



EIT Health

2019

Together for
healthy lives
in Europe

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European healthcare – maximising opportunities for transformation

Europe faces a turning point in health. Chronic diseases and growing multi-morbidity cause an estimated economic loss of €115bn per year.¹ Combined with an ageing population, these challenges are placing huge pressures on health systems and enterprises across Europe. We must take the opportunity to transform healthcare in Europe, for healthier citizens and a re-energised economy.

In 2019, EIT Health continued to harness opportunities for transformation and work towards accomplishing our ultimate goal – to **help European citizens live healthier, longer lives**. Across the year, we have supported solutions that range from improving education to driving increased investment in health. These solutions offer potential improved health outcomes and quality of life to European citizens now and in the future.²

EIT Health is a vast, vibrant community of world leading health innovators backed by the European Union. Working across borders, we bring together the brightest minds from the worlds of business, research, education and healthcare delivery to answer the biggest health challenges Europe faces.

In this report, we outline the extent of the work EIT Health does and the contribution we have made to solving society's biggest healthcare challenges in 2019. We proudly share some of our greatest achievements to demonstrate our role in healthcare transformation for the benefit of European citizens.

We also take a look to the future as we continue striving to meet our goals of strengthening healthcare systems and contributing to a sustainable health economy in Europe, while promoting better health of European citizens.

Executive summary

Our key successes and achievements across 2019

EIT Health brings together the brightest minds from the worlds of business, research, education and healthcare delivery to answer some of the biggest health challenges facing Europe.

Here's how we worked to transform healthcare in Europe in 2019:



Acceleration

Nurturing entrepreneurs for a competitive European health economy



350+

start-ups supported

€169 million

total investment attracted

Education

Training the workforce for the future of healthcare



53

graduates from MSc and PhD programmes

6,176

graduates and professionals trained

26,155

citizens empowered through education

Innovation

Creating new possibilities
in patient outcomes



8

products launched to market

17,893

*patients benefited from EIT
Health-supported solutions*

45

innovation projects started

Influence

Engaging policy-makers,
decision-makers and the public



- Engaging with EU-level decision makers, including the European Commission and joining forces with other influential organisations, such as the European Patients' Forum.
- Advocating for the future needs of healthcare in Europe through our thought leadership forum, Think Tank, and our popular annual summit.
- Telling the stories of the work we do and the impact it has or will make through our new Spotlight series.

With these achievements and more, we have continued to support the development of sustainable healthcare in Europe as we work towards our overall mission – to help European citizens live healthier, longer lives.



SELECTED

EIT Health and the major healthcare challenges we're trying to solve

Our ambition is to enable people in Europe to live longer, healthier lives by building and growing businesses to create products and services that progress healthcare in Europe, while strengthening our economy.

To achieve our ambition, we identified six of the most urgent healthcare challenges facing society because we believe these areas offer the most potential to transform how healthcare is received and delivered.

To find solutions to these challenges, we create an environment where the brightest minds can explore new ideas, allowing a new type of healthcare to thrive for the benefit of citizens. We're empowering a network of innovators to break down barriers, challenge convention and take action to put life-changing products and services into people's hands.



Reform care pathways

Working to extend care pathways to provide end-to-end care from before the onset of disease through to end-of-life support.



Transform healthcare

Bringing together innovators to harness new and better technologies that optimise healthcare delivery and treatment, and create a sustainable healthcare system that can support an ageing society.



Harness real-world data

Delivering prediction models for early diagnosis, enhancing treatment and informing how we can lead healthier lives by harnessing the wealth of healthcare data available across Europe.



Bringing care home

Prioritising innovative solutions that support healthcare delivery in the home and away from the hospital, to ensure healthcare is more accessible for all European citizens while reducing pressure on hospital services.



Health in the workplace

Improving workplace health at every level through better education, improved personal awareness and helping to make healthy choices easier.

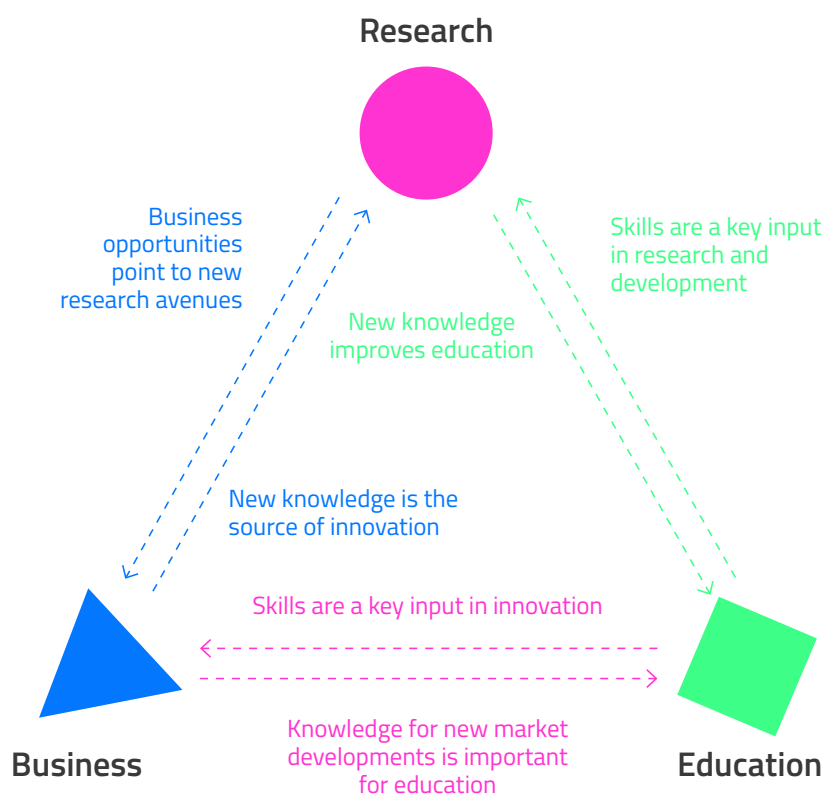


Fostering healthier lives

Changing lifestyle behaviours by creating the tools and incentives that help protect the health of European citizens, prevent early ageing and reduce disease and disability.

