



Climate-KIC yearly review 2011

# Driving climate innovation in Europe and beyond

PROGRESS TOWARDS OUR STRATEGIC OBJECTIVES | 2011/12

## CHAIRMAN'S OVERVIEW

# Sharpening up our vision

Europe is leading the world on the global climate change challenge. To help retain this position, Climate-KIC was created to be a unique engine for innovation in this area.

From the outset, Climate-KIC has been a hub of activity. We've moved through a challenging start-up phase and have now firmly established ourselves operationally while sharpening up our vision.

Our integration of industry, research, education and regional government creates an environment ripe for creativity and innovation. By bringing the right partners together, by identifying new markets and technological as well as social solutions for climate change, we enable the creation of the products, services and jobs of tomorrow.

My vision for the future is to nurture and grow Climate-KIC's ability to unleash and accelerate new ideas for climate change mitigation and adaptation, so that we continue to lead in this vital area.



**John Schellhuber, Chair**

Our community now has  
20 core partners and almost  
100 affiliate partners



## CHIEF EXECUTIVE OFFICER'S INTRODUCTION

# Ambitious and achievable targets

I'm delighted to introduce our first yearly review, which demonstrates the advances we're making on the climate change challenge and sets out our future ambitions.

2011 was a period of building and strengthening our core business. Already we have flagship examples of new business start-ups across Europe. Next year, we have ambitious and achievable targets that will see our performance step up a gear.

Our powerful networking ability has enabled us to establish a strong European community that is fast attaining a unique 'critical mass' of expertise across the research, education, business and policy fields.

We created Climate-KIC to change the way business is done in Europe, turning innovative ideas for climate change mitigation and adaptation into new products, services and, ultimately, new business and new jobs. At its heart, Climate-KIC is about changing the way we all live, think and work today.

Whether you're new to Climate-KIC or you've been working with us for a while, we offer the chance to partner a world-class network, transforming climate change ideas into commercial success.

## Mary Ritter, Chief Executive Officer

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## WHO WE ARE

# Shaping the world's next economy

Launched in 2010, Climate-KIC is one of three Knowledge and Innovation Communities set up by the European Institute of Innovation & Technology (EIT).

Our purpose is to spark and deliver innovative and imaginative solutions to climate change via a dynamic alliance of European partners drawn from academia, industry and the public sector.

Our vision is to provide the people, products, policy and leadership to confront the challenge of climate change globally. In doing so we create opportunities for innovators to shape the world's next economy.

As a European network and a dynamic community we share certain values. Our focus is on impacts. We believe in nurturing tomorrow's talent today. We recognise the transforming role of creativity and the power of partnership. We cross boundaries to reach our objectives.

## 'Results are more resilient – they add real value'

Launched in 2006, Advancity is a Paris region cluster that brings together some 60 academic institutions and local authorities plus about 200 enterprises of all sizes to promote and deliver sustainable cities and green technologies. Since submission to EIT, we opted to partner Climate-KIC because, crucially for us, the cities dimension has a key role within the community as one of four principal innovation themes.

For us, Climate-KIC's great advantage is that it offers a permanent, collaborative forum for addressing issues at the European level. It fits directly with our agenda. Although it takes time to set up, the Climate-KIC partnership model is always intellectually stimulating. Results are more resilient, and they add real value.

**Vincent Cousin**  
**Industrial Advisor, Advancity**  
[www.advancity.eu](http://www.advancity.eu)

**Our first innovation festival  
attracted over 250 stakeholder  
participants in 2011**



## A community built on partnership

Climate-KIC connects partners large and small, local and global, from the private, public and academic sectors. As of June 2012 our expanding community had 20 core partners and close to 100 affiliate partners. These partners represent all three sides of the ‘knowledge triangle’ – research, higher education, and business.

Across Europe we have five co-location centres that together support our wider community by hosting research, sponsoring collaboration, and incubating innovation. Our six regional innovation communities led by public bodies, provide the test-beds and implementation opportunities for innovative technology and policy.

Climate-KIC is guided by a core partner assembly and led by a governing board drawn from our co-location and regional hubs. Our chief executive and executive team drive our strategy and day-to-day operations.

