Case studies

A selection from EIT Climate-KIC's systems innovation portfolio

October 2019

@ClimateKIC

EIT Climate-KIC is supported by the EIT, a body of the European Union

What we're working for…

Our Vision

A prosperous, inclusive, climate resilient society with a circular net-zero emissions economy

Our Mission

To catalyse systemic change for climate action

Our Promise

Transformation in time, through innovation

Climate-KIC

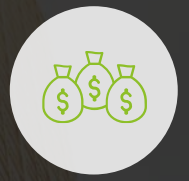
Theory of change

EIT CLIMATE-KIC

Four areas of focus

Finance

We are working for climate-conscious finance that reflects the true costs of climate change and the social, economic and ecological benefits of ‘multisolving’ for clean air, health and liveable cities, through systems-literate investment.



Mainstream climate in financial markets

Democratise climate risk information

Foster bankable green assets in cities

Climate-KIC

Project case study // Finance

CRAMS by Carbon Delta

PROBLEM / CHALLENGE

Asset managers need to quickly get to grips with the impacts that climate change is having on their investment portfolios. Hurricane Florence alone caused up to €45 billion in economic losses in 2018. They need to understand what the future impacts of a shifting physical environment, with more extreme weather events, are likely to be, and start to analyse how climate-related regulation will affect their basket of assets. In doing so, they will not only safeguard against risk but can begin to take advantage of the huge opportunity they have to accelerate the growth of the low-carbon economy.

SOLUTION

In a nutshell, the CRAMS project VaR™ (Value at Risk) model takes 22,000 companies and 60,000 securities – nearly every asset that is listed worldwide and produces a model of their exposure to climate risk. It looks at both 'transition' risks, such as climate policy scenarios (like the probable costs for companies to comply with emissions limitations), and 'physical' risks which evaluate the impact of extreme weather hazards such as heat, cold, wind, wildfires and hurricanes.

Project case study // Finance

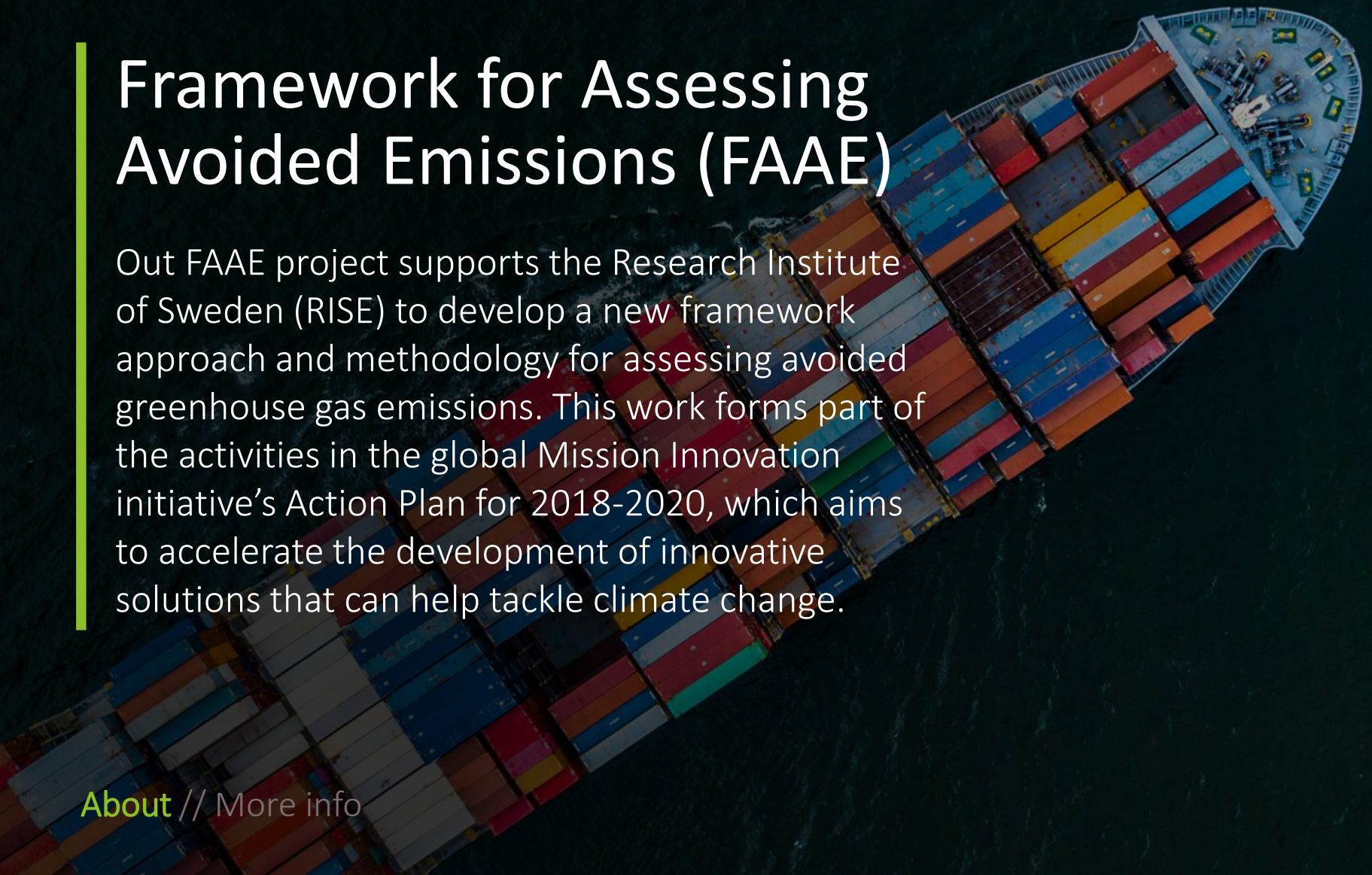
CRAMS by Carbon Delta

IMPACTS

AXA, a group with over €750 bn assets under management, has been working with EIT Climate-KIC partner Carbon Delta to assess future portfolio level impacts from climate change. In April 2018, AXA released its first TCFD aligned report using Carbon Delta's Climate VaR analysis to help uncover climate risks and opportunities within their investment portfolios.

