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**RAPPORTEURSHIPS "FACING CLIMATE CHANGE"** 

# "CLIMATE INNOVATION: REIMAGINING EVERYTHING"

SESSION WITH KIRSTEN DUNLOP.



# **CLIMATE INNOVATION: REIMAGINING EVERYTHING**

Invited Speaker: Dr. Kirsten Dunlop, Chief Executive Officer at EIT Climate-KIC (Knowledge and Innovation Community), Amsterdam

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This report is a synthesis of the debate carried out with Dr Kirsten Dunlop in the conference series "Facing climate change" organised by Catalunya Europa Foundation in the context of the Re-City project. This session, titled "Climate innovation: reimagining everything" consisted of a public lecture, a seminar and a lunch-debate bringing together personalities from the economic, social, political and business sector of Catalonia. The mentioned activities were held in Barcelona at the Antoni Tàpies Foundation in May 2019. The content order of this report is thematic and does not represent the order in which it was exposed by Dr. Dunlop. The conference series "Facing climate change" is developed in collaboration with BBVA, Generalitat de Catalunya, Àrea Metropolitana de Barcelona and Barcelona City Council.



# Biography

Dr. Kirsten Dunlop is Chief Executive Officer at EIT Climate-KIC (Knowledge and Innovation Community) since 2017. Climate-KIC is the European Union's (EU) largest public-private partnership addressing climate change through innovation by achieving deep decarbonisation across cities, while tackling land use, agriculture and industrial manufacturing, and securing finance. Dunlop is clear and purposeful about the transformational change needed to effectively create a collaborative culture of innovation that can deliver a world we all want to live in.

Dunlop, a joint British-Australian national, has a Ph.D. in cultural history on the marriage of rhetoric and architecture in the building of Italian medieval and Renaissance cities. She is a specialist in experiential learning and a life-long exponent of cross-disciplinary thought and practice. Her career spans academia, consulting, banking, insurance, strategy, design, innovation and leadership across Europe, Australia and North America.

Before joining Climate-KIC she was Executive General Manager of Strategic Innovation at Suncorp – a position she held for 4 years. Suncorp is an Australian financial services conglomerate, a longstanding partner of Climate-KIC and a member of the global climate risk information platform OASIS. At Suncorp, Dunlop founded and led a bespoke division focused on managing and responding to strategic risk through innovation, transforming core business and industry models from within. As part of this work, she was instrumental in working towards the creation of Climate-KIC Australia, inspired by the European model.

Prior to Suncorp, Dunlop worked at KPMG as Head of Culture, Leadership and Learning (Australia, 2012); in Second Road as Principal, Leadership and Learning (Australia, 2011-2012); in Generali Group Innovation Academy for Assicurazioni Generali pioneering proprietary thinking in the areas of strategic risk management, strategic innovation, strategic leadership development and cultural change (Italy, 2005-2010); in UniCredit to design a new Management and Banking Academy (UK, 2004), and in Newton Management Innovation as a leadership development consultant (Italy, 2000-2003).

Her advisory roles to date have included the IBM European Insurance Advisory Council, the Advisory Board of Credit Suisse Business School, the Advisory Board of Schering Plough, the Scientific Committee of the University of Bicocca Learning Lab and as a non-Executive Director on the Board of Traity.com. Her publications include a case study on the creation of the Strategic Innovation division at Suncorp Personal Insurance in The Routledge Companion to Strategic Risk Management, Routledge 2016.



### Summary

Keeping global temperature rise below 1.5°C, as the IPCC last Report urgently asked, and moving towards an inclusive, climate resilient society with circular, net zero emissions economy by 2050 needs unprecedented changes: new social dynamics, ways of doing business, capital flows, policymaking, economic models, and new ways of living. This is the way European Institute of Innovation & Technology (EIT) Climate-KIC (Knowledge and Innovation Community), the EU's largest public-private partnership addressing climate change through innovation, has conceived of tackling these planetary challenges.

