



R-ACES
Energy Cooperation Platform

The R-ACES toolkit

AUTHOR: CHRISTA DE RUYTER, S-ISPT

DATE: 05-04-2022



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°892429

Technical References

Project Acronym	R-ACES
Project Title	fRamework for Actual Cooperation on Energy on Sites and Parks
Project Coordinator	S-ISPT – Institute for Sustainable Process Technology
Project Duration	1 June 2020 – 30 November 2022
Project Website	www.r-aces.eu

Deliverable No.	D5.2
Dissemination level ¹	PU
Type Deliverable ²	R
Work Package	5 - Disseminate
Lead beneficiary	LE2C
Contributing beneficiary(ies)	S-ISPT, SPINERGY, CONDUGO, ESCI
Due date of deliverable	31-05-2021
Actual submission date	05-04-2022

¹ PU = Public

PP = Restricted to other programme participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

CO = Confidential, only for members of the consortium (including the Commission Services)

² R = Document, report

DEC = Websites, patent filings, video, etc.

DEM = Demonstrator, pilot, prototype

OTHER = other

Document history

V	Date	Author (Beneficiary)	Description
0.1	31-3-2022	Christa de Ruyter & Max Brouwer (S-ISPT)	First version
0.2	01-04-2022	Kristine Jung (ESCI)	Revision
1.0	05-04-2022	Christa de Ruyter (S-ISPT)	Final version

Project Summary

The R-ACES project is an initiative promoted by 8 partners from 6 European countries, with the vision to support high-potential industry parks and clusters to become fully fledged ecoregions that reduce emissions by at least 10 %. R-ACES means a step-change in the contribution of European Industry to the climate targets of the EU. The industry sector after all represents 25% of all energy demand – and 50% of the total cooling and heating demand on the continent; yet only 16% comes from renewables. By focusing on collective measures and clustering, the efficiency of industry can be drastically increased.

The focus of R-ACES therefore is to turn high-potential, high-impact industrial clusters into ecoregions that achieve at least a 10% reduction in emissions. They do so by exchanging surplus energy, making extensive use of renewables, and tying everything together with smart energy management systems. An ecoregion is a geographic area where energy and information exchanges occur between various companies and actors to reduce waste and energy consumption. Ecoregion can be centred on an (eco-)industrial park or (eco-) business park, linked to its surroundings by a 4th/5th generation district heating/cooling network.

R-ACES is the capping stone, condensing the knowledge and experience gathered throughout EU and national projects into a set of three focused tools, namely a self-assessment tool, a legal decision support tool, and a smart energy management platform. The tools are embedded in support actions built around peer-to-peer learning, more formal coursework and webinars, and serious games. Together they enable a cluster to really become an ecoregion and set up meaningful energy collaboration. The entire package of tools and support is aimed at the high-potential clusters identified in the European Thermal Roadmap. It will be validated in three ecoregions, actively deployed in another seven regions, and disseminated to identified ninety regions European wide. In addition, the tools

and support methodology will be made available to third parties in a sustainable way after the end of this project.

Partners :



Institute for
Sustainable
Process Technology

<https://ispt.eu/>



Condugo

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



<http://www.spinergy.it/>



<https://www.energycluster.dk/>



<http://www.energycluster.it/en>



<https://www.pomantwerpen.be/>



<https://www.esci.eu>



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

Executive Summary

During the R-ACES project, we developed three different tools: a self-assessment tool, a legal decision support tool, and an energy management platform. These tools are aimed at supporting the energy cooperation in ecoregions and are designed, tested, and used in scope of the R-ACES project. The goal of this deliverable is to make them accessible for the larger public. Therefore, we developed a web page, a brochure, and an explanatory video for each tool:

- The Self-Assessment Tool helps to identify and start up new energy cooperation activities within an ecoregion.
- The Legal Decision Support Tool helps to deal with legal issues related to the development of energy cooperation activities.
- The Energy Management Platform helps to optimize and manage energy and waste streams within an ecoregion.

Keywords

R-ACES keywords

Industrial Symbiosis, Energy System Integration, District Heating and Cooling, Energy Cooperation, Ecoregion, Eco-Industrial Parks

Deliverable keywords

Toolkit, Explanatory video, Self-Assessment Tool, Energy Management Platform, Legal decision support tool.

