

Creating the Circular Carbon Economy

THREE C Project launched to promote new value chains and products made all around biochar in North West Europe

January 2020 saw the first gathering of THREE C project partners, new and old, at the premises of Trendhuis in Mechelen, Belgium. This meeting signalled the start of the project, a 3 year Interreg NWE funded project focused on building upon the good work previously undertaken during the RE-DIRECT project and others before it. THREE C (Creating the Circular Carbon Economy) will aid in the development of sustainable biomass value chains for the provision of biochar based products and

services. The growing consortium of partners are comprised of a diverse range of groupings, institutions and enterprises. New to the group were:

- UniLaSalle - from France
- Bretagne Eco-Entreprises - from France
- Gemeente Apeldoorn - from the Netherlands

The planned kick off meeting was scheduled for March 2020 in the southern German town of Baden Baden, where a site visit to the recently installed pyrolysis plant operated by the partner "Umwelttechnik Baden Baden" had been scheduled to take place. Unfortunately, Europe and the rest of the world ground slowly to a halt



Picture 1: First THREE C gathering in Mechelen, Belgium

and international travel as well as face to face meetings made way for new ways of working together on transnational projects.

With the unfolding and ongoing COVID 19 pandemic situations continuing to impact people's lives, the second half of 2020 saw the THREE C project continue in the virtual realm as travel restrictions meant both international and national travel was off the cards for the most part for the THREE C project partners. While the situation differed from region to region, the decision to continue with online and virtual partner meetings was taken, in accordance with public health guidance. In the absence of the ability to meet face to face, meetings were held online every 2 weeks. These meetings were used to progress the work plan for activities of the three work packages central to the successful roll out of the THREE C project, namely the CC Hubs, CC Labs and CC Net.

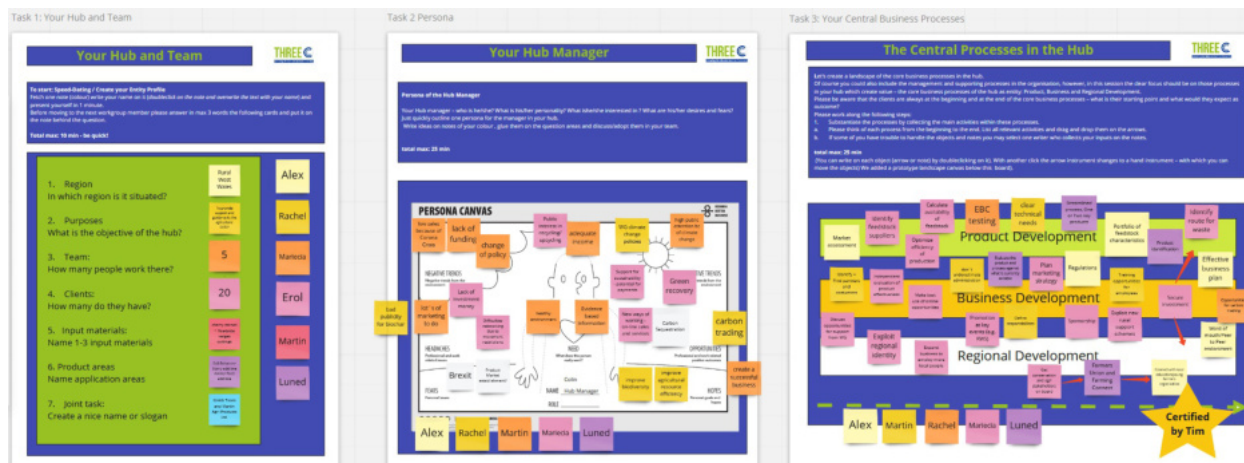
The use of software came into its own during the later part of 2020, in particular, the use of platforms such as MIRO which allowed multiple breakout sessions where partners could work in real time on the same ideas in a collaborative approach.

CC Hubs

The thinking on the establishment of 7 different regional CC Hubs or Circular Carbon Hubs, located in the 6 participating countries, has evolved to reflect the circumstances that exist on the ground. In some countries, there are existing physical locations where the hubs will be located and in other countries, the hub will exist in a more digital format, with occasional meet ups taking place. The C Hubs are designed to act as spaces where innovation can take place, as incubators for product development and start-ups where prototypes can be worked on, and assistance can be given to those looking to develop a biochar based product or service.

CC Lab

The CC Lab group have continued to meet and work on identifying and developing the parameters that will be required for the testing of different biochars and feedstocks. The main CC Lab, which will be located in the University of Kassel in Germany, made preparations for the installation of new pyrolysis equipment for assisting in analytical side of the THREE C project.



Picture 2: Screenshot of the virtual workshop with digital collaboration tools

CC Net

As part of the activities for the development of the Circular Carbon Network (CC Net) all project partners were tasked with identifying existing product lines, stakeholders and various marketing elements, pricing structures and availability for biochar-based products and services in the different countries. The outcome of these will help inform approaches to the successful development of new products and services through the THREE C project.