Dr. Kirsten Dunlop, Chief Executive Officer at EIT Climate-KIC, stated that targeting 2050 as a deadline for reaching a 100% emissions reduction in Europe is simply too little and too late. She noted that if Europe is to contribute what it should be contributing, it needs to decarbonize by 2035 or 2040. This requires a significant increase in action from where it is right now. Secondly, she stated that no one really knows what a circular net zero emissions economy looks like. That, although it is talked about, there are no practical demonstrations of what it is, how to finance it, how to benefit from it, how to design its process flows and how to ensure that they continue to be both global and local. Further, she criticized the fact that mitigation and decarbonisation have persistently been privileged over adaptation, when in fact, this is an important continuum; one leads to the other. Finally, she noted that although significant capital has been invested in innovation, it is still not leading to transformative structural change. The major conclusion of Dunlop's reflections was that in order to bring about true transformative structural change, there needs to be a shift away from incremental solutions that are technology optimistic, and instead a shift towards transformative and disruptive systemic innovations, and proper mechanisms for scaling these up for a shift in the whole socio-economic system. In order to achieve so, Dunlop highlighted the importance of creating space in cities for experimentation through piloting and testing, of reframing the climate change narrative showcasing climate positive initiatives and of the media in order to promote the required cultural change.



# Climate Innovation: Reimagining Everything

<u>EIT Climate-KIC<sup>1</sup></u> is a European <u>knowledge and innovation community<sup>2</sup></u> (KIC), working to accelerate the transition to a zero-carbon economy. Established and funded by the <u>European Institute of Innovation and Technology<sup>3</sup></u> (EIT) in 2010, Climate-KIC identifies and supports innovation that helps society mitigate and adapt to climate change.

EIT is an EU body created by the European Union in 2008 to strengthen Europe's ability to innovate and compete with the US – particularly with the challenge of commercialization of innovation. The EIT is an integral part of <u>Horizon 2020</u><sup>4</sup>, the EU's Framework Programme for Research and Innovation.

KICs are partnerships that bring together and strengthen cooperation among businesses (including SMEs), research centres and universities to create networks of expertise, through which innovative products, services and systems can be developed, brought to market and scaled-up for impact. Including Climate-KIC, there are currently eight Innovation Communities and each focus on a different societal challenge.

In response to a question on whether the organisation's role could be defined as a form of public-private partnership, Dunlop stated that Climate-KIC are a public-private partnership to the extent that they include organisations from both sectors, co-existing and learning from each other. Climate-KIC provides granting mechanisms through the European Institute of Innovation and Technology that ask for no financial return, and is therefore taxpayer funded. According to Dunlop, Climate-KIC's duty of care is to make sure the funding goes where it needs to. It is therefore not structured along public/private lines, but rather "along the lines of collective intelligence, demand and problem solving". Essentially, there is a focus on reflecting as a community, and pursuing radical change through the direction of innovation.

Climate-KIC's vision is a prosperous, inclusive, climate resilient society with a circular, net-zero emissions economy by 2050. Dunlop stated that 2050, as a target for 100% emissions reduction in Europe, is simply too little, too late. She noted that if Europe is to contribute what it should be contributing, in the context of planetary boundaries, it needs to decarbonize by 2035 or 2040. This requires a significant increase in action from where it is right now.

Secondly, she stated that no one really knows what a circular net zero emissions economy looks like. There are currently no practical demonstrations of it, how to finance it, how to benefit from it, how to design its process flows or how to ensure that they continue to be both global and local. Further, she criticized the fact that mitigation and

<sup>&</sup>lt;sup>4</sup> https://ec.europa.eu/programmes/horizon2020/en



<sup>&</sup>lt;sup>1</sup> https://www.climate-kic.org/

<sup>&</sup>lt;sup>2</sup> https://eit.europa.eu/our-communities/eit-innovation-communities

<sup>3</sup> https://eit.europa.eu/

decarbonisation have persistently been privileged over adaptation, when in fact, this is an important continuum; one leads to the other. Finally, she noted that although significant capital has been invested in innovation, it is still not bringing transformative structural change.

