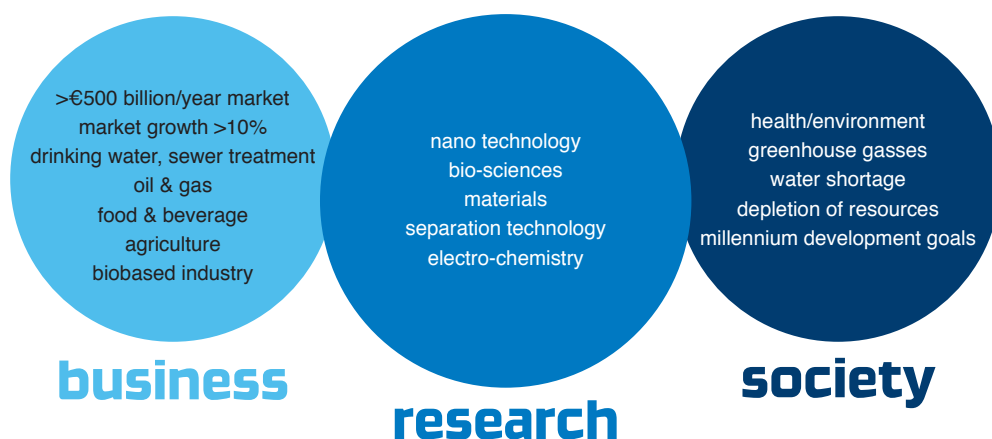


Network of excellence in sustainable water technology



Breakthrough technological developments in the field of water treatment technology are required, not only to enable the export ambitions of the water sector, but also to help solve global societal threats and challenges. Global water problems and solutions have three aspects that need a combined approach:



Societal needs: Immense global water problems and the social and health effects thereof, have a large impact on the everyday life of people:

- Environmental and health issues. The EU Water Framework Directive gives the EU the most stringent water discharge regulations in the world.
- Water shortages that will increase due to pollution, population growth, wealth and climate change. This is already influencing several countries in the EU, but also in the rest of the world. The depletion of important minerals is, among others, also caused by non-sustainable water treatment technologies.
- Absence of safe drinking water, irrigation water and sanitation in the 2nd and 3rd world is causing immense stress (as described in the UN Millennium Development Goals) that can be relieved by new water treatment technology.

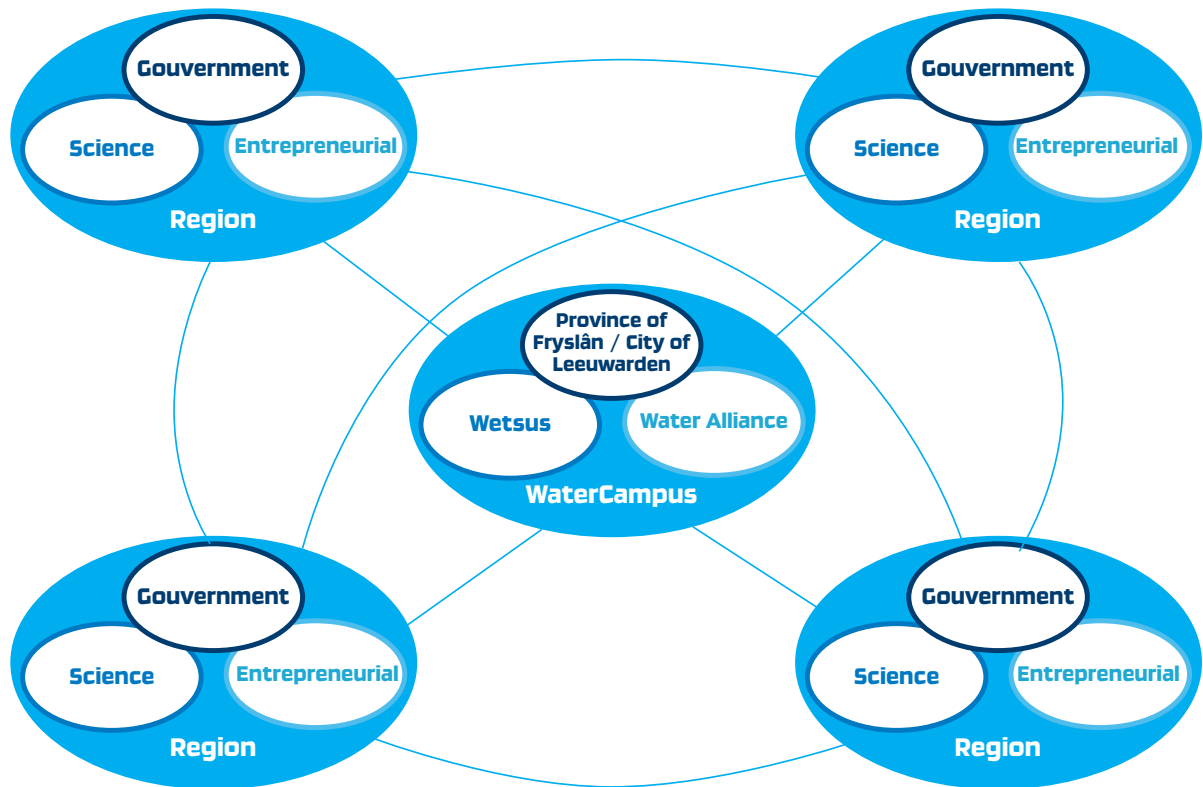
Business Market Combinations: Water technology for public drinking water production and sewer water treatment is a very large market. Globally, the largest use of fresh water is for irrigation purposes. The industrial water supply and industrial waste water treatment also represents a significant market. In total the annual water treatment market exceeds €500 billion per year with an annual growth of more than 10%.