Our presence

EIT Health has pan-EU representation via our headquarters in Munich and six regional innovation hubs, which operate as strong innovation clusters to drive our thriving ecosystem. The InnoStars cluster brings together organisations from more progressive regions where the overall pace of innovation is more moderate. EIT Health has expanded the community's presence with an EIT Regional Innovation Scheme (RIS) in 13 regions across Central, Eastern and Southern Europe. EIT Health also leads the development of the EIT Hub in Israel, which connects innovators across Europe to other key thriving ecosystems beyond the EU.



Our vast community, including approximately 150 world-class partner organisations, works across borders to bring together the three worlds of business, research and education. We believe the best innovation happens when these three worlds meet. That's why we call this the 'knowledge triangle' – it's where life-changing innovation happens. We exist to provide an ecosystem in which this fresh thinking can thrive.

Regional Innovation Scheme (RIS): Finding hidden potential across Europe

To close the gap between regions that lead innovation in Europe and those that are still progressing, EIT set up the RIS. Covering almost half of Europe, with 14 regions in 13 countries, the RIS aims to engage participants in EIT Health programmes that can support local innovation, reveal hidden potential, and connect innovators in RIS regions with the EIT Health network. You can see examples of the great projects that have emerged from the RIS later in the report.



SECTION 2

How we create change in healthcare

We offer a set of tools, resources and programmes to support the discovery, development and growth of life-changing health products, services and new businesses, while also making sure we continue to assess how health needs are changing.



Accelerator

Within Accelerator, we work with entrepreneurs, start-ups and small and medium-sized enterprises (SMEs) to bring transformative products and services to market – attracting the attention of global investors, while nurturing world-class talent and employment opportunity.



Education

Education is our portfolio of programmes equipping learners with the knowledge and skills they need to solve the healthcare needs of tomorrow.



Innovation

Our Innovation projects strive to answer the biggest healthcare challenges facing Europe by connecting bold ideas to leading experts in our network, who turn them into a commercially-viable product or service that can change the lives of people in Europe.



Think Tank

The EIT Health Think Tank is our thought leadership forum, which brings healthcare leaders together to prepare the ground for life-changing innovation and to identify the next opportunity for a step-change in delivery.

In the following sections, you can see how each of these arms of our organisation have helped move us closer to achieving our ambition and made 2019 another successful year for EIT Health.



Accelerator

Nurturing entrepreneurs for a competitive European health economy

Innovative healthcare ideas must clear several hurdles to survive, from bureaucracy and funding to the challenges of rising global competition.³ Europe has strong research abilities, both within SMEs and academic institutions. But the prosperity of European healthcare depends on sustained investment in innovation, in order to create an environment in which innovative ideas can succeed.



95% of the 27,000 medical technology companies in Europe are SMEs, with the majority employing less than 50 people and having an annual turnover of less than €10 million.⁴ But it can cost an SME up to €28 million to launch a medical device to market.⁵

Innovation in healthcare relies on generating investments, securing ongoing funds to scale businesses up and out, as well as inspiring adoption of new technology through policy and decision-making processes. Supporting innovators to develop their ideas and attract continued investment from idea creation through to the market is vitally important to ensure Europeans have access to better medicines and smarter medical devices that can help us to live longer, healthier, more independent lives.³

The EIT Health Accelerator supports the creation and scaling of great companies by catalysing growth at any stage of a business' maturity to build a European health economy that continues to compete on the global stage.

In 2019, our network continued to provide the right ingredients to coach entrepreneurs, foster new businesses and spur growth in more established enterprises. From incubating an idea, writing a business plan and validating it, all the way through to scaling up by attracting investment and scaling out to new markets.

2019 also saw the launch of our Gold Track programme, which offers highly individualised mentorship and tailored strategic guidance to health start-ups that have the potential to scale up and succeed in the global marketplace.

Key achievements for 2019

350+

start-ups supported



€169 million

total investment attracted



Most Promising Incubator

awarded to EIT Health by the UBI World Benchmarks Study



First pan-European crowdfunding platform for the health sector

In 2019, we launched [Aescuvest.eu](https://aescuvest.eu), the first European cross-border crowdfunding platform specifically aimed at healthcare start-ups and SMEs. Crowdfunding gathers many small investments into one large pool of funds to support a good idea. This not only provides promising start-ups and SMEs with much-needed investment, it also allows Europeans to benefit from the success of these companies.

Healthcare innovation is expensive, but funds may be limited. Funding is critical for any new innovations to flourish and spread at scale.

We launched the platform in August 2019 and in just the first five months we have already started to support four start-ups. Over €15 million has been invested in MedTech, BioTech and Digital Health, with Surge-on Medical surpassing their €500,000 target to develop and sell novel surgical instruments designed for keyhole surgery techniques.



Each year, UBI Global rank incubation programmes, which provide financial and technical support to young businesses. In 2019, they assessed 364 business incubators from 82 countries.⁶ Being awarded “most promising” accelerator programme underlines the external recognition of EIT Health’s Accelerator programmes.

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Expanding our network to strengthen Europe's healthcare sector

In 2019, we partnered with the European Investment Fund (EIF) to work together to increase access to funding in healthcare by establishing a **Venture Centre of Excellence (VCoE)**. The VCoE is the first pan-European collaboration that aims to bring together the pharma/med-tech sector with managers of European life science venture capital funds. By combining the EIF's network with our own, we will be able to attract additional funding for European healthcare and life sciences.

Whether a fledgling start-up or a more mature med-tech enterprise, many of the organisations we work with struggle to access funds to bring their ideas to life. Increasing the pool of investors and connecting them to innovators in healthcare will be essential if we are to fund projects that have the potential to improve the lives of European citizens (read more about the sort of projects that such investments could fund in the Innovation chapter below).



Diabeloop: Securing investment to reduce treatment burden in type 1 diabetes

Type 1 diabetes is a chronic condition for which there is no cure.⁷ People living with diabetes must regularly monitor the amount of sugar in their blood and inject insulin to keep blood sugar levels within a target range.⁷

The incidence of type 1 diabetes is increasing by 3.4% each year across Europe⁸ and more than half of people with type 1 diabetes are diagnosed at 30 years or younger.⁹

Partnering with people living with diabetes and their families, Diabeloop has developed DBLG1 – a self-learning therapeutic artificial intelligence (AI) algorithm that automates and personalises the treatment of type 1 diabetes. Using real-time and historical data, the device tells the user how much insulin they need to inject. It is hoped this may improve the quality of life of children with diabetes in both the short and long term, as well as reducing the burden on their loved ones who help to manage the disease.

