TOP DUTCH Naturally leading the transition

# WHY START-UP

in the TopDutch region



TopDutch is the economic region of the provinces of Groningen, Friesland and Drenthe. We're located at the top of the Netherlands, and the forefront of the transition. Together, our companies, knowledge institutions and government are building smart and sustainable solutions for global challenges, and developing the talent that's key to unlocking the economy of the future.

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# WELCOME TO THE TOPDUTCH REGION!

**TOPDUTCH** 

**The Netherlands** 

**Germany** 

**Belgium** 

### **TopDutch: Naturally leading the transition**

1.7 million inhabitants. 75,000 students. 6 key industries. 3 provinces. In TopDutch we're a diverse but tight-knit bunch. We're TopDutch because we're located, literally, at the top of the Netherlands (we're the economic region for the three Northernmost Dutch provinces of Groningen, Friesland and Drenthe). But on top of that, we're TopDutch because we're home to a number of top Dutch ambitions, solutions and businesses ecosystems.

We host many SMEs and intelligent start-ups, alongside large international companies such as Google, IBM and Shell. Regional partnerships, integrated talent development and the expanding number of strategic international

alliances are key to our region's leadership position in a number of key, system-

level transitions.

# MEET TOPDUTCH

From large, established multinationals all the way to the hottest new start-ups, the TopDutch region draws in global businesses as a result of our purpose-driven, people-powered ecosystems, our competitive financial and fiscal environment, and our green, digital and talented business culture.

## **MEET TOPDUTCH**

The top 10 things you should know about us:

- Most competitive economy in Europe
- Interconnected ecosystems rich in knowledge
- Regional economy of green & digital innovation
- Competitive tax system & fiscal incentives
- World's most connected country
- World-renowned research & education

International & multilingual society

**8.**Fifth strongest talent pool globally

9. Innovative business culture

Best work/life balance & happiest kids in the world

## **OUR ECONOMY**

# We have the most competitive economy in Europe - and fourth most competitive worldwide -according to the World Economic Forum's 'Global Competitiveness Report'.

### **GDP & Prosperity**

We're a small country but a big economic player. We have the 5th largest economy in the EU - in terms of gross domestic product (GDP) and the 2nd richest population in the EU - in terms of real disposable income:

Despite being only 23rd in size.

### **Regional Economy in Transition**

Our global economy is undergoing a large-scale transition. Old industries need deep restructuring and new industries are constantly arising.

In the TopDutch region, we're leading that transition, naturally.

Together, we're building smart and sustainable solutions to

global challenges, and developing the applications and talent we
believe are key to unlocking the economy of the future.

Here, top-rated knowledge institutions and government agencies naturally come together and are focused on cocreating system-level transitions across our region's key industries, including green energy, green chemistry, digital innovation, WaterTech, life sciences & health and AgriFood.

The Ne World E

#### **Fiscal Incentives**

The Netherlands ranked 14th globally on the 2022 International Tax Competitiveness Index. TopDutch businesses benefit from competitive corporate income tax rates, a wide tax treaty network and a number of attractive incentive programs, including special provisions for highly skilled expatriate workers.

At 25.8% (and 19% on the first €200,000), the Netherlands has one of Europe's most competitive corporate income tax rates. Certainty in assessments relating to future tax positions also helps multinational companies to thrive here.

The Netherlands assists companies who need to bring employees in from other countries through a number of tax provisions. These include a sizeable limited-time tax break (the 30% ruling) and tax-free ability to reimburse international school fees, relocation expenses and moving allowances.

#### Infrastructure

The Netherlands is the world's most connected country. For the tenth time, the Netherlands came first on DHL's 2022 Global Connectedness Index. Our excellent physical infrastructure, strategic location and super-fast internet helps us stay globalized.



## **OUR PEOPLE**

### From kindergarten to retirement, TopDutch talents are constantly developing.

#### **Education**

Already in elementary school, our children foster an exploratory spirit and independent thinking with our 'learn through play' mentality. At the same time, they're learning multiple languages as a child, which is why 90% of our adults are fluent in English, and many in other major languages such as German, French or Spanish.

Once they've grown to adolescence, the 130,000+ annual TopDutch students gain access to one of the leading higher education systems in Europe. Here, they can choose between our world-renowned research universities, universities of applied sciences, and vocational education, depending on what type of skills they desire and the sort of career they'd like to develop. The curated mix of educational levels complement each other, with different expertise working together to optimize output.

#### **Business Culture**

Our world-renowned knowledge institutions produce internationalized and specialized fresh talent every year, who join the workforce to add to our talent pool ranked no.3 in the world, according to the IMD's World Talent Appeal Index 2022.

Their hard work made us the 5th most innovative country worldwide, ranking in the top 3 in terms of our business environment, financing for start-ups and online creativity.

our business environment, financing for start-ups and online creativity.

With 50% of the country's GDP being derived internationally, the presence of internationals is generally viewed as positive. This is particularly true of the TopDutch city of Groningen, where

94% of people agree we're a good place for immigrants to live, putting it in the top 5 in European cities.

### **Quality of life**

according to UNICEF.

Here in the TopDutch region, our landscape is a great mix of dynamic cities and tranquil countryside. Our residents can enjoy all the benefits of city life, whilst still being surrounded by vibrant natural environments. We're also

less crowded than the western part of the Netherlands: Which means less traffic, cleaner air, lower costs of living and less pressure. We're a seriously good place to live - proven by the fact that our city of Groningen is ranked as the 5th happiest place on earth by the World Happiness Report!

The TopDutch region has always had a healthy attitude to work/ life balance. We know that quality downtime is an important contributor to better productivity. We're very successful in combining work, family commitments and personal life. In the Netherlands, moms or dads often work part-time, facilitating both parents to take on a dual role, and contributing to the overall wellbeing of all household members. No wonder our citizens have some of the best work/life balances in the OECD and our kids are the happiest worldwide,

no.
happiest kids in the world





on Global Innovation Index and World Talent Index

most proficient non- native English speaking country

# MEET OUR START-UP SCENE

The tight-knit business community and collaborative culture of the Northern Netherlands makes fertile ground for innovative start-ups across a wide range of industries. Well-established firms are always willing to give the youngsters a hand, and the communities of start-up ecosystems, accelerators and shared facilities makes the sharing of knowledge and skills all that easier.