Disclaimer

This publication reflects only the author's and consortium's view. The Agency and the European Commission are not responsible for any use that may be made of the information it contains.

Table of Contents

- 1 INTRODUCTION..... 8**
 - 1.1 OBJECTIVE OF WORK PACKAGE 5 'DISSEMINATE' 8
 - 1.2 OBJECTIVE OF THE DELIVERABLE 9

- 2 GUIDANCE MATERIAL SELF-ASSESSMENT TOOL 10**
 - 2.1 WEB PAGE 10
 - 2.2 EXPLANATION GUIDE..... 11
 - 2.3 EXPLANATORY VIDEO 11

- 3 GUIDANCE MATERIAL ENERGY MANAGEMENT PLATFORM 12**
 - 3.1 WEB PAGE 12
 - 3.2 GUIDANCE DOCUMENT 12
 - 3.3 EXPLANATORY VIDEO 13

- 4 GUIDANCE MATERIAL LEGAL DECISION SUPPORT TOOL 14**
 - 4.1 WEB PAGE 14
 - 4.2 GUIDE..... 15
 - 4.3 EXPLANATORY VIDEO 15

- 5 CONCLUDING REMARKS 15**

1 Introduction

1.1 Objective of Work Package 5

‘Disseminate’

The R-ACES project intends to pave the road for effective energy exchange in industrial clusters and business parks in Europe. We develop a methodology to come to concrete energy cooperation activities. To make a significant impact, we aim to disseminate the project results to a wide extend of 90 so-called ecoregions across Europe.

"Our ambition is to equip practitioners with capacities, knowledge and skills, to make them confident and well informed about the possibilities with energy cooperation as well as to support them with an implementation approach that fits their specific needs."

Our dissemination activities aim at enhancing the uptake and the extension of energy cooperation activities within the industrial clusters and/ or business parks. The tools and methods developed by R-ACES that could facilitate the uptake of these activities are:

- The R-ACES Toolkit consisting of three practical tools:
 - The Self-Assessment Tool helps to identify and start up new energy cooperation activities within an ecoregion.
 - The Legal Decision Support Tool helps to deal with legal issues related to the development of energy cooperation activities.
 - The Energy Management Platform helps to optimize and manage energy and waste streams within an ecoregion.
- The R-ACES Serious Game "Heatopoly" makes stakeholders familiar with the concept of energy cooperation and serves to get to know stakeholders within an ecoregion.
- An educational environment containing materials that enable students and experts to obtain knowledge on various aspects of energy cooperation.

- A Use Case Library containing inspiring examples of energy cooperation projects.

We spread the materials and the R-ACES approach through national and European orientated webinars and other dissemination activities. All these activities will be focussed on the needs of stakeholders within ecoregions: What knowledge and skills do they need to further develop energy cooperation activities? The identification of these needs is an iterative process of talking to stakeholders. Based on the outcome of these talks the dissemination materials are developed. For a more information, see the R-ACES dissemination roadmap¹.

1.2 Objective of the deliverable

During the R-ACES project, we developed three different tools: a self-assessment tool, a legal decision support tool, and an energy management platform. These tools are aimed at supporting the energy cooperation in ecoregions and are designed, tested, and used in scope of the R-ACES project. The goal of this deliverable is to make them accessible for the larger public.

To make the tools available, we publish (online) guidance material. This guidance material exists of the following blocks:

- Each tool is publicized on the R-ACES webpage
- For each tool, an explanation guide is made
- For each tool, a short explanation video is made

The ecoregion concept

An ecoregion is a geographic area where energy and information exchanges occur between stakeholders of various types to reduce energy consumption. Geographical size does not matter (the size can be as small as a business park or as large as a city). Important is that an ecoregion relies on an anchor organization responsible for managing the area. Another aspect is the proximity of stakeholders to ensure interconnected energy flows. Within an ecoregion, a wide range of assets could be involved: office parks, data centers, multimodal centers, technological centers, agro-centers, science parks, brain parks, lighthouse parks, chemical parks, eco-industrial parks, and cluster/business parks. Also, residential areas could be considered.