EIT CLIMATE-KIC'S ROLE

EIT Climate-KIC has worked with Carbon Delta to grow the CRAMs project from a collection of ideas to a solution that is transforming the asset management industry by mainstreaming climate analysis and democratising climate risk information. They started out in EIT Climate- KIC's Start-up Accelerator programme.



Framework for Assessing Avoided Emissions (FAAE)

Out FAAE project supports the Research Institute of Sweden (RISE) to develop a new framework approach and methodology for assessing avoided greenhouse gas emissions. This work forms part of the activities in the global Mission Innovation initiative's Action Plan for 2018-2020, which aims to accelerate the development of innovative solutions that can help tackle climate change.

Project case study // Finance

Framework for Assessing Avoided Emissions

PROBLEM / CHALLENGE

It might come as a surprise that no generally agreed framework exists to calculate the CO_2e reductions in society. Current frameworks tend to use an accounting approach where the reasons for calculating the emissions are based on a potential liability or branding problem. So, when companies, cities and financial institutions today talk about their contributions to reduced emissions, they almost never talk about reductions in society; but rather their own reductions. Sometime these two can be the same, but very often a reduction in one part of the system, results in increased emissions in others.

SOLUTION

The Research Institutes of Sweden (RISE), together with the Swedish Energy Authority and the Carbon Trust have – alongside other partners, including EIT Climate-KIC – developed a new framework approach and methodology for assessing avoided greenhouse gas emissions. This work forms part of the activities in the global Mission Innovation initiative's Action Plan for 2018-2020, which aims to accelerate the development of innovative solutions that can help tackle climate change.

Project case study // Finance

Framework for Assessing Avoided Emissions

IMPACTS

It is not sufficient to just allow polluting companies to show how they reduce their emissions, governments need to be able to direct support to providers of solutions in a cost-efficient way (most GHG emissions reduction for the buck). Investors need to be able to identify winners in a low/zero-carbon economy (not just avoid the losers). This will require a shift in emphasis from “doing things less bad” to “doing good things”, but will also need tools and methods to quantify and compare the impact of different solutions and potential solutions.

EIT CLIMATE-KIC’S ROLE

EIT Climate-KIC is supporting The Research Institutes of Sweden (RISE) to develop a new framework approach and methodology for assessing avoided greenhouse gas emissions. In addition, organisations including the Clean Energy International Incubation Centre and WWF Climate Solvers, will help source solutions.

Land

We are working for net-zero carbon emissions in forestry, agriculture and other land uses, including through: climate-smart agriculture and reformed food systems; carbon sinks; and bio-based substitutes for the fossil carbon used in cement, plastics and fuels.

- Make agriculture climate-smart
- Reform food systems
- Nurture forests in integrated landscapes

Climate-KIC

Industry

Concrete alone contributes 5% of global GHGs. Steel, up to 7%. Cleaner materials and circular production systems could generate trillions in net economic benefit. Place-based innovation is also needed to support entire regions still economically dependent on coal and oil, as they transition towards clean, circular economies.

