHG emissions cutting solutions, leading to 37 on-going partnerships with EIC startups, 15 non-disclosure agreements signed and two Proof of Concepts in the making.

Top measures used to reduce emissions:

- *Promote public transport and carpooling - 20%*
- *Avoid flight travel - 17%*
- *Promote active and short distance mobility - 14%*
- *Communicate on carbon footprint - 13%*
- *Change lights to LED - 12%*

Franc Mouwen,
EIC Programme Manager for architecture engineering construction technologies

70% of the world's population is expected to live in urban areas by 2050 and estimates point to nearly half of all greenhouse gas emissions being embodied in buildings. To achieve the ambitions set out in the European Green Deal and the principles of the New European Bauhaus the "Architectural, Engineering and Construction" (AEC) value chain must transform the way it designs and builds the environments in which we live. I am keen to see how we can provide some targeted support through the EIC to create a pipeline of innovative new approaches through interdisciplinary research, to create new companies and to scale companies here in the EU.

GREEN CENTAURS

in the EIC portfolio

TAPPWATER
TWAICE
ADDIONICS
avantium
Lightyear
sympower
VOLTAERO
LeydenJar
Solynta
ENOUGH Sustainable protein
hydrogenious TECHNOLOGIES
microphyt
AMMINEX
creapaper
exergyn
INOVO
Minesto

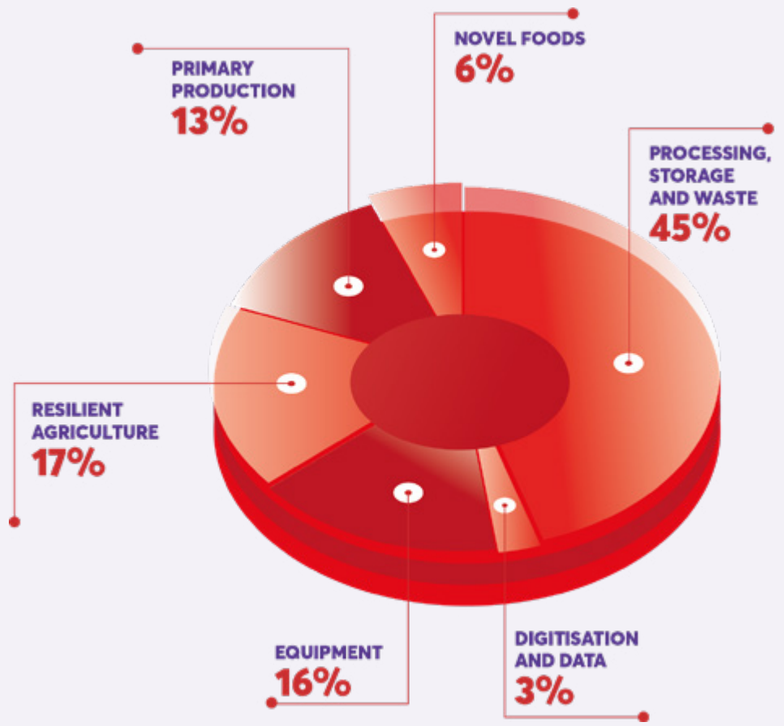
Spotlight on AgriFood

Current agricultural practices cause around **10%** of Europe's greenhouse gas emissions, with up to **70%** of EU soils deemed unhealthy, costing farmers almost **EUR 1.25 bn** each year. Replacing old farming methods with innovative, green and clean ones is vital if we are to achieve the ambitious aims of strategies such as **Farm to Fork** - including reducing fertiliser use by **20%** and chemical pesticides and nutrient loss by **50%** - and reach the **EU's 2030 environmental, energy and climate targets**.

The EIC supports innovative technologies to achieve better soil health, farming efficiency and crop yield and quality, in a sustainable way.

To date, there has been a particularly strong focus on areas such as food processing, storage and waste management (see image below). However, alternative proteins and novel farming are attracting growing EIC as well as private investment. Three of the ten largest European startups and SMEs in this area have received EIC support, i.e. Infarm (sustainable urban farming), InnovaFeed (leading insect producer for animal and plant nutrition) and Relex Solutions (managing food waste).

AGRIFOOD PORTFOLIO



InnovaFeed

Insect protein for animal and plant food

InnovaFeed biotech company specialises in the production of insect proteins for animal and plant nutrition.

Clement Ray,
CEO of InnovaFeed

Innovafeed harnesses the power of insects to turn agro industry by-products into valuable ingredients, with a drastically lower impact on the planet compared to conventional solutions. By supporting the emerging insect industry, the EIC enables more local food and feed, working towards the continent's food independence. For Innovafeed, the EIC's support is not only a participation to our innovation effort but also a quality stamp recognised by the market.

Ivan Stefanic,
EIC Programme Manager for food chain technologies, novel and sustainable food

Ivan Stefanic points out that climate change and food security are not the only issues we aim to solve with innovative agricultural technologies - many Europeans also suffer with obesity and micronutrient deficiency.

He adds: "Enjoying quality, nutritious food is such an important part of life in Europe, yet quality food is becoming harder to find and expensive. In 2019, it was estimated that over half of the EU's adult population was overweight, partly due to this inaccessibility of good food. The EIC aims to support innovative ways of ensuring quality food for all, in turn improving the health and wellbeing of citizens, and contributing to the EU Strategy for Europe on Nutrition, Overweight and Obesity-related Health issues."

Follow this fast-growing company's journey since receiving EIC support in 2018 below

AUGUST 2018 — Receives an EIC pilot grant of EUR 1.75 m

NOVEMBER 2018 — Secures an additional EUR 40 m Series B

DECEMBER 2018 — Launch of the world's first commercial "insect-fed" trout value chain, with 50% of fishmeal present in trout feed replaced by Innovafeed's insect protein

JUNE 2019 — Innovafeed and Cargill join forces to offer sustainable aquaculture feed

DECEMBER 2019 — Innovafeed and Hello Nature join forces for the marketing of fertilisers and biostimulants from insects

JUNE 2020 — Launches the first "insect-powered" chicken value chain in the world

AUGUST 2020 — Uses its expertise in insect rearing to help the World Mosquito Program (WMP) design their large-scale mosquito production facilities, as part of a scientific programme to combat dengue fever

OCTOBER 2020 — Opening of the largest insect farm in the world

NOVEMBER 2020 — Exports its technology to the US and secures an additional EUR 140 m Series C

FEBRUARY 2021 — Launches the "insect-powered" swine value chain with Auchan

MAY 2021 — Cargill & Innovafeed expand partnership to the use of insect oil for pig feed

JUNE 2021 — Joins forces with Lidl and Earthworm to reduce dependence on imported soybeans

FEBRUARY 2022 — Announces strategic partnership with ADM Petfood to pioneer large scale commercialization of insect protein in petfood in the U.S

SEPTEMBER 2022 — Raises USD 250 m in series D financing round

OCTOBER 2022 — obtains B Corp Certification, joining international community of companies committed to using business as a "force for good"