2 Guidance material Self-Assessment Tool

2.1 Web page

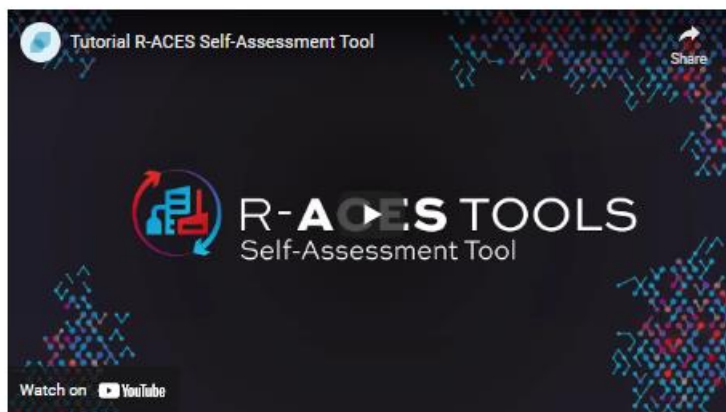
The web page of the Self-Assessment Tool can be found here:

<https://r-aces.eu/tools/self-assessment-tool/>.

On the web page, one can find the tool, a tutorial video, and a user guide.



How to use the Self-Assessment Tool ?



User Guide

This practical user guide helps you to use the Self-Assessment Tool. All steps are clearly described.

[Download the user guide](#)

All done ?

Give your opinion !

[Evaluation form](#)

2.2 Explanation Guide

To make the Self-Assessment Tool accessible, we made [a guidance document](#), which is available for downloading on the website.

2.3 Explanatory video

The explanatory video of the Self-Assessment Tool is included on the tool subpage and also in R-ACES YouTube channel: <https://youtu.be/3GkhXSBD6p0>. The video starts with a short explanation of the way the tool can be used. Afterwards, the video takes the user through the entire process of using the tool and explains step by step what the user is supposed to do.

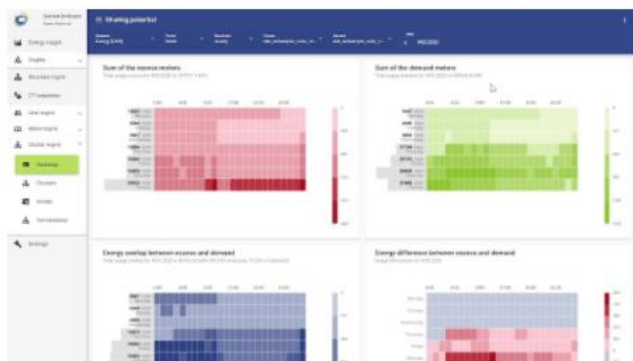
3 Guidance material Energy Management Platform

3.1 Web page

The web page of the Energy Management Platform can be found here: <https://r-aces.eu/tools/energy-management-platform/>.



How to use the Energy Management Platform ?



Guidance document

This practical user guide helps you to use the Energy Management Platform. All steps are clearly described.

[Download the guidance document](#)

Request your Demo account

Are you interested in discovering how our Energy platform works and how it can help you in your energy management challenges?

3.2 Guidance document

To make the Energy Management Tool accessible, we made a [guidance document](#), which is available for downloading on the website.

Guidance document for the energy management platform

The following manual explains how to login and how to use the energy management platform. It also explains the 2 dashboards related to exchanging energy among different users. The first one is used to scout a possible collaboration between partners who have on the one side an excess of energy while others have a need/shortage. The second dashboard – by representing a cluster sharing Sankey – can be used to follow-up on the exchanges in real-time.

Login (2 steps)

STEP 1:

Go to <https://r-aces.eu/tools/energy-management-platform/> and scroll down to the bottom of the page and fill in the following data:

Request your Demo account

Are you interested in discovering how our Energy platform works and how it can help you in your energy management challenges?

Provide us the information below and we will setup a personal demo account for you. Please check your e-mail afterwards for further instructions. In case you do not receive an e-mail in your inbox, please also check your SPAM folder, as they might be delivered there.

P.s: your account will be active for 15 days. If you need more time or if you have other request, don't hesitate to contact us on info@condugo.com.