Build circular material flows

Reduce industry emissions

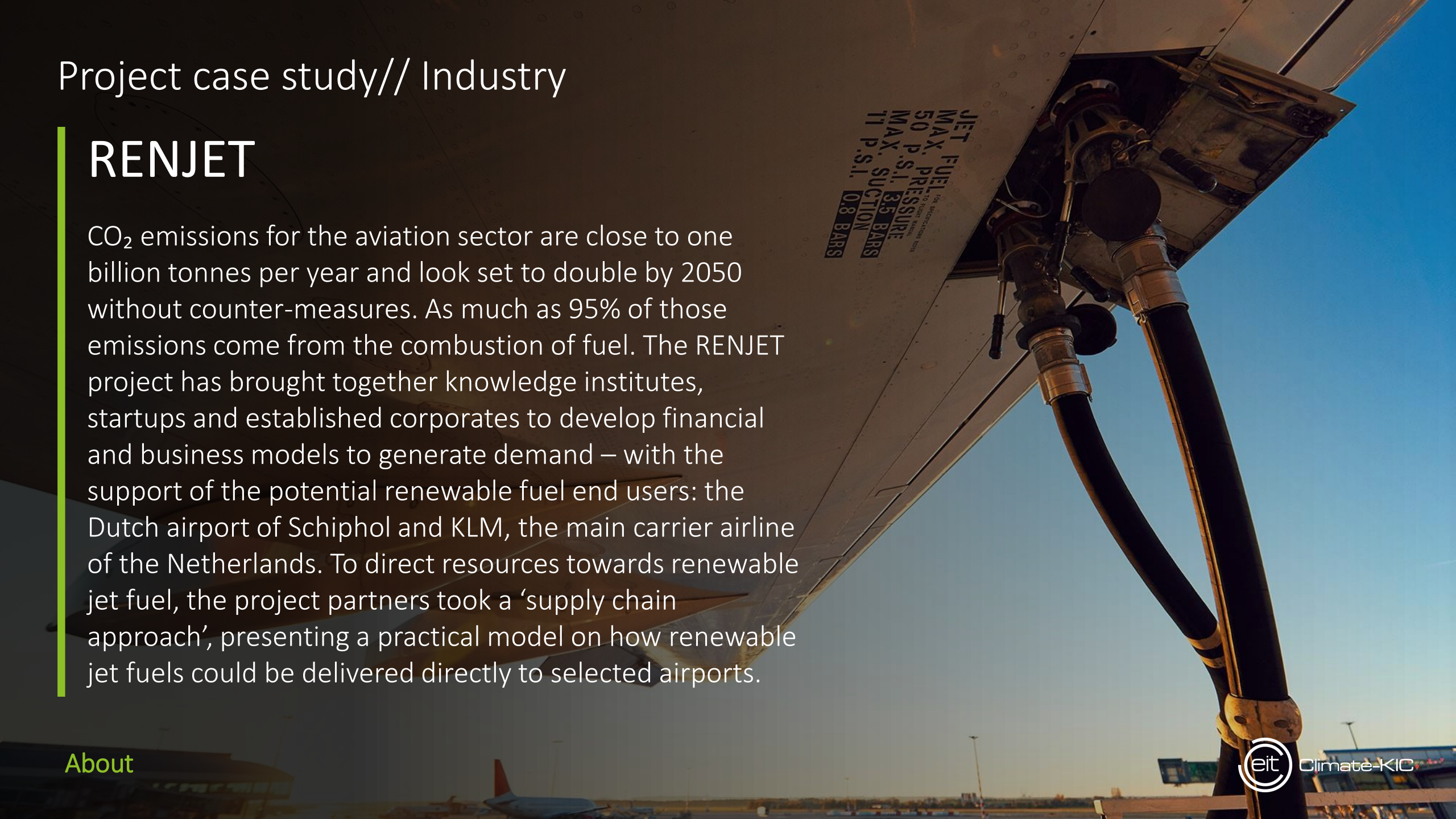
Reboot regional economies

Climate-KIC

Project case study// Industry

RENJET

CO_2 emissions for the aviation sector are close to one billion tonnes per year and look set to double by 2050 without counter-measures. As much as 95% of those emissions come from the combustion of fuel. The RENJET project has brought together knowledge institutes, startups and established corporates to develop financial and business models to generate demand – with the support of the potential renewable fuel end users: the Dutch airport of Schiphol and KLM, the main carrier airline of the Netherlands. To direct resources towards renewable jet fuel, the project partners took a ‘supply chain approach’, presenting a practical model on how renewable jet fuels could be delivered directly to selected airports.



CICERONE

CICERONE is addressing a major challenge: the fragmentation and lack of coordination of circular economy research and innovation funding in the EU. Thousands of individual projects are being financed to catalyse a switch to a circular economy, but a European joint strategy and systemic approach is needed for impactful transformation. To fill this gap, CICERONE is developing common priorities for circular economy across all EU countries, and building a platform for public and private sector funders to jointly plan and finance future initiatives.

CICERONE is funded by the European Commission's Horizon 2020 programme > www.cicerone-h2020.eu

Project case study // Industry

Climeworks

Climeworks, a direct air capture system start-up incubated in the EIT Climate-KIC Accelerator programme, is now a listed company with scalable technology already operating in Switzerland, Iceland and Italy. In 2019 it was named one of the Top 3 CO_2 Direct Air Capture technologies by Bill Gates. EIT Climate-KIC takes the risk and provides business creation support for early ideas that can make a big change – which includes helping big ideas to be embedded in place-based and value-chain transitions, to trigger maximum systems value. See it covered on the BBC website here.

Project case study // Industry

Chrysalix Technologies

Chrysalix Technologies offers a bio-based alternative to petrochemicals. Their proprietary process enables the use of any type of woody material – including agricultural by-products and (currently unrecycled) treated waste wood – for the large-scale production of bio-derived materials, chemicals and fuels. In 2018 this multi-award-winning start-up received a Voucher to carry out new scale-up work with two industrial partners and funding from the European Union's Horizon 2020 research and innovation programme.

Project case study // Industry

HyDistrict

The HyDistrict Pathfinder Project resulted in the creation of a virtual institute, to trigger an innovative approach to support the regional economic transition in the Rhenish lignite mining area, while facilitating hydrogen applications. The institute combines the necessary regulatory, economic and technological know-how as well as crucial political willpower.

Project case study // Industry

HyDistrict

PROBLEM / CHALLENGE

Increasingly, hydrogen is being identified as an important pillar of the energy transition in the Rhenish Mining District. Although there are hundreds of projects developing fuel cell manufacturing solutions and hydrogen applications in the region, there is currently no coherence between them. A series of obstacles is hindering the efficient uptake of hydrogen solutions – from fear of change, to lack of knowledge about the maturity, regulations and accessibility of hydrogen technologies, and the hydrogen infrastructure itself is not yet strong or connected enough to support ‘reindustrialisation’.

SOLUTION

The pathfinder emphasised the need for ‘centralised information’: a knowledge database where anyone can look and see the ripeness of technologies, view research results and business cases and somewhere where people can find experts, or special equipment for hydrogen installation. A network of the people working in the hydrogen ecosystem.

Project case study // Industry

HyDistrict

IMPACTS

The pathfinder project has provided a clear understanding of the positions of local stakeholders regarding hydrogen implementation, as well as how a ‘virtual institute’ could provide support. The virtual institute approach is ground-breaking amongst lignite areas and increases the economic attractiveness of the Rhenish mining district. Already, the project has gathered the relevant partners for development, bringing together experienced business leaders, faculty researchers, government officials, municipal economic developers, and new companies, so that the ‘demonstrator’ phase of the project can begin.

EIT CLIMATE-KIC’S ROLE

The EIT Climate-KIC provided the majority of the funding for this project to date, making nearly €20.000 available. This enabled ENGIE, HyCologne and the Zukunftsagentur to conduct their interviews, workshops and analyses

In addition to funding, the EIT Climate-KIC has also provided valuable community support for the project. The Partners were invited to attend workshops and given access to an extended network of contacts.

Project case study // Industry

Locational effects of deep decarbonisation

The project has developed a model including a series of scenarios for local policymakers to enable deep decarbonisation. It shows that today's assets in the value chain of steel making are probably also very relevant in a future of new break-through technologies based on renewable electricity.

Climate-KIC

Project case study // Industry

Locational effects of deep decarbonisation

PROBLEM / CHALLENGE

Since its very inception, the EU has been fundamentally shaped by coal and steel production. For centuries, much of our economic, social and political landscape depended on these two deeply entwined industries. Today Europe is the largest producer of high-grade steel in the world, with Germany as the main contributor. For decades, mining and steel production have been strongly concentrated in North-western Europe, particularly in the area around the river Ruhr in the West German state of North Rhine-Westphalia, once known as the 'Land von Kohle und Stahl'. With decarbonisation now an urgent priority, the steel industry is beginning to explore other production routes based on renewables-based electricity and hydrogen.

SOLUTION

The project focusses on steel regions in North-western Europe, investigating how deep decarbonisation strategies might affect different locations. The goal is to provide insights into the challenges and opportunities presented by deep decarbonisation, with a view to informing strategic investment and regional policies.