Climate-KIC receives EIT funding up to 25 per cent with the remainder provided by partners, external sources and commercialisation.



*Climate-KIC events bring the community together to share ideas and learn from each other*

### CASE STUDY | Carzapp

## The new generation of car sharing

An innovative peer-to-peer car sharing service is making it easier to rent vehicles safely from private owners. Carzapp, brainchild of Oliver Lünstedt and co-founders Yannick Feige and Sahil Sachdeva, began life after a chance meeting at an event hosted by Berlin’s Technical University, a Climate-KIC partner.

Car owners and renters are brought together via carzapp’s online portal. Owners set a hire price, and renters pay a fixed fee based on how long they want the vehicle for. Owners typically rent their car out while they’re on holiday or at work. For renters, the scheme makes it easy to source a car locally.

Once the owner approves a request, renters use their phone to unlock the car before driving it away. Thanks to carzapp’s unique ‘ZappKit’ mobile app, the deal is done without handing over the keys. For renters it’s



about convenience. Owners benefit financially, while both parties are insured via carzapp.

The scheme also has clear environmental benefits. Car sharing means fewer cars on our roads. Sharers reduce their carbon dioxide (CO<sub>2</sub>) emissions by up to one tonne per year – or roughly ten per cent of mean German emissions per head. ‘Carzapping’ saves money and protects the environment. It’s fun, too.

### First step – Berlin

In 2011, after applying for a Climate-KIC Greenhouse Grant, the carzapp start-up team was awarded



€25,000. Climate-KIC's Incubation Programme helps entrepreneurs develop their clean tech venture in three stages. Support typically lasts 3-6 months at each stage.

In carzapp's case our input helped transform an exciting proposal into an innovative business. After a six-month residency at our Berlin incubator the team moved to new offices and is gearing up to launch a full service in 2012. Says Oliver Lünstedt: 'We'll start in Berlin with 100 cars and then go public.'

Carzapp is already partnering Renault, Peugeot, Vodafone, E.ON and Capgemini in an electric car pilot designed to boost electric vehicle development in Germany. Combining the advantages of electric power with car sharing lowers operating costs by up to 70 per cent, whilst optimising the use of private vehicles.

Climate-KIC Germany continues to support carzapp with access to our business coach network and our master classes.

[www.carzapp.net](http://www.carzapp.net)

## 'We want to be involved at the embryonic stage'

Our partnership with Climate-KIC is all about finding the next paradigm shift for sustainability. Through Climate-KIC we're mapping out a quest for technology. We're saying: these are the challenges we face in water, energy reduction or in carbon – what can you do to help us? We know what we know. But what else is out there? And if it isn't out there yet, who's going to invent it, and when?

Much of our current work with Climate-KIC focuses on lighting, water and solar technologies. We've installed a lot of solar panels right across our estate. At 15 megawatt of generation we have one of the UK's largest multi roof top installations.

Our partnership with Climate-KIC is helping us deliver our '20 by 20' programme of sustainability targets by 2020. By creating, with Climate-KIC, events like the recent 'retail-led lighting and water competition' we can hopefully capture innovation that comes from this competition, driving down our consumption in these areas.

We know the UK. But there must be brilliant ideas out there we don't know about, and Climate-KIC can bring these to us. We want to get involved at the front end or at the embryonic stage in order to help shape the technology in a commercially meaningful way.

**David Penfold**  
**Sustainability and Innovation Manager,**  
**Sainsbury's Supermarkets Ltd**

In 2011, 150 professionals  
from six European regions  
completed our developing  
knowledge programme  
*Pioneers into Practice*



## WHAT WE DO

# Catalysing commercial opportunity

To drive climate innovation we create successful partnerships between business, public bodies and the academic world. In building these relationships our focus is on identifying the market potential of ideas or initiatives in three integrated areas of operations – education, innovation and entrepreneurship.

Our work in education acknowledges that future climate innovators and entrepreneurs need a wide range of skills to become inspirational agents of change.