Spotlight on Renewable Hydrogen

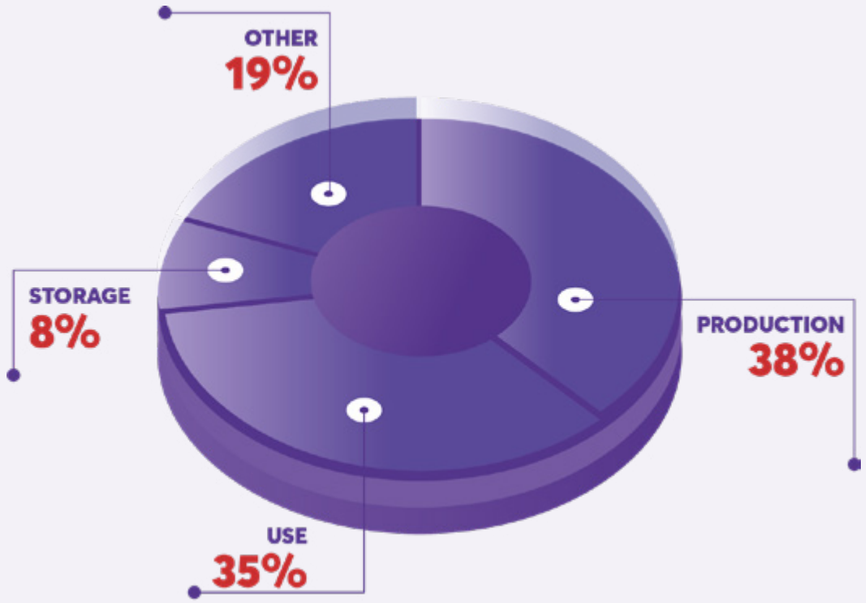
Renewable hydrogen is seen to be vital to lower emissions in critical sectors (such as hard to abate industries) and being an enabler for other energy vectors, it can have a range of applications ranging from co-generation in housing to energy storage.

Enabled by a strong innovation ecosystem and the EU Hydrogen Strategy, Europe currently leads hydrogen production efforts with the share of hydrogen in Europe's energy mix projected to reach 13-14% by 2050.

To date, nearly EUR 120 m has been provided in support of hydrogen-related deep technologies by the EIC, spanning early-stage basic research to closer to market developments. Reinforced by a Pathfinder Challenge call on novel routes to green hydrogen production, earlier-stage research projects have a strong concentration of renewable hydrogen production using electricity, solar energy and/or biomass as input sources. They have also integrated a circular/life cycle approach to minimise the use of Critical Raw Materials and the inherent supply chain dependencies on less trusted partners.

To date, private investment broadly mirrors that of EIC support, with production and final use of hydrogen attracting most of the investment (see image below).

HYDROGEN PORTFOLIO



INERATEC

e-fuel alternative to fossil fuels and chemicals

Today, more than 4 000 m tonnes of fossil crude oil are processed into fuels and chemical products every year. The consumption of these products is a huge driver of climate change, but demand for crude oil is expected to increase further. If we want to be in line with the Paris Climate Agreement, major efforts must be made and new paths taken to move us towards a CO^2-neutral world. The start-up INERATEC is working on new solutions in this field, building power-to-X plants that produce synthetic fuels, also known as e-fuels, and synthetic chemicals from renewable hydrogen and CO^2. These fuels are climate-neutral and compatible with existing infrastructure and vehicles. With the synthetic fuels, INERATEC aims to defossilise these sectors, recycling CO^2 to produce alternatives to fossil fuels and chemicals. The company's aim is that 2% of the European fuel market will be covered by e-fuels and e-products by 2035, and INERATEC will be one of the market leaders for e-fuels and e-products.

In May 2021, INERATEC received EIC Accelerator funding of nearly EUR 2.5 m to launch scalable series production for its technology to produce alternatives to fossil fuels and chemicals. Thanks to this funding, INERATEC can make a significant contribution to a CO^2-neutral future by scaling, multiplying and implementing industrial-scale pilot plants for the production of e-fuels.

In January 2022, INERATEC closed a Series A financing round worth over USD 20 m to scale up sustainable e-fuel production with strategic investors Engie, Safran and MPC. In addition, existing investors provided further growth capital, to scale up the production capacities of synthetic fuels made from CO^2 and green hydrogen towards the megaton scale. With the new shareholders from the energy, aviation and shipping sector, INERATEC is extending the set up to enable significant company growth.

Antonio Pantaleo,
EIC Programme Manager for Energy Systems and Technologies, Biosystems Engineering

We need to focus on the best uses of Hydrogen, in sectors where its benefits could be maximised and where we have limited decarbonisation options. It is the case, for instance, of heavy transport, shipping and aviation, where we cannot rely on electrification as in the automotive sector. Avoiding the use of critical raw materials or minimising dependencies on such materials in the Hydrogen supply chain is also becoming increasingly important, and I am pleased to see some exciting ideas emerging from our Pathfinder portfolio that could make an important contribution here.

Philipp Engelkamp,
CEO and co-founder of Ineratec

The funding for our project comes at exactly the right time. With further scaling, multiplication and implementation, we will be able to deliver power-to-x technology faster and at lower cost. With this "boost" we will contribute to making mobility and the chemical industry more sustainable with e-fuels and e-products.

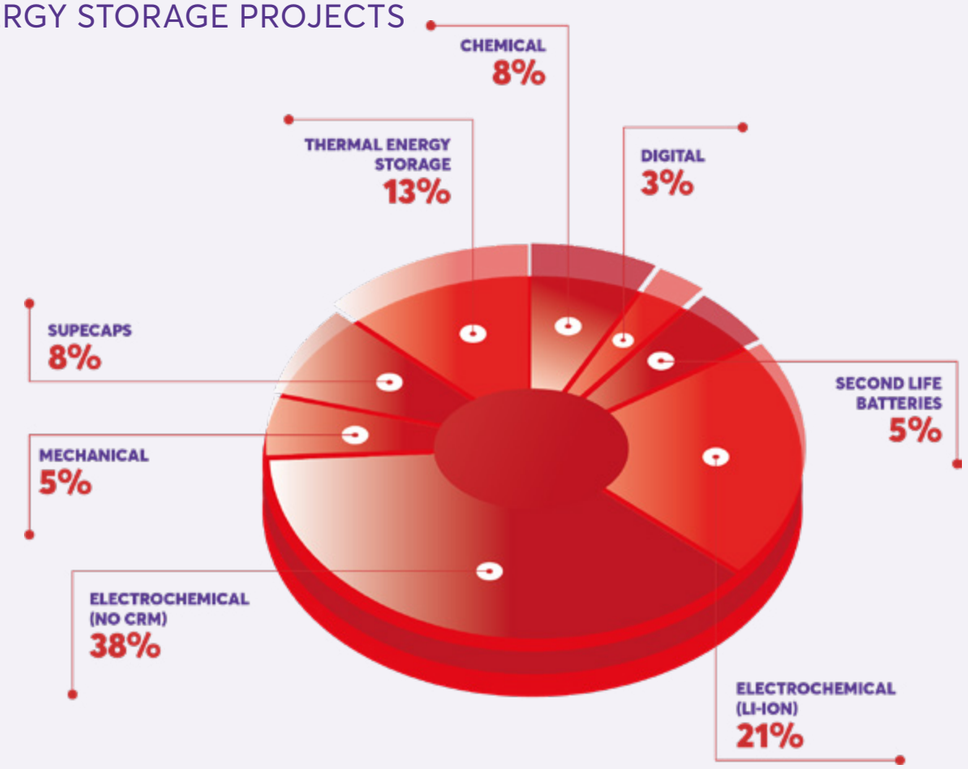
Spotlight on Energy Storage

With a total addressable market that is expected to reach over EUR 8 bn by 2025, storing renewable, clean electric and thermal energy at low cost and high efficiency is essential if we are to successfully incorporate renewable energy into our systems and address the current supply and demand mismatch.