Dunlop stressed that while emissions are going up, the window to act is now. She mentioned a cost of roughly 2.5% of global GDP as what would be required for undertaking the necessary structural changes, but also emphasised that there was a \$26 trillion business opportunity in pursuing an industrial revolution with a fundamentally different design from how industry and economics has been carried out in the past. This would require distribution, democratisation, participation and co-creation. Dunlop emphasised the need to reframe the situation as an opportunity - by making it about the positives, such as by emphasising giving clean air, making streets greener and providing the opportunity to live in community and have water you can swim in, rather than taking something away, such as your car or your meat.

With regards to the EU's role in this transformation, Dunlop argued that there is a need to provide leadership in climate change, but of course major tensions exist with regards to who actually benefits from actions taken. She outlined how EU leadership is based on the capability to understand culturally diverse governance within the EU peace project, which is ultimately premised on narratives of different cultures coming together. For Dunlop, this is a competitive advantage that must be seized upon.

This led her to the question of how innovation can be redirected in a way that stimulates transformational change, through the setting of dramatic challenges. She referred to John Maynard Keynes' "How to pay for a war" text from 1940, which underlined the need to stop thinking in terms of balancing the books, and instead of the greatest challenge that needed to be solved and directing energy towards it, so that finance would follow.

Climate-KIC have recently decided to change their innovation model, going beyond a sole focus on technology. According to Dunlop, the most crucial reason for this adjustment is an understanding that if their aim is to find a solution to climate change, systems change is needed rather than singular solutions. The way that innovation drives transformation needs to be adapted by focusing on complex interfaces and relationships to achieve transformation across the whole systems. For Dunlop, Europe needs innovation consisting of "non-linear, disruptive transformational change in the relationships we have across energy, water, waste, mobility, infrastructure, food and so on". She held that the model of looking for single solutions was not working, and that therefore Climate-KIC were making themselves a prototype for a different way of innovating.



#### Reflections on 10 years of Climate-KIC

Some of the good practices to catalyse systemic climate innovation suggested by Dunlop are listed below<sup>5</sup>:

#### 1. Focus on the systems that need to change

Climate-KIC has identified cities, land use and manufacturing as the three major systems which, if change were triggered wholesale and emissions reduced, would have the most potential for realising a climate-resilient society and a net-zero carbon economy.

Cities consume 75 per cent of the world's natural resources, produce half the planet's waste and generate 60-80 per cent of global greenhouse gas emissions. EIT Climate-KIC's <u>Urban Transitions</u><sup>6</sup> experts advise cities and districts on how best to transform urban environments into decarbonised and climate-resilient urban areas by greening the city and going for a more clean mobility among other things. They also run a city matchmaker project that aims to combine where there are investment opportunities for cities, helping cities make themselves available to the market, and where projects exist that could be combined into an investable package. This correlates with the need to provide investment-ready projects.

Agriculture, forestry and other land uses represent 24 per cent of global greenhouse gases emissions. Integrated approaches to land use that connect urban and rural, and that bring together stakeholders along the value chain are needed. As an example, they run the Winners programme<sup>7</sup> that consists of a climate service that uses machine learning to create robust climate risk information for reinsurance and credit guarantees, which allows banks to provide loans to smallholders who have never been able to access credit before. This climate smart agricultural initiative also helps to ensure that both large- and small-scale farmers are able to make better decisions and improve their productivity and carbon footprints. An example of this is help being provided to smallholder African suppliers of European supermarkets, with very little ability to sustain risk posed by extreme weather events. The project provides them with a line of credit and information from European satellites, information on water, planting possibilities and so on. The idea is ultimately to create a knowledge-sharing, open innovation system that makes food supply significantly more stable and, as a result, stimulating change across several spheres.