In the areas of entrepreneurship and innovation we help small to medium-sized businesses (SMEs) and start-up companies to target low-carbon prosperity using four broad themes – measuring climate drivers, water management, low-carbon cities, and zero-carbon production.

These four themes are central to our mission. They create bridges between Climate-KIC partners or programmes, and rally companies, institutions and cities around delivery of new products or services.

We staged four inspirational *SPARK!* talks during 2011 with a total participation of 160 attendees across Europe



## ‘Put simply, it gives us a seat at the

Our relationship with Climate-KIC started after we won the Shell Springboard Award in 2011 – right away we entered discussions about our technology and its potential. As soon as we met Climate-KIC’s affiliate partner criteria we received an SME voucher – a small grant to fund measurement testing of our technology. This was our first project with the Climate-KIC community.

Our Virtu™ hybrid solar panel generates both electricity and heat. That makes it unique. Besides being suitable for a wide range of climates it offers dual or parallel savings. With Climate-KIC’s support we’re pitching the technology at high-demand locations like hospitals, schools and retail estates. In addition, dwellings with limited roof space are an ideal application for Virtu™ with its game-changing efficiencies. The social and economic benefits extend to households in fuel poverty that are sensitive to energy price rises.

Climate-KIC’s role has been to identify opportunities,



*Business start-ups and partners are supported and connect through Climate-KIC*

**HOW WE WORK**

# A transformative alliance in action

Climate-KIC's operating model brings Europe's foremost research and educational institutions together with business partners large and small and public sector partners.

It's a progressive partnership that offers education and training, business mentoring and development, funding and finance, plus market support within a world-class, highly networked environment.

It's also a productive alliance that delivers important corporate and commercial benefits including risk reduction, value creation, accelerated passage to market, and enhanced brand reputation year on year.

In 2011 we made excellent progress towards our strategic objectives. We streamlined our organisation, optimised our staffing, and strengthened our governance. As well as deepening our existing partnerships we forged new ones on the road to making Europe a clean, competitive low-carbon economy. We're building on this in 2012.

## top table'

to match-make, and to open doors for us. It's like 'sheltered innovation'. We've already won two Climate-KIC entrepreneurship awards, presented to the European parliament, and met with venture capitalists. Now we're talking to potential customers about a pilot and production. Quite simply, our relationship with Climate-KIC allows us to sit at the table with the big players.

There are all kinds of business clubs you can sign up for. Climate-KIC is special because it's at the hub of a unique network of organisations which come in all shapes or sizes but which share a climate mitigation ideal. It's an important engine for commercialising intellectual property, for investment, for education. The fact that we're already looking to sponsor our own education programmes shows that the model is working.

**Christophe Williams**  
**Managing Director, Naked Energy**  
[www.nakedenergy.co.uk](http://www.nakedenergy.co.uk)



*Above: Christophe Williams (right) and Richard Boyle with their panel. Below: large commercial roof space can generate electricity, heat for water, building heating and chilling.*



## 'You learn that it's not such a bad thing to fail'

January 2012 saw the election of our Alumni Association's first board. We've almost completed the process of drawing up our statutes, after which we'll become a fully-fledged Climate-KIC partner. In 2012 we'll be holding elections, and this will become an annual event. There's a lot of enthusiasm for what we're doing. It's an enthusiasm I first experienced on Climate-KIC's summer school, *theJourney*.

I discovered Climate-KIC while studying for a second Masters, in Human Geography and Planning. I had to choose an option, so I seized the chance to sign up for Climate-KIC's six-week summer school, which took me to Paris, London and Zurich. There were two parts to *theJourney* – we explored the science of climate change and we learned how to write a business plan. That tells you where the focus lies.

For me, *theJourney* was a very positive experience. Although we came together – about 50 of us – from a wide range of scientific backgrounds, everyone shared the same passionate interest in climate change and a desire to make a difference. It shaped the atmosphere. You become more entrepreneurial. You start seeking out opportunities. You learn that it's not such a bad thing to fail. If you fail you start again.

Looking ahead, I see our Alumni Association as a means of connecting people who think the same way. These are smart individuals with strengths in different fields. It might be consultancy or governance or education. If you spot an opportunity, you can make it happen by asking others to come on board. The Alumni Association brings focus to our diversity. I hope people will want to stay connected.