Through the support of EIT Health's Accelerator, Diabeloop set a fundraising record for therapeutic intelligence by attracting €31 million in funding in 2019, enabling them to bring their product to market.

"Today we can say that Diabeloop is on track for rapid international deployment, which will make our devices accessible to the greatest possible number of patients."

Marc Julien,
co-CEO of Diabeloop



VIGO: Cutting-edge technology for stroke rehabilitation

RIS project

In Europe, stroke is the second most common cause of death and a leading cause of adult disability.¹⁰ With a rapidly ageing population, the burden of stroke is expected to increase significantly, posing huge challenges to limited healthcare resources.¹¹

Stroke survivors receive rehabilitation, which has been shown to improve functional outcomes, decrease mortality and reduce the length of hospital stays.¹¹ But long-term rehabilitation isn't always easily accessible to those who need it.

Vigo is digital therapeutic software that uses artificial intelligence to aid recovery of stroke survivors by supplying the user with information, knowledge and skills needed to tackle the many challenges they face after experiencing a stroke. Making Vigo accessible at home helps address the challenges of long-term rehabilitation without adding additional pressures to healthcare systems.

Vigo was created by a graduate from the EIT Health Innovation in Health Care Master's programme who then participated in Accelerator, receiving expert mentorship, attending innovation bootcamps and conferences. This support has helped Vigo develop from an idea to a marketable product that could provide much needed support to stroke survivors and their families.



Education

Training the workforce for the future of healthcare

Education is our portfolio of programmes equipping learners with the knowledge and skills to solve the healthcare needs of tomorrow. We have educational programmes to suit every type of learner in healthcare: healthcare professionals, students, entrepreneurs, start-ups and SMEs, citizens and patients.

Healthcare is undergoing a rapid transformation that will bring with it new professions, requiring new knowledge and skills. The specific skills and roles required will be driven by several trends (see below) and the need for healthcare workers to ensure healthcare provision is fit to meet the future needs of the European people. For example, ageing populations and increased rates of chronic disease will require more management at homes, which may require new healthcare professionals to provide this care.

Moreover, trends in technology will require that healthcare workers develop technology specific skills, from genetic literacy to enable personalised care to the technical expertise required to provide remote healthcare. This will make sure patients can benefit from innovative solutions that become available.

Our Education programme aims to bridge the gap between academia and enterprise by upskilling professionals on new innovative techniques, entrepreneurialism, digital and data literacy and providing the practical knowledge and inspiration learners need to deliver future innovation. We draw on the experience of experts working at the front line of healthcare innovation to create educational programmes that share knowledge so we can develop the skills needed for a future healthcare system. We deliver innovative thinking by innovative means, challenging conventional wisdom to stimulate creativity and entrepreneurial thinking.

In addition to training healthcare professionals, we provide education for patients and citizens. Given that age-related, non-communicable, chronic diseases are currently the leading cause of death in many European regions, improving health awareness and education among European citizens can further support healthier populations, prevent disease and reduce premature deaths.¹⁴ Indeed, education has positive lifelong effects on health, as well as life satisfaction and mental health.¹⁵

Trends in healthcare driving the need for new skills and roles^{12,13}

Population-related

- Increasing elderly population
- Increased chronic disease (more likely to be managed outside of hospital in people's homes)
- Patient empowerment/increased involvement in care

Technology-related

- AI
- Personalised care (for example, based on an individual's genetics)
- Preventative care
- Remote healthcare provision

Key achievements for 2019

53

graduates from MSc and PhD programmes



6,176

graduates and professionals trained



26,155

citizens empowered through education



Training future leaders in health

In 2019, our diverse portfolio of degree programmes (including PhD and Master's) provided learners with practical knowledge and inspiration needed to deliver future innovation in healthcare. Many of our graduates go on to successful careers in healthcare innovation, inspired and equipped to create their own start-ups ([see Vigo above](#)).

24 universities participated in EIT Health MSc or PhD programmes, with 53 students graduating. One of our most popular programmes was the Master of Science in Health and Medical Data Analytics, which engaged 233 participants – more than twice the target of 100 – in EIT Health-funded novel education/outreach formats and citizen outreach activities.

“The foundation for a strong and effective health workforce, able to respond to the 21st century priorities, requires matching effectively the supply and skills of health workers to population needs, now and in the future.” World Health Organization, 2016.¹⁶”

We also provided training for senior healthcare executives in the *Senior Executive Programme Global Health Innovation Management*. Learners developed their leadership and entrepreneurial skills, but also created innovative solutions for a particular challenge they had identified at their own institution. They created detailed action plans that they could implement on their return to work.





Inspiring students to tackle real-life health challenges

Not all of our professional training results in a degree qualification. Education and training is also delivered through summer schools and innovation days, which are held in our 14 RIS regions and see students competing to develop solutions to real health challenges. In 2019, these events were attended by over 2,000 students, more than 500 of whom were from RIS regions.

A great example of this innovative training was **SensUs 2019**, in which 14 teams from across Europe and beyond gathered to develop ideas for a device to measure the level of a rheumatism drug, adalimumab, in the blood. It can be challenging to determine the right dose for individual patients and such a device could be a great way for patients to know whether the drug is having an effect on their condition.

Adalimumab is used to reduce inflammation in rheumatoid arthritis, a condition causing pain and joint damage that affects more than 2.3 million individuals in Europe.^{17,18} For people taking the drug, blood tests are required to monitor the effects of the treatment.¹⁷

SensUs 2019 teams competed to develop and pitch their ideas to a panel who awarded prizes to the best ideas. The competition brings together a community of healthcare providers, students, and industry leaders to share knowledge and form networks, exposing participants to a range of knowledge and skills. For example, new start-ups taught the teams how they might take their concept and create a start-up.