State of the art Science and Process technology: Multidisciplinary approaches from nano technology, bio-sciences, separation technologies and electro-chemistry are necessary to develop breakthrough solutions for the enormous water problems mankind faces.

Network of Excellence

A network is proposed in which the most excellent regions in water technology from across Europe will be brought together, which will facilitate the development of breakthrough solutions for the world water problems. This network will enhance cooperation between the governmental, entrepreneurial and scientific community of each participating region. This will create a strong public-private-partnership (PPP) with a triple helix structure. The partnership will target all the elements of the knowledge triangle: education, research and innovation, as well as entrepreneurship. Together these form the building blocks for new talent, ideas, knowledge, products & services, competitiveness and economic growth & jobs. To stimulate know-how clustering it is important that the critical mass of international research is embedded in a dedicated innovation ecosystem. A concentration of commercial and scientific activities in the field of water technology provides synergy in the shape of natural joint ventures, new creativity and facility sharing. In addition, concentrating water activities in a single geographic area increases the international profile of all participating regions.





The selection of participating regions will be largely based on RIS3 and the business/science focus of a region. The RIS3 strategy of the region will highlight which area of the multidisciplinary field of water technology they excel in. To be successful the network needs a large variety of disciplines to generate the next generation of water technology products and solutions.

To operate successfully on a pan-European basis there is a need for European regions to commit themselves to this ambitious network, at the same time this process can be facilitated and strengthened by linking up with important European water initiatives, such as the European Technology Platform for Water Supply and Sanitation (WssTP), the Climate-KIC and the European Innovation Partnership on Water (EIP on Water), last but not least the network can be supported by European funding instruments: INTERREG EUROPE, Horizon2020, JPI Water and EIT.

Governmental

- Creating a network of regional and local politicians
- Annual inspiring meetings in partner regions to exchange ideas and best practices
- Creation of jobs in sustainable water technology in each participating region
- Creating Ambassador Cities for sustainable water technology
- Making an INTERREG EUROPE project proposal

Entrepreneurial

- Creation of three start-up companies in every region
- Annual matchmaking event for companies within the network
- Brokerage events for Horizon2020 to form proposals
- Entrepreneurship courses for start-up companies
- Improving interaction between science and entrepreneurship
- Using EU instruments like European Enterprise Network (EEN)
- Stimulating and facilitating existing companies to innovate

Science

- Brokerage events for Horizon2020 and proposal formation
- Breakthrough technology development
- Training of employees at the European Centre of Excellence
- Preventing brain drain by creating highly skilled jobs in participating regions
- Collaboration with SMEs and end-users of breakthrough technologies
- Collaborative network on multidisciplinary topics
- Develop demand driven science model

EU Policy

The objectives and activities of the network are in line with several of the goals and objectives of: Widening Participation; European Research Area; (Regional dimension of) JPI Water, EIP on Water, EIT, European Growth and Jobs strategy, European cluster Excellence, Internationalisation of RIS3, Societal Challenges and European Competitiveness. This proposal is also in line with the ERDF (European regional development fund) and can be covered by this fund.

