



DIGI-GRENT Project

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Output name:

**Digital and Responsible Entrepreneurship
(DREP) Co-Creation Platform and Virtual
Learning Environment (VLE) through
Open Innovation and Co-creation**

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1 Introduction

This document provides an overview on the Digital and Responsible Entrepreneurship (DREP) Co-Creation Platform and Virtual Learning Environment (VLE). The VLE is a key deliverable of DIGI-GRENT as it provides the backbone for implementing the blended TCCPs and the co-creation in an open innovation manner.

The VLE has been translated into Italian, Spanish, Polish, Greek and English, thus maximizing its potential for transferring the knowledge generated in this project across Europe.

2 Overview

Academia, policy makers, industry/SMEs and society are engaged into a virtual learning environment (VLE) for DREP based on an online tool in which various digital models of startup/company operations systems can be subject to an open debate for improving their environmental and social impact. The VLE will contain all the DREP curriculum as well. The VLE will be linked with SCEnAT which is a supply chain modeling tool that will be used to pilot the VLE materials. However, SCEnAT is decoupled from the VLE in order to ensure maximum efficiency, optimization and user-experience.

The DIGIGRENT approach to DREP training:





The proposed final goal sustains envisions the VLE as a web platform that will contain the DREP curriculum, open MOOCs, training materials, DREP resources, information feeds from various key DREP players/stakeholders, user feedback/comment facilities, and as central element - access to the SCEnAT tool.

However, the main goal of the VLE (during the project lifecycle) is to enable all primary stakeholders (university and industries/startups) as well as the secondary stakeholders (students, policy makers, society) to co-create by evaluating applicability of the DREP curriculum for the proposed scenarios/models. This public input from stakeholders is critical for enabling an open innovation approach for enhancing the quality and comprehensiveness of the DREP curriculum for wider targets.

Specifically, all stakeholders will be able to request free access to this VLE platform. As mentioned, the platform will contain best practices for DREP, all the DREP curriculum from O1, samples of models for digital and responsible business models, and demonstrations of how the skills gained through the TCCP helped industries/SMEs to achieve DREP through the use of the SCEnAT tool (to demonstrate the initial status of a model's DREP, and the post-intervention status after applying the know-how gained through the TCCP).

Furthermore, the users of the VLE will be able to develop and test their own DREP models, share issues/skill requirements and request DREP curriculum for their own skill requirements. This output will also provide an update for O1 in terms of skill matrix update. Such an open approach (VLE) is deemed to make a greater impact of DIGI-GRENT's findings on the desired target groups and to enable a sustainable outreach of the project leading to innovation outburst through open innovation and knowledge collection, management and improvement (co-creation).

During the software development process, constant interaction with the consortium members was maintained in order to make sure that the requirements are fully met. The effort for extending SCEnATi to achieve the VLE is minimized - as the core element has been already performed and tested through the TrainERGY project which was previously undertaken by the academic project partners.



After the VLE has been developed and is fully operational, the platform was piloted during each transnational TCCP intensive 5-day sessions. At the end of each TCCP session, the co-creation stakeholders will use the VLE to develop DREP models and will apply the skills gained from the DREP curriculum on these models in order to develop a practical application of the taught material.

Finally, all the feedback gained will be utilized for the primary goal - to improve the DREP curriculum so that academic institutions produce more market oriented knowledge through open innovation and co-creation with market actors.

3 Functionality of the VLE

In the current stage the VLE offers the following functionality:

- Download of the content and readings corresponding to the 3 parts of the curriculum
- SCEnATi manual and user-guide
- Templates for the TCCP assignments
- Access to SCEnATi

DIGI-GRENT VLE:

Virtual Learning Environment

Building Next Generation of Globally Responsible Entrepreneurs

TEACHING AND LEARNING SECTION

Download the relevant templates:

- [DIGI-GRENT – Business Model Report](#)
- [DIGI-GRENT – DREP Business Model Canvas Template](#)
- [DIGI-GRENT – Final Trainee Presentation Template](#)
- [DIGI-GRENT – Good Practice Template 2](#)
- [DIGI-GRENT – Instructions](#)

Intellectual outputs:

- [DIGI-GRENT IO2 Quintuple Helix Toolkit](#)