As well as identifying the locational factors likely to cause regions to gain or lose importance, the resulting model allowed the team to investigate which locations and sites will potentially benefit from an electrification strategy in the steel sector, and which might be negatively affected.

Project case study // Industry

Locational effects of deep decarbonisation

IMPACTS

The project's model has gone some way to align decarbonisation with industrial revitalisation. The scenarios outline future material flows and energy demands in the steel industry, thus enabling steel sites as well as other businesses to identify opportunities linked to decarbonisation, and to bypass potential risks.

By facilitating discussions, gathering feedback, and shedding light on the trajectory of future decarbonisation, the project has also provided support to regional agencies addressing the challenges of infrastructural change.

EIT CLIMATE-KIC'S ROLE

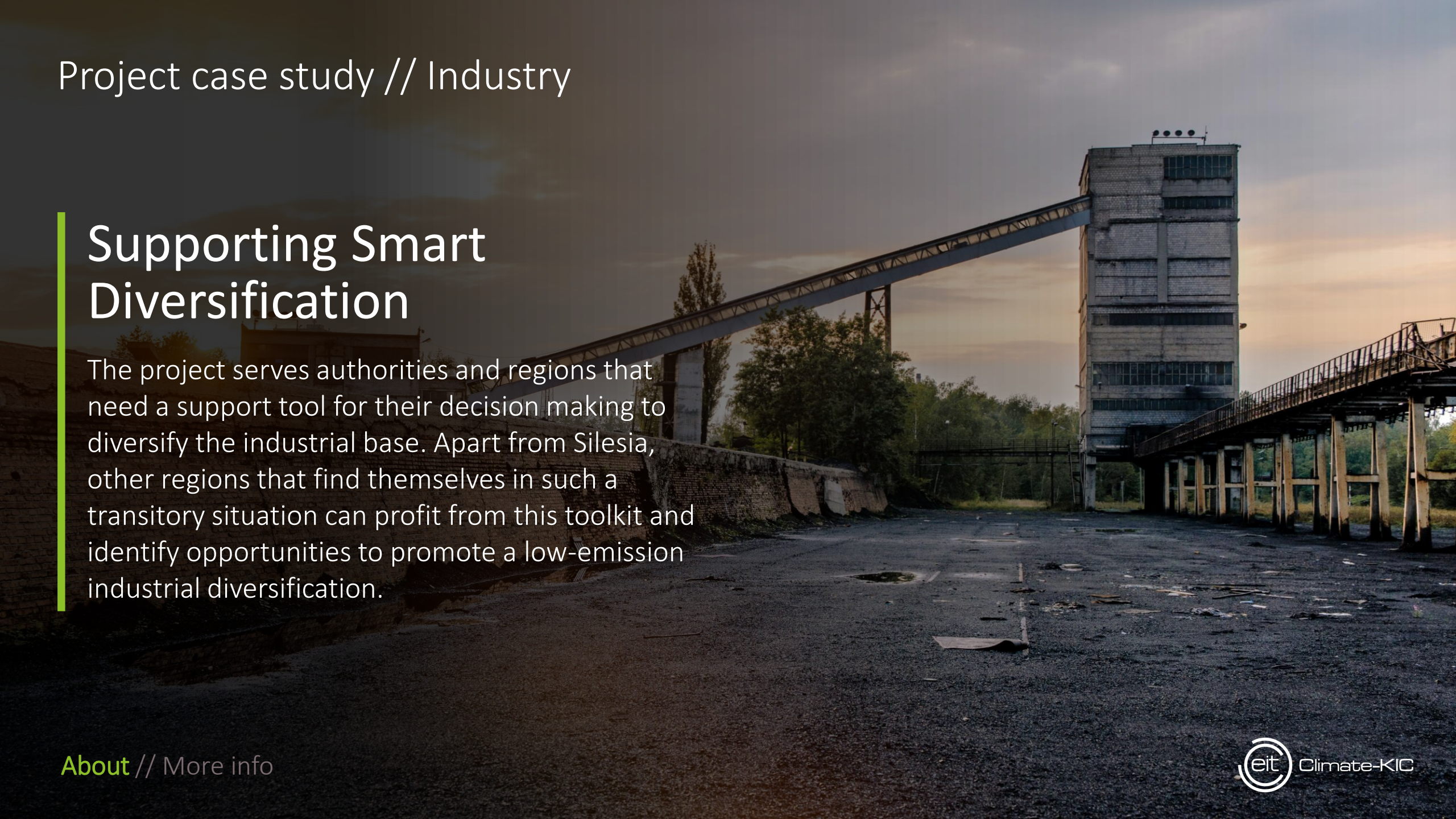
EIT Climate-KIC provided the majority of the funding for this project, allowing the team to employ researchers and cover workshop expenses. They were also given access to the EIT Climate-KIC network.

Subsequent interactions with the EIT Climate-KIC project, INFRANEEDS, have allowed 'Locational effects of deep decarbonisation of basic industries' to develop in a more Europe-embedded context.

Project case study // Industry

Supporting Smart Diversification

The project serves authorities and regions that need a support tool for their decision making to diversify the industrial base. Apart from Silesia, other regions that find themselves in such a transitory situation can profit from this toolkit and identify opportunities to promote a low-emission industrial diversification.



Climate-KIC

Project case study // Industry

Supporting Smart Diversification

PROBLEM / CHALLENGE

Coal mining has been the backbone of the Silesian culture and economy since the second half of the eighteenth century. Historically, the industry developed in the 19th and early 20th century, and peaked in the 1970s under the Soviet-backed People's Republic of Poland.

Today, Silesia is not only the largest hard coal producer in the EU, but also a major cluster of carbon-intensive industries and coal-based power production. According to the Polish Central Statistical Office, the region's energy and industry sectors consumed over 19 Mt of hard coal in 2016, and emitted over 41 Mt of CO2 from coal combustion.

SOLUTION

The project team carried out a diagnosis of the current potential of the region. They looked at how often these specialisations coincided across sectors, and identified diversification opportunities by compiling a list of low-emission sectors with the highest proximities to current specialisations in carbon-intensive markets.