# MEET OUR START-UP SCENE

What makes TopDutch a good place to be great:

One of the most attractive start-up locations

Second healthiest economy in EU for start-ups

Third heaviest start-up density & VC investment in EU

Fastest growing start-up ecosystem in the Netherlands

Tight-knit community of start-ups and scale-ups

Dedicated innovation institutions for knowledge sharing

Catalyst for some of the world's most exciting tech scale-ups

Unique in the world start-up visa program

# DUTCH START-UP ECOSYSTEM

#### A nation of start-ups

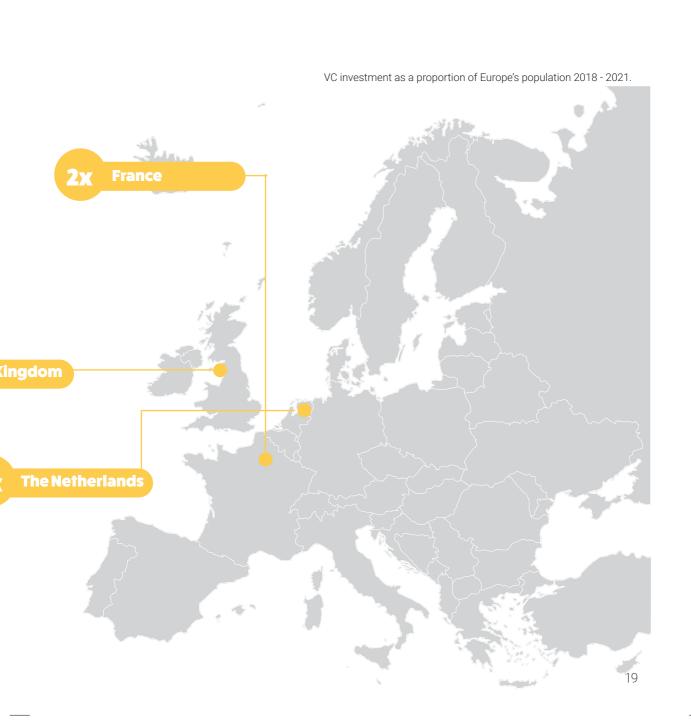
The Netherlands' ambitious business environment for start-ups, access to quality talent and supportive state led Startup Blink to name us the forth strongest start-up ecosystem in the European Union on their 2022 rankings. The nation's ecosystem is supercharged by the €75 million 'Ambitious Entrepreneurship Action Plan', which provides start-ups with better access to capital, knowledge, innovation and the global market.

It's no surprise, therefore, that our top-notch business environment has indeed made fertile ground for a diverse array of high-potential start-ups. In 2021 we had the third heaviest start-up density in the European Union. Being a start-up in the Netherlands means being a part of a network of like-minded, ambitious entrepreneurs.

**3x** United Kingdom

As a small country, we punch well above our weight in terms of VC funding capture. Between 2017 and 2021, we raised the third largest share of VC funds in the European region weighted for GDP and population, after the UK and France. In particular, we were the most capitalized relative to our population, seeing nearly four times the proportion of total funding compared to our proportion of Europe's population. No wonder WIPO ranked us the third strongest market globally in terms of finance for startups and scaleups on their Global Innovation Index 2022.

4x The Net



# OUR START-UP ECOSYSTEM

### A jewel in the Netherlands' crown

Within the Netherlands, the TopDutch region is a hotspot for impactful new start-ups. Our province of Groningen has the fastest growing start-up ecosystem in the country, growing by an average of over 12% per annum for each year since 2018, equating to over 1,200 new start-up jobs within

4 years. Our provinces of Drenthe and Friesland are also powerful catalysts, with Frisian start-ups raising €22.7M in VC

funding in 2022 and Drenthe employing over 600 people across 40 start-ups.

TopDutch's supportive environment has laid the foundations for some of the world's most exciting tech start-ups and scale-ups.

Take, for example, HackerOne – recently ranked number 5 in Fast Company's 'Most Innovative Companies' – which was born in the TopDutch region and now has branches

across the world. Or Catawiki, who was Europe's fastest-growing tech company when it scaled-up by 45000% in a year.



This growth is supported by our tight-knit communities of start-ups, scale-ups and established firms, who can connect, collaborate, and knowledge-share via our dedicated innovation institutions; Founded in Groningen, Founded in Friesland and Ik Ben Drents Ondernemer. They are dedicated to supporting more high-quality start-ups from pre-seed to scale-up via four pillars of development:

1. Access to talent – stimulating the development of a diverse and entrepreneurial pool of talent across a variety of walks of life (e.g. students, researchers,

experienced workers, medics etc.) and supporting their start-up ambitions.

- 3.3K+ 23O+ 14.7m

  start-up start-ups VC funding 2022(€)
  - Groningen

**Drenthe** 

600+ 40+ 2.1m

start-up start-ups vc funding 2022(€)

- 2. Access to technology closing
  the gap between (new) technologies
  and new business solutions
- 3. Access to market facilitating access to the market for start-ups by organizing regional public and private launching customer initiatives, networking opportunities and (international) missions.
- **4. Access to capital** creating an optimal

investment climate in the TopDutch region so that start-ups and scale-ups throughout every life stage have easier access to the best financing, subsidies, schemes, financers and investor-readiness training.

# EXPLORE OUR PROGRAMS & SERVICES

The TopDutch region is committed to developing a start-up ecosystem that will help us continue to lead the global transition and create smart and sustainable solutions to global challenges. We are doing that by cross-chain programmatic development. From pre-seed to scale-up, our services and programs support entrepreneurial talent to take the first step, inviting promising internationals to join us, and facilitating their development via incubators and training.

### **OUR PROCESS**

# How we support international start-ups to thrive:

# **1**. Get in touch

Through our TopDutch contact page, by email or direct to your dedicated project manager, get in touch to start the conversation.

# **2**. Alignment meeting

We'll schedule a meeting with you and our regional dedicated project team to identify your needs and align objectives.

# 3. Network roundtable

Based on your start-up needs, we'll set up a roundtable with your future network. This could include a facilitator, investors or industry buddies, for example.

# Personalized start-up plan

Your dedicated project manager will draw up a personalized start-up package, with a checklist of arrangements and practicalities needed to successfully start-up in TopDutch, and a plan of how they'll support you.

# 5. Settle into TopDutch

The IWCN helps with the boring stuff (bureaucratic or practical matters) and the fun stuff (like meeting new friends!) Meaning you can jump right in to supercharging your start-up.