First name	<input type="text"/>
Last name	<input type="text"/>
Email	<input type="text"/>
<input type="checkbox"/> I'm not a robot	
<input type="button" value="REQUEST DEMO ACCOUNT"/>	

Once you have filled in your name/email, you can request your demo account.

STEP 2:

With the obtained login details, you can now enter in the platform website and have access to the following 2 dashboards:

3.3 Explanatory video

The explanatory video on how to use the Energy Management Platform is available on the R-ACES EMP sub page as well as directly on YouTube via the following link: [\(7\) Tutorial R-ACES Energy Management Platform - YouTube](#)

4 Guidance material Legal Decision Support Tool

4.1 Web page

The web page of the Legal Decision Support Tool can be found here:

<https://r-aces.eu/tools/legal-decision-support-tool/>.

On the web page, one can find the tool, the guidance documents, the explanatory video, and a Q&A section.



A tool to help you with your legal issues

Legal aspects of energy cooperation are perceived as complex and they may slow down or discourage your project.

The following tool is designed to lower the legal barrier and help you develop energy cooperation projects between potential suppliers and customers in industrial clusters.



If you have a basic concept of the supply and demand in your energy project, you can go straight to the tool below. It is an easy to use fill-in contract template, with explanatory notes at the side. It will help you to bring focus and to agree on the fundamentals of an energy exchange project (sales and delivery). And it generates a ready to use (simple) contract in one go.

You can also approach your project from the general introduction to the contract template, which provides more context, and use the downloads: the contract template, the guide to contract template, and the guide to EU laws.

We also have a user forum, where you can post comments and share tips and tops. We hope that this helps to further our common goal of realizing more energy cooperation projects.

Guide to contract template



Contract Generator

Agreement for sale and purchase of energy for Project name

4.2 Guide

The written guide to the Legal Decision Support Tool s available for download here: <https://r-aces.eu/wp-content/uploads/2021/10/R-ACES-Guide-to-Contract-Template-3.pdf>

4.3 Explanatory video

The explanatory video of the Legal Decision Support Tool is included on the tool subpage and also in R-ACES YouTube channel: <https://youtu.be/cwKlQarD2QI>. The video starts with a short explanation of why the R-ACES project made the tool. Afterwards, the tool is explained step by step.

5 Concluding remarks

With this toolkit a set of tools to start energy cooperation projects has been developed. The guidance materials will help users to use the tools and to inaugurate and boost energy cooperation projects within their ecoregion. The R-ACES project will continue to use the tools in the pilot ecoregions and the additional ecoregions identified within the project term. There will be additional effort to inform a broader audience on the functionalities and benefits of these tools.

Annex 01

R-ACES definitions

Business park: An area of land in which many office buildings are grouped together with a common infrastructure ([Wikipedia](#)). Business parks, like industrial sites, often have similarities in heating and cooling demand. Certain businesses may even have residual energy streams, for example data centers. As such, business parks may also organize as an ecosystem or eco business park (EBP) and become an important stakeholder within an ecoregion.

Eco Business Park: *"An eco-industrial park is a community of businesses located on a common property in which businesses seek to achieve enhanced environmental, economic and social performance through collaboration in managing environmental and resource issues. This is known as industrial symbiosis, which is a means by which companies can gain a competitive advantage through the physical exchange of materials, energy, water and by-products, thereby fostering inclusive and sustainable development."* ([United Nations Industrial Development Organization](#))

Communicate: professional and public coverage of the project results and achievements, benefits and potential deployment. This will be realised via the adoption of a large variety of distribution channels, including already existing platforms focusing on energy cooperation in industrial sites and business parks and energy exchange/cooperation at large.

Disseminate: exploitation of the project results to relevant stakeholders in the regions. It intends to ensure a low threshold in accessibility, usage of R-ACES tools and methods. This includes access to the tools, to the use case libraries and to the training and capacity building material and related self-explanatory instruction manuals.

DHC: Abbreviation of District Heating and Cooling. A system for distributing heating/cooling generated in a centralized location through a system of insulated pipes for residential and commercial heating requirements such as space heating/cooling and water heating/cooling.

