Eindhoven University of Technology, Wageningen University & Research, Utrecht University and University Medical Centre Utrecht are complementary in knowledge and talent and work together to contribute to societal transitions.

HIGHLIGHTS OF 2022

alliance TU/e, WUR, UU, UMC Utrecht | EWUU.nl
Future generations face unprecedented challenges: climate change, resource depletion, major healthcare problems and a widening gap in society – between rich and poor, highly educated and less educated. Scientific endeavour has a crucial role to play in finding solutions to these problems, by bringing disciplinary fields together and joining forces.

Eindhoven University of Technology, Wageningen University & Research, Utrecht University and UMC Utrecht are working together in the alliance TU/e, WUR, UU, UMC Utrecht (EWUU) since 2019 to tackle pressing social challenges and realise sustainable transitions to create a better future. This highlight report gives an overview of the main activities of the alliance in 2022.

**SEED FUND: SLEEP ASSESSMENT**

The seed funded [project Sleep Assessments in Preterm Infants](#) is focused on the relationship between nutrition and sleep for early human brain development. It won the Ureka Mega Challenge of UMC Utrecht in 2022.

**SEED FUND: SUMMER SCHOOL**

The international [summer school Food for Mars and Moon](#) received seed funding. It aims to unite students and young professionals and encourages them to create solutions for space farming while considering energy, health, food and sustainability topics.

**ANNUAL CONFERENCE**

At our annual conference 2022 Building the Future Together in Eindhoven 325 people came together to connect and collaborate.

**CITIZEN SCIENCE**

Over 100 researchers and supporters working on public engagement exchanged knowledge and experience during the [Wetenschnapps XL](#) in October 2022.
ACADEMICS OF THE FUTURE

We teach the academics of the future to combine the knowledge from their disciplines with a broad scale of interdisciplinary and transdisciplinary skills. This allows students to cooperate and communicate in a complex, diverse context. We collaborate in education for professionals, developing alternatives for practicals and fieldwork and in educational research.

STUDENT MOBILITY

The platform EduXchange makes it a lot easier for students to orientate and enroll in courses from partner institutions. In 2022 325 courses were offered and 159 students took courses from another university.

ENTREPRENEURIAL EDUCATION NETWORK

Tools, tips and reading material for entrepreneurial learning were developed and collected in network meetings for professionals in entrepreneurial learning and entrepreneurship.

EDUCATION FOR PROFESSIONALS

In 2022 the course Didactics for continuing education for EWUU lecturers run in Utrecht. This course is meant to support teaching staff in the development of education for professionals.

CHALLENGE BASED LEARNING

We implement new, innovative teaching methods such as Challenge Based Learning, in which students from various disciplines collaborate with social partners on real problems in society. In 2022 six challenges were organised.

Replacing Animal Testing Challenge

Is it necessary to use animals for our products and medical safety testing, or can we do without? Students and professionals found solutions to the complex problem of animal testing in a multi-disciplinary context in collaboration with Proefdiervrij.

BITT Challenge

102 students from different disciplines came together with patients and doctors to work on problems related to a disease or medical treatment. Ranging from how nutrition might contribute to the treatment of ADHD to the ways pain and fatigue can be reduced in children with arthritis. The aim was to create patient centred solutions.

STUDENT GUIDANCE DAYS

At two Student Guidance Days 50 EWUU colleagues working in student guidance exchanged knowledge, interacted and built cross-connections.
SOCIAL TRANSITIONS

We use our wide range of expertise to contribute to major social transitions. Preventive Health and Circular Society are the priority areas of this alliance, with the aim of achieving ground-breaking and iconic cooperation while building on existing research capacity. We encourage young researchers to explore new interdisciplinary connections at our Centre for Unusual Collaborations. Our Artificial Intelligence programme and Centre for Living Technologies support our goals to improve human and environmental health.

OUR RESEARCH

PREVENTIVE HEALTH

Our Institute for Preventive Health (i4PH) focuses on four research themes: Healthy Start, Preserving Health, Health at Home and Living with Disease. With this it aims to contribute to the goal that all Dutch people live for at least five years longer in good health, and to decrease the health differences between the lowest and highest socio-economic groups.

CONFERENCE

178 professionals came together at the conference Accelerating cooperation to stop overweight and obesity in November in Utrecht. They concluded that the responsibility for obesity does not solely lie with the individual. Professionals have a role to play in the necessary systemic change, by looking beyond the boundaries of their own fields and isolated solutions, and by being open to new collaborations.

CREATING A VIBRANT COMMUNITY

Preventive Health undertook various activities to foster a lively community and to facilitate matchmaking and preparation of grant proposals, This resulted in three national grant proposals and active participation in the Growth Fund PreventiePromotor.

CO-SHAPING FUTURE CITIES

What is the impact of the environment on a healthy lifestyle? An interactive workshop Co-shaping future cities at Utrecht Science Week explored this with 30 participants. Virtual reality was used to engage participants in designing their own neighbourhoods.

FUNDING OF RESEARCH

How can older people remain self-reliant for longer and what interventions are needed to prevent acute hospital admission? The project PROACT dives deeper into this question combining the knowledge of nursing science with data analysis and AI. Together with 5 other projects, 35 researchers received seed funding in order to accelerate research and interdisciplinary collaboration in the field of preventive health.