Empowering Europeans with knowledge for healthier lives

In 2019, we engaged over 900 European citizens in learning about healthy living through our *Healthy Lifestyle Innovation Quarters for Cities and Citizens (HeaLIQs4Cities)*. People learned while taking the opportunity to complete lifestyle assessments, test innovative products and get involved in community programmes.

Helping to raise awareness of cardiovascular and osteoporosis risks, *#ProtectUrLife*, screened 2,328 citizens through six public events.

Each year cardiovascular disease (CVD) causes 3.9 million deaths in Europe, accounting for 45% of all deaths in the region.¹⁹

One of our most popular topics delivered in a series of online courses was *Caregiving and Ageing Reimagined in Europe*, which reached 9,786 citizens. We also engaged 1,000 citizens to learn about *Empowering Citizens to Face Loneliness, Being Healthy and Active* and 656 citizens in activities focused on *Enhancing Activity and Mobility in the Community for Healthy Ageing*.



Key achievements for 2019

17,893

patients benefited from EIT Health-supported solutions



45

innovation projects started



8

products launched to market



Innovation

Creating new possibilities in patient outcomes

With healthcare organisations facing unprecedented challenges to improve care quality, increase efficiency and lower costs, innovation has never been more important. This need for change is driven by many of the trends shaping the future of healthcare (see Education above), including the move to remote healthcare and increased chronic disease.^{12,13}

Projections from the European Commission for public spending on long-term care due to ageing populations show the pressure likely to be felt on public spending over the coming decades.²⁰ This highlights how important innovative responses to healthcare needs will be to ensure sustainable healthcare provision that meets patients' needs.

The ultimate aim of innovation in healthcare is to create solutions that meet the needs of patients and that can **help European citizens live healthier, longer lives.**

The projects we support aim to improve outcomes for patients in diverse ways, from improving diagnosis and treatment of conditions such as epilepsy to providing mobile artificial hearts for children awaiting transplant (read more about our 2019 Innovation projects making a real difference for European citizens below).

Our Innovation projects strive to answer the biggest healthcare challenges impacting Europe. They connect bold ideas to leading experts in our network, who turn them into a commercially-viable product or service that can change the lives of people in Europe.

It's here that our unique approach to innovation comes to life. For each project, we build a unique consortium of world-class experts from the worlds of business, research and education to create new possibilities in patient outcomes.

TOGETHER

SEIZET2: Improved seizure detection for optimised treatment

More than 50 million people worldwide have epilepsy, making it one of the most common neurological diseases globally.²¹ It can be difficult to diagnose and treat people with the condition because of inaccurate seizure reporting.²²

Seizet2 offers a clinically accurate, discreet wearable device that monitors biosignals such as brain activity and circulation to detect seizures. Traditional seizure diaries have an accuracy of less than 50%,²³ while Seizet2 offers 70–90% accuracy, offering an innovative way to improve patient experience and personalise care outside of the hospital setting.^{22,23} Seizet2 also holds longer term promise as a seizure prediction tool and alarm.

Epileptic seizures differ for different people but they can have a big impact on a person's quality of life. The aim of most treatments is to reduce or eliminate seizures and being able to accurately record when they happen is therefore essential.²²

The Seizet team were able to draw on the strength of the EIT Health network to create a consortium of experts committed to improving care and treatment of people with epilepsy. In 2019, EIT Health supported Seizet to test Seizet2 in more than 70 people with temporal lobe epilepsy and eight patients with absence epilepsy, providing evidence for its increased accuracy in detecting seizures.^{23,24}

ROLINER: A game-changing adaptive wearable

The human body changes shape throughout the day, but traditional prosthetic limbs are made from hard plastics that cannot adapt to these changes, causing discomfort and pain if prosthetics are poorly fitted. To avoid this, Roliner has developed a unique adaptive wearable that provides amputees with a device that understands changes in their body and adapts to them, using AI to determine optimal settings and avoid pressure sores.

Evidence from various countries suggests that up to one-fifth of health spending is wasteful and could be reallocated to better use.¹ With escalating healthcare costs in coming decades, reducing avoidable healthcare use could play a key role in trying to make healthcare more affordable.²⁵


Not only will Roliner be a game-changer for people who rely on prosthetic limbs, it is also set to drastically reduce prosthetic fitting visits. It can improve quality of life by increasing comfort for amputees, as well as helping to avoid injuries and reducing the need for socket replacements, which cost between €3,500 and €5,500, by more than 50%.*

EIT Health was a catalyst for the project, enabling close collaboration between industry, healthcare and academic experts to complete the prototype design. Roliner also received €612,000 of research funding to support the testing and validation required to bring the product to European citizens.

**anticipated outcomes of the clinical trials.*

Innovation in action





MACH: Mobile Autonomy for Children in end-stage Heart failure

Children in end-stage heart failure awaiting heart transplantation face a longer wait for donor organs than adults. The number of children waiting on the heart transplant list is growing but donation rates are not.

In 2018, more than 150,000 patients registered for organ donation lists, while every day around 18 patients die waiting for organs they need.²⁶

Children and adults awaiting transplant often rely on “artificial hearts” (called ventricular assist devices) while they wait for a new heart. EXCOR®, the only mobile version of such a device for children, offers those awaiting transplants and their families greater freedom and increased quality of life. It can also reduce treatment costs and pressure on the limited supply of hospital beds.

In 2019, EIT Health supported EXCOR to achieve CE certification and move the device forward to first-in-human implantation in Germany. These are vital steps in bringing a device to market that can improve quality of life for children awaiting transplantation.

Innovation in action



Wild Card 2019

Each year, our Wild Card challenge invites creators, inventors and self-starters to come up with ideas that can improve the health of people and patients in Europe. Ideas don't have to be fully formed, that's why our Wild Card initiative is open to anyone whose thinking could help transform healthcare.

Wild Card provides world-class training and mentoring, and the opportunity to create a venture with up to €2 million investment.

In 2019, the Wild Card teams tackled one of two challenges:

- **Digital Biomarkers**
Improving early diagnostics with the application of digital biomarkers.
- **Brain and Mental Health**
Improving prediction, diagnosis and treatment to fight mental disorders and strengthen brain health.

