

User Manual for CELERO

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Abbreviations

CP	Cleaner Production
EP/UBP	Ecopoints/Umweltbelastungspunkte
IS	Industrial Symbiosis
NACE	Nomenclature of Economic Activities
KPI	Key Performance Indicator
CBA	Cost Benefit Analysis
OPEX	Operational Expenditure
CAPEX	Capital Expenditure

1 Introduction

CELERO is an open source software platform which merges Cleaner Production (CP) and Industrial Symbiosis (IS). It can be used to improve the eco-efficiency of industrial processes, identify potential optimization scenarios and support decision-making.

CELERO structures flows and processes of companies into projects and lets you calculate Key Performance Indicators (KPI) to select CP potentials for further analysis. It also matches flows from multiple companies to generate a list for potential IS options and contains a Cost-Benefit Analysis Tool which helps to pinpoint improvement scenarios.

You can find more information about CELERO under the *About* Tab > *What is CELERO?*

You can look at finished projects under *Cases* > *Case studies* for further inspiration.

Note: CELERO is optimized to run with Google Chrome browser.

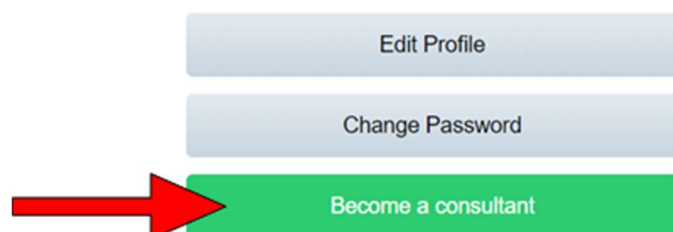
2 Create your profile as a consultant

First, you need to create a profile. This will allow you to use the tool: create and manage a project, create companies and use all the functions.

There are two kinds of profiles: supervisor and consultant. Only consultant profiles can be created. When you create a profile, the administrator will need to approve your request.

Follow these steps to proceed:

- Go to *My Account* > *Register*.
- Use the name of your organization in your name e.g. *SofiesClaude*.
- Enter all required fields and upload a photo, then hit *Register*.
- To gain full access to all CP functionalities, upgrade your Profile to Consultant by clicking *Become consultant* after saving.



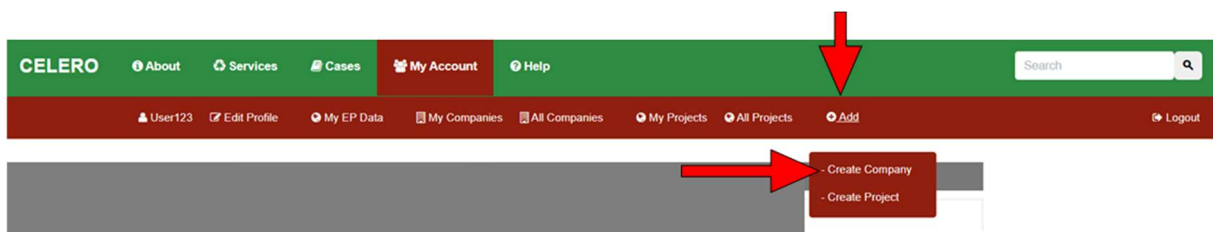
3 Create company profiles

In this step, you need to enter a profile for each company that you wish to assess in your project. Once your companies will be filed under a project (step 4), you will be able to enter technical information such as flow types and quantities. You can create as many company profiles as you need!

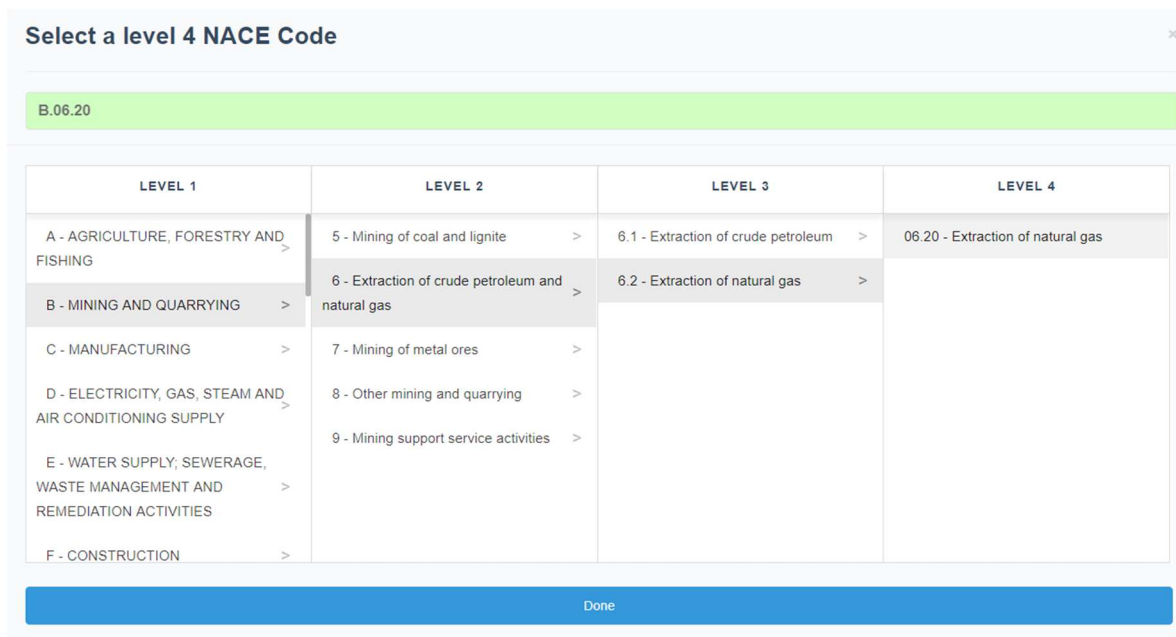
Note: Other users will see the companies that you enter under *All Companies*. Flow information and other data however are confidential (step 5).