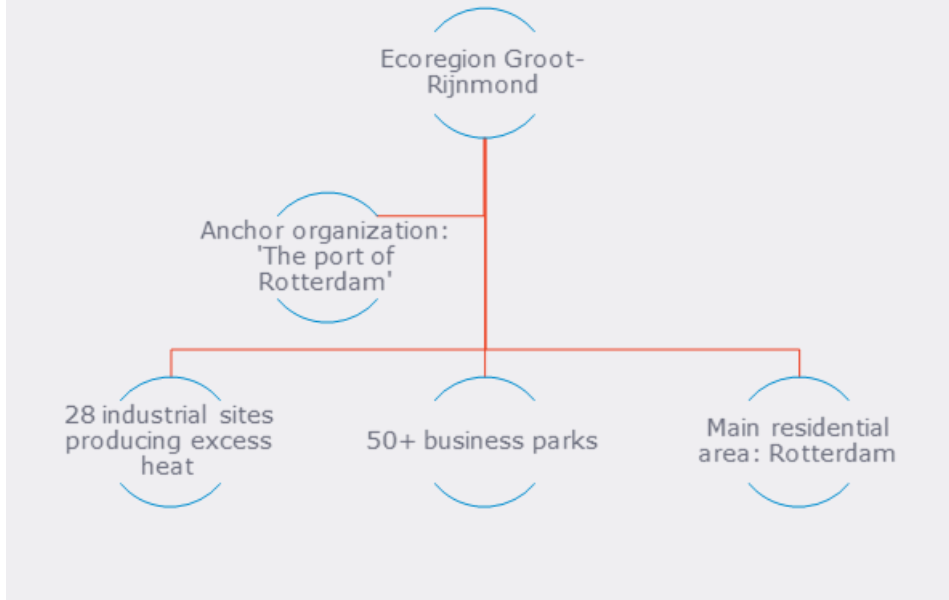
4th generation DHCs: *"4GDH systems provide the heat supply of low-energy buildings with low grid losses in a way in which the use of low-temperature heat sources is integrated with the operation of smart thermal grids. Smart thermal grids consist of a network of pipes connecting the buildings in a neighbourhood, town centre or whole city, so that they can be served from centralised plants as well as from a number of distributed heating and cooling producing units (or decentralised units) including individual contributions from the connected buildings. The concept of smart thermal grids can be regarded as being parallel to smart electricity grids. Both concepts focus on the integration and efficient use of potential future renewable energy sources as well as the operation of a grid structure allowing for distributed generation which may involve interaction with consumers."* (adapted from Lund et al, Energy 68; 2014, p1-11).

5th generation DHCs: *"5GDHC is a highly optimized, demand-driven, self-regulating, energy management system for urban areas. Its key features are: 1) ultra-low temperature grid with decentralized energy plants; 2) closed thermal energy loops ensuring hot and cold exchange within and among buildings; 3) integration of thermal and electricity grids."* ([D2grids](#), Interreg NWE)

Ecoregion: An ecoregion within the R-ACES project is a geographic area where energy and information exchanges occur between stakeholders of various types to reduce energy consumption. Geographical size does not matter (the size of an ecoregion can be as small as a business park or as large as a city). Important is that an ecoregion relies on an anchor organization responsible for managing the area (for example park management). Another aspect is the proximity of stakeholders in order to ensure interconnected energy flows (continuity of supply, quality of supply, quantity). Within an ecoregion, a wide range of assets could be involved: office parks, data centers, multimodal centers, technological centers, agro-centers, science parks, brain parks, lighthouse parks, chemical parks, eco-industrial parks, and cluster/business parks. For the demand of heat, also residential areas could be taken into account. As such, the term ecoregion functions as an 'umbrella term'.

Example of a high priority/ high impact ecoregion

An example of a high priority/ high impact ecoregion is the [Groot-Rijnmond](#) region in the Netherlands. According to the Heat RoadMap the region belongs to priority group 1. The conventional excess heat is 179.65 PJ and the total heat demand is 35.53. Demand and supply are located close to each other. This means that the region has a high potential impact on primary energy savings (KPI 1). A main anchor organization of the region is 'The port of Rotterdam'. Within the region, there are 28 industrial sites that produce excess heat. There is also a large number of [business parks \(50+\)](#). Considering the large number of industrial sites and business parks present, the region also has a high potential impact on KPI 3.