# **7 Facilitating financing**

Has your business reached the next level, and you need an injection of capital to achieve your potential? The NOM, alongside its own investment fund, provides access to their network of financiers, and will connect you with an investor who works for you.

# 6. Business development

The TopDutch region offers a number of business development programs for (foreign) talent to set up business in the region. Mix and match our programs to tailor a personalized track that matches your needs.

# Always a helping hand

Even after you've established yourself in the TopDutch region, we'll stay on hand to offer advice as you grow – whether that's finding a bigger site, hiring new talent, or navigating the TopDutch business environment.

# OUR RELOCATION SERVICES

#### Make yourself at home in the TopDutch region

In the TopDutch region we believe that innovation should know no borders. That's why we facilitate talented entrepreneurs from across the globe to start-up in the TopDutch region. N.V. NOM sets up founders with innovative ideas with help to gain a visa to live and work in the Netherlands, connect with local industry leaders to mentor their business development, and help them settle into the region both professionally and personally.

- Setting up business in a foreign country can bring about great benfits.
   But it also means taking on a host of new challenges. Through N.V.
   NOM, we're ready to help you with every stage of the process in (re)locating your business to the TopDutch region.
  - Our professionals in finance, location/acquisition, business development and networking are here to give businesses from around the world a helping hand.
  - We know the TopDutch region inside out, and TopDutch industries know us. We know the best business locations, which permits you need to have, who the best energy suppliers are, how to find your dream talent, which subsidiaries or grants you may be eligible for, and how to access them.
  - We can help you with capital or know who to connect you with.
     How we can help your business?

- And we believe that innovation should know no borders. The Start-Up Visa NL program is a unique accelerator program that allows the brightest entrepreneurial talent from non-EU/EEA countries to start-up in the TopDutch region.
  - The TopDutch region provides opportunities for some of the most promising entrepreneurial talent from across the globe to find their home in the region.
  - Non-EU/EEA entrepreneurs can arrive in the Netherlands on a one year startup visa, the duration of which is spent establishing their business and their skills.
  - Not sure where to start? The Startup Visa NL crew matches startups with our facilitators free of charge, so that both parties can focus on what's really important: building a successful company.
  - At the end of the startup visa year, entrepreneurs can apply for a long-term self-employment visa, and we'll provide support in accessing any further financing, partners, or business development programs needed to succeed in the TopDutch region.

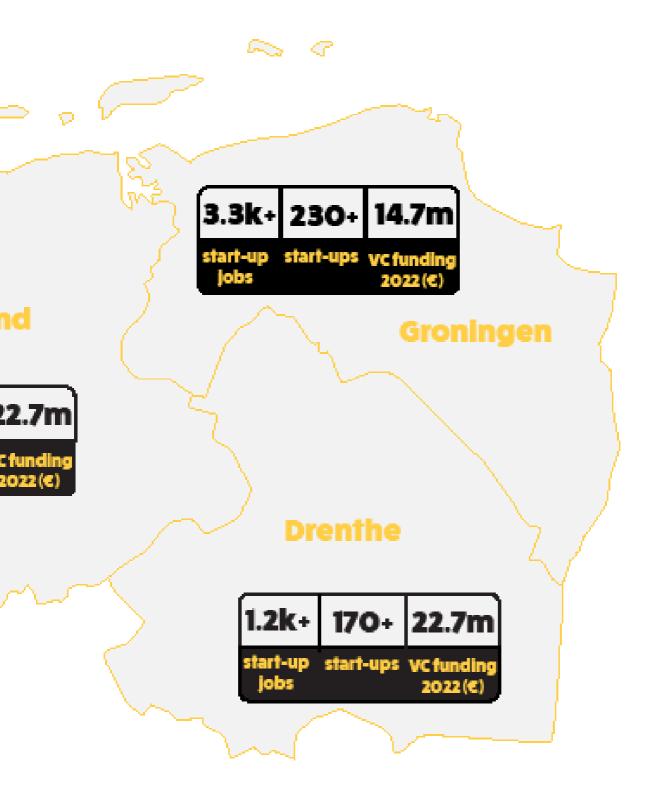
# OUR PROGRAMS & FINANCING OPTIONS

### Take the next step with our business development programs

The TopDutch region is leading in developing green and digital solutions for global economic, social and ecological challenges. Doing that requires not just established companies, but also the innovating thinking of start-ups. That's why we have a number of opportunities for (foreign) talent to set up business in the region. Mix and match our programs to tailor appersonalized track that matches your needs.

1.2k+ 17O+ 22.7m

start-up start-ups vcfunding 2022(€)



### **STAGEO**

### **Discovery and development (TRL 1-6)**

Do you have an innovative business idea that you think aligns with TopDutch's ambitions to build smart and sustainable solutions to global challenges? We offer a supportive base for you to develop your product or service from fundamental research, developing a proof of concept (PoC) to developing, validating and piloting a prototype.

### **Financing options**

- Grants: Depending on your product, there are a number of different grant schemes that can help you with fundamental research (TRL 1), applied research (TRL 2) and proof of concept (TRL 3). For example, the MIT feasibility scheme provides SMEs in the TopDutch region with a idea that aligns with one of our missions with up to €20,000 to perform a feasibility study. Or researchers collaborating with other local partners on a knowledge development project or valorization project that will help us lead the transition to a smarter, healthier and more sustainable future can apply for a grant from the Just Transition Fund of up to €4,000,000.
- Proof of Concept fund: Entrepreneurs developing their PoC to a test prototype (TRL 4), validating (TRL 5) and demonstrating (TRL 6 and 7) their prototype can access the Proof of Concept fund launched by the University of Groningen, the University Medical Center Groningen (Triade), the Investment and Development Agency for the Northern Netherlands (NOM) and the Groningen Investment Fund (GIF). This offers pre-seed investment for high

- tech start-ups working in one of our key industries (Life Sciences & Health, Digital Innovation, High Tech Systems and Materials, Green Chemistry, WaterTech, Green Energy), or on a solution for sustainability and circularity challenges.
- RVO early stage funding: SMEs, innovative start-ups and spin-offs discovering and developing an innovative solution to a societal challenge, and have a statement of intent from a future investor, can apply for a proof of concept loan from the Netherlands Enterprise Agency (RVO). For the technological development of a new product, process or service, or the clinical development of a new drug or medical device, entrepreneurs between TRL 3 and 9 can also apply for up to €10 million Innovation Credit from the RVO.
- Institutional investors: Institutional investors with an active investing mode include (but are not limited to) RUG-Ventures, Hanzepoort (Triade/UMCG) and NOM (the Investment and Development Agency of the Northern Netherlands). Together with a diverse scope of semi-public investors they are accountable for a large slice of the investment cake in the TopDutch region.