Finally, industry emissions account for 30 per cent of total global greenhouse gas emissions. These stem mainly from materials processing in the metals and chemicals



<sup>&</sup>lt;sup>5</sup> https://www.climate-kic.org/who-we-are/making-an-impact/

<sup>&</sup>lt;sup>6</sup> https://www.climate-kic.org/areas-of-focus/urban-transitions-2/overview/

<sup>&</sup>lt;sup>7</sup> http://www.winners-project.org/

sector, where demand in the automobile, household appliances, consumer electronics and packaging sectors is highest. By working together with a variety of partners, from businesses to academia, <u>Climate-KIC aims to</u><sup>8</sup> switch to a circular economy, to transform production for high-emitting materials to cut value chain emissions, and to shift the carbon-intensive regions to become zero-carbon innovation hotspots. A project supported by Climate-KIC aims at using supermarket refrigeration and cooling technologies to change the relationship between the amount of food that is wasted, and the amount of energy waste produced for cooling, illustrating how several areas can be tackled at once.

#### 2. Shift away from a single proposal approach to interconnected proposals

Dunlop believes that the main challenge here is to work backwards from the problem; to focus on all of the interconnected issues that need to collectively change to achieve systemic change and create resilient and green cities by 2030-35. In other words, not simply focusing on single issues and solutions as mentioned earlier, like whether or not people have electric cars, but on every single aspect surrounding this issue and how to design an innovation program for that, so that change is achieved across systems, tackling other issues in parallel.

They run global initiatives, such as the <u>Climate Launch Pad</u><sup>9</sup>, which focuses on opening access doors to individuals hoping to figure out how to play a role as an entrepreneur or innovator. Launch Pad connects them with other individuals and gives them something to work on so that they can join the innovation system across Europe. Dunlop also mentioned <u>Climate KIC's Climathon</u><sup>10</sup> as another example of the type of global movement under way. This is a 24-hour hackathon that takes place in October, literally around the world, were more than 100 cities set a challenge to their local residents that have to come up with ideas and solutions. Climate-KIC then is committed to follow and support the ideas and to connect them with other people.

#### 3. Enable an environment for experimentation in cites - "learning by doing"

Dunlop suggested **creating space in cities for experimentation through piloting and testing.** The city learns from these pilots by observing the change and recalibrates the approach in response to the insights gained. This learning by doing approach in cities, where 70% of the world's population lives, also allows for visible, large-scale deep demonstrations. Building on this point, Dunlop noted that cites are the 'stranded assets' of the future. For example, cities that are too close to flood plains, cities with infrastructure that simply will not cope with 40 to 50-degree heat, that are not designed



<sup>8</sup> https://www.climate-kic.org/areas-of-focus/sustainable-production-systems/our-initiatives/

<sup>9</sup> https://climatelaunchpad.org/

<sup>10</sup> https://climathon.climate-kic.org/

for water disasters, that are not designed for massively dense populations fleeing from the worst disasters, etc. As such, while cities represent the greatest concentration of risk, they are also the greatest source of hope for effecting change.

Climate-KIC have just launched invitations for partners to work with them, and so far, this has led to work with the port of Valencia, Mondragon, Amsterdam, Helsinki and more. They aim to design innovation in a way that understands the non-linearity and non-mechanical nature of change, and rather its unpredictability and volatility, particularly when human behaviour needs to change.