The main energy storage reservoirs in the EU are currently dominated by pumped hydro storage while lithium-ion (li-ion) batteries represent most of electrochemical storage. There is however limited absorptive capacity for new pumped hydro storage and li-ion batteries are mostly viable for short-duration applications.

The EIC's Pathfinder portfolio of projects in the area shows a strong trend towards eliminating the reliance on critical raw materials (such as lithium, cobalt), while the portfolio of technology companies supported under the Accelerator shows a more even balance across all strands broadly mirroring global investment trends (see image below). Chemical storage is attracting the most investment, followed by thermal and mechanical storage.

ENERGY STORAGE PROJECTS



C2C-NewCap

Efficient and sustainable mobility and energy storage

Every year, due to idling (keeping the engine running when stopped), the average truck spends up to EUR 7,000 on fuel and emits more 10% of CO^2, representing a cost for both the fleet owner and the environment. In addition, trucks depend on lead-acid batteries to start their engines and provide electrical power during driving breaks. Two batteries in each heavy vehicle are replaced every year, meaning an annual consumption of nearly 100kg of toxic metal, lead, per vehicle. Although lead has been banned from most applications due to the number of deaths it causes, today there is still no alternative when it comes to automotive batteries.

C2C-NewCap has developed an innovative hybrid supercapacitor contributing to a more efficient and sustainable means of mobility and energy storage. This breakthrough technology can make a truck run 100% on electric energy during resting periods, eliminating the need for idling and extending battery life.

C2C-NewCap is a spin-off from Instituto Superior Técnico - University of Lisbon. The company is marketing its first product, supercapacitor GO-START, which is already proving its benefits in heavy vehicles delivering goods across the EU. The EIC Accelerator supported this project from 2017 to 2022 - with almost EUR 1.4 m - to reach market entry. The company is also focusing on the development on supercapacitor modules for stationary energy storage with carbon electrodes made from sustainable EU residues. In addition, it recently kicked off a EUR 2 m EIC Transition project to develop a disruptive new supercapacitor technology for high-temperature electronic applications.

Francesco Matteucci,
EIC Programme Manager for Materials for Energy and Environment

The EIC will place a strong emphasis on technologies that eliminate the use of critical raw materials, or at the very least ensure their full reuse and minimise the environmental footprint. We will look to develop innovative, fit-for-purpose energy storage technology with the Pathfinder, and continue the support for spin-offs or startups, through the prototype and scaling up phase with the Transition and Accelerator programmes.

André Mão de Ferro,
Co-founder & Executive Manager at C2C-NewCap

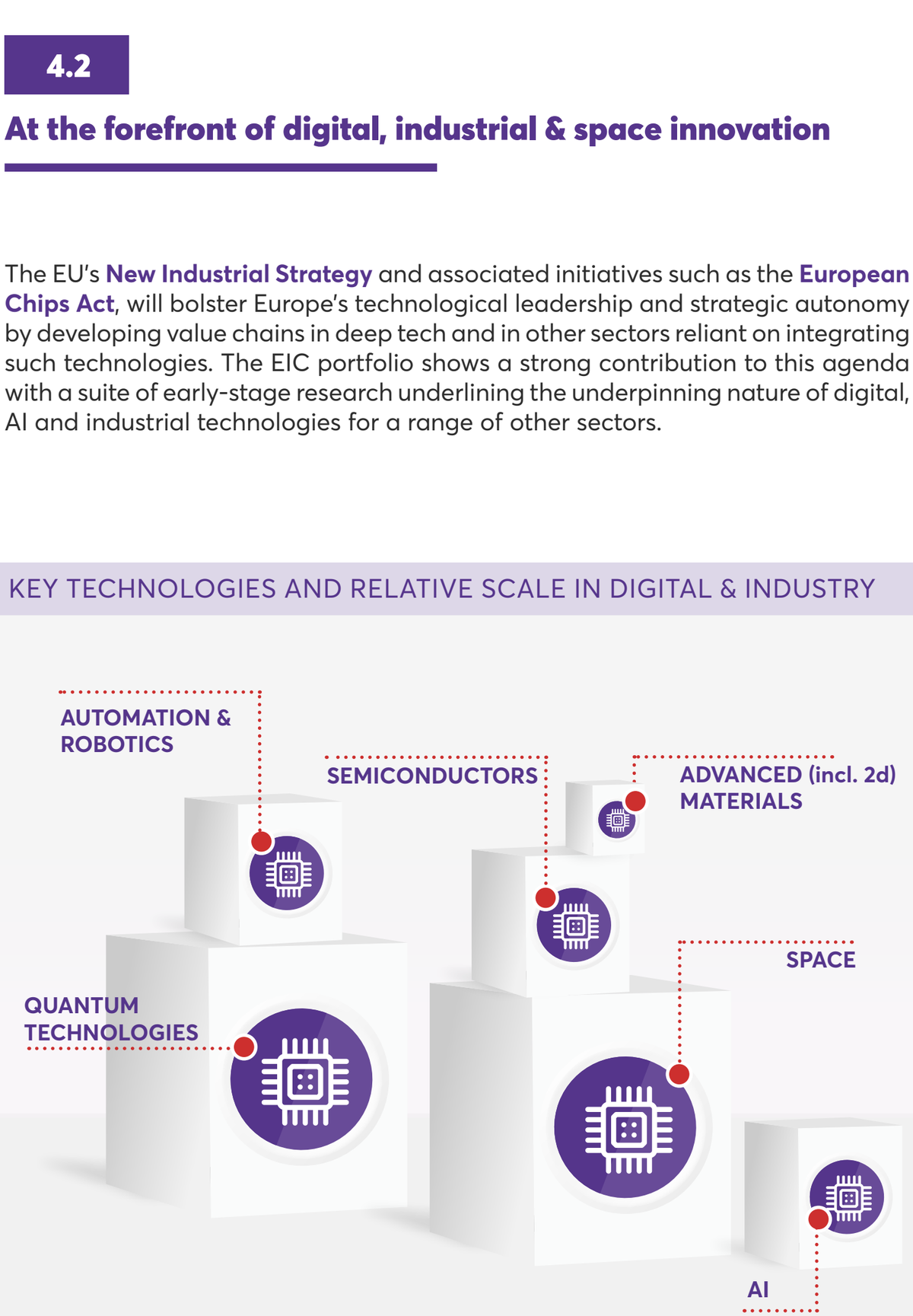
The EIC has been a fundamental instrument for us and for many companies operating risky but potentially game changing technologies and solutions. We are proposing a supercapacitor-based solution to replace lead-acid batteries - a century old technology used in the automotive industry that causes high operating expenses, pollution and use of toxic metal lead that has a huge societal impact. Around 900,000 people die every year due to lead. The EIC was the support we needed to certify the product and to prove that there is a business opportunity behind a more sustainable alternative.

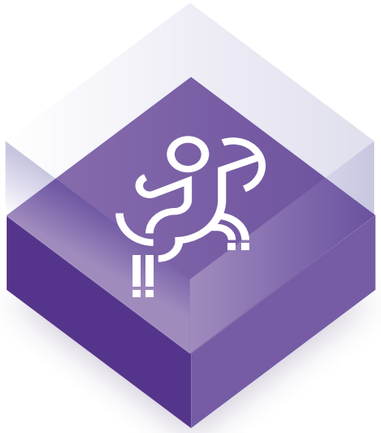
4.2

At the forefront of digital, industrial & space innovation

The EU's **New Industrial Strategy** and associated initiatives such as the **European Chips Act**, will bolster Europe's technological leadership and strategic autonomy by developing value chains in deep tech and in other sectors reliant on integrating such technologies. The EIC portfolio shows a strong contribution to this agenda with a suite of early-stage research underlining the underpinning nature of digital, AI and industrial technologies for a range of other sectors.