**Charlotte van de Water**  
President, Climate-KIC Alumni Association

In 2011 we supported 53 start-ups and SMEs

## WHAT WE'VE ACHIEVED

# Performance highlights 2011

### Climate-KIC

Our community comprises 20 core partners and almost 100 affiliate partners

### Innovation

14 projects involving partners across all co-location centres and sectors | Marketplace event exchanging ideas for climate innovation attracted new partners and projects, with 80 participants

### Education

A pilot summer school in 2010 with 44 students led to five participants starting their own businesses | Two summer schools – *theJourney* – attended by 65 students | Four *SPARK!* talks held with total participation of 160 attendees across Europe | 105 students recruited for Masters and postdoctoral degrees or executive programmes

### Entrepreneurship

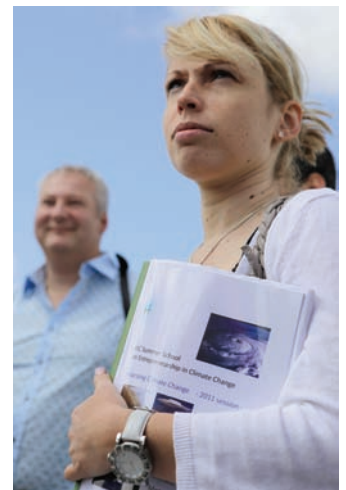
Support for 53 start-ups and SMEs | 150 professionals from six European regions completed our developing knowledge programme *Pioneers into Practice* | First annual venture competition for climate start-ups

### Operations

Governance, legal and financial management structures in place | Recruitment and staffing completed | Implementation of financial and document management tools | Launch of community-wide video conferencing system

### Communications

Strategic communications audit initiated | Website upgraded | Two articles in environment media, two films produced | First community-wide innovation festival held with over 250 participants





Students experience climate innovation with European professionals

## CASE STUDY | South Pole Carbon Asset Management

### Helping staff cut energy use at home

Significant gains in Europe's greenhouse gas balance could be achieved by scaling up employer-led carbon dioxide (CO<sub>2</sub>) and energy use reduction measures by staff at home. That's the thinking behind *Off4Firms*, a Climate-KIC Switzerland initiative now bedding in at affiliate partner South Pole Carbon Asset Management.

Domestic households account for some 30 per cent of final energy use and about 40 per cent of CO<sub>2</sub> emissions in Switzerland. As a result, the Swiss Energy Agency estimates that annual residential sector consumption might be cut by up to five gigajoules per head until 2020, with equivalent gains in other EU countries.

As similar opportunities develop elsewhere, it's clear that scaling up successful measures to global levels has enormous potential for cutting the world's energy consumption and emissions.

With leadership from ETH Zurich and in partnership with Wageningen University and climate solution specialist South Pole Carbon, *Off4Firms* nudges companies large and small towards implementing effective CO<sub>2</sub> emission or energy consumption reduction measures within the employee household.

#### Best-practice scenarios

Progressive organisations like global re-insurer SwissRe have already started offering staff good reasons to

improve their household emission balance. Incentives include subsidies on energy efficient appliances, energy efficient cars or public transport subscriptions, and better insulation for homes.

*Off4Firms* sets out to create a portfolio of CO<sub>2</sub> and energy reduction measures and a toolkit of 'optimal' strategies that match the characteristics of a firm and its people. Bespoke best-practice scenarios draw on lessons learned from existing successful corporate programmes such as those at SwissRe.

*Off4Firms'* goal is to target all large companies and SMEs in Europe and beyond via the new Climate Action for Corporations unit at South Pole Carbon. South Pole Carbon's Maximilian Horster says: *Off4Firms* and other Climate-KIC innovation projects allow medium-sized enterprises like us to further innovations and to explore whether markets exist for these innovations. At the same time, Climate-KIC support helps us to take the necessary entrepreneurial risk.'

With offices around the world and operations in over 20 countries, South Pole Carbon supports the take-up of high-quality emission reduction projects that address climate change and sustainability. The affiliate partner is a natural Climate-KIC ambassador for carbon neutrality in Switzerland and globally.