Digital
Responsible
Entrepreneurship

Curriculum 1 – DIGI-GRENT Thessaloniki Training (30 September -04 – October 2019)	Eco-friendly digital business models for startups Slides – Ecofriendly-digital-BM Slides – Green-digital-Examples	Digital security and cybercrime for digital entrepreneurs Slides (Prezi)	Managing and understanding the quintuple helix towards fostering digital & responsible startups Slides – Managing and understanding the quintuple helix
Curriculum 2 – DIGI-GRENT Almeria Training (Online) (18- 29 January 2021)	Pitching strategies DIGI-GRENT – Instructions TCCP2 DIGI-GRENT – Pitching Strategies	Startups and social awareness DIGI-GRENT – Startups and social awareness	Next generations digital trends Next-generation digital trends
Curriculum 3 – DIGI-GRENT Lodz Training (18- 29 January 2021)	Bridging Investors, Business Angels and Digital & Responsible start-ups Bridging Investors	Developing partnerships with responsible companies in the e-market Teaching notes Developing partnerships with responsible companies in the e-	Digital policies Digital policies_1 DigiTrianing 2-SEERC_Digigrent Digital policies_2

PRACTICE & APPLICATION TRAINING SECTION

Here you can find useful resources for the application/practice side (business models, examples of good practices from each lecture).

Business Models	Good Practices
DIGI-GRENT – Business MODEL FEMEVAL DIGI-GRENT-Business-Model-Report_GIMBUS DIGI-GRENT – Business Model Report – 3D Printing	DIGI-GRENT – Good Practice FEMEVAL DIGI-GRENT – Good Practice ULO Airly Ltd DIGI-GRENT-Good-Practice-patent office


HANDS-ON SECTION

Here you can use SCEnATI in order to apply the knowledge gained so far !

You can download the SCEnATI manual here:

[SCEnATI Manual_November_2018](#).

Important: In order to benefit from maximum user experience we highly recommend that you utilize a high resolution (wide screen or zoom out in order to capture the entire modelling map).



[<< Back to Main Site](#)
[Login](#)

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Please enter your user name and password. [Register](#) if you don't have an account.

All the contents and training materials corresponding to the 3 parts of the curriculum are translated into each partner's language. Thus, any person interested in obtaining the materials

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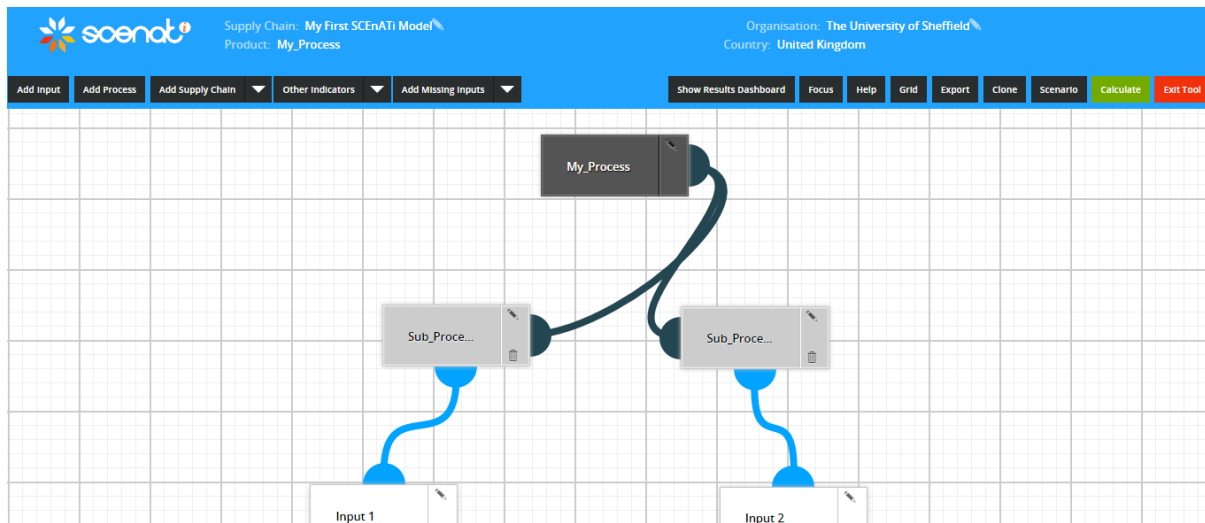
in one concrete language can find them entering into the language-related version of the VLE and then download each file. Languages available: English, Spanish, Polish, Italian and Greek.

4 Functionality of SCEnATi

SCEnATi has the following functionality which enables DIGIGRENT VLE users to assess the sustainability and responsibility of their business models.