High priority region: A high priority region is an Ecoregion, as defined above, that has balanced potential match of heating/cooling supply and heating/cooling demand in both quantitative (amount of heating/cooling) and qualitative (temperature, form of heat) terms. The region should be identified by heat roadmap studies (for example, the Heat RoadMap Europe or Stratego) or other research activities. In addition, the regions should have networking possibilities. The regions can include industrial sites, business parks and residential areas.

The table below gives an indication of the priorities. R-ACES will focus on priority group 1 +2.

Table 2.19. Excess heat ($E_{heat,o}$) and heat demand (Q_{tot}) characteristics for the definition of priority groups to identify heat synergy regions

Priority group	Characteristics		Priority status	Comment
	Excess heat ^a [PJ/a]	Heat demand ^b [PJ/a]		
1	$\Sigma E_{heat,o} > 10$	$Q_{tot} > 10$	Very high	High levels of both $E_{heat,o}$ and Q_{tot}
2	$1 < \Sigma E_{heat,o} < 10$	$Q_{tot} > 10$	High	Moderate levels of $E_{heat,o}$ and high Q_{tot}
3	$\Sigma E_{heat,o} > 10$	$1 < Q_{tot} < 10$	Moderate	High $E_{heat,o}$ and moderate levels of Q_{tot}
4	$1 < \Sigma E_{heat,o} < 10$	$1 < Q_{tot} < 10$	Low	Both $E_{heat,o}$ and Q_{tot} at moderate levels
0	$\Sigma E_{heat,o,max} < 2.5$	$Q_{tot,max} < 25$	No priority	Both $E_{heat,o}$ and Q_{tot} at low levels

^a Maximal theoretical levels of annually available excess heat.

^b Space heating and domestic hot water preparation in residential and service sectors.

High potential region: Within the project proposal, sometimes the term high potential ecoregion is mentioned. From now on, this term will not be used within the scope of the R-ACES project.

High impact (in R-ACES terms): Regions that have a high potential impact on the R-ACES KPIs. More specifically, regions are meant that have a high potential impact on KPI 1: Primary energy savings, and KPI 3: Number of plant sites and number of industrial parks where businesses commit to energy cooperation.

Energy cooperation: Energy cooperation activities between industries, which include physical clustering (e.g., of buildings and processes, energy exchange, collective production) and/ or service clustering (e.g., joint contracting). Both can deliver a more stable cumulative demand, economy of scale for larger installations with higher efficiencies and smaller spatial footprint and an optimized demand response. Within R-ACES, the focus is mainly on energy cooperation through the exchange of heating and cooling.

Energy management Platform: is an ICT-tool that makes energy flows transparent; allows energy consumption and production to be allocated to specific installations, stakeholders and nodes; and identifies anomalies and opportunities. A key feature is that it is very easy to use for a wide range of stakeholders. In this way, it is possible to deploy it in a cluster and give access to the different company and cluster managers – each at their level of detail and with the information they should have access to. On the ecoregion level, there will be a dashboard that shows different energy flows.

ESCO: Abbreviation for Energy Service Company. An ESCO is a business that provides a broad range of energy solutions including designs and implementation of energy savings projects, retrofitting, energy conservation, energy infrastructure outsourcing, power generation and energy supply, and risk management.

Facilitator: someone who helps to bring about an outcome (such as learning, productivity, or communication) by providing indirect or unobtrusive assistance, guidance, or supervision. This task does not include technical expert know-how, instead facilitators are trained to facilitate interaction between multiple actors.

Industrial cluster: Within the project proposal, sometimes the term Industrial cluster is used. From now on, this term will not be used within the scope of the R-ACES project.

Industrial park: Within the project proposal, sometimes the term Industrial park is used. From now on, this term will not be used within the scope of the R-ACES project.

Industrial region: Within the project proposal, sometimes the term Industrial region is used. From now on, this term will not be used within the scope of the R-ACES project.