Wild Card Winners 2019:

iLoF: Speeding up drug discovery for brain diseases

Effective treatments for neurodegenerative disease are desperately needed but remain elusive. This is because Alzheimer's and other neurological disorders are complex and patients with the same diagnosis may differ in terms of underlying biology. Currently, to be included in a clinical trial, patients must undergo invasive screening after which 80% of individuals are deemed unsuitable. Screening is also costly – up to €2,000 per patient.²⁷

iLoF provide a solution that uses biophotonics (the use of light-based technologies for the purpose of studying biological tissue, cells and cellular processes) and AI to non-invasively screen patients for clinical trials.

Alzheimer's disease is a debilitating disease without a cure that affects 44 million people worldwide. There have been 400 failed clinical trials for Alzheimer's treatments in the last 14 years.²⁷

EIT Health recognised the promise of iLoF's innovative solution and awarded them €2 million in funding, in addition to mentoring and access to the EIT Health network. This support has enabled the new start-up to attract further investment from outside investors and further develop their solution, which will transform patient experience and make clinical trials more convenient and patient-centric.



PIPRA: Predicting post-operative cognitive complications in the over-60s

Post-operative delirium (POD) and post-operative clinical decline (POCD) are conditions that can strike after surgery. Patients experience disorientation, memory loss and speech difficulties. These serious conditions can cause lasting damage and have even been linked to dementia.²⁸ But a better understanding of a patient's individual risk of POD or POCD could help clinicians and patients make informed decisions about the risks and benefits of surgery, and plan for post-operative recovery if surgery cannot be avoided.

More than 30% of those over 60 suffer cognitive impairment (such as POD or POCD) due to surgical complications.²⁹

PIPRA (Pre-interventional Preventative Risk Assessment) is an app that uses machine-learning technology to predict the risk of POCD or POD for a patient calculated from their clinical history. After pitching their idea during the Wild Card competition, PIPRA were awarded €2 million in funding and further support to develop their technology-driven, pre-operative screening tool, which could help reduce or avoid post-surgical complications and improve quality of life for older patients undergoing surgery.



Innovation influencers: Engaging policy-makers, decision-makers and the public



If the innovation that EIT Health nurtures is to make a difference to the lives of European citizens, we must make sure healthcare policy supports innovative ideas to become a reality. To this end, 2019 was another busy year of influencing policy and decision-making via the media, meetings with important political and policy stakeholders, and persuasive reports.



We have engaged with EU-level decision makers, including the European Commission. We also joined forces with other relevant organisations, such as the European Patients' Forum with whom we have launched the Data Saves Lives initiative to raise awareness of health data and its responsible use.

Through these activities and our thought leadership forum, Think Tank, EIT Health has used its voice backed by evidence-based analysis to advocate for the future needs of healthcare in Europe, which we hope will ultimately benefit European citizens and their health.



Think Tank

Preparing the ground for life-changing innovation

World-class ideas are wasted if the world isn't ready for them. The EIT Health Think Tank – our thought leadership forum – brings healthcare leaders together to prepare the ground for life-changing innovation and identify the next opportunity for a step-change in how healthcare is delivered. We collaborate across disciplines and borders to explore and assess the most pressing topics impacting healthcare innovation today.

The Think Tank aims to ensure that expert recommendations are translated into realistic and meaningful outcomes, striving for an environment that is conducive for the uptake of innovation in health for the benefit of all European citizens.

Think Tank explores the most pressing topics for the health of Europe. It brings together data, trends and influential experts across regions and disciplines to help navigate the healthcare landscape and raise awareness amongst decision-makers of the opportunities and barriers that exist for a more sustainable healthcare future.

In 2019, Think Tank explored the topic of “Optimising the Innovation Pathway: Future Proofing for Success” in a series of Round Table events that brought together healthcare experts, innovators and partners across Europe. The discussions explored the pathway that innovators must navigate from ideation through to commercialisation and adoption.



INNOVATION INFLUENCERS

The ‘innovation pathway’ describes the progress healthcare innovations make from a need and an idea to a product or service on the market that is adopted, or even becomes the standard of care.

While traditional medicines and medical devices have a well-defined innovation pathway, rapid growth in health technology products has not been matched by the development of a similarly clear and well-trodden pathway.

In recent years, there has been rapid growth in a new sector – medical and health technology products such as software or digital diagnostic tools. Many innovators face barriers to getting their products widely adopted due to challenges in the pathway. This may delay potentially impactful digital solutions from reaching patients and citizens who could benefit from them.

Led by national external subject matter experts, the meetings aimed to identify, clear, actionable recommendations to improve the pathway process for digitally enabled solutions. As well as developing an example innovation pathway, EIT Health’s Think Tank 2019 came up with several key recommendations including:

- Developing clear regulatory and evidence requirements for digital health technologies.
- Implementing a Europe-wide approach to health technology appraisal (HTA) of digital health technologies.
- Continuous evaluation and surveillance of digital health technologies, and where necessary, disinvestment of obsolete technology. This can ensure valuable, often scarce resources can be funnelled into the current needs of people in Europe.

These recommendations and our findings have been developed into specific reports as well as compiled into a White Paper and shared with key policy decision-makers who can influence the various stages along the pathway. We will work with these stakeholders to make sure the insights we gathered as part of Think Tank 2019 can have a real impact on healthcare and digital health technology adoption in Europe.

A HTA is the systematic assessment of the relative costs and outcomes (cost-effectiveness) of a health technology, such as a medical device, that helps health authorities make decisions about their use.

INNOVATION INFLUENCERS

EIT Health Annual Summit: “Where collective ideas transform the future of healthcare”

One of the must-attend events in the European health innovation calendar, the EIT Health Summit presents an exciting opportunity to interact with Europe’s top healthcare thought leaders and innovators, whilst presenting the latest thinking and developments in health.

The 2019 annual EIT Health Summit took place in the prestigious Palais Brogniart in Paris, kindly supported by the Paris region. We presented a revamped event that showcased our ambitions through high quality content and renowned expert speakers. We were rewarded by a doubling of attendees versus 2018 with over 1,000 international participants across two days.