### **Programs**

- University of Groningen (RUG): The University of Groningen's
   Faculty of Science and Engineering and Faculty of Economics and
   Business offers various business development support programs,
   both to support existing students or researchers to spin-off from
   the university, and by offering collaboration opportunities for
   fundamental research.
- Venture Lab North: The Business Development Program from VentureLab North offers aspiring entrepreneurs with an innovative idea and a vision for a successful business a one-year business

development program. Through three core components –

1) weekly workshops with a community of industry experts,
ecosystem leaders and researchers, 2) one-to-one mentoring
sessions and 3) quarterly pitch presentations to a panel of
TopDutch entrepreneurs and thought leaders – the program
supports its participants to develop a valid prototype. VentureLab
North also offers 'hackathon'-style weekends to help aspiring
entrepreneurs sound and test their ideas, develop business models
and pitch to an experienced jury, and monthly expert lectures and
networking events.

- Start-up Readiness Program: Are you ambitious and do you have a startup idea? Do you want to bring a new, innovative product to the market as a (potential) entrepreneur? But are you not sure which market to focus on or who your customers are? A good start is half the battle! The Startup Readiness Program is a tenweek program consisting of four different modules that you can participate in as a startup and that will take you towards the next step to a successful startup. The program consists of group sessions, peer-to-peer, and individual coaching.
- Start-up in Residence: Start-Up in Residence Noord-Nederland is an accelerator program which offers start-ups the opportunity to collaborate with local government, universities and other public institutions from the TopDutch region on solutions for 12 different challenges facing our communities. During the six-month program, entrepreneurs receive support and guidance from professional coaches to further develop their idea and prototype into a viable product. Once the solution is market-ready, the public sector challenge owners will also act as a launching customer for the most promising products.

### STAGE 1

### **Demonstration and deployment (TRL 7-9)**

Are you an innovative start-up in looking to fine-tune your market development? The TopDutch region supports founders to discover their customer, test and demonstrate their concept until its ready for take-off.

### **Financing options**

- Institutional investors: Institutional investors with an active investing mode include (but are not limited to) RUG-Ventures,
  Hanzepoort (Triade/UMCG) and NOM (the Investment and
  Development Agency of the Northern Netherlands). Together with a diverse scope of semi-public investors they are accountable for a large slice of the investment cake in the TopDutch region.
- Angel network: SMEs counts for over 90% of business in the
  TopDutch region. Former entrepreneurs regularly re-invest in the
  region and bring their own expertise. Our region's cooperative
  culture created well-organized business angel networks
  which spread out nationally and even globally, and our open
  attitude means we invite and support innovative international
  entrepreneurs to access them.
- Venture Capital: We offer access to our deep contacts with a
  variety of Venture Capital investors by fund-in-fund relations. In
  TopDutch, you'll discover a broad network of expertise, (inter)
  national contacts, (former) entrepreneurs, specialists and key
  opinion leaders. Our focus is on, but not excluded to, Life Sciences
  and Health, Digital, High Tech Systems and Materials, Green
  Chemistry, WaterTech, the energy transition, sustainability and

circularity.

#### **Programs**

fine-tune their market development – for example by testing their working prototype on potential clients, connecting with their first paying customer, or by expanding their existing positioning to acquire new clients – can accelerate with the MRP.

During a ten week program, together with fellow TopDutch entrepreneurs, you'll test all your assumptions about your customer. In a mix of one-to-one and group sessions, you work on the questions "what problems do customers in my market have? and "how can I offer a solution?". Throughout the course you'll learn to engage in effective conversations with your customers, so you can think from their perspective and validate solutions in cooperation with your target group.

The first half of the program will look at your market, customer types, customer problems and devise a potential solution. After you've developed, tested and validated your solution, you'll get stuck into developing your product or business model with a deeper understanding the customer.

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- challenge owners will also act as a launching customer for the most promising products.
- Investor Readiness Program: Are you an innovative start-up with growth ambitions, and need to develop a quality investment proposal in order to secure capital for further development, professionalization or scaling-up? Do you offer an innovative product or service with a working prototype and a technically, commercially and financially feasible concept? In a customized, one-on-one program, the IRP will help you will develop a promising proposal which will help convince investors to inject capital into your company's growth. Our business developers will coach you on all aspects of your business case: From the product, to market validation, business plan, and financing strategy. Throughout the program, you will also have extra meetings where you can get feedback on your proposal from other participants, our partners and potential investors. Once the program is completed, and you've developed a concrete investment proposal, we'll help you connect with the investor that's right for you.
- **Bestart:** The BeStart accelerator programme for ClimateTech start-ups lasts one year and goes through three stages: Build, Launch and Scale. In the 'build phase' bootcamp helps participants to validate their business idea and develop it into a business model and strategy. The 'launch phase' sees you meet weekly with your business coach to develop a growth map for your business. In the 'scale phase', Bestart offers guidance on how to make the right choices in a focused way in order to keep moving forward.

### STAGE 2

#### **Customer validation**

Are you a start-up whose innovative product or service has an early evangelical customer base? The TopDutch region offers financing options and business development programs that supports you to set up a scalable sales process and a solid business plan to allow you to meet your growth ambitions.

#### **Financing options**

- Institutional investors: Institutional investors with an active investing mode include (but are not limited to) RUG-Ventures,
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and Health, Digital, High Tech Systems and Materials, Green Chemistry, WaterTech, the energy transition, sustainability and circularity.

#### **Programs**

- Boost-up: Ambitious start-ups with growth potential are supported securing their next round of investment with the Boost-up program. After an initial pitch and sparring sessions, you are matched with a business partner that provides constructive criticism, works with you to finetune your business plan with strategic choices in operations, marketing and sales, and introduces you to the knowledge, capital and network you need to grow at your final partners pitch.
- **Investor Readiness Program:** Are you an innovative start-up with growth ambitions, and need to develop a quality investment proposal in order to secure capital for further development, professionalization or scaling-up? Do you offer an innovative product or service with a working prototype and a technically, commercially and financially feasible concept? In a customized, one-on-one program, the IRP will help you will develop a promising proposal which will help convince investors to inject capital into your company's growth. Our business developers will coach you on all aspects of your business case: From the product, to market validation, business plan, and financing strategy. Throughout the program, you will also have extra meetings where you can get feedback on your proposal from other participants, our partners and potential investors. Once the program is completed, and you've developed a concrete investment proposal, we'll help you connect with the investor that's right for you.