Coordinated by Aleksander Śniegocki, the WiseEuropa team carried out the data analysis, while Climate Strategies provided best practices from other coal-intensive regions undergoing transition. The Central Mining Institute acted as the local knowledge partner, providing an assessment of the Silesia's knowledge base and industrial capacities.

Project case study // Industry

Supporting Smart Diversification

IMPACTS

In a very short period of time, the project created and piloted a tool that can be used by EIT Climate-KIC, as well as other initiatives and policy instruments, to systematically reboot industry in regions like Silesia. The methodology is now available for other projects. Project partners have created a high-level analytical approach to guide regional development initiatives.

This highlighted the need to strengthen knowledge exchange between the climate action community and experts working in the field of regional development policies. The other outcome of the research is the need to look beyond green energy markets when trying to reboot carbon-intensive economies.

EIT CLIMATE-KIC'S ROLE

The project received nearly €50,000 in funding from the EIT Climate-KIC, with a smaller amount being provided from WiseEuropa and Climate Strategies.

With this funding, the project could offer remuneration for the invaluable services provided by the Central Mining Institute, which provided experts on regional knowledge and industrial base, gave feedback on methodology and provided inputs that were essential for conducting the pilot.

By using the EIT Climate-KIC network, the team were able to begin to build a coherent and efficient exchange with various European energy transition initiatives.

Project case study // Industry

Infrastructure Needs

The research project “Infrastructure Needs of an Industrial Transformation of the EU towards Deep Decarbonisation” (INFRA NEEDS) analyses where in Europe and how much additional energy needs arise from the decarbonisation of the most energy-intensive industrial sectors in Europe. For these hotspots, the resulting infrastructure needs in 2050 will be investigated.

Project case study // Industry

Infrastructure Needs

PROBLEM / CHALLENGE

In the EU's race to meet its 2050 climate goals, the materials processing industry is proving one of the most difficult sectors to decarbonise. The energy-intensive sectors of steel, plastics and cement still depend largely on fossil fuels and are responsible for unsustainable levels of greenhouse gas emissions: Europe's iron-and-steel sector alone still generates about 200 million tons of CO2 per year. For a decarbonised industry sector to be viable, it will have to be built on circular economy practices and an energy system comprising hydrogen fuel cell technologies, synthetic fuels, and carbon capture systems in varying configurations. Right now, the infrastructure for these systems does not **exist.**

SOLUTION

The project identified the regions in Europe with the best conditions for renewable electricity generation and for the storage of CO2 – dubbed 'sweet spots' by the project partners, and evaluated existing studies using meta-analysis. In the case of electricity from renewable energy sources, these included the study 'e-Highways 2050'.

They are now carrying out an explorative regional analysis on site, to learn more about what is possible and what has to happen to realise decarbonisation pathways.

Project case study // Industry

Infrastructure Needs

IMPACTS

INFRA NEEDS is generating important knowledge and increasing awareness of the infrastructure needs of decarbonised industries in Europe, especially regarding the time-critical role of infrastructure planning. By targeting major emitters – the EU steel, plastics and cement industries – the project is contributing to CO2 emissions reductions. The project's analysis will help industry and political stakeholders to identify challenges, seize chances linked to industrial decarbonisation, and mitigate potential risks. By mapping the hot spots of industrial priority regions in Europe, and the sweet spots for renewable energy production and carbon capture potential, the project is providing some essential tools to contribute to the transformation of Europe's industry.

EIT CLIMATE-KIC'S ROLE

EIT Climate-KIC provided almost 70% of the overall cost of the INFRA NEEDS project, as well as other supports such as networking support.

The project's impact relies on knowledge dissemination and effective communication with industry and policy makers. The EIT Climate-KIC provided the project with the references they needed to access to stakeholders, particularly in the selected regions, and mitigated many of the project's important communications.

eit Climate-KIC

Cities

We are working to realise prosperous, green, resilient, livable cities – with zero carbon use in mobility and the built environment and optimum use of nature-based solutions – by catalysing integrated solutions to multiple city challenges.

Promote retrofit and decentralised energy

Nurture nature-based solutions

Accelerate sustainable urban mobility

eit Climate-KIC

Green Procurement for Zero Emission Construction Sites

Construction sites are big contributors to CO_2 emissions, and also have a major effect on air quality in cities due to other harmful pollutants. The Zero Emission Construction Sites project looks into how construction sites can be transformed into zero emission sites, thus helping to 'lay the foundations' of carbon neutral cities. Through a dialogue-based approach, the Zero Emission Construction Sites project is seeking solutions to these issues in close collaboration with Oslo, Copenhagen, Stockholm and Helsinki.

1 Million Near-Zero Energy Homes in Europe by 2023

1 Million Homes is a mission-led programme created with several partners and cities. It aims to engage citizens in deep retrofits of their homes, neighbourhoods and cities – including opportunities to generate income from selling energy. Social innovation is a key component, as is innovation in finance and communications.

The first cohort of cities will come from the Benelux region as well as cities in Central and Eastern Europe.

2nd Skin

By creating an energy efficient and energy generating second skin around the existing building, the 2ndSKIN product is an affordable value proposition for deep retrofit which can be installed with minimal disturbance to occupants.

The program launched to market in 2018, installing in 183 units for €12 million, through a partnership between the TU Delft academic institution and contractor Bikbow. It also includes TU Munich, OfficeVitae, Kingspan, STO and social housing association WaterwegWonen.

Project case study / Cities

2nd Skin

IMPACT OVERVIEW

The near-zero energy (NZE) retrofit is delivered with no increase in rent; hands-on user training on living in an NZE apartment. It impacts over 600 residents and creates a total of just over 900 local jobs.

We are currently discussing the potential for this to be a solution for the city of Amsterdam, with the ambition to retrofit 8,500 units.

Lifetime savings: 4314.6 tCO2e
(68 CO2e/m2 p.a. x 2115m2 x 30 years).

LEARNING AND NEXT STEPS

Through innovations in construction methods and economies of scale the renovation cost has reduced from 93K per unit to 63K. The team are aiming for 50K.