The focus in 2019 was to explore how we define and understand real needs-based innovation and the fundamental role it should play to generate meaningful change in the lives of patients and citizens. This was summed up by EIT Health CEO Jan-Philipp Beck after the event:

“Innovation for innovation’s sake no longer has a place in an ever-changing healthcare landscape. Unmet need must be the core focus of all innovation activity if we are to deliver true transformation to the lives of patients.”

Spotlight

Every day we spark, shape and mould cutting-edge innovations, taking them from idea to reality. 2019 saw the launch of our spotlight series, in which we shine a light on some of our most successful projects, which could truly help to revolutionise healthcare across Europe.

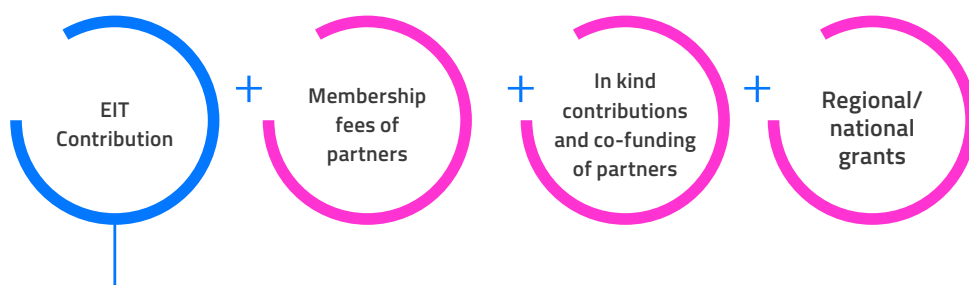
Spotlight is a new creative, multimedia communications series telling the stories of the work we do, the impact it has or will make, and the variety of differing ways EIT Health can “make a difference”.

Visit: the [Spotlight Series](#) to find out more.

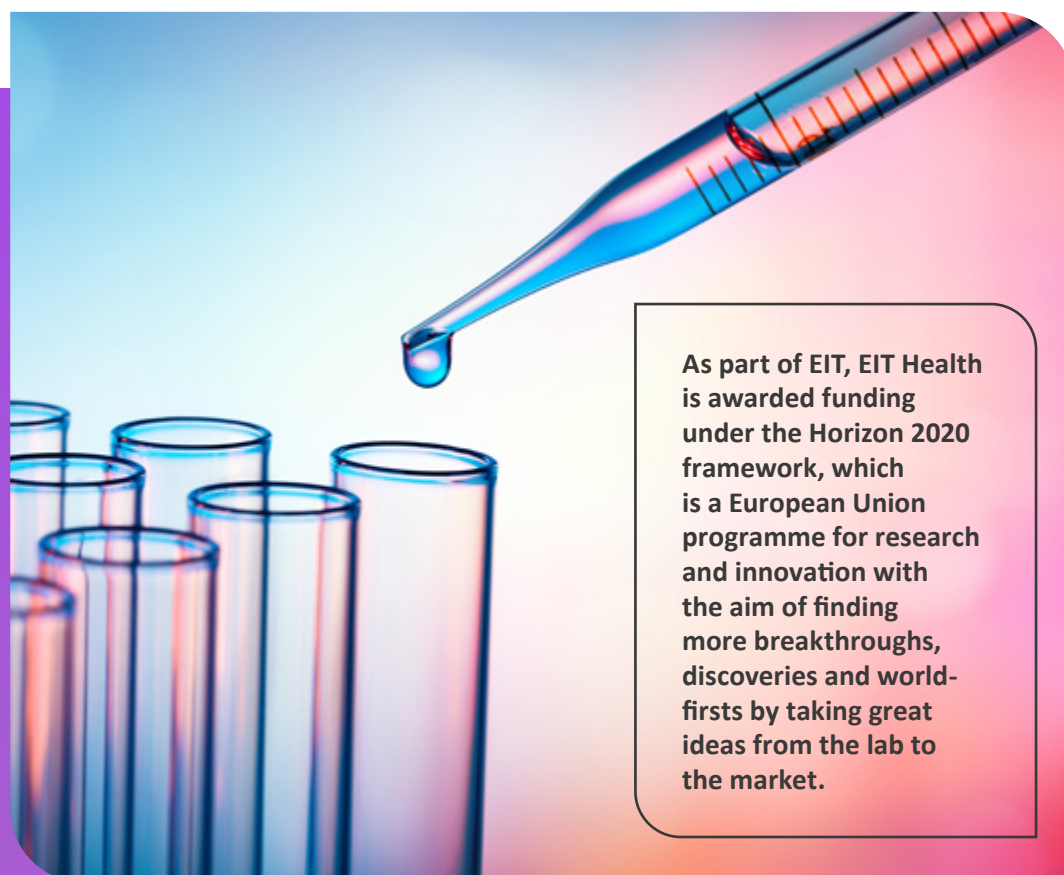


How is EIT Health funded?

To make sure we can achieve our ambitions and improve the health and lives of Europeans, we work hard to make EIT Health a financially sustainable organisation, working as transparently and efficiently as possible. As a non-profit organisation, our funding comes from the European Union via our umbrella organisation EIT, our partners and other contributors. We also conduct some commercial activities to support the long-term sustainability of the organisation, for example by charging fees for some of its services.



EIT contributes up to 25% of the funding that KICs receive.



As part of EIT, EIT Health is awarded funding under the Horizon 2020 framework, which is a European Union programme for research and innovation with the aim of finding more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.

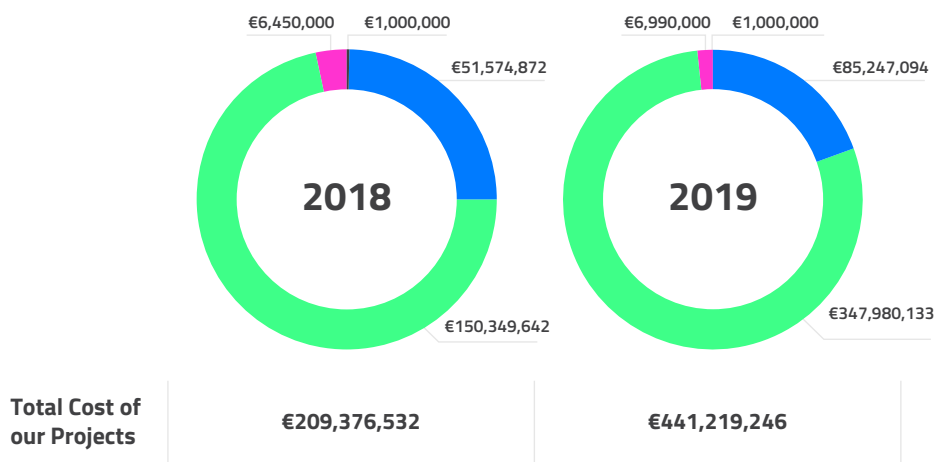
Towards financial sustainability

To further develop the independence and sustainability of EIT Health, we worked in 2019 to increase funding from additional sources such as regional organisations with a vested interest in health innovation. For example, we secured funding from local government, including the Bavarian Ministry of Economic Affairs, Regional Development and Energy.