Partners continued to build upon regional networks of potential CC Hub clients and participants in the projects, all of which will go towards the development of a circular carbon network throughout Northwest Europe.

Bioeconomy Ireland Week

Irish partners IrBEA (the Irish Bioenergy Association) were asked to participate in the Bioeconomy Ireland 2020 event- a weeklong event full of different online digital webinars, launches, information sessions and workshops showcasing just some of the projects, initiatives and businesses who are forging a path in the bioeconomy. The invitation to participate came from a member of the Bioeconomy Implementation Group, a working group from the Department of Agriculture, Food and the Marine (DAFM). IrBEA decided to use the

national platform to hold an Irish launch of the project. The 2-hour event featured presentations on the bioeconomy potential in Ireland, an overview of the THREE C project in Ireland, an update on the potential at a farm level from Welsh THREE C partners at Cwm Harry and a presentation from Arigna Biofuels about their torrefaction facility in the West of Ireland. The presenters then held a question and answers segment. The event, which saw over 100 people register, took place in a week of activities which covered diverse bioeconomy topics such as seaweed and grass biorefineries, innovative microwave technology for the pre-treatment at anaerobic digestion facilities and bioeconomy projects looking at symbiosis between beer manufacturers and waste bread, a company developing protein from insects and a project looking at valorising fruit and vegetable waste for the production of new food fibre ingredients. The events highlighted the potential for integration of a circular carbon economy alongside the broader, developing bioeconomy sector.

Irish THREE C activities continued in early 2021 with the hosting of a biochar focused webinar as part of the IrBEA fortnightly webinar series. The event, titled ["Biochar - Addressing the Climate & Environmental Challenges"](#) was aimed at providing an introduction to just some of the various benefits that can be realised through the application and development of biochar based products and services. It also showcased some of the work currently underway by Irish THREE C

stakeholders including enriched biochar-based plant and soil additives, a range of animal feed grade biochars and biochars being used in forestry and agricultural settings. With Irish biochars being made at a variety of differing facilities, using differing technological processes and biomass feedstocks, it has led to a nice range of biochars finding its way onto the Irish market.

Bio360 Expo France

The start of the year also saw THREE C activities in France underway, with the French partners of AILE, Uni LaSalle and Bretagne Eco Enterprises participating in the Bio360Expo in Nantes. The weeklong expo showcased the overlapping themes of the bioeconomy and bioenergy space - with biochar production and use being recognised as belonging to both. The THREE C project was presented alongside other existing biochar enterprises and initiatives and the recordings of the different events can be found