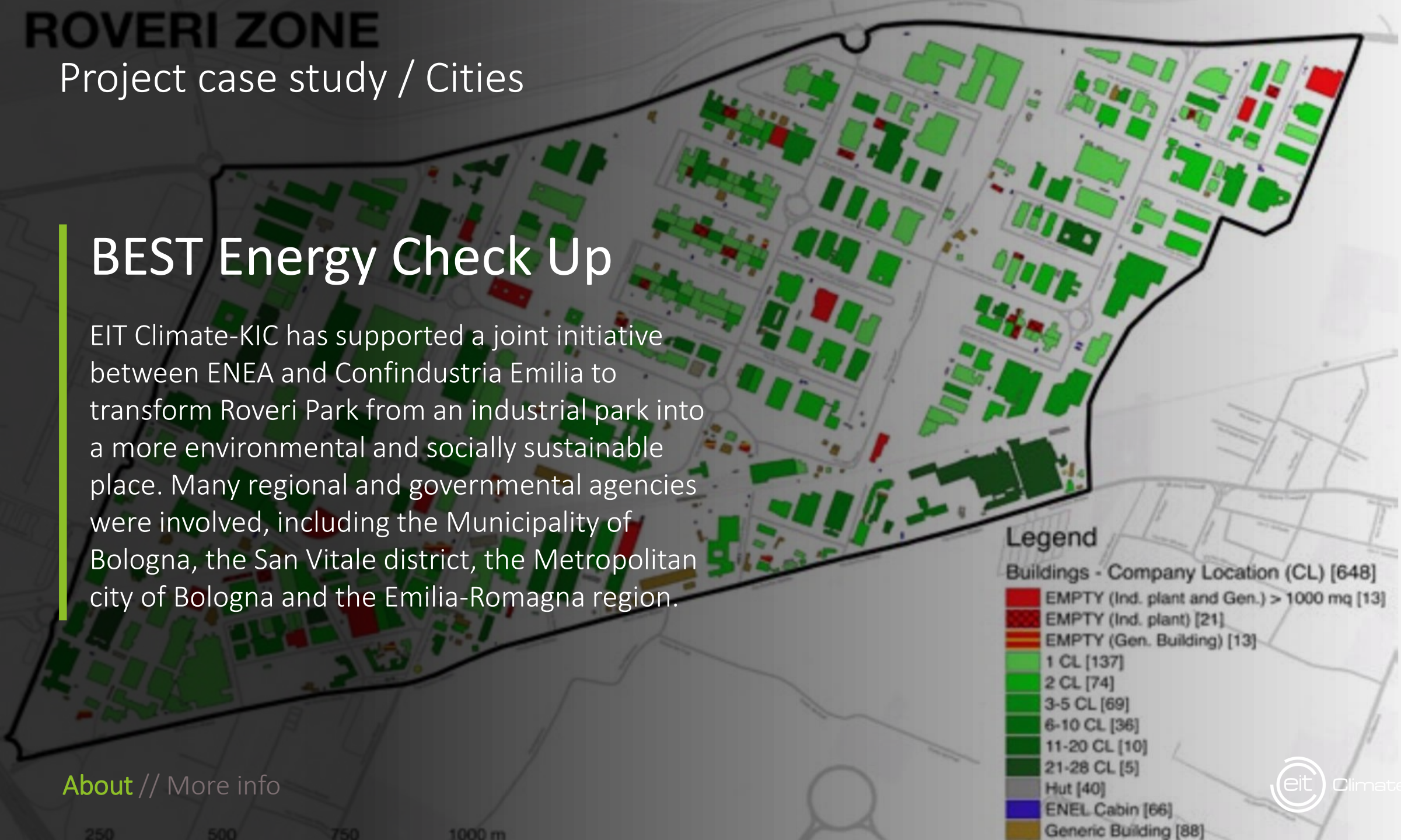
After four years of support the system is now ready for addressing the market need without the need for EIT subsidy. We are now positioning retrofit solutions to work with cities to aggregate demand and build capital stacks.