[www.southpolecarbon.com](http://www.southpolecarbon.com)

## 'It allows us to scale up ideas in a larger arena'

As the principal consortium for innovation and technology transfer here in Emilia-Romagna, Aster works closely with Climate-KIC on several integrated fronts. As well as embedding a climate change innovation culture regionally we're creating conditions on the ground for sustainable economic growth in this part of Italy. Climate-KIC provides us with a unique model for networking and best practice.

Climate-KIC helps us reach our own corporate or organisational targets – in that sense the partnership is very much a two-way affair. Aster exists to accelerate research, innovation and technology transfer at the local, national and European levels – and to grow the regional economy by promoting collaboration, business launches, and workforce 'up-skilling'. In all these areas Climate-KIC is a key partner.

Much of the benefit of our partnership with Climate-KIC has to do with scope and reach. Climate-KIC's operating model offers a unique opportunity to scale up what we do, to develop new ideas and actions on a bigger stage and in collaboration with top-flight European partners. With its deep pool of expertise, Climate-KIC has the potential to deliver across the continent, beyond its current network geography.

**Valeria Bandini**  
**European and International Dept. Manager,**  
**Aster, Climate-KIC Emilia-Romagna Region**  
[www.aster.it](http://www.aster.it)

In 2011 we hosted two summer schools presenting *theJourney* to 65 students

## STRATEGIC OUTLOOK 2012

# Smarter engagement, closer ties

As a people business, Climate-KIC sets out in 2012 to connect even more closely with top-flight talent and experience. Building our brand's profile and reputation is key to engaging a bigger share of this influential group.

Part of our focus is on strengthening working relationships between Climate-KIC partners, and between our co-location and regional centres. We're already taking important steps to make our internal and external communications 'smarter'. We also aim to host more community events at local level.

Better engagement is at the heart of our strategic vision. The quality and integrity of communications within our expanding network mean everything to us. We work with valued partners, and it's through our valuable partnerships that we deliver.

### Our 2012 business plan includes delivery of:

- Blueprint for partner strategy and enhanced communications
- More community events at local and regional level
- Expanded video conferencing capability
- Deeper integration between our work in education, innovation and entrepreneurship
- Refinement of governance and intellectual property policies

### Our externally focused 2012 targets include:

- Investment in *theJourney*, our popular summer school learning experience
- Launch of Climate-KIC's Alumni Association, extending and strengthening our network ties
- Start of EIT-labelled Masters courses
- More Climate-KIC branded incubator programmes supporting young entrepreneurs





- Climate Market Accelerator offering fast-track test bed support for new technologies
- Partnering 20 start-ups or SMEs creating new climate change products and services
- Recruiting 180 students to our education courses and 160 delegates to our professional courses
- Establishing strategic portfolios integrating all our activities within the four themes of measuring climate drivers, managing water, low-carbon cities and zero-carbon production
- Delivering a business start-up competition, a sustainable airport event, plus five match-making events across Europe
- Recruiting 180 entrepreneurs to our *Pioneers into Practice* programme

## ‘The key is its cultural openness to the new’

Climate-KIC is addressing the biggest challenges of our time – how to drive growth, how to address climate change and how to do so in a way that improves rather than diminishes quality of life. Their activity and ethos is absolutely complementary to the Institute’s and reflects an important tipping point in our collective thinking. The Climate-KIC community exists because enough people have decided we can’t effect the changes needed, either at the speed or scale required, by continuing to work in isolation. Climate-KIC is a much-needed mechanism that brings together Europe’s leading organisations from private, public and third sectors.

As a governing board member I have watched it

develop into a dynamic organisation with a deeply embedded culture of openness to new approaches. This, along with its focus on market need, is its key strength and why I believe it is on course to play an important role in driving the climate change agenda globally.

From the Institute’s perspective, we are looking forward to continuing to work with our Climate-KIC colleagues to push boundaries and confront some of the most pressing issues for our generation.

**Ian Short**  
**Chief Executive, Institute for Sustainability**

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