Mondragon was underscored because of its future as one of the most successful global cooperatives and for its membership of a series of industries based on high carbon manufacturing that will need to change their models. For Dunlop, Mondragon is an interesting case of political collectivism, which could offer guidelines on what to do politically, an example of cooperative governance design that enables working with resources in a way that is circular and shared. She said that while this case was highly unique and challenging to replicate, certain aspects could potentially be exported into other systems "to give a notion of the mechanics of polycentric governance." Climate-KIC plans to work with Mondragon in the <a href="Deep Demonstrations11">Deep Demonstrations11</a> of change initiative, part of the Climate-KIC 2019-2022 strategy. Deep Demonstrations focuses on examples of what is possible in terms of change at the level of whole systems, with Mondragon as part of a group of regions in Europe that are reliant on coal and heavy industry (Climate-KIC, 2019)

For Dunlop, ports are interesting transition zones for decarbonising entire set-ups, in a way that can go backwards into all supply chains - this is a key area in which Climate-KIC hope to work with **Valencia** in the future. One example of this was the Navlandis ZBOX $^{12}$ , a foldable shipping container that when empty can be folded. It takes up far less space than a regular container and tackles the issue of empty containers taking up 25% of sea traffic, subsequently providing a reduction in  $CO_2$  emissions from transport and reduced costs (Climate-KIC Spain, 2017). Climate-KIC's partners in Valencia include the Valencia port Foundation and the University of Valencia. The Valencia port Foundation is a participant in the Climate-KIC funded "Susports - Delivering Sustainable energy solutions to ports" project. Valencia also hosted a Climathon in October 2019, focused on where to capture  $CO_2$  in the port of Valencia.

Dunlop stated that whilst providing tools and a platform to find solutions was valuable, this alone was not enough, stressing how cities were our biggest hope for implementing entirely new systems, and building a sense of energy around ways forward by modelling alternatives. This includes partnerships across cities through which information and

<sup>12</sup> https://www.navlandis.com/en/zbox-2/



<sup>11</sup> https://www.climate-kic.org/programmes/deep-demonstrations/

skills are shared, and where each city can offer its own particular set of circumstances to experiment with something that suits them.

#### 4. Participate in city networks and establish new connections

There is an increasing focus in Europe on exchange with and reciprocal access to other areas in the world addressing climate change as a great challenge and a great opportunity. Dunlop emphasised how innovation should be deployed as one part of a big puzzle of levers for change, and that it would be impossible to try and change the world alone. Because of this, Dunlop emphasized the importance of city networks. Climate-KIC works in partnerships as much as possible, with networks such as C40, and the Global Covenant for Mayors creating exchange and reciprocal access between cities.

#### 5. Balance the tension between the global and local

Dunlop proposed a move away from the rhetoric that all solutions need to be or can be scaled and begin thinking about how to balance the relationship between the challenges and opportunities of hyper local places with the opportunity to learn from what others are doing - taking inspiration, ideas, methods, technologies and value chains across borders. Essentially, trying to combine working across Europe with being place-specific in terms of regions, cities, districts, communities, neighbourhood streets and households, with a view to create networks rather than focus on single, exportable business opportunities.

#### 6. Incubate and accelerate a supply of entrepreneurial new businesses

Dunlop believes that innovation accelerators should shift their focus from working with start-ups to help them acquire capital, towards helping them connect with and work with cities, governments or industry. Although this is a longer, slower and more difficult process, requiring a degree of patience, Dunlop believes that it is an important part of what will ultimately lead to transformation. They run 32 accelerators across Europe, which makes them the biggest clean-tech accelerator in the world. Some of them are run by themselves. The rest are run by partners in different cities and institutions.

#### 7. Meet investor demand for "investment ready" businesses

A major target of Dunlop's critiques was the world of sustainable finance, which she previously stated is "nowhere near where it needs to be, and the trajectory remains underwhelming – it is mediocre in its ambition and uninspiring in terms of the solutions it is currently focusing on." The European Commission's Action Plan on Sustainable Finance published in 2018 identified an annual investment gap in Europe of at least €180 billion through to 2030. Dunlop stated that investors and capital holders are not taking the scale of climate risk and opportunity sufficiently into account in their investment strategies to be able to change course. She noted that an immediate barrier to unlocking



capital is investors saying that there are not enough "investment-ready" and innovative ideas, assets and business models available.