ROVERI ZONE

Project case study / Cities

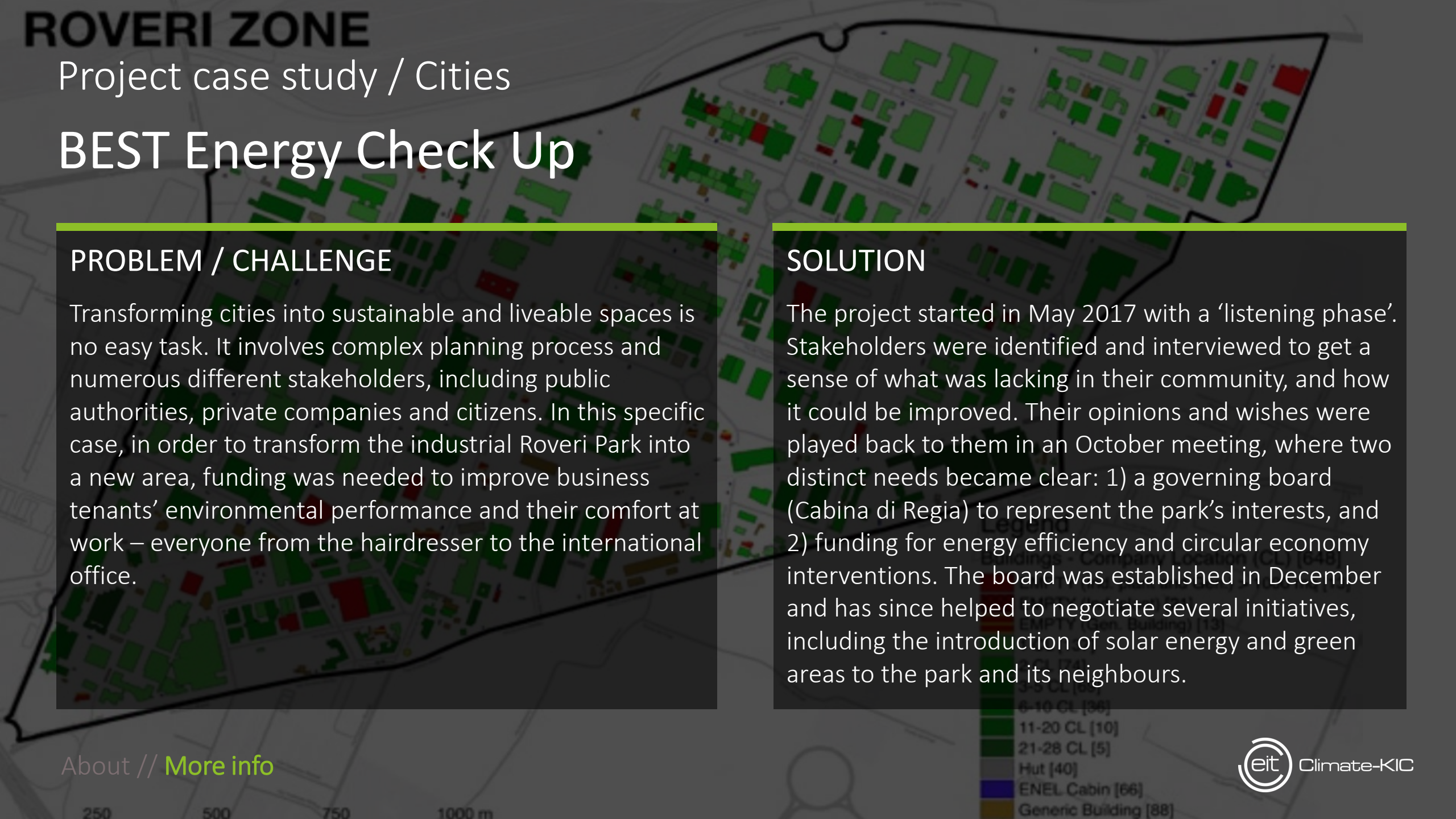
BEST Energy Check Up

EIT Climate-KIC has supported a joint initiative between ENEA and Confindustria Emilia to transform Roveri Park from an industrial park into a more environmental and socially sustainable place. Many regional and governmental agencies were involved, including the Municipality of Bologna, the San Vitale district, the Metropolitan city of Bologna and the Emilia-Romagna region.



About // More info

eit Climate-KIC



Project case study / Cities

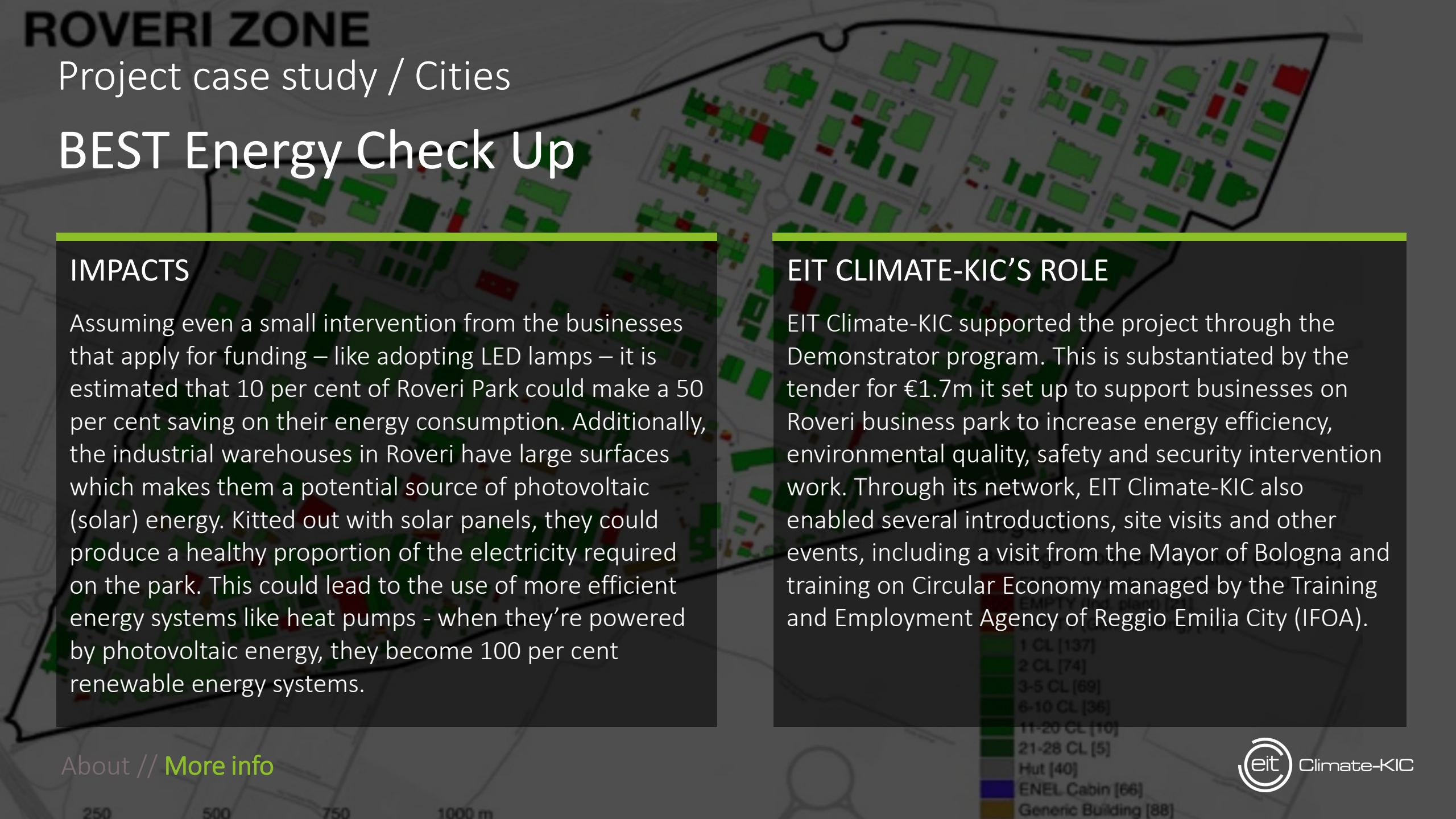
BEST Energy Check Up

PROBLEM / CHALLENGE

Transforming cities into sustainable and liveable spaces is no easy task. It involves complex planning process and numerous different stakeholders, including public authorities, private companies and citizens. In this specific case, in order to transform the industrial Roveri Park into a new area, funding was needed to improve business tenants' environmental performance and their comfort at work – everyone from the hairdresser to the international office.