4.1 First step towards DREP: Creation of supply chain maps with processes and inputs

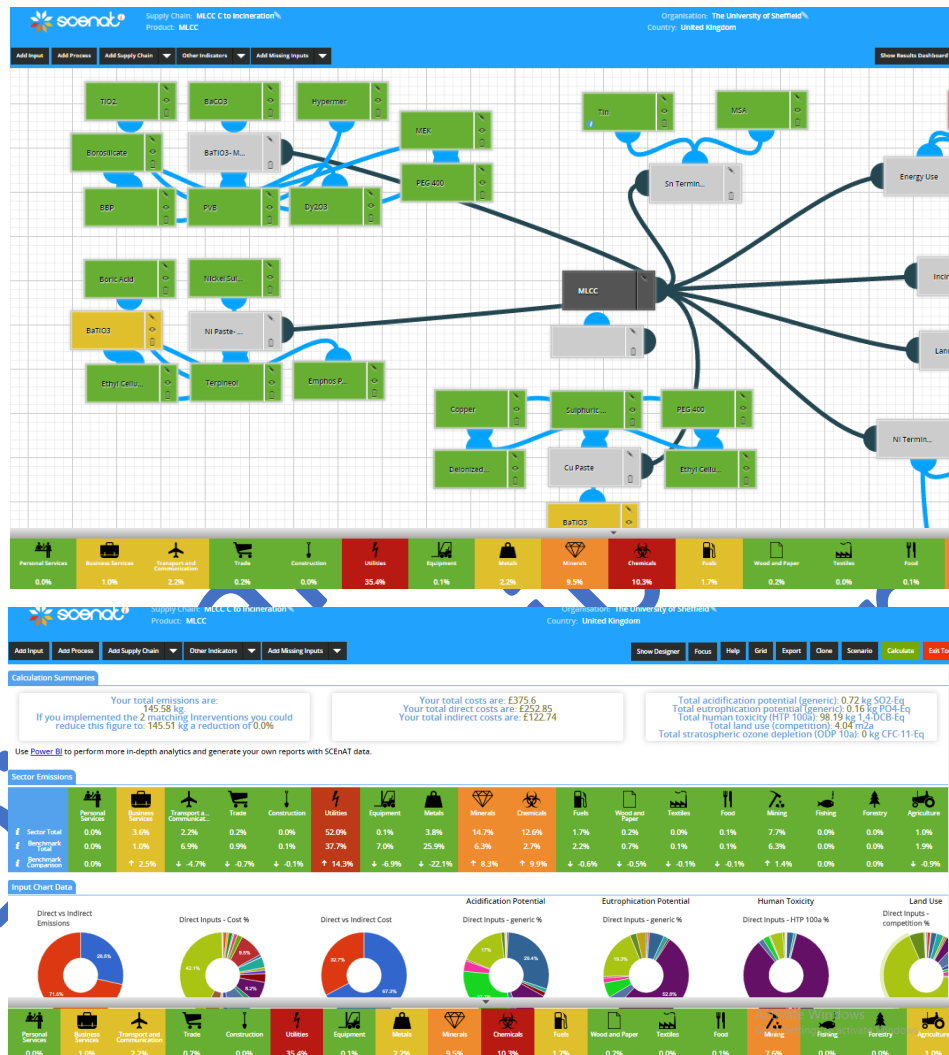
- Supply Chain products consist of either **'Inputs'** and **'Processes'** which are linked to the final or reference product
- The following input attributes are supported:
 - **'Name'** of the Input
 - The Economic Input-Output **'Sector'** that the Input can be classed
 - The Economic Input-Output Sub-Sector describing the **'Classification'** of the Input
 - Specify the **'Quantity'** of Input into the Supply Chain
 - The **'Unit'** of the Input
 - The **'Emissions Intensity'** of the Input
 - The average **'Unit Cost'** of the Input
 - When building a product supply chain, specified **'Inputs'** are usually linked directly to the **'Final Product'** or linked to a named **'Process'**. In the example shown below in Figure 3, **'Input 1'** is linked to **'Process 1'** which in-turn is linked to the **'Final Product'**. As shown, **'Input 2'** for example is also linked directly to the **'Final Product'**.



4.2 Second step towards DREP: Supply chain carbon map calculation

SCEnATi obtains the product supply chain carbon map after building the supply chain. The map automatically transforms into a carbon map¹ as illustrated in Fig 4. The Hybrid LCA methodology (an integration of Process LCA and Environmental Input-Output LCA) within a Multi-Regional Input-Output framework is the carbon accounting model built behind SCEnATi.