Follow these steps to proceed:

- Click on **+Add > Create Company**.



- Enter all fields and select the location of the company on the map.
- Select a Level 4 NACE code for the company. This is the company's activity sector.



- Click **Create Company** to confirm.

You can find all your companies under the tab *My Account > My Companies*. By clicking on a company in the list you can edit all Information and Data and you will be able to give other users permission to edit.

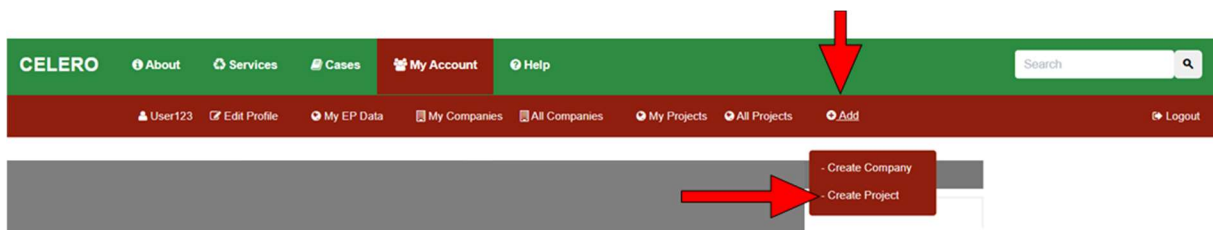
4 Create a project

The IS (Industrial Symbiosis) identification can only give results for companies that are filed under the same project. This is why the creation of a project is a necessary step to allow for IS identification.

Projects are also a way to sort your companies, so that you can always come back to any project and edit the companies, add flows, or start new computations. You can also assign a Status for your project. They reach from Envisioning and Planning to Deployment and help to keep track if you're dealing with different projects.

Follow these steps to proceed:

- If you haven't upgraded your account to Consultant yet, do that in the user profile by clicking *Become consultant* (otherwise no access to CP measures possible).
- Click on **+Add > Create Project**.



- Use the name of your organization in the project name e.g. *SofiesProject*.
- Enter all the required fields and choose coordinates on the map.
- Assign the companies you want to find IS potential with.

Coordinates

Select on Map

Lat Long Zoom Level

Assign Companies

Choose at least one

Assign Consultants

Choose at least one

- Click *Create Project*.

You can find all your projects under the tab *My Account > My Projects*. After clicking on a project in the list you can *Edit Project Information*. By clicking *+Open Project* you gain access to the Services tab.

5 Define flows and processes for your companies

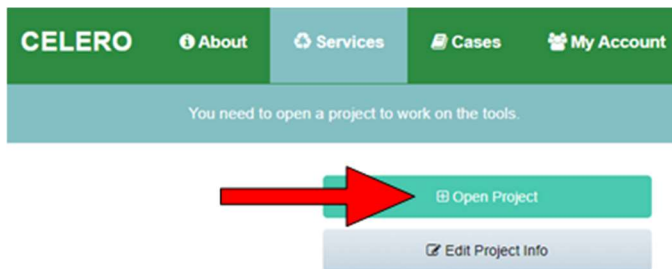
Once you have created your project and assigned a company you have to define flows and processes for the tool to search for matches. Before adding flows, the EP-values have to be defined. **Ensure that flow names** in the different companies for the same material / energy source **are identical**. Otherwise the program won't be able to find the allocation.

To ensure the good functioning of the tool, be thorough and enter as much information as you have. The tool solely uses this data for computation, so the quality of the data you enter in this step will directly influence your results when using the IS and environmental impact functions.

All the data that you enter under your companies are confidential and will not be shared with other users.

Follow these steps to proceed:

- Select your project under *My Projects* > Click on *Open Project*.