KEY TECHNOLOGIES AND RELATIVE SCALE IN DIGITAL & INDUSTRY





D&I CENTAURS

in the EIC portfolio

Acast, Aledia, ALICE & BOB, another brain, ARCAM, Arralis, Blickfeld, CARTO, CLARITY AI, ColoriFix, CORONET, DAEDALEAN, EFFECT PHOTONICS, ellipticlabs, EQS Group, evision, Greater Than, HappyOrNot, hiber, HiLight Semiconductor, HOKODO, illusive, IQM, KAYRROS, KONUX, LINGOKIDS, NIL TECHNOLOGY, ORBEX, outsight, OZ SPORTS, PASQAL, PLD SPACE, PragmatIC, SettleMint, SILEXICA, SMART PHOTONICS, SMARTEX, swap.com, submer, TACTOTEK, ultimate.ai, ultraleap, U SOUND, XMOS, VARTA, yousician

Isabel Obieta,
Programme Manager for Responsible Electronics

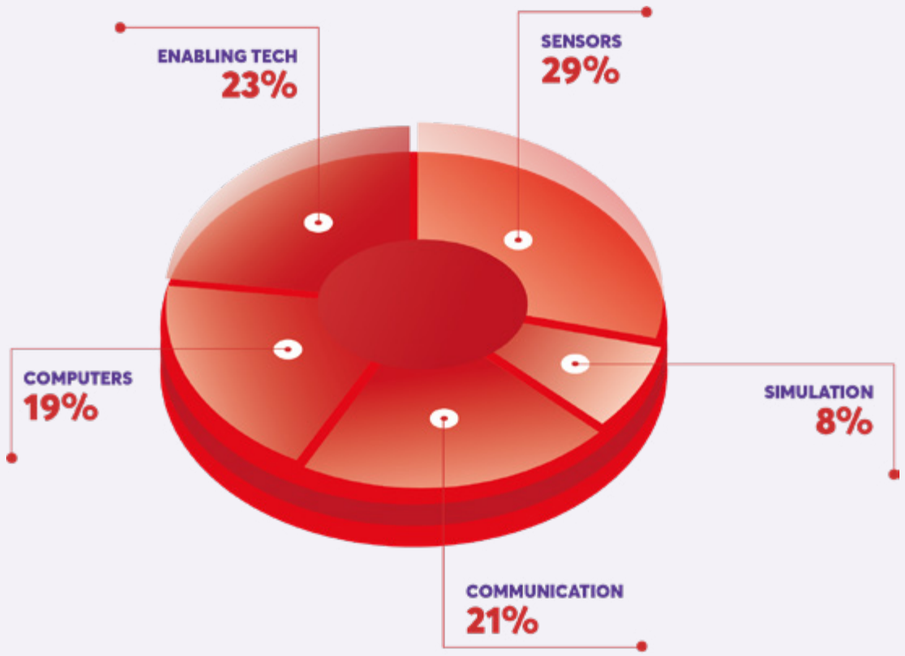
Semiconductors are essential for the acceleration of the green transition to meet the EU's climate goals. Yet, the world is short of semiconductors. Creating a dynamic European semiconductor ecosystem is one of the main objectives of the European Chips Act. My ambition is to help achieve this objective by tackling the areas where start-ups can make a difference in the supply chain. I will be focusing on sustainability by selecting ideas that tackle areas such as the reduction of power consumption of devices or a drastic reduction in the use of critical raw materials. This is one way we can help ensure that Europe retains strategic autonomy in this critical sector.

Spotlight on Quantum Technologies

The transformative potential of quantum technology is increasing global investment and competition in the area, which is expected to see market growth from EUR 1.7 bn in 2021 to EUR 89 bn by 2040. The EIC plays an important role in Europe's quantum sector by supporting advances in groundbreaking research as well as the subsequent commercialisation and scaling up of those startups and SMEs that are bringing game-changing solutions to market. To date, over EUR 125 m of support has been provided by the EIC in support of the quantum agenda. This has included a strong focus on developing enabling technologies, sensors and communications under the Pathfinder and Transition, as well as support for quantum computing under the Accelerator. Building on and complementing investments in R&D through European initiatives such as the **Quantum Flagship** and in infrastructure via the **Digital Europe programme**, the EIC is placing Europe at the leading edge of global efforts to develop and commercialise quantum technologies.

This portfolio features two 2022 Nobel laureates in Physics (Professor Alain Aspect and Professor Anton Zeilinger) and three of the 10 most highly valued companies in the EU - IQM, Alice & Bob and Pasqual - who have attracted increasing levels of private investment following EIC support.

QUANTUM PORTFOLIO



TOPSQUAD

Developing a universal quantum computer

A universal quantum computer can be exponentially faster than classical computers for certain scientific and technological applications. No one has yet managed to create such a quantum computer because of two obstacles: qubit fragility and qubit scalability. The output of TOPSQUAD – which is supported by the EIC Pathfinder with over EUR 3 m from 2019 – 2023 – is expected to lay the foundation for universal quantum computing by addressing these two major obstacles. This long-awaited innovation under development by five partners - including three universities and two companies - could help solve global challenges related to health, energy and the climate. For example, quantum chemistry can help design new medicines; improved material property prediction can help make energy storage more efficient; big data handling can help tackle the complexity of climate physics.

Professor Floris Zwanenburg,
Coordinator of Topsquad

By bringing together four internationally acknowledged institutes and two young high-tech SMEs with large potential to become global frontrunners, Topsquad will expand leadership and excellence at EU level and will present a major worldwide advancement in the field of quantum technologies.

Samira Nik,
EIC Programme Manager for Quantum tech and electronics

Quantum sensors have already entered the market and have a wide range of applications, albeit in tightly controlled environments such as laboratories or in very specific test environments. Likewise, quantum computing has attracted investment from the public and private sectors and demonstrated small-scale utility. However, it suffers from large error rates that are at least - in order of magnitude - too high for fault-tolerant quantum computation. None of today's solutions, demonstrated or proposed, come close to the need for a control system that scales to many thousands of qubits. My ambition is to focus on such requirements and complement investments at EU and national level, to ensure that Europe is at the cutting-edge of quantum capabilities with strategic autonomy in this critical field.