KPI

Key performance indicators for the whole program (5 years) with 10 regions

INTERREG/H2020 funds	20M Euro
SME collaborations	200
FTEs paid by the network	40
FTEs created by the network	100
Brokerage meetings	5
Matchmaking meetings	5
Governmental meetings	5
Start-ups	30
Regions	10

Budget

To strengthen and expand the cooperation of the WaterCampus network with other regions a minimum annual budget of 200.000 euro per region for a period of 5 years is foreseen.

The programme can be financed from the ERDF budgets of the individual regions. The aim is to acquire additional funding from INTERREG-VC and Horizon2020. The only funds being spent outside the participating regions are dedicated to human capacity building and training of PhD's, Post Docs and researchers at the European Centre of Excellence for Sustainable Water Technology. With a minimum of one PhD student for 4 years.

Budget table in K€ per year

	Training	Travel	Meeting
Government		15	10
Business		15	10
Science	125	15	10

WaterCampus Leeuwarden: The coordinator of the European network of excellence for sustainable water technology

The province of Fryslân has placed water technology at the core of its RIS3 strategy. This ambition is echoed by the provincial capital Leeuwarden, which uses “capital of water technology” as its motto and is recognised by the UN as innovating city for water technology. To stimulate know-how clustering and valorisation, an innovation ecosystem has been created: WaterCampus Leeuwarden, which stimulates collaboration between the various public and private organizations that together constitute the water sector. The WaterCampus has a clear ambition to stimulate the competitiveness of the whole EU. This unique ecosystem for the water sector stimulates cooperation between public and private companies, between universities and scientific chairs; and between regional, national and European policy makers and is in that sense an example for triple P cooperation for other sectors.

The WaterCampus consists of:

1. The European centre of excellence for sustainable water technology Wetsus, which brings together leading European universities and companies to develop breakthrough technologies.
2. The Water Alliance, which constitutes a SME network dedicated to water technology (they cover the national scale).
3. The Centre of Expertise in Watertechnology (CEW), which is an applied research centre with a focus on valorisation of knowledge and education in universities of applied sciences.

Overall, WaterCampus Leeuwarden offers a unique research infrastructure, and is the water technology meeting point for scientists and companies from all over Europe. The international cooperation organized and stimulated by WaterCampus

Leeuwarden leads to knowledge, talent and entrepreneurship that contribute to solutions for global water problems. Because of the activities of the WaterCampus network 40 new companies have started their business in the field of water technology.

Government: **Province of Fryslân and city of Leeuwarden**

The province of Fryslân is an innovative province which has water technology as one of its main focus points. This province is characterized by a relatively high density of independently owned and globally exporting water technology companies and a high degree of organization in the sector. The province supports water technology science and business development in numerous ways including funds, demonstration sites and high level presence at important water events.

The capital of Fryslân is Leeuwarden, besides being European Capital of Culture 2018, it is recognized in 2014 as UN innovative city in water technology and uses capital of water technology as motto. The WaterCampus is located in Leeuwarden, close to the city centre.

Science: **Wetsus, European centre of excellence in sustainable water technology**

Wetsus is a leading research institute in which 52 European professors from 20 EU universities supervise 65 PhD students in innovative breakthrough technology development. This research is financially supported by more than 95 worldwide active companies of which 45% are SME's. Wetsus combines scientific excellence with commercial relevance. Through this collaboration more than 26 patents have been transferred to companies, and 26 start-ups have been realized. The transferred knowledge and patents are used by many of the member companies. The Wetsus staff consist of specialists from all over Europe and is about 50% non-Dutch. Wetsus is and has been coordinator of 3 FP7 projects and 1 Horizon 2020 and Interreg projects.

Entrepreneurial: **Water Alliance**

The Water Alliance has a business focus and has a SME member base from all over The Netherlands. About half of these companies are SME's of which many are within the region, but of course also SME's outside the region are part of the network. The Water Alliance organizes national and international business to business events, represents EU companies outside the EU, supports companies to start-up and grow and organizes an annual SME award in Water Technology.



Wetsus building



Science centre

Proposition

We offer this program to interested regions. Please indicate your interest by contacting the persons below. Hereafter we can identify if your region fits the program and which organizations in the region would be the best to participate.



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