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## STAGE 3 & 4

#### Scale-up

Are you are an established start-up looking to scale-up or expand in the TopDutch region? If you're ready to take the next step in your business journey, TopDutch will help you take advantage of the opportunities the region's supportive start-up ecosystem and strong economy have to offer you.

## **Financing options**

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  Development Agency of the Northern Netherlands). Together with a diverse scope of semi-public investors they are accountable for a large slice of the investment cake in the TopDutch region.
- Strategic investors and Private Equity: Our extensive (inter)
  national network of SME's and multinationals ensures TopDutch
  scale-ups eyes and ears around the world. This is only
  strengthened through our direct connection with the Netherlands

Foreign Investment Agency. On a daily basis, we are in search of valuable contacts worldwide to find suitable strategic partners for businesses in the Northern Netherlands.

## Personalized business development and location services

Besides the nine start-up programs, we provide more established start-up and scale-ups with a personalized business development assessment, access to our network of investors and financing options, and location services – of course in terms of finding the perfect spot for you – but also sharing our knowledge on factors like regulation, taxation, subsidies and finding talent.

# SETTLE INTO THE TOPDUTCH REGION

#### With the International Welcome Center North

The International Welcome Center North (IWCN) is a one-stop shop for international people living or coming to live in the provinces of Groningen, Friesland and Drenthe and offers service and information in three areas:

- Official matters: The IWCN efficiently arranges government formalities for international arrivals, such as residence permits (for non EU/EEA Citizens) and municipal registration (required for all residents)
- 2. Practical matters: From finding the right house, opening bank accounts, signing up for health insurance to selecting the right school for the children, the IWCN is happy to provide everyone living in the region with referrals to reliable service providers and detailed information on all kinds of practical matters.
- 3. Social and leisure: The IWCN organizes multiple events and activities that help people with building a strong social and/or business network and becoming familiar with the Dutch language and culture.

# BOOVER OUR KEY INDUSTRIES

The TopDutch region is a collection of interconnected, purpose-driven and people-powered ecosystems that are committed to finding green and digital solutions for global economic, social and ecological challenges.

We're focused on 6 key industries: Green Chemistry, WaterTech, Agrifood, Digital Innovation, Life Sciences and Health and Energy. Read about our key industries in detail, and find out more about the innovative projects we're working on.

## **AGRIFOOD**

our offer:

Dairy Capital of Europe

**Z**.

Healthy Ageing Capital of Europe

Feeding a healthy and sustainable economy

World-class knowledge & innovation communities

5.
Gateway
to EU market
& access to
talent

# How our AgriFood industry is growing a healthy future

## 1. Dairy Capital of Europe

We're building the most innovative, sustainable, remunerative and animalfriendly dairy chain in the world.

- Dairy Campus, part of AgriFood university Wageningen (WUR), spurs innovation with education and R&D.
- The Dutch physical environment has led to the optimal density of healthy cows.
- Our healthy cows produce exceptional nutrient-rich milk and have a high lifetime yield of optimized pregnancies and lactations.

## 2. Healthy Ageing Capital of Europe

We're performing groundbreaking research to increase human lifespan with healthy years through a healthy diet and lifestyle.

- Lifelines research cohort and biobank provides insight into the effects of lifestyle on health.
- Our R&D and innovation communities extract dietary building blocks for advanced nutrition
- Our dedication to sustainable farming; protecting biodiversity; land, seed and crop quality and circularity keeps our environment, and us, healthy.

## 3. Feeding a healthy and sustainable economy

We're dedicated to feed-linking industries with sustainable building blocks for a healthy economy, and providing nutrients for the protein transition.

- AgriFood crosses over with: Green Chemistry by growing crops used
  as bio-based building blocks; Energy by using agricultural waste as
  feedstock for green fuels; Digital Innovation by developing smart tech
  to optimize performance; WaterTech by working together to develop
  agricultural water solutions; Life Sciences & Health by researching
  protein structures and healthy nutrition.
- As demand for plant-based protein is increasing, we're leading the
   protein transition by extracting valuable proteins from crops.

## 4. World-class knowledge and R&D communities

We have the best knowledge institutes and communities for cutting edge AgriFood innovation R&D.

 Our AgriFood ecosystem is home to major research campuses, innovation communities and pilot facilities.12 of the 40 largest AgriFood companies have Dutch R&D facilities, and the Netherlands has the 3<sup>rd</sup> highest private AgriFood R&D investments in Europe.

## 5. Gateway to European market and access to talent

The Netherlands is the ideal gateway to the EU market and provides access to AgriFood talent at all levels.

- Our strong location provides direct access to 244M consumers within
   1,000 km via our dense transport network.
- The Netherlands is the 2<sup>nd</sup> biggest agricultural exporter globally, aided by our excellent trade facilitation and fiscal environment.
- The TopDutch region provides access to AgriFood talent by providing world-class education at all levels, and attracting international talent with our innovation communities.



## Find your facilitator:



Inqubator Leeuwarden is for all ambitious entrepreneurs (of the future) who match the ambitions of the TopDutch start-up ecosystem. Located in Friesland, there is a strong presence of firms in the WaterTech and AgriFood industries.

CAMPUS GRONINGEN Campus Groningen stimulates and supports entrepreneurship, and facilitates innovative initiatives. Besides offering laboratory facilities, business support is offered in the fields of business development, business strategy, intellectual property and patenting, legal aspects, budgeting, finance and risk analysis.

## **GREEN CHEMISTRY**

our offer:

**Cohesive** ecosystem for Green Chemistry & energy

**Access to** green feedstock

**First** CO₂ negative, fossil-free & circular cluster

Hydrogen capital of Europe

**World-class** knowledge & access to talent

# How we're changing the nature of Green Chemistry

## 1. Complete and cohesive ecosystem for Green Chemistry

We offer the most complete and cohesive Green Chemistry ecosystem in Europe.