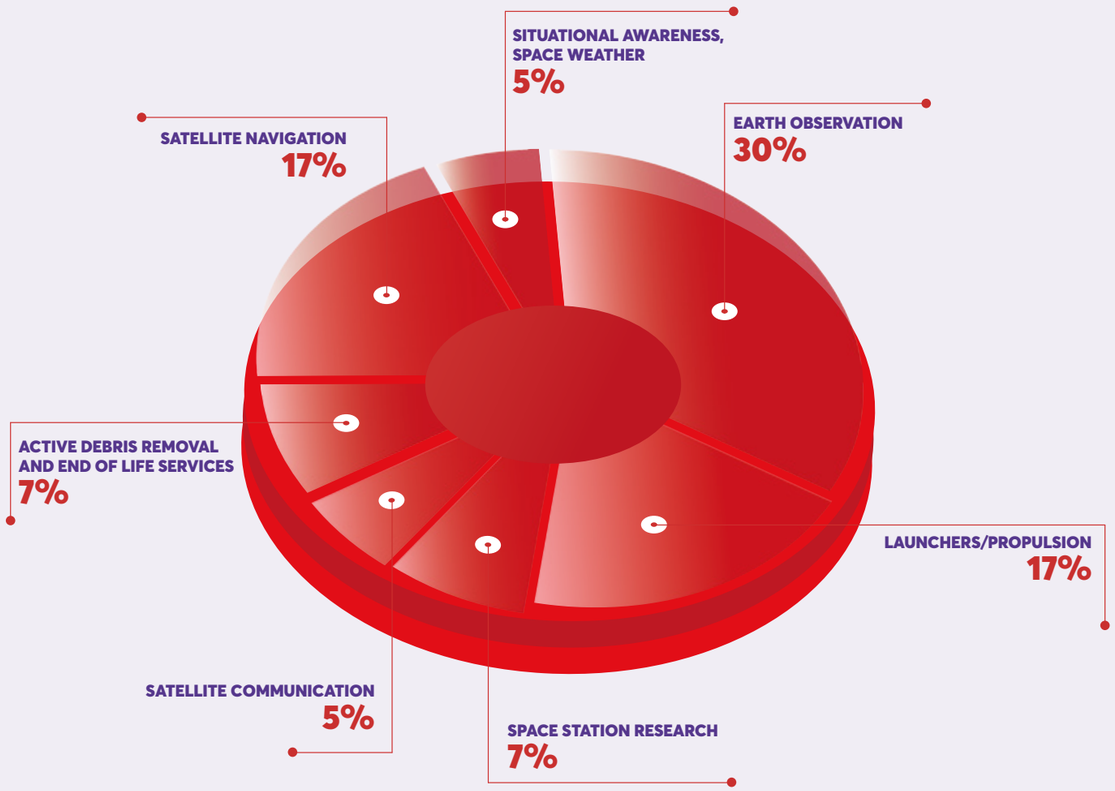
Spotlight on Space

Disruptive technologies, driven by SMEs and startups, are changing the value proposition of the global space industry. European space companies are a major player in the global space economy, valued at EUR 370 bn in 2021 and with an expected growth of 74% by 2030 reaching up to EUR 642 bn for both the upstream (e.g. satellite manufacturing, launchers, etc.) and downstream (e.g. navigation, satellite communications, earth observations, etc.) activities.

The European space industry is the fourth biggest player in the global space industry and has registered a growth in sales of around EUR 1 bn, reaching a value of around EUR 8.6 bn in 2021 for the upstream activities. Independent analysis suggests private investment in space has seen growth of almost 60% in less than ten years, with European space startups raising EUR 1.9 bn in private capital.

The EIC supports its beneficiaries in developing disruptive innovations, through to demonstration and commercialisation, enabling European space SMEs and startups to become competitive, leading players in the fast-evolving global space industry. Companies in receipt of support include D-Orbit, ICEYE and Endurosat, and European earth observation and navigation companies are expected to grow steadily and increase their market share.

SPACE PORTFOLIO



ThrustMe

Increasing the potential of satellites in space

Increasing the in-orbit mobility capacity - and decreasing the cost - of satellites is vital if the space industry is to flourish. ThrustMe has disrupted the space industry with its alternative propellants for electric space propulsion, providing deeply integrated solutions having smart/intelligent in-orbit space operations. Their advanced propulsion system allows satellites to have full orbital mobility during the complete satellite lifetime in orbit, and its unique design meets the stringent need for industrial production capacities. The company has a strong patent portfolio with proprietary, protected innovations and an exclusive worldwide patent for their technology. ThrustMe, founded in 2017, has been selected for blended (grant and equity) EIC Accelerator support.

Dr Ane Aanesland,
CEO and co-founder of ThrustMe

Having already received the grant element of EUR 2 m, Dr Ane Aanesland, CEO and co-founder of ThrustMe said: "The European Commission has given vital support for our company's growth. Both my co-founder and I have won the Marie-Curie fellowship programmes in the past, and we are now strongly supported by the EIC to accomplish our disruptive R&D and product development strategy.

Stela Tkatchova,
EIC Programme Manager for Space

One particular area of opportunity is in-orbit servicing, allowing satellites to be serviced in-orbit and extending their lifetime by at least five years. Investment in active debris removal and end of life de-orbiting are also of critical importance if we are to protect the space environment.

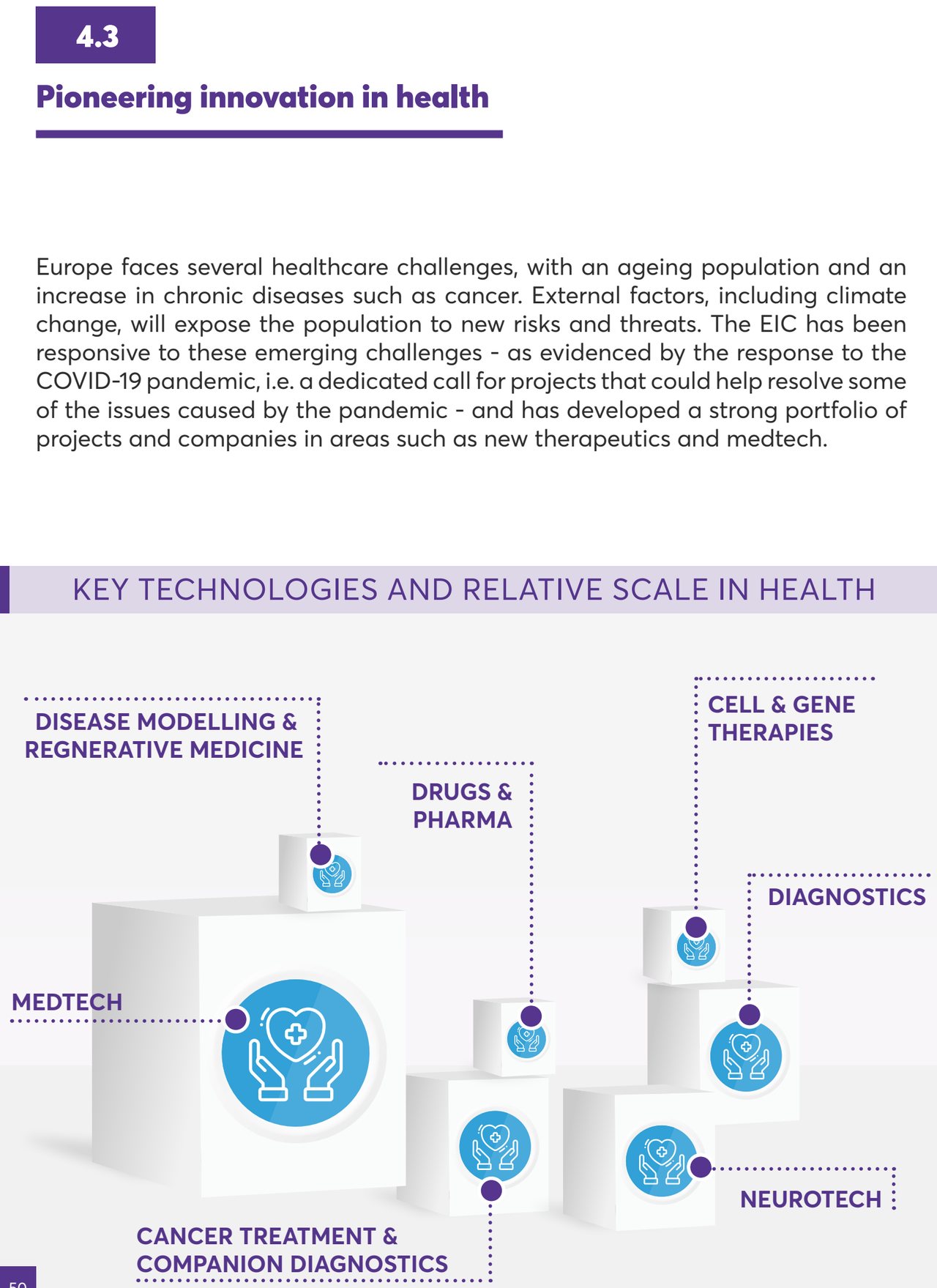
We can expect a much stronger role for startups in these growing areas. However, it will not be easy for space tech startups to simultaneously design, develop and test their technology innovations, discover new markets and develop their business models, while also attracting the necessary private investment. We need to locate and support these disruptive high-risk SMEs and startups' ideas, as they are important players in the EU space economy.