Our hard work is paying off – at the end of 2019, EIT Health's funding was more than twice that secured in 2018, and comparable to that secured in total during the previous three years. This demonstrates the value that the outcomes of our collective activities bring to the EU health system.

OUR Contributions

● EIT contribution ● In kind contributions and co-funding of partners ● Membership fees of partners ● Regional/national grants



Looking to the future: our commitment to improve in 2020 and beyond

In 2020, we will continue to be driven by our mandate to maintain progress against EU healthcare priorities and other relevant international objectives (such as the United National Sustainable Development Goals in health) by supporting initiatives that protect and improve the health of European citizens, in alignment with our six focus areas.

Each year, we also look to the future to try to understand what the European healthcare landscape might look like. Moving into 2020, we will continue finding new ways to prevent disease and develop effective solutions that will improve the health and well-being of European patients and citizens.

Recognising the key challenges that are likely to arise, we plan to continue contributing to advancing digital healthcare by seeking ways to harness the benefits of AI and increase confidence and trust in novel healthcare technologies. We will also explore the persistent barriers to maximising the real potential of healthcare data.

For more information about what we have planned for 2020, read our [**BP2020 report**](#).

Initiatives planned for 2020

HEALTHY AGEING

As populations age, health awareness and education will play an important role in reducing the burden of age-related, non-communicable diseases.¹⁴ That's why we will have 15 initiatives addressing risk factors such as tobacco use and passive smoking, harmful use of alcohol, unhealthy dietary habits and physical inactivity.

CHRONIC DISEASE

Europe holds 25% of the global cancer burden, despite only containing 9% of the world population.³⁰ In 2020, we will develop more than 25 initiatives to tackle cancer, as well as other chronic diseases such as age-related and neurodegenerative diseases.

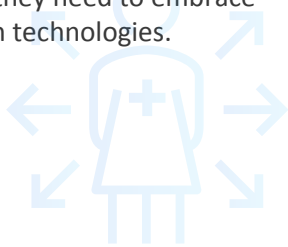
DRUG-RELATED ILLNESS

More than 1 in 10 new AIDS cases in the European Union are still attributed to injecting drug use.³¹ So we will run two initiatives centred around drugs-related health damage, including information and prevention of HIV/AIDS, as well as other infections associated with injecting drug use such as tuberculosis and hepatitis.

As we look to the longer-term future of health, we will continue driving progress against our six focus areas in 2020.

Reforming care pathways

The EIT Health Community* will be investing €18 million in 32 initiatives including programmes such as **FutureSkillSet**, which prepare the healthcare workforce for the future, equipping them with the skills they need to embrace health technologies.



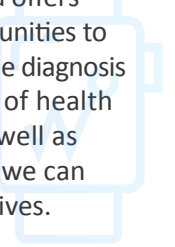
Transforming healthcare

The EIT Health Community* will be investing €27 million in 45 initiatives that help to reform patient care and accelerate diagnosis.



Harnessing real-world data

The EIT Health Community* will be investing €5 million in nine initiatives that harness the power of real-world data, helping to establish a framework for European leadership in access to and analysis of real world data. Real-world data offers exciting opportunities to help improve the diagnosis and treatment of health conditions, as well as informing how we can lead healthier lives.



Bringing care home

The EIT Health Community* will be investing €6 million in 13 initiatives that harness new technologies such as robotics and AI.



Health in the workplace

The EIT Health Community* will be investing €580,000 in two initiatives focusing on employer leadership programmes, and encouraging health stewardship in the workplace to improve health outcomes.



Fostering healthier lives

The EIT Health Community* will be investing €4 million in 14 initiatives that support healthy lives by introducing behavioural change.

With these projects and more, we aim to support the development of sustainable healthcare in Europe as we work towards our overall mission – to help European citizens live healthier, longer lives.