- Entrepreneurs, government and knowledge institutions collaborate in Chemport Europe, consisting of Chemport Emmen and Heerenveen for polymer/ polymer applications and Chemport Delfzijl for intermediate chemicals, to make chemistry green.
- Companies in Chemport Europe integrate chains and collaborate to close the loop, accelerating the circular economy.

#### 2. Direct access to green feedstock and green energy

We're rich in our own green resources, and also well-connected to Germany and Scandinavia.

- We offer access to green feedstock and building blocks via our regional natural gas reserve; regional reserve of sodium chloride, regional reserve of magnesium chloride, biomass and biorefined chemical building blocks, or easy imports via our seaports.
- We offer access to green energy including our own supply of solar, wind and biomass energy, and imported green energy via the NorNed and COBRA cable.

## 3. Most ambitious ecosystem

We will be the first fossil-free,  ${\rm CO_2}$  negative and circular chemical cluster in the world.

- Chemport Delfzijl will be the first fossil-free and CO<sub>2</sub> negative chemical cluster by using only green chemical building blocks; optimizing all processes; reusing CO<sub>2</sub> and collaborating and investing together.
- Chemport Europe is leading the New Plastics Economy by focusing on 100% circularity; making 100% green products; designing plastic products for easy recycling and developing systems to collect, recapture, filter and recycle all plastics.

#### 4. Hydrogen Capital of Europe

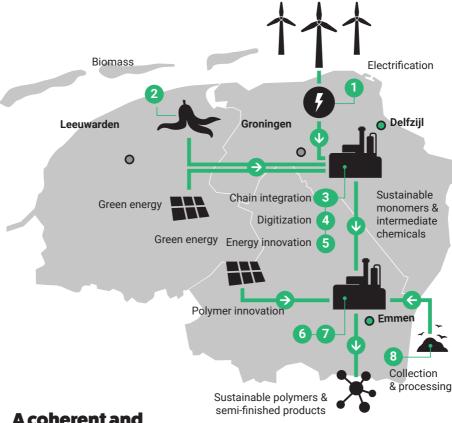
We are dedicated to producing 100% green hydrogen, one of the most used and basic chemicals in the chemistry industry.

- We decided to close our large natural gas reserve in 2022, spurring us to transition from gray hydrogen to green hydrogen production (via blue hydrogen).
- We'll first transition our no.1 in Europe gas infrastructure to an integrated hydrogen transmission network. By 2025, the TopDutch region will be home to 169km of hydrogen pipelines.
- After switching to a hydrogen transmission pipeline network, we will transition the hydrogen mix from blue to green, with a green hydrogen production capacity of 100PJ p.a. by 2030.

#### 5. World-class knowledge development and access to talent

We have a highly skilled workforce that knows green chemistry and offer leading R&D facilities.

The University of Groningen has the largest chemistry facility in the
 Netherlands, and is home to Nobel Laureate Ben Feringa.



# A coherent and innovative R&D and production ecosystem

- 1. 1 MW Test Centre
- 2. Zernike Advanced Processing (ZAP)
- 3. Chemport Industry Campus (CIC)
- 4. Smart Industry Hub

- 5. EnTranCe
- 6. Sustainable Polymer Innovation Cluster (SPIC)
- 7. Green PAC Polymer Application Centre
- 8. Knowledge Centre Recycling

## Find your facilitator:

CAMPUS GRONINGEN Campus Groningen stimulates and supports entrepreneurship, and facilitates innovative initiatives. Besides of offering laboratory facilities, business support is offered in the fields of business development, business strategy, intellectual property and patenting, legal aspects, budgeting, finance and risk analysis. The facilities are suitable for product development in the (bio)chemical field.



Groningen Seaports offer all the ingredients needed to help startups and scale-ups in the energy, circular technology and materials sectos to get off to a good start and undergo long-term and successful development. They offer flexible working spaces from single desks to complete offices, with a close-knit community of young professionals and established multinationals.

## **WATERTECH**

our offer:

WaterTech Capital of Europe

Complete chain of innovation

Access to EU & international markets

Breeding ground for technological partnerships

Access to talent & highly skilled labor

## How we test the waters in WaterTech

## 1. WaterTech Capital of Europe

Our city of Leeuwarden is globally recognized as the WaterTech Capital of Europe.

- It is home to the WaterCampus, which drives innovation in WaterTech both internally and externally.
- WaterCampus is home to five education/training institutes and 25 companies.
- WaterCampus has direct connections to 23 European universities and research institutes and over 200 companies.

#### 2. Complete chain of innovation

WaterCampus facilitates, supports and connects every single step in the innovation chain.

- Science partner Wetsus supports ideation and fundamental research through world-class educational institutes, securing pre-seed funding and patent applications.
- Applied Research partner Center of Expertise Water Technology (CEW)
   supports from applied science to market-ready product development
   with the Water Application Center, 4 demo sites and acts as launching
   customer.
- Business partner Water Alliance accelerates worldwide business development through cooperation, offering matchmaking services and identifying export opportunities.

## 3. Access to European and international markets

We have the best international networks to provide access to global markets.

- Water Alliance is part of Enterprise Europe Network (EEN), which connects tens of thousands of European SMEs for partnerships.
- Water Alliance is part of Global WaterTech Hub Alliance, which provides direct access to industry networks in the USA, Singapore, China, Israel and Korea.
- Water Alliance organizes, supports or highlights international conferences and matchmaking events.

#### 4. A breeding ground for new technological partnerships

Our partners facilitate technological partnerships across a range of projects.

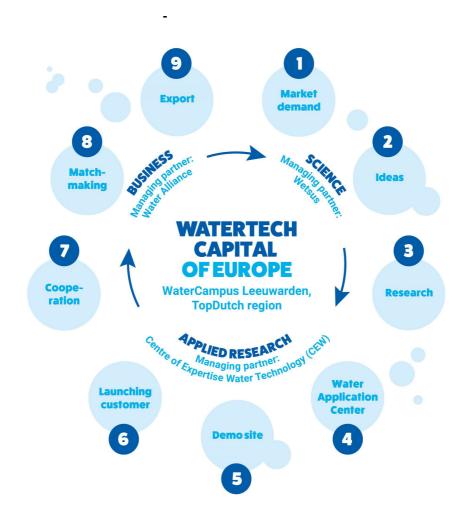
- Partner with Wetsus for groundbreaking scientific research with leading researchers from multiple universities.
- Partner with CEW to develop your first prototype, set up a pilot,
   accelerate the innovation cycle or shorten your time to market.
- Partner with international or local technology partners for turn-key water management solutions through Water Alliance's business network.