Climate-KIC also launched a fund helping investors interested in sustainable solutions to understand the value of what they are investing in. They are using a risk tool that helps insurers price in the real externalities and risks that are at play.

#### 8. Sustainability as the purpose and intent of the financial system

In line with the previous point, Dunlop referred to her own experience working in insurance and banking, seeing that the financial system had largely been doing business with itself, disconnecting itself from the financial needs of the real-world economy. She argued that real world definitions of value were locking us into unsustainable systems. Therefore, there was a need to change this definition of value, and to reconnect it into the core financial system, making that system realise that sustainability and being "green" is not simply a subcategory of an asset, but rather the purpose and intent of the entire financial system, both on the risk side and the cash side.

Dunlop accepted that this was a lot to ask for but stressed the role banks could play. She pointed to the different moments in our lives and choices that banks play a role in, such as whether or not we can afford a car - these moments in time could represent an opportunity for banks to ask clients to pay attention to a different set of value indicators, acting as intermediaries and reframing or redefining what value actually is. For Dunlop, it is possible to unlock a lot of private capital if you start designing for a new economic system involving a complex combination of demand finance and supply finance, and valuing temporal finance.

# 9. Reframe the climate change narrative – from "taking something away" to providing opportunities

As mentioned earlier, Dunlop noted that while on the one hand 2.5% of global GDP is required to effect the structural changes necessary to address the 12 year decarbonisation challenge (as per the conclusions of the 2018 IPCC special report on the impacts of global warming of 1.5 °C), business opportunities also exist in effecting this fundamental change in industries and the economy. The value of redesigning our societies and economies between now and 2030, making them distributed, democratized, participatory and co-creative, has been placed at \$26 trillion in Europe - a decent business opportunity.

This also provides an opportunity to reframe the narrative and remove the historically ingrained cultural barriers to the adoption of climate innovation initiatives. Dunlop gave the example of the city of Amsterdam which is engaging this narrative through



climate positive initiatives. Amsterdam city has focused less on the taking away of nonelectrical vehicles or taking away meat or taking away access to the centre of the city, for example. It is instead framing innovation as providing its citizens with clean air and water, greener public spaces and the possibility of living in a community.

#### 10. The media's role in generating awareness

In addition to these transformations, Dunlop remarked on the relevance of the media. She argued that the media should show how the situation is progressing in order to enhance social collaboration, and to promote cultural changes (such as reducing water consumption, increasing the use of renewable energy, diminishing the anthropogenic degradation of ecosystems, etc).

Dunlop reiterated the need to engage with people, to create narratives that do resonate, and highlighted the role of visual arts, media and culture for creating these narratives. One of the areas Climate-KIC were focusing on was climate communication, which she considered to be a disaster, stressing how single image climate communications had been largely unsuccessful". She expressed scepticism of the efficacy of adverts depicting images of polar bears and icebergs, for example. For Dunlop, this is not an effective means for enticing people to buy more sustainable products or behave in a greener way -someone may have brief emotional response to an image of a polar bear, but it will not instigate that person to change their habits, as day-to-day concerns will take precedence. In communities where change needs to happen fast, such as communities of coal miners in Silesia, narratives need to be built that connect with the things they care about.

She highlighted the need to show the alternatives to unsustainable activities. This is necessary to win several generations of people off the idea of coal-mining, or water-intensive exotic fruit production in Andalucia. Creating pathways and narratives focused on carving alternatives together, rather than just saying that what people do is bad.

Overall, she stressed the need to change the subtext of cynicism and doubt towards one of hope, creativity and possibility. One way to communicate this could be for communities that are already experimenting and making changes towards sustainability to have their stories heard.

# Concluding remarks

One of Dunlop's key messages iterated the need to act now, and fast. She criticised the idea of finding a "Planet B" when she was asked about literature referring to this, emphasising the need to save this planet and a belief that it was still possible to do so. While she found the lack of action demoralising, she was optimistic about the ability for human beings to be creative under pressure.