4.3

Pioneering innovation in health

Europe faces several healthcare challenges, with an ageing population and an increase in chronic diseases such as cancer. External factors, including climate change, will expose the population to new risks and threats. The EIC has been responsive to these emerging challenges - as evidenced by the response to the COVID-19 pandemic, i.e. a dedicated call for projects that could help resolve some of the issues caused by the pandemic - and has developed a strong portfolio of projects and companies in areas such as new therapeutics and medtech.

KEY TECHNOLOGIES AND RELATIVE SCALE IN HEALTH



HEALTH CENTAURS

in the EIC portfolio

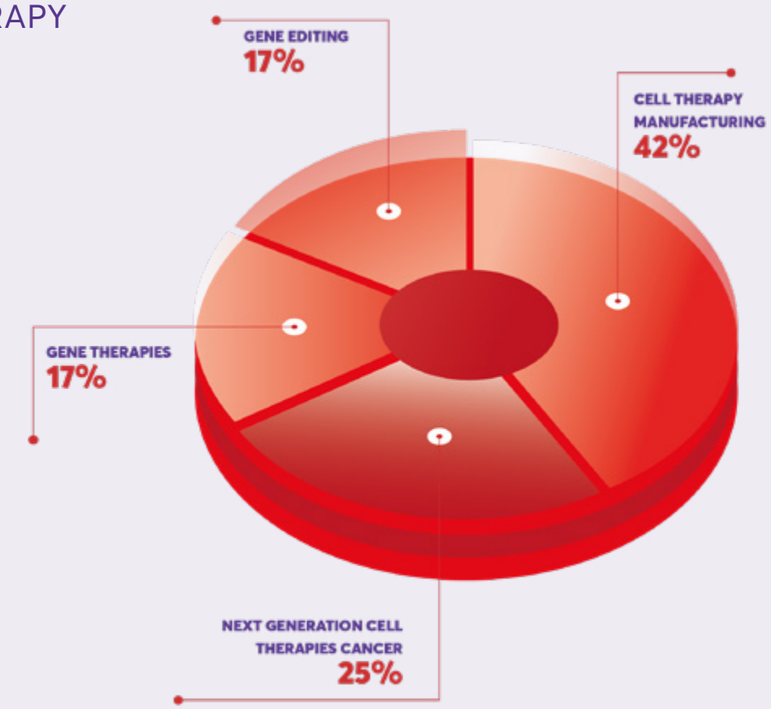
ada
ADVITOS
AGENDIA
aiforia
AVECTAS
castor
c-LEcta
Corti
CUTISS personalized skin
Depixus
diabeloop
DNASCRIPT
eligo bioscience
ENYO PHARMA
EpiEndo Pharmaceuticals
epigenomics
FARON Pharmaceuticals
FIBRIANT
GANYMED
indigo
LUMICKS
MedLumics
MEDTRACE
MeMed
MICREOS
minoryx therapeutics
monese
NUCLEIX
NURITAS Life-changing Discoveries
OSIVAX
PEPTOMYC
perfuze
Perspectum
ProVerum
Qubit pharmaceuticals
SATLANTIS
SAVANA
Scope Fluidics
SPARINGVISION
sphingotec
TreeFrog
TRiCares
xenothera
Vivasure medical

Spotlight on Cell and Gene Therapy

Cell-based therapies have already revolutionised the treatment of some blood cancers, and the European market is experiencing steady growth, with over 200 regenerative medicines companies headquartered in the region. The development of therapies continues to expand rapidly, enabled by the European Medicines Agency (EMA), which has granted orphan status to the majority of Cell and Gene Therapy drugs in development.

Building on strong capabilities in basic research - with 16 of the top 50 global life science universities based in Europe - the EIC supports the technological journey of Cell and Gene Therapies from concept to implementation in the clinic. The EIC portfolio currently features three of the most highly valued companies in Europe in the areas of Disease Modelling including 3D-bioprinting, manufacturing and Cell and Gene Therapy namely BICO, TreeFrog Therapeutics and SparingVision, respectively.

CELL & GENE THERAPY PORTFOLIO



To ensure the development of a strong and integrated European sector in this field, the EIC is taking a holistic approach to its support, both spanning and connecting advances in innovative new treatment pathways to their manufacture and application at scale. Another area in which the EIC is focusing is the commercialisation of RNA-based therapies and diagnostics for complex or rare genetic diseases.

SparingVision

Translating pioneering science into vision-saving treatments

SparingVision is a genomic medicines companyBuilding on more than 20 years of world-leading ophthalmic research. SparingVision is leading a step change in how ocular diseases are treated, moving beyond single gene correction therapies. These novel medicines could form the basis of a suite of new sight-saving treatments with potential applications across many other retinal diseases, regardless of genetic cause. Following EIC support running from August 2019 to July 2022, SparingVision raised EUR 60 m in Series A (October 2020) and EUR 75 m in Series B funding rounds (September 2022). This latest round was co-led by Jeito Capital and UPMC Enterprises, with additional participation from 4BIO Capital, Bpifrance, the RD fund, venture arm of Foundation Fighting Blindness, and Ysios Capital.

Iordanis Arzimanoglou,
EIC Programme Manager for health and biotechnology

We're at the beginning of the value creation journey in this field. My ambition is to establish the EIC as the most effective catalyst of breakthrough science to disruptive innovation in this area.

This means providing integrated and complementary support across the entire innovation chain through to commercialistion, into hospitals and directly to citizens in need of these life-changing treatments.

Stéphane Boissel,
President and CEO of SparingVision

The support of the EIC was instrumental in the development of SPVN06, our lead gene independent gene therapy product, and was seen by many of our stakeholders as a label of excellence.