## 5. Access to talent and highly skilled labor

The TopDutch region offers a highly skilled, specialized and internationalized workforce.

- Lifelong WaterTech learning program from primary school to PHD and
   MBA level
- Wetsus graduates on average 40 highly and uniquely skilled WaterTech specialists a year.
- Water Alliance supports growth ambitions by connecting industry to talent

## **Chain of innovation**



## **Find your facilitator:**



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WaterCampus stimulates cooperation between (inter) national businesses, knowledge institutes and governments within the water technology sector, in order to create synergy for world class innovation, education and entrepreneurship.

## **DIGITAL INNOVATION**

our offer:

Strong in data science, deep learning & Al

Digitalizing key system transitionst

Access to pioneering talent & skilled labor

**Z.**Test ground for autonomous systems

Digital society & ideal testmarket

Natural choice for smart- and data-intensive business

# How we're accelerating the transition with Digital Innovation

# 1. Foundational research in big data, machine learning & Al and facilitating environment for deeptech

We host a number of leading research institutes, and support science spin-off with business development programs, networks and financing.

- Companies such as IBM and our research institutions are leading in High Performance Computing and solving large problems in science, engineering and business.
- Our University of Groningen collaborates with business and public sector, including global tech firms like Google and Facebook, to perform groundbreaking research and find new solutions in multi-disciplinary centers.
- Al Hub Northern Netherlands is developing Al applications via high impact public-private partnerships.

## 2. Europe's leading test ground for autonomous systems

With a technologically-ready workforce and ambitious businesses, our key industries are digitalizing at warp speed.

 European Digital Innovation Hub Northern Netherlands is accelerating digitalization in our key industries, and establishing the TopDutch region as Europe's leading testing ground for autonomous systems.

## 3. Digitalizing key system transitions

We're accelerating key societal transitions by making systems smarter.

• Our green chemistry and energy ecosystems are leading the sustainable

transitions with CleanTech. Our expertise in big data optimize biotechnical, chemical and energy-intensive processes.

- Our life sciences & health ecosystem is applying HealthTech to lead the transition to healthy ageing with big data labs and e-health applications.
- Our WaterTech and AgriFood ecosystems apply expertise in sensor technology works to make food and water systems smarter and more sustainable.

## 4. Digital society and ideal test market

The TopDutch culture encourages innovation and technological adoption, making the our population an ideal test market.

- Our Noorden Digitaal Coalition shares knowledge, facilitates and educates our citizens to realize a 'spiral of innovation'.
- Several cyber cooperatives are jointly developing cyber resilience in all the region's companies and civil society. We were the birthplace of ethical hacker 'unicorn' HackerOne.

## 5. Access to pioneering talent and skilled labor

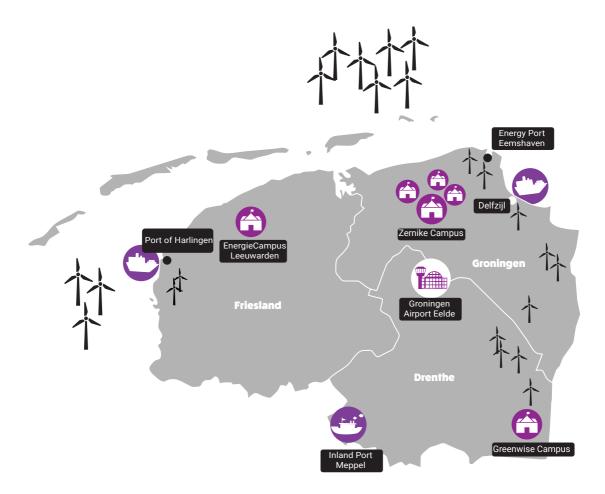
We're home to an ever-increasing number of scientific and entrepreneurial talent

Our institutions offer education to more than 75,000 students including
in some 60 IT-related education courses, from research university level
to vocational level. Our workforce includes large numbers of
technologically and digitally skilled people.

#### 6. The natural choice for smart- and data-intensive business

With a reliable and flexible green grid, the best digital infrastructure and the fastest set-up, we're the natural choice for smart- and data-intensive

## TopDutch's battery testing ground



## Find your facilitator:







The NOM is the Investment and Development Agency for the TopDutch region. They act as a facilitator for start-ups in the Digital Innovation sector, as well as offering business development programs across sectors, and providing investment up to 1 million euros.

Innovation Cluster Drachten emphasizes on Technostarters in digital & high tech systems domain. It's the perfect facilitator for tech startups that need facilities to test their robotics innovation. This hub for smart factories works on the future of metal 3D printing, remote sensoring and big data, robotics, visual intelligence and renewable propulsion

At the Game Bakery, game developers and other creative pioneers work just like a baker bakes his bread: expertly, patiently and passionately.

## **LIFE SCIENCES** & HEALTH

our offer:

**Europe's** reference region Capital of for healthy ageing

**BioAnalysis Europe** 

**Hub of** knowledge and R&D

**Smart and** sustainable ecosystem for MedTech

**Networks and** opportunities for partnerships

**World-class** education & highly skilled labor

## Why Life Science & Health is in our blood

## 1. Europe's reference region for healthy ageing

TopDutch is an EC four-star reference region for Active and Healthy

Ageing. We are leading Europe's transition to sustainable healthcare.

- We host more fundamental and applied healthy ageing research than any other region.
- Our e-health cluster is leveraging our region's expertise in Big Data, Al, and sensor technology to create new applications.

## 2. BioAnalysis Capital of Europe

We have the largest BioAnalytical capacity and diversity in Europe.

- Over 100 LC-MS/MS machines are operational in the region.
- Largest biobank available from Lifelines longitudinal research cohort, making biodata available not only during, but also in the build-up to the emergence of diseases.
- Biomarker Bay, a consortium dedicated to the research, development and application of biomarkers, is supercharging development of tailored diagnostic methods and drugs.

## 3. Hub of knowledge and R&D

We support knowledge to market-ready products with a supportive mix of research programs, shared innovation infrastructure and access to capital.

- We offer access to a complete R&D chain; from fundamental research to product validation.
- Our unique research programs, including Biomarker Bay, ERIBA and

Lifelines, feed developments in pharma and medical technology.