Watch the video of the Institute for Preventive Health.
By linking knowledge and expertise of the four institutions we are able to take a multidisciplinary approach to circular issues and use each other’s knowledge and networks.
LIVING TECHNOLOGIES

Our Centre for Living Technologies (CLT) aims to develop bio-based technologies by introducing new functionalities onto living cells and explore how these technologies can be used to improve the health of people, animals and the environment. The programme builds on existing strengths in life science research of our four institutions.

iGEM SYMPOSIUM

At the Dutch iGEM symposium, organised by the alliance, 51 students from 6 Dutch universities came together, explored collaboration and discussed various ethical, societal, and political aspects of synthetic biology. The teams created projects from brainstorming to proof of concept. The iGEM competition offers the students an opportunity to apply their knowledge and push the boundaries of synthetic biology.

ACTIVITIES & EVENTS

In 2022 Living Technologies organised a number of activities and events, including a sand-pit on Synthetic Microbial Communities, a seminar on Building Partnerships and Enabling Discovery and a symposium on One carbon fixation.

PRESTIGIOUS GRANTS

Living Technologies was successful in acquiring a number of prestigious grants:
**OUR RESEARCH**

**ARTIFICIAL INTELLIGENCE**

Our Artificial Intelligence programme aims to develop new AI techniques that lead to a greater and better impact in the area of health and sustainability. Together the alliance partners have the data, technology, knowledge and facilities to make these solutions a reality.

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Innovative AI methods that contribute to better personalized care, to prevention and the reduction of administrative burden were seeded funded in 14 projects with 78 researchers. In order to drive forward the development and application of AI to the benefit of society.

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**CHALLENGE AI FOR PRETERM INFANTS**

Students with a background in data science, AI engineering and medicines worked together on the prevention of sepsis in preterm babies in collaboration with the intensive care unit for babies of UMC Utrecht. The goal was to provide doctors with an accurate risk analysis so they can quickly take the right measures to reduce health damage in premature babies.

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**AI TO THE BENEFIT OF SOCIETY**

A joint seed money call was launched for crossdisciplinary collaborations in which Artificial Intelligence plays a crucial role in advancing the state-of-the-art in Preventive Health and Circular Society. Seven innovative projects were funded in 2023.

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**AI & PREDICTIVE HEALTH SUMMIT**

150 participants from our four institutions, private companies and public and non-profit organisations came together to collaborate at the AI & Predictive Health Summit in September.

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The students found working with data collected in daily clinical practice very valuable.

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Highlight Report 2022 | alliance TU/e, WUR, UU, UMC Utrecht (EWUU)
**Our Centre for Unusual Collaborations (CUCo)** brings together an interdisciplinary group of diverse young researchers in unusual collaboration to address the most pressing challenges of this age. This is done by removing barriers to research across boundaries for early and mid-career academics. Stimulating unexpected and out-of-the-box research is an essential aspect of the centre. Learning and reflection on the process of collaboration is key as well.

**UNUSUAL COLLABORATIONS GRANTS**

The project *imaging more than human communities* explores ways of imagining a more equitable community of humans and nonhumans (animals/robots) and how to make it a reality in everyday life. Together with 12 other projects, it received a *Unusual Collaborations* grant. The decision on funding was left to a lottery. In total 52 researchers were involved.

**SPARK LEARNING JOURNEY**

Spark grants aim to stimulate unusual collaborations to address societal challenges. A *Spark Learning Journey* was developed in 2022. Four new Spark teams kicked off, six ongoing Spark teams concluded their activities with 48 academics involved.

**GREAT FAILURE FESTIVAL**

CUCo organised 13 events with 500 participants, such as the *Great Failure Festival* in May. The events are characterised by their potential to stir up debate, as well as by their contribution to understanding unusual interdisciplinary research.

**UNUSUAL COLLABORATIONS GRANTS**

At Betweter Festival visitors could perform experiments with us and also travel in porous material using virtual reality.

**TOOLKIT FOR A COLLABORATIVE PROCESS**

The toolkit offers a set of methods, approaches, people and likeminded initiatives that facilitate working across boundaries: across ideas, disciplines, institutes, types of knowledge and personalities.

**BETWETER FESTIVAL**

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The motto of the strategic alliance between Eindhoven University of Technology, Wageningen University & Research, Utrecht University and University Medical Centre Utrecht is Challenging Future Generations. We strive to do that by putting young researchers, lecturers and students at the helm and by collaborating across the borders of the scientific disciplines. In the alliance, the four institutions combine their expertise in order to contribute to social transitions in the fields of health, food, energy and sustainability.

**BOARD**
Members of the Executive Boards of TU/e, WUR, UU and UMC Utrecht form the Board of our EWUU alliance. The General Board involves all members of the Executive Boards of our four partner institutions.

The deans of TU/e and UU, the managing directors and deans of WUR and the chairs of the strategic themes of UMC Utrecht come together in the General Assembly.

**EWUU OFFICE**
The Board of the EWUU alliance receives expertise-related support from the alliance coordinator and the members of the Core Team. It receives organisational support from the Programme Team.

**STEERING COMMITTEES**
The six initiatives within research and education are led by steering committees, consisting of representatives of our four partner institutions.

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**OUR ORGANISATION**

**CHALLENGING FUTURE GENERATIONS**
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