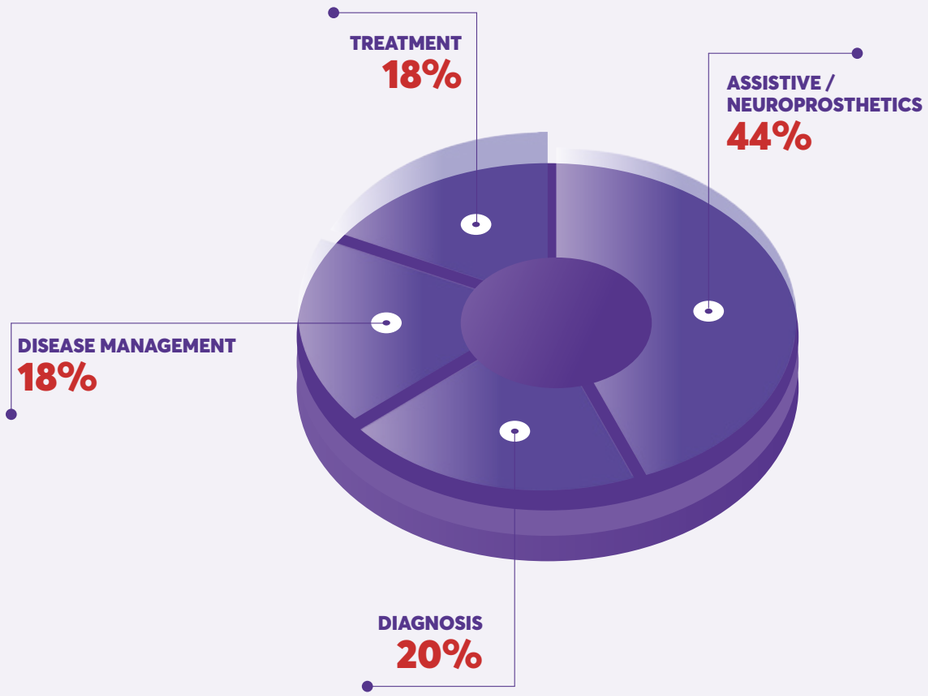
Spotlight on NeuroTech

NeuroTech is an emerging sector within health-related technologies, operating at the intersection of advances in neuroscience and digital technologies.

By detecting and leveraging our growing understanding of signals from the brain, which carry and process sensory, cognitive and motor information, we are beginning to see the development of a new generation of technologies capable of identifying and treating neurological conditions, such as depression, Parkinson's disease, Locked-In syndrome and spinal cord injuries.

To date, the EIC has invested around EUR 200 m in over 60 research projects – developed by pan-European research teams - delivering non-drug-based treatments or support to help individuals suffering from neurological conditions From developing understanding of the function of the brain through the Pathfinder to large-scale production and delivery of groundbreaking medical devices to manage and assist treatment of neuro conditions through the Accelerator, the EIC aims to support the entire research and innovation chain.

NEUROTECH



ONWARD:
Brain-Spine Interface (BSI) technology to restore mobility in people with spinal cord injury

A EUR 3.6 m EIC Pathfinder grant was awarded this year (2022) to ONWARD and its research partners - EPFL, one of the world's preeminent neuroscience research institutions, CEA-Clinatec, the Edmond J. Safra Biomedical Research Centre and Sint Maartenskliniek, a leading rehabilitation centre for spinal cord injury.

The consortium is using the grant proceeds to fund integration between ONWARD's Academic Research in Complementary and Integrative Medicine Therapy, which delivers targeted, programmed stimulation of the spinal cord, and Clinatec's WIMAGINE, a fully-implantable device which records and decodes the brain's cortical signal to predict a person's desired movement intentions. They will also conduct two clinical feasibility studies using their Brain-Spine Interface system, assessing its use for upper and lower-limb control and rehabilitation, and including two participants per study. The project has also been awarded an EIC Transition grant to test the usability of a commercially-viable BSI system for people with spinal cord injuries.

Enric Claverol-Tinturé,
EIC Programme Manager for medical technologies and medical devices

If we can overcome some remaining hurdles to existing medical devices, such as invasiveness, poor resolution and limitations in our ability to monitor or stimulate a sufficiently large number of neurons, devices measuring and stimulating brain activity can revolutionise the treatment of neurological conditions and vastly improve the quality of life of those suffering from such conditions – this is the vision and goal of the EIC in the area.

Jocelyne Bloch,
MD, Functional Neurosurgeon, Co-Founder, ONWARD Medical

The grant award from EIC will be critically important to support enhancement of the BSI system we are developing with EPFL, CEA-Clinatec, and our other partners -- a next-generation technology platform that we hope will make our breakthrough therapies for walking and other mobilities even more effective in restoring function to people after spinal cord injury and paralysis.

5

PARTNERING WITH THE EIC TO BUILD A EUROPEAN DEEP TECH ECOSYSTEM

The EIC has a unique role in the EU ecosystem, linking to initiatives at EU, national and regional level with a view to building on these investments, identifying areas of future opportunity, and ensuring synergies to maximise the impact of investments across the EU in research and innovation. The EIC works with the full set of relevant European funding schemes and initiatives, including the European Research Council (ERC), European Institute of Innovation and Technology (EIT), Invest EU, Horizon Europe, and the Enterprise Europe Network (EEN), to build a better European innovation ecosystem.

5.1

Turning frontier research into breakthough innovation with the European Research Council

The **European Research Council** (ERC) is the premier European funding organisation for excellent frontier research. In the last year, the EIC has strengthened its partnership with the ERC, with beneficiaries of **ERC Proof of Concept** projects eligible to apply to the EIC Transition programme and bring ground-breaking ideas to market.

EIC Programme Managers have also sought to explore scientific developments and associated applications emerging from the ERC, with a view to scouting for promising areas with high innovation potential. The EIC and ERC organise workshops to discuss the innovation potential of emerging scientific breakthroughs, including in Cell and Gene Therapy and Energy Storage technologies.

BiopSense

Liquid biopsy monitoring of cancer supported by ERC and EIC

Cancer medications are often causing serious side effects and high expenses, therefore it is important to get the most curative medication for each patient as soon as possible. Automated blood processing technology developed by BiopSense is a very effective way to improve the quality of cancer treatments and reduce costs and suffering. BiopSense began as a research project at the University of Jyväskylä, Finland, by four academic colleagues from biological, medical, and engineering fields. Having received an ERC Proof of concept grant in 2018, the team went on to receive EUR 2.5 million from EIC's Transition to Innovation programme.

Marja Tiirola,
Co-founder and CSO, BiopSense

Our new sample processing technology simplifies liquid biopsy diagnostics and improves cancer care paths. The financial and advisory support we have received from ERC and EIC has been essential when stepping out of the academy.

Maria Leptin,
President of the ERC

Portrait image © Michael Wodak / MedizinFotoKöln, 2021

By bringing together the worlds of research and innovation we can understand and inspire each other. A good example is the discussion between researchers and innovators in our jointly organised workshops. There is a clear complementarity between the EIC and the ERC - without strong basic research, we cannot do applied research. The success of ERC Proof of Concept projects in the EIC's Transition calls underlines the fact that we have interrelated missions and can profit from collaborative efforts.

Ben Feringa,
ERC Scientific Council Member and Nobel Prize winner in Chemistry

The collaboration between the ERC and the EIC are a beautiful demonstration of the strong complementarity between basic science and science applied to innovative solutions. It is crucial for Europe to maintain and further develop an excellent basis in science and knowledge to make our future possible. Our young people today dream of a society respectful of the environment, with clean energy and a sustainable planet for future generations. And our industry wants new opportunities for growth and energy security. This should be our aim. And to make these dreams come true, we need excellent science, because that means excellent innovation. We need the ERC and we need the EIC and they need to work together with a common aim.

5.2

Fast tracking startups from the EIT

European Institute of Innovation & Technology

The European Institute of Innovation and Technology (EIT) is Europe's largest innovation ecosystem, bringing together close to 3 000 partners from business, research and education organisations in 60+ innovation hubs.