SOLUTION

The project started in May 2017 with a 'listening phase'. Stakeholders were identified and interviewed to get a sense of what was lacking in their community, and how it could be improved. Their opinions and wishes were played back to them in an October meeting, where two distinct needs became clear: 1) a governing board (Cabina di Regia) to represent the park's interests, and 2) funding for energy efficiency and circular economy interventions. The board was established in December and has since helped to negotiate several initiatives, including the introduction of solar energy and green areas to the park and its neighbours.



Project case study / Cities

BEST Energy Check Up

IMPACTS

Assuming even a small intervention from the businesses that apply for funding – like adopting LED lamps – it is estimated that 10 per cent of Roveri Park could make a 50 per cent saving on their energy consumption. Additionally, the industrial warehouses in Roveri have large surfaces which makes them a potential source of photovoltaic (solar) energy. Kitted out with solar panels, they could produce a healthy proportion of the electricity required on the park. This could lead to the use of more efficient energy systems like heat pumps - when they're powered by photovoltaic energy, they become 100 per cent renewable energy systems.

EIT CLIMATE-KIC'S ROLE

EIT Climate-KIC supported the project through the Demonstrator program. This is substantiated by the tender for €1.7m it set up to support businesses on Roveri business park to increase energy efficiency, environmental quality, safety and security intervention work. Through its network, EIT Climate-KIC also enabled several introductions, site visits and other events, including a visit from the Mayor of Bologna and training on Circular Economy managed by the Training and Employment Agency of Reggio Emilia City (IFOA).

About // More info

eit Climate-KIC

OfficeVitae

EIT Climate-KIC has supported the Delft based start-up OfficeVitae on its mission to help office workers find the most suitable workplace that matches their personal comfort and vitality goals and coach them virtually with targeted tips to stand and move as much as possible. OfficeVitae enriches the office environment with high quality sensors and provides its occupying employees with reflective software. This way, objective and subjected data can be measured and visualised.

Project case study / Cities

OfficeVitae

PROBLEM / CHALLENGE

Office environments are oftentimes left cold or in the dark with noise disturbances and bad air quality. This is not only environmentally unsustainable, it also has a great impact on the productivity of the employee workforce. This project aims at creating a personalised, ergonomic workplace that feels relaxing and well-designed with greenery not just being an outside view, but also bringing plants inside to create a comfortable working environment.

SOLUTION

OfficeVitae was supported by EIT Climate-KIC Benelux, the EIT Climate-KIC Head Office and other EIT Climate-KIC supported initiatives such as 2nd Skin and Façade Leasing (where OfficeVitae has installed sensors, collected data and carried out research) and EIT Climate-KIC's flagship Building Technologies Accelerator (BTA). EIT Climate-KIC has also helped OfficeVitae connect with international customers and navigate the market.

Project case study / Cities

OfficeVitae

IMPACTS

The launch, growth and positive impact of OfficeVitae has been made possible through various sources of funding, of which EIT Climate-KIC is one of the main initiators. The project has OfficeVitae has managed to secure several commercial assignments in the Netherlands and the United Kingdom, including Achmea (Dutch health insurance company), Facilicom (a large international facilities management firm) and UCBI & Cundall (WELL Building Standard).

EIT CLIMATE-KIC'S ROLE

EIT Climate-KIC supported the project through the Demonstrator program. This is substantiated by the tender for €1.7m it set up to support businesses on Roveri business park to increase energy efficiency, environmental quality, safety and security intervention work. Through its network, EIT Climate-KIC also enabled several introductions, site visits and other events, including a visit from the Mayor of Bologna and training on Circular Economy managed by the Training and Employment Agency of Reggio Emilia City (IFOA).

Project case study / Cities

Façade Leasing

EIT Climate-KIC has supported the Façade Leasing project, which makes it possible to install a high-quality façade and making this financially attractive while also factoring in sustainability from all angles. This approach therefore allows for CO_2 reduction and enhanced indoor comfort to be applied on a much larger scale than ever before.

One of the key technical features includes the installation of a chip of the façade, which can be read remotely, providing information on who the owner is and what materials are used on the façade. This data also allows for improving maintenance, saving money and material resources.

Project case study / Cities

Façade Leasing

PROBLEM / CHALLENGE

When the exterior of a building is due for maintenance, a frequent approach entails a (relatively and only short-term) ‘’low-cost’’ intervention aimed at only the next few years. A common example of this would be to paint a façade. Such a short-term and relatively low-cost approach is often chosen by private building owners who take less interest in a long-term performance of the building, but primarily have their focus on quick payback times and low capital cost investments.

SOLUTION

Façade Leasing is a solution particularly well suited for university buildings that were constructed in the ‘70’s but could also be applied to office buildings from that period. One of the key technical features includes the installation of a chip of the façade, which can be read remotely, providing information on who the owner is and what materials are used on the façade. This data also allows for improving maintenance, saving money and material resources.

Project case study / Cities

Façade Leasing

IMPACTS

In 2017, Façade Leasing carried out a very successful testing at the Delft University of Technology (TU Delft) faculty of Electrical Engineering, Mathematics and Computer Science (EWI). The construction took about three months from start to end for a surface area of around 30m2. The result showed that technology was indeed not a barrier, but new construction and management processes had to be developed, as all parties were interested in the idea of circularity but were having problems understand what it meant for them in practice. Now, Façade Leasing is getting ready for its first large market adaptation set to renovate over 2.500m2 of façade of TU Delft's faculty CiTG.

EIT CLIMATE-KIC'S ROLE

Façade Leasing has received support from EIT Climate-KIC for several years and initially started as a Pathfinder project. TU Delft applied to EIT Climate-KIC's Pathfinder Program in 2015. Receiving an EIT Climate-KIC Pathfinder grant was critical in getting the project off the ground; it enabled the team to hire a dedicated researcher and to spend time working with the supply chain while generating interest in the proposals among the business community.