**Funding from the EIT Health Community includes the total sum of self-funding, co-funding and EIT contributions*

References

1. OECD/EU. Health at a Glance Europe: 2016 OECD Publishing, Paris, 2016. Available from: <https://www.oecd-ilibrary.org/docserver/9789264265592-en.pdf?expires=1594655018&id=id&accname=guest&checksum=5CBE9CDF19A3DC31D95719CAE96A6D7E> (accessed July 2020).
2. Trueman P, Taylor DG, Lowson K et al. Evaluation of the scale, causes and costs of waste medicines. Report of DH funded national project. York Health Economics Consortium and The School of Pharmacy, University of London, York and London, 2010. Available from: https://discovery.ucl.ac.uk/id/eprint/1350234/1/Evaluation_of_NHS_Medicines_Waste__web_publication_version.pdf article (accessed July 2020).
3. European Commission. Innovation in Healthcare From Research to Market to Health-systems to Patient, Main conclusions from 2010, 2011, 2012 conferences. Brussels, 2013. Available from: https://ec.europa.eu/research/health/pdf/innovation-in-healthcare-overview-report_en.pdf (accessed July 2020).
4. MedTech Europe. The European Medical Technology Industry – in figures 2019. Available from: <https://www.medtecheurope.org/wp-content/uploads/2019/04/The-European-Medical-Technology-Industry-in-figures-2019-1.pdf> (accessed August 2020).
5. Marešová P, Peter L, Honegr J, et al. Complexity stage model of the medical device development based on economic evaluation – MedDee. Sustainability 2020; 12: 1755.
6. UBI Global. UBI Global World Rankings of Business Incubators and Accelerators 2019–2020. UBI Global, Sweden, 2019. Available from: <https://ubi-global.com/benchmark-study-2019-2020/> (accessed July 2020).
7. Diabetes UK. What is Type 1 diabetes? Available from: <https://www.diabetes.org.uk/diabetes-the-basics/what-is-type-1-diabetes> (accessed July 2020).
8. Patterson CC, Harjutsalo V, Rosenbauer J, et al. Trends and cyclical variation in the incidence of childhood type 1 diabetes in 26 European centres in the 25 year period 1989–2013: a multicentre prospective registration study. Diabetologia 2019; 61: 408–417
9. Thomas N, Jones S, Weedon M, et al. Frequency and phenotype of type 1 diabetes in the first six decades of life: a cross-sectional, genetically stratified survival analysis from UK Biobank. Lancet Diabetes Endo. 2018; 6(2): 122-129
10. Wolfe PC, McKevitt PC, Emmett DE, et al. The Burden of Stroke in Europe. [online] Stroke Alliance for Europe. Available at: https://www.stroke.org.uk/sites/default/files/the_burden_of_stroke_in_europe_-_challenges_for_policy_makers.pdf (accessed July 2020).
11. Lui SK, Nguyen MH. Elderly stroke rehabilitation: overcoming the complications and its associated challenges. Curr Gerontol Geriatr Res 2018; 2018:9853837.
12. EIT Health. Health Skills of the Future: the EIT Health Education Needs Analysis. 2018. Available from: <https://connections.eithealth.eu/documents/21805/10674310/Health+Skills+of+the+Future+-+EIT+Health+Education+Needs+Analysis.pdf/95a980bb-fa53-6c9a-fd9b-842f54008b52> (accessed July 2020)
13. Health First Europe. Profiling the European Health Workforce of Tomorrow. 2019. Available from: <http://healthfirsteurope.eu/wp-content/uploads/2019/12/HFE-Paper-Profiling-the-European-Health-Workforce-of-Tomorrow-004.pdf> (accessed July 2020).
14. OECD/EU. Health at a Glance Europe: 2018 OECD Publishing, Paris, 2016. Available from: https://www.oecd-ilibrary.org/docserver/health_glance_eur-2018-en.pdf?expires=1596204215&id=id&accname=guest&checksum=8817E5BCA1CE686D7CAF4B2BA25B7412 (accessed July 2020).
15. WHO. Health 2020: Education and Health Through the Life-Course. WHO, Geneva, 2015. Available from: https://www.euro.who.int/__data/assets/pdf_file/0007/324619/Health-2020-Education-and-health-through-the-life-course-en.pdf?ua=1 (accessed July 2020).
16. WHO. Global strategy on human resources for health: Workforce 2030. 2016. Available from: <https://apps.who.int/iris/bitstream/handle/10665/250368/9789241511131-eng.pdf?sequence=1> (accessed August 2020).

17. Versus Arthritis. Adalimumab. Available from: <https://www.versusarthritis.org/about-arthritis/treatments/drugs/adalimumab/> (accessed July 2020).
18. O'Hara J, Rose A, Jacob I et al. The burden of rheumatoid arthritis across Europe: a socioeconomic survey (BRASS). 2017. Available from: https://www.nras.org.uk/data/files/Publications/Surveys%20Reports/UoC_HCD_BRASS%20Summary%20Report%20FINAL.pdf (accessed July 2020).
19. European Heart Network. European Cardiovascular Disease Statistics 2017 Edition. European Heart Network, Brussels, 2017. Available from: <http://www.ehnheart.org/cvd-statistics.html> (accessed July 2020).
20. EU. The 2018 Ageing Report: Economic and Budgetary Projections for the 28 EU Member States (2016–2070). EU, Brussels, 2018. Available from: https://ec.europa.eu/info/sites/info/files/economy-finance/ip079_en.pdf
21. World Health Organization. Factsheet – Epilepsy. Available from: <https://www.who.int/news-room/fact-sheets/detail/epilepsy> (accessed July 2020).
22. Elger CE, Hoppe C. Diagnostic challenges in epilepsy: seizure under-reporting and seizure detection. *Lancet Neurol.* 2018; 17(3): 279–288
23. Gu Y et al. Comparison between Scalp EEG and Behind-the-Ear EEG for Development of a Wearable Seizure Detection System for Patients with Focal Epilepsy. *Sensors.* 2018; 18(1): 29
24. Vandecasteele K, De Cooman T, Gu Y et al. Automated epileptic seizure detection based on wearable ECG and PPG in a hospital environment. *Sensors* 2017; 17: 2338
25. OECD. Healthcare costs unsustainable in advanced economies without reform. 2015. Available from: <https://www.oecd.org/health/healthcarecostsunsustainableinadvancedeconomieswithoutreform.htm> (accessed July 2020).
26. European Kidney Health Alliance. Joint Statement. Thematic Network on Improving Organ Donation and Transplantation in the EU 2019. Available from: https://ec.europa.eu/health/sites/health/files/policies/docs/ev_20191017_co04_en.pdf (accessed July 2020).
27. iLoF.com. Applications. Available from: <https://ilof.tech/applications/> (accessed July 2020).
28. Daiello LA, Racine AM, Gou RY et al. Postoperative delirium and postoperative cognitive dysfunction. *Anaesthesiology* 2019; 131: 477–491
29. American Geriatrics Society Expert Panel on Postoperative Delirium in Older Adults. Postoperative delirium in older adults: best practice statement from the American Geriatrics Society. *JACS* 2015; 220(2): 16–148.
30. Ferlay J, Colombet M, Soerjomataram I, et al. Cancer incidence and mortality patterns in Europe: estimates for 40 countries and 25 major cancers in 2018. *Eur J Cancer* 2018; 103: 356–387.
31. European Monitoring Centre for Drugs and Drug Addiction. Health and Social Responses to Drug Problems: A European Guide. Publication of the European Union, Luxembourg, 2017. Available from: https://www.emcdda.europa.eu/system/files/publications/6343/TI_PUBPDF_TD0117699ENN_PDFWEB_20171009153649.pdf (accessed July 2020).