She gave an example of asbestos cases, where claimants took governments to court 30 years after the fact with evidence that they had been aware of the issue but failed to take the right decisions, resulting in severe health consequences for the people affected. For Dunlop, there is a similarity with Climate Change here - there is an opportunity at the sub-national level, as well as certain financial mechanisms in place, to act now. Things can be done differently this time.



## **Bibliography**

Commission, G. (2014). Better Growth. Available at:

http://static.newclimateeconomy.report/TheNewClimateEconomyReport.pdf%5Cnpapers2://publication/uuid/E05ED012-1722-4805-940E-7D39142DEADF.

Environment Inquiry (2018). Sustainable Finance Progress Report. Retrieved from <a href="http://unepinquiry.org/wp-content/uploads/2019/03/Sustainable Finance Progress Report 2018.pdf">http://unepinquiry.org/wp-content/uploads/2019/03/Sustainable Finance Progress Report 2018.pdf</a>.

European Commission (2019). Report on Climate-related Disclosures. Retrieved from https://ec.europa.eu/info/sites/info/files/business\_economy\_euro/banking\_and\_finan ce/documents/190110-sustainable-finance-teg-report-climate-related-disclosures\_en.pdf

FC4S (2019) Shifting Gears: How the world's leading financial centres are entering a new phase of strategic action on green and sustainable finance. Retrieved from https://docs.wixstatic.com/ugd/eb1f0b\_0787bfbd60f54deda3c80dae7490bb10.pdf

UNEP Inquiry (2017) 'Accelerating Financial Centre Action on Sustainable Development How International Cooperation Can Scale Up Green and Sustainable Finance', (December). Available at: http://unepinquiry.org/wp-content/uploads/2017/12/Accelerating\_Financial\_Centre\_Action\_on\_Sustainable\_Development.pdf.

Ballabriga, A. (2019). Debunking myths about sustainable finance. Retrieved from https://www.bbva.com/en/opinion/debunking-myths-about-sustainable-finance/

ICCA (2019). EIT Climate-KIC. Available at <a href="https://www.icca2019.org/eit-climate-kic/">https://www.icca2019.org/eit-climate-kic/</a>.

EIT (ND-online). EIT - Who we are. Available at <a href="https://eit.europa.eu/who-we-are/eit-glance">https://eit.europa.eu/who-we-are/eit-glance</a>.

EIT (ND). Knowledge and Innovation Communities. Available at https://eit.europa.eu/our-communities/eit-innovation-communities.

Navlandis (ND-online). Zbox. Available at https://www.navlandis.com/en/zbox-2/

Climate-KIC Spain (2017- online). Navlandis, revolutionizes shipping with its Zbox folding container. Published 7th July 2017. Available at <a href="https://spain.climate-kic.org/en/news/navlandis-revolutionizes-shipping-with-its-zbox-folding-container/">https://spain.climate-kic.org/en/news/navlandis-revolutionizes-shipping-with-its-zbox-folding-container/</a>

Climathon (2019). Valencia Climathon 25th October 2019. Available at <a href="https://climathon.climate-kic.org/en/valencia">https://climathon.climate-kic.org/en/valencia</a>

European Commission (ND). Horizon 2020. Available at https://ec.europa.eu/programmes/horizon2020/en



Climate -KIC (2019). Deep Demonstrations of a Net-zero Emissions Resilient Future pdf. Available at <a href="https://www.climate-kic.org/wp-content/uploads/2019/04/EIT-Climate-KIC-Deep-Demonstrations.pdf">https://www.climate-kic.org/wp-content/uploads/2019/04/EIT-Climate-KIC-Deep-Demonstrations.pdf</a>

Climate-KIC (ND-online). Programmes - Deep Demonstrations. Available at <a href="https://www.climate-kic.org/programmes/deep-demonstrations/">https://www.climate-kic.org/programmes/deep-demonstrations/</a>



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