¹**Supply Chain Carbon Map:** SCEnATi defines a product supply chain carbon map as a whole supply chain representation of the lifecycle carbon emissions associated with the production of a given product. The supply chain carbon map as shown in Figure 4 consists of both direct and indirect emissions associated with the supply chain, hence it accounts for both Scope 1, 2 and 3 emissions associated with the product supply chain.



The Product/process Supply Chain Carbon Map has the following characteristics:

- **Automatic Carbon Hot-spotting:** High carbon inputs into the supply chain are automatically identified and classed as hot-spots. These hot-spots are relative to the total lifecycle emissions. For example **'Inputs'** with emissions greater than 10% are automatically tagged with the colour **'RED'**.
- **Direct Emissions:** The Direct Emissions associated with the product supply chain are presented on the main grid of the mapping screen.
- **Indirect Emissions:** The Indirect Emissions associated with the product supply chain from the wider economy are represented at the bottom of the supply chain carbon map across 18



aggregated sectors. Refer to Appendix I for details of these economic sectors. The relative percentage contributions from each of these sectors are indicated on the carbon map.

- **Results in Graphical Form:** The total lifecycle emissions (direct and indirect) are presented as a pie chart on the left pane.
- **Automatic linkage to Low Carbon Intervention:** SCEnATi is populated with a number of interventions.

4.3 Third step towards DREP: Performance measurement

Performance measurement towards DREP is done on a set of Key Performance Indicators (KPI) across Economic, Social and Environmental measures as illustrated in Figure 10.

How it Works

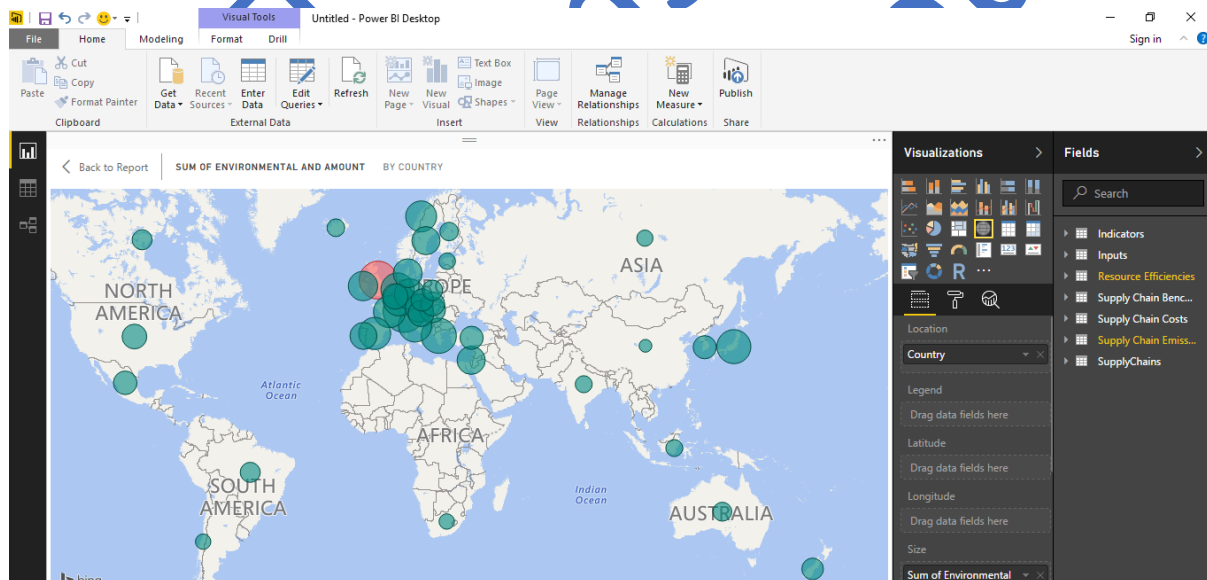
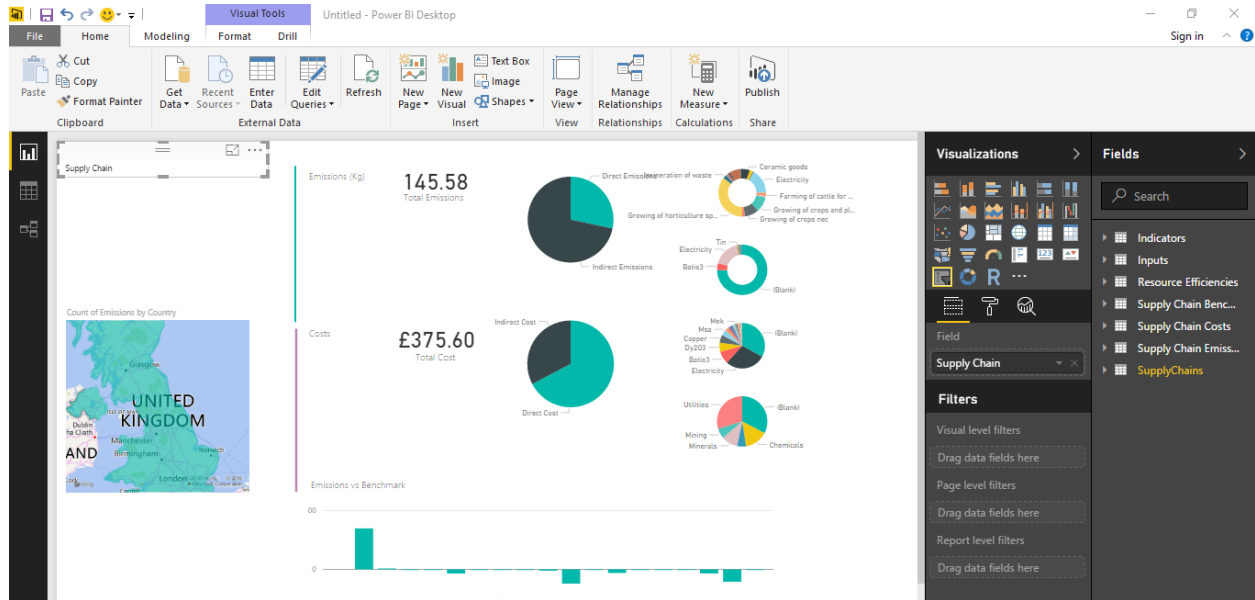
- This step in SCEnATi is closely linked to the supply chain mapping/calculation and the interventions stages. A series of performance evaluation measures relevant to each type of intervention are provided in SCEnATi. Within each category, users can select the measures they think to be relevant. The user can select indicators within each category by simply ticking the relevant box. The inbuilt mechanism of this step is so flexible that each user can customise the performance measurement system.
- The user defined performance measurement system, would produce the set of KPIs across which SCEnATi would evaluate the supply chain.
- A performance measure is associated with each KPI. These measures can be evaluated at each level within the supply chain: (the user should specify, after the selection of the KPIs, if they want to measure them at a focal firm or at a whole supply chain level)
- At the end of this step, the user would be able to visualize an impact table and impact charts (percentage impact of interventions on associated KPIs) for each tested intervention.