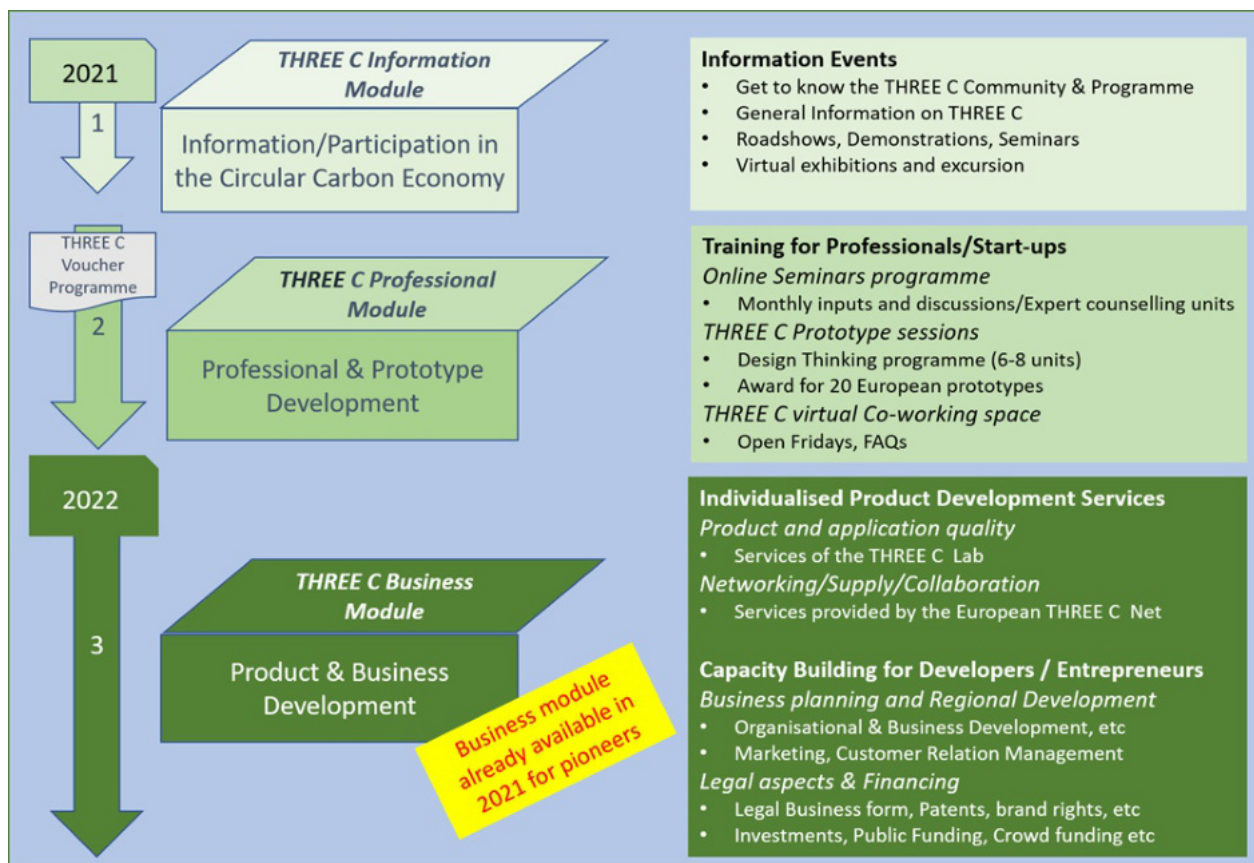


Picture 3: Biochar on the agenda of the bio360 week.

online on [the Bio360 Youtube channel](#)

THREE C Professional Development Course

During the first half of 2020, the THREE C partners from the different regions all began engaging with and seeking expressions of interest from potential participants for the



Picture 4: Outline of the planned THREE C course

upcoming THREE C professional Development Course that is being trialled as part of the THREE C project. This course is aimed at providing participants with access to the background information, knowledge exchange, collaboration and guidance in order to be better equipped to developing biochar-based business, products and services. The course is set to be piloted, beginning in the second half of 2021.

Launch of THREE C Digital Platforms

This period also saw the development and launch of various digital and social media platforms to assist in the roll out of the project. www.threec.eu is the official project website.

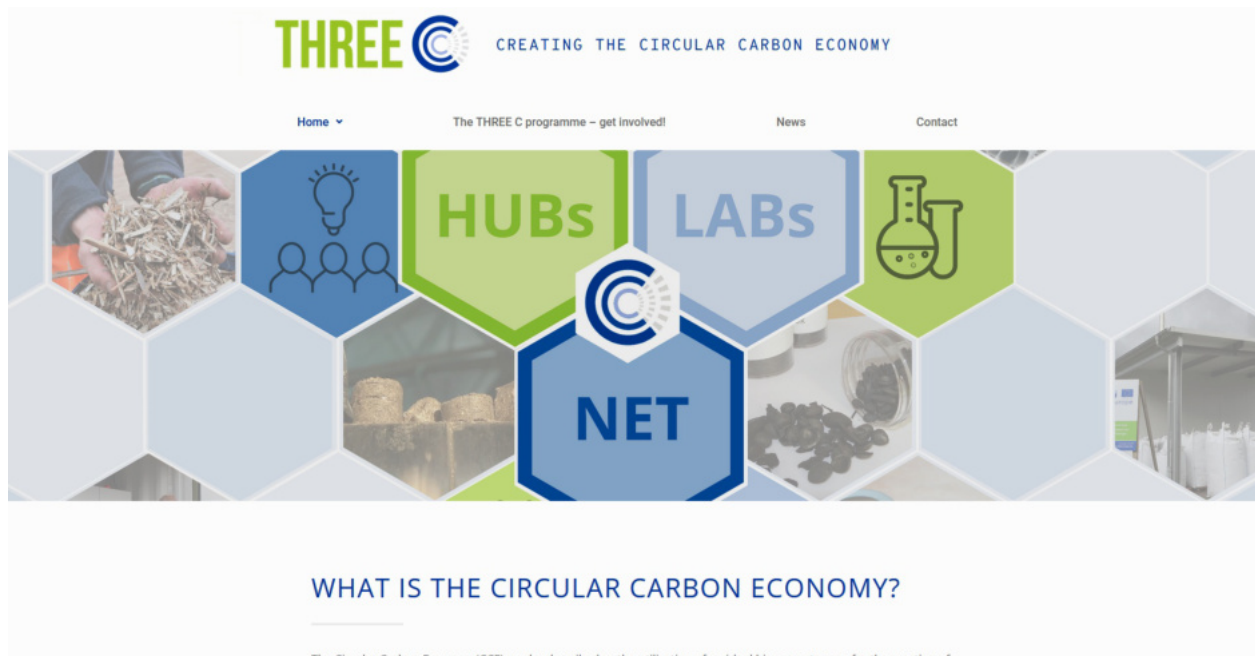
And interested parties can connect with the project through its LinkedIn Page, accessible at: www.linkedin.com/company/three-c-creating-the-circular-carbon-economy/

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Picture 5: Screenshot of the new project website www.threec.eu