 Our innovation programs - including in the Open Diagnostics Ecosystem and PharmaNL - and the €500 million Campus Community Fund support innovative products to market and offer opportunities for expansion.

## 4. Smart and sustainable ecosystem for MedTech

Innovation and product development are supported via our cross-linked green and digital ecosystem.

- Together with our green chemistry industry, TopDutch leads in the development of medical devices, medical and polymer solutions.
- Cross-linking with our digital innovation ecosystem, we offer advanced data capabilities, supporting the development of ground-breaking
   MedTech with sensor tech and Al.
- Cross-linked with our High Tech and Smart Materials cluster, we are particularly strong in revolutionary lens and catheter technologies.

## 5. Networks and opportunities for partnerships

Our open business culture supports knowledge-sharing, welcomes newcomers, and supports innovative start-ups to reach their potential.

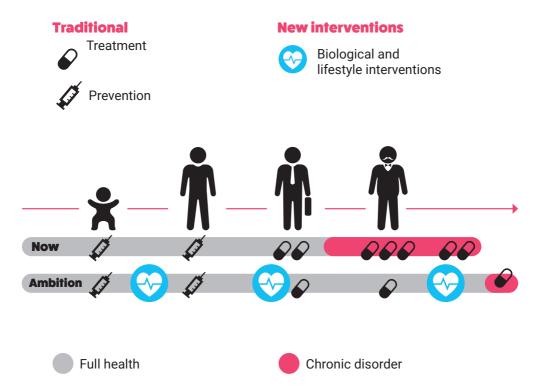
 From pre-seed to scale-up, our services and programs support entrepreneurial talent to take the first step.

## 6. World-class education and highly skilled labor

Our world-class knowledge institutes educate the health and medical professionals of the future.

Home to 75,000 students, including 4,000 medical students in our top
 100 University Medical Center Groningen. Healthy Ageing Campus offers
 research and business facilities to spin-offs and start-ups.

## **Biological and lifestyle interventions**



## Find your facilitator:

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## **ENERGY**

our offer:

Natural gas

Natural gas legacy & switch to green gases

3.

Hydrogen Capital of Europe

5.

System-level sustainable transition

2.

The heart of the North Sea green power plant

4.

Smart students, researchers & talent

# How our Energy industry is powering a sustainable future

## 1. Natural gas legacy & switch to green gases

Built on Europe's largest natural gas reserve, we're now investing in infrastructure, education and innovation for green energy.

 We're transitioning our extensive natural gas transmission network and upskilling our 15,000 experienced workers from the natural gas industry.

## 2. The heart of Europe's largest future proof energy sourcing area

Located on the North Sea coast, we will power Europe's energy transition.

- The North Sea will be Europe's biggest green power plant, with 120GW capacity by 2030.
- The TopDutch region will be a leading powerhouse, scaling our on- and off-shore wind energy production to 12.2 TwH by 2030, including plans for three offshore sites totaling 4,700 MW.
- With TopDutch as the key energy port, the Dutch high voltage grid transports electricity across borders and seas through 24,500km of pipeline.

## 3. Leading the transition to a hydrogen economy

TopDutch is Europe's first and only fully-integrated hydrogen valley. We will continue to lead Europe's hydrogen economy by fulfilling a \$10 billion joint investment agenda by 2030.

• Our inherent natural resources - including salt caverns for storage - and

existing energy infrastructure make us the natural business location for a green hydrogen economy. By 2025, we will host 169km of hydrogen pipelines, which will connect to a further 6,800km of pipelines across Europe by 2030.

- HEAVENN is a large-scale demo program creating a fully-integrated and functioning 'H2 valley'. It now acts as a blueprint for replication.
- Our \$10 billion hydrogen investment agenda will allow us to power
   Europe's future economy with 100PJ of hydrogen p.a. by 2030.

## 4. Smart researchers, students and talent

TopDutch offers an energizing environment for innovation in CleanTech.

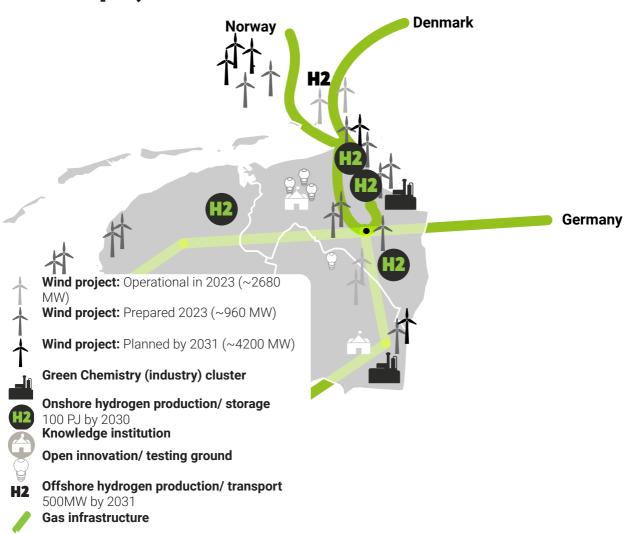
- TopDutch has a culture of open innovation, with a network of knowledgesharing initiatives, living labs, shared testing facilities and innovation centers.
- We're creating a generation of new energy-skilled talent via our worldleading higher education system.

## 5. Ambitious complimentary industries fueling a systemlevel energy transition

We're not only generating the energy needed to fuel the sustainable transition, but also the technologies and applications.

- Our Green Chemistry ecosystem, Chemport Europe, will be the first fossil-free and carbon dioxide-negative chemical cluster.
- Our Digital Innovation Cluster is making the New Energy System smarter with AI.
- We have one of the most developed green mobility markets, and are super-charging innovation in 6 key competencies of battery technology.

# TopDutch's hydrogen projects:



## Find your facilitator:



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Are you interested in exploring what your business possibilities could be?

Connect with Fleur Mulder, our start-up ecosystem expert.

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## **JOIN TOPDUTCH**

Want to find out more about how the TopDutch region is naturally leading the transition, or view the digital edition? Head over to our website: www.topdutch.com

## The Top Dutch collective: Economic region



provinsje fryslân provincie fryslân

provincie Drenthe

**Executive partners** 





Min isterie van Economische Zaken en Klimaat



Netherlands Foreign Investment Agency

**Regional partners** 









**Knowledge partners** 



university of groningen

















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Naturally leading the transition