Industrial site: An area zoned and planned for the purpose of industrial development. An industrial site can be thought of as a more "heavyweight" version of a business park or office park, which has offices and light industry, rather than heavy industry. They may contain oil refineries, ports, warehouses, distribution centres, factories, and companies that provide manufacturing, transportation, and storage facilities, such as chemical plants, airports, and beverage manufacturers ([Wikipedia](#)).

(R-ACES) Learning community: Local group of stakeholders that are (a) directly involved with the energy collaboration on a site; and (b) engaging in both organised and informal exchange of knowledge and best practices over the course of the project period. These groups are the first beneficiaries of instruments like serious gaming. Learning communities from different sites in this project will eventually be brought into contact with each other to further stimulate the exchange of best practices.

Learning network: *"Allow for enduring relationships built on trust to develop among companies within an industrial site. In turn these relationships encourage information sharing, creative solutions, long term planning and governance among stakeholders. Social aspects increase interactions among stakeholders and strengthen collaborations and partnerships including industrial ones"* (Scaler, 2018). To establish such learning networks, the R-ACES project will use learning communities.

(R-ACES) Legal tool: A tool that supports practitioners by giving the legal decision support for joint contracts. A low threshold for usage is a critical requirement. The tool is self-explanatory, application oriented, using well-defined and clear terminology. The tool should be able to deal with a high diversity of local situations. For practical reasons, the name of the legal tool might change during the R-ACES process. In this case, the consortium will be informed.

LESTS framework: Abbreviation for Legal, Economic, Spatial, Technical and Social/Managerial. LESTS is a framework that is used in the project to categorize barriers and drivers in ecoregions. The different categories include: Legal, e.g. liabilities, regulatory requirements, third party contracts, service agreements, rules; Economic, e.g. cost savings, waste/ resource recovery value, funding mechanism, taxes & environmental considerations; Spatial, including geographical proximity,

planning rules and environmental considerations; Technical, e.g. sharing and cascading resources, system stability, facilities; Social/Managerial, e.g. with regard to workers, consumers, local communities employment, community engagement, and capacity building.

Lock-in: Exchange of by-products will lead to long term reliance on an outside company, which will restrict flexibility of the involved companies and possibility for innovation, or possibility to relocate the site.

Longlist (for example longlist of regions): Exists of lists of items (rows), for example regions, that have been selected on the basis of loose selection criteria (columns). The long list is a first step in creating a short list. The long list should cover all potential subjects that might be of interest to the short list. Example:

Region	Region	Country	Source	# DHCS	# Industrial sites	# Business parks	Contact person	Contact details
1	Maasvlakt	Nederland ...						
2	Chemelot	Nederland ...						
3	Terneuzen	Nederland ...						

Long-term: Long-term impact of R-ACES is gained after the end of the R-ACES project (in KPI terms).

Peer2peer: A network of peers (R-ACES stakeholders) that perceive each other as equal. The peers interact with each other in order to learn from each other. The peer2peer learning context is a formal or informal setting, in small groups or online. Peer learning manifests aspects of self-organization. By this is meant, that there is no hierarchical structure within a peer2peer network ([Wikipedia](#)).

(R-ACES) Self-assessment tool: A tool that helps ecoregions to determine the next steps they have to take in the energy cooperation process. The tool exists of a number of questions practitioners have to answer. Based on the answers, the practitioners will get a score and some practical considerations they should take into consideration.

Serious gaming: A method for learning-through-experience that presents participants with a case study in which they have to play pre-assigned roles to each reach a pre-defined objective as quickly as possible. The interactive & competitive gaming element increases the attractiveness and the learning outcome of the case study. Serious gaming addresses cooperation elements among a large variety of practitioners and focus at creating acceptance and awareness, where the learning communities focus at sharing experiences between peers.

Shortlist (for example shortlist of regions): List of items, for example regions, that have been selected from a long list on the basis of (strict) selection criteria. Hereby, the advantages and disadvantages of each item are considered ([OpenLearn](#)). The shortlist contains items that have a high potential and likelihood to contribute to the R-ACES goal.

Short-term: Short-term impact of R-ACES is gained during the R-ACES project.

Use case: A written description of the sequence of steps performed by an ecoregion to come to fruitful energy cooperation.

Use case library: A library that contains multiple use cases.