46 companies selected for funding by the EIC Accelerator in 2021 were previously supported by at least one of the EIT's Knowledge and Innovation Communities (KICs). In recognition of this, a **Fast Track scheme** has now been introduced to speed up the process and reduce the administrative burden for companies wishing to apply to the EIC Accelerator following EIT support. For example, the EIT Health KIC offers startups in specific programmes access to the EIC Accelerator through the Fast Track scheme.

Sustainable delivery concept, supported by EIT InnoEnergy and EIC Accelerator

ONOmotion - the urban utility vehicle for today and tomorrow's driving, is developing A new approach to urban logistics is needed reduces road congestion and air pollution. With its weather-protected electric vehicle, which combines the flexibility and advantages of a bicycle with the durability and cargo capacity of a van, this is a solution that protects the planet and improves the health of communities. It is emission-free with a small physical footprint, an easy battery-swapping set-up, a smart electrical system made with quality components, using automotive production processes for safety and durability.

Founded in 2016, ONOmotion entered into strategic partnership with EIT InnoEnergy in 2020, and received a grant of EUR 1.8 m from the EIC Accelerator in the same year – and EUR 2 m in equity from the EIC Fund – to help achieve its mission of having 14 000 vehicles on the road in more than 60 cities by 2025.

Beres Seelbach,
Co-founder and co-CEO, Onomotion

The vision of Onomotion is to improve the quality of life in European cities by replacing diesel vans with our electric cargo bikes using the concept of containerisation. The EIC and EIT support has offered the support we needed to move from prototype to mass production!

5.3

Enabling access to other funders through the Seal of Excellence

EIC funding is highly competitive, resulting in many high-quality ideas failing to receive support due to budgetary constraints. Following a rigorous selection process, companies that fall short on issues other than the quality of their innovation projects receive an EIC Seal of Excellence, which signals a strong investment potential for national governments and investors.

The EIC Seal of Excellence is recognised increasingly by other national innovation programmes who can then provide the necessary funding support. For example the Spanish Ministry of Science and Innovation allocated EUR 20 m from the Spanish Recovery and Resilience Plan to EIC Seal of Excellence recipients in 2021, through its national innovation agency the Centre for Industrial Technological Development (CDTI).

6

A CALL TO ACTION

The EIC has - over a short period of time - developed a strong portfolio of high growth potential companies and a pipeline of emerging technologies and companies that could generate the next generation of breakthrough technologies.

It is at the beginning of its journey as a fully-fledged deep tech programme supporting innovative ideas from concept to market. With a budget of over EUR 10 bn from period 2021-2027, it is set to become the largest early-stage, deep tech investor in Europe.

We strongly encourage companies and researchers with ambition and vision to continue to engage with us in support of European innovation.

Are you an investor looking for the best deep tech opportunities in Europe?

- work with the EIC to identify the most promising technologies and deep tech startups emerging from all parts of Europe
- co-invest with the EIC Fund to have early access to a pipeline of high potential investments
- explore opportunities for follow-on investment in our portfolio of over 1600 companies.

Are you a corporate looking for breakthrough ideas that can be integrated into your business?

- share your priorities and requirements with the EIC so we can help you identify companies and researchers, taking forward ideas that could align with your needs.
- contact us to organise an EIC Corporate Day to access startups with novel solutions to meet your challenges in decarbonisation, digitisation and much more.

Are you a public procurer looking for innovative solutions?

- Work with our dedicated EIC procurement schemes to identify companies developing innovative propositions that provide new solutions and enhance services for your stakeholders.
- Benefit from a set of tested innovative solutions for a broad range of public services from health to energy to transport to digital government.

Are you a local, national or private innovation initiative?

- Work with us to promote EIC funding opportunities for the startups, spinouts or scaleups that your initiative is supporting.
- Explore whether you can benefit from the Seal of Excellence scheme to access relevant projects to support through your funding schemes.

ANNEX

KPI	LATEST PERFORMANCE DATA	PREVIOUS DATA
1. Investor of choice for innovators with visionary ideas *Including:* ■ *Increase in support to women led startups and projects* ■ *Increase support to innovators from Horizon Europe widening countries*	72% of Accelerator companies and 60% of Pathfinder participants extremely or very likely to recommend EIC.	
	20% women led companies in Accelerator in 2021	22% companies with women CEOs in Accelerator in 2020
	24% women coordinators and 31% women researchers in Pathfinder in 2021	31% women researchers in Pathfinder in period 2014-2020
	9% companies from widening countries in Accelerator in 2021	7.8% from widening countries in period 2014-2020 in Accelerator
	7.5% participants from widening countries in 2021	8.9% participants from widening countries in period 2014-2020
2. Crowd in investors to European deep tech ■ *Leverage of 3-5 in co-investments with EIC fund* ■ *Leverage of 3-5 in follow up investments after EIC support*	Co-investment leverage of 2.6X EIC Fund	Co-investment leverage of 2.7X EIC Fund
	> EUR 10 bn in follow-on funding	EUR 9.6 bn in follow-on funding
3. Increase European Scale ups *In particular through EIC supported startups that reach Centaur and Unicorn valuations*	12 Unicorns	2 Unicorns
	112 Centaurs	93 Centaurs
	44% growth in employment in first three years following receipt of EIC support	

KPI	LATEST PERFORMANCE DATA	PREVIOUS DATA
4. Improve pipeline from research to innovation *Including increase in follow up support to ERC and EIT projects*	25 ERC Proof of Concert projects funded through EIC Transition. 46 EIT KIC funded companies funded through the EIC Accelerator.	
5. Support high risk, disruptive technologies/ innovations *Including increase in publications, patents, investments in key technology areas ((Methodology to be further developed)*	7 010 publications incl. 5 200 in peer reviewed journals	4 324 publications incl. 3010 in peer reviewed journals
	3 121 publications in high-impact journals	1 842 publications in high impact journals
	100 patents	58 patents
	1 375 new innovations	827 new innovations
6. Operational excellence *Including:* ■ *time from application to grant for Accelerator, 6 months for Transition, and 8 months for Pathfinder*	ca. 300 days to grant Accelerator in 2021	152 days to Accelerator grant in 2020.
	13 weeks to grant for EIC Transition in 2021	N/A
	167 days to grant for EIC Pathfinder in 2021	207 days to grant for EIC Pathfinder in 2020
	Term sheets for 2021 have yet to be concluded due to restructuring of the EIC Fund.	6-12 months to term sheet during EIC pilot

Methodology Note

The data about private investment has been collected in collaboration with Dealroom.co, a Dutch company using big data technologies to scan the Internet and other sources in search for publicly available data about innovative companies. It monitors the progress of private companies by tracking indicators of innovation and growth, such as investments (both venture funding and to a lesser extent government grants), exits (IPO, merger & acquisition), accelerator support, etc. Valuations are broad estimates based on available data, and are subject to change.

The information regarding financial performance of companies comes from the obligatory self-reporting of companies as well as from Orbis database, which compiles different sources of official information, including national registries.

The data about Pathfinder patents and publications comes from project report. Moreover the report uses information from Innovation Radar experts' assessment. This is a tool providing insights about the innovations being created within the Pathfinder projects. The progress of all EIC Pathfinder projects is systematically monitored by an Innovation Radar expert. The expert fills in a questionnaire that aims at identifying potential innovations, level of maturity of the technology and its exploitation, market competition and societal dimension

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