4.4 Fourth step towards DREP: Business intelligence

About the business intelligence capability of SCEnATi

- SCEnATi enables you to make better use of your full data underlying your already mapped supply chain in order to understand what implications do the revealed findings (i.e. carbon map, indicators, etc) have on the wider business context (i.e. business intelligence).
- Such action is being done in conjuncture with the Microsoft Power BI tool which uses big data analytics to reveal key intelligence from your model.
- The big data analytics process is being done based on cutting-edge algorithms focused on data clustering and extraction of intelligence factors from the wide amount of available information.
- The key intelligence is being displayed in a highly managerial manner with concrete and visually appealing charts, dashboards and geographic information systems (GIS) maps to show the global benchmark of your supply chain.
- You can then use these features in order to either take informed and intelligent decisions and corrective measures for your supply chain or simply to show these cutting-edge findings and reports to your management team or clients.



5 Technical specification of the VLE and SCEnATi

Technical features of the VLE:

- Mobile and touch device compatible

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- Secure (password restricted in order to properly register all users)
- Fully digital and updated
- Easily accessible

Technical features of SCEnATi:

- Big data analytics
 - Geographic information system visualisation
 - Improved security, scalability and future proof integration via our Microsoft Cloud platform and its proven system and data analytics technology
 - Microsoft Cloud, Azure and Power BI infrastructure, integration and interface
 - Automated data capture (from Office 365 (e.g. Microsoft Excel) integration link
 - Touch devices fully compatible and scalable
- **Appendix A – Global VLE benchmarking sources**

Best practices for the VLE development have been collected from:

<https://moodle.org/>

<https://www.udemy.com/>

<http://www.rcampus.com/>

<http://www.learnopia.com/search/>

<https://www.p2pu.org/en/>

<http://oaeproject.org/>



<https://www.edx.org/>

<http://iversity.org>

<https://www.futurelearn.com/>

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