- Click on *Services* > *Identification of CP measures*.
- Select *Dataset management* of a company.



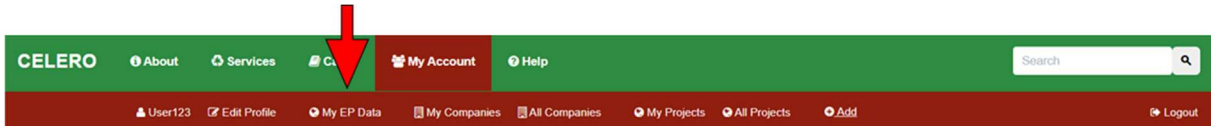
Note: You can also access this menu from the company page by clicking *Edit Company Data*.

Ecopoints

First you have to define the Ecopoint-values for the flows of your company. There is the possibility to add these manually or you can upload an Excel-File. You can download an Excel-Template before and fill in your values.

Follow these steps to proceed:

- Click on My Account > My EP Data.



- Click on *Upload Excel*: Your excel sheet must have the following format, it is even better if you delete the first row (data, ep value).

	A	B	C	D
1	data	ep value per (UBP/x)	unit (x)	unit ID (in psql DB)
2	Acetic acid	9040.35	kg	3
3	Acetone liquid	7982.00	l	22
4	Acids inorganic	9789456.00	kg	3
5	Acids organic	31564.00	kg	3
6	Acrylic acid	6384.00	kg	3
7	Acrylic filler	687797956.00	kg	3
8	Acrylonitrile butadiene styrene ABS	0.00	kg	3
9	Adhesive	0.00	kg	3

- Once uploaded, you have to Add the EP-values that you will use to your project by clicking *Add*.

Manual UBP value import

Name	EP Value (UBP/x)	Unit (x)	save
<input type="text"/>	<input type="text"/>	Select	Add

Excel UBP import

Name	EP Value (UBP/x)	Unit (x)	save
Acetic acid	9'040.35	kg	Add
Acetone liquid	7'982.00	l	Add
Acids inorganic	9'789'456.00	kg	Add
Acids organic	31'564.00	kg	Add
Acrylic acid	6'384.00	kg	Add

Your saved/imported UBP values

Name	Value (UBP/x)	Remove
Acids organic	31'564.00 UBP/kg	Delete
Acids inorganic	9'789'456.00 UBP/kg	Delete
Acetic acid	9'040.35 UBP/kg	Delete
Acids organic	0.00 UBP/kg	Delete
Acetone liquid	0.00 UBP/kg	Delete
Waste Water	0.60 UBP/kg	Delete
Raw Milk Loss	3'500.00 UBP/kg	Delete
Raw Milk	3'500.00 UBP/kg	Delete
Acetone liquid	7'982.00 UBP/l	Delete

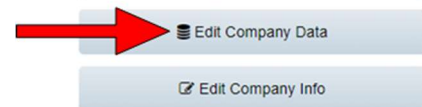
Flows & Processes

Now that the EP-values are set, you can start adding flows and processes. Flows describe the total flow of Materials, Water and Energy of a company in order to generate products. Parts of these flows can later be allocated to different processes. One process can contain multiple flows and one flow can go through multiple processes.

Note: It is advised to add a description as it can get confusing when working with many different companies and flows, especially if you're working as a team on one project.

Follow these steps to proceed:

- Select your company under *My Projects* > Select a project > Select a project company under *Project Companies*.
- Select *Edit Company Data*.



Add **Flow** (at least *name, type, quantity, cost*).

- Click on the *Environmental Impact Calculator*.
- Select the name of the flow you want to assign in the list.

Note: If the flow name isn't in the list, you have to go back and define the flow under *My EP data*.

Select your flow to calculate the environmental impact

Flow name Isopropanol	Quantity/a (in kg) 123	UBP/kg 1853.79	Total UBP/a 228016
--------------------------	---------------------------	-------------------	-----------------------

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Endoflife treatment	> Agricultural production	> Acids inorganic	> Acetone liquid
Energy	> Ceramics	> Acids organic	> Benzene
Materials	> Chemicals	> Chemical organic	> Butane
My own UBP values	> Construction	> Gases	> Epoxy resin
On Site Emissions	> Electronics	> Inorganic chemicals	> Isopropanol
Transport	> Food	> Washing agents	> Phenolic resin
	> Glass		> Propylene glycol liquid
	> Metals		> Toluene liquid

Done

Keep in mind that the names have to be identical for the tool to connect different flows from companies within the same Project.

- Fill in the *Quantity* of your flow and click *Done*.
- Enter the *annual cost*, choose if it's an *Input* or *Output* flow, and define the *State*.

Flow Component Process Product Allocation

Add flow

Calculate your annual environmental impact

Environmental Impact Calculator

Quantity/a * Quantity unit *

Flow name *

Total UBP/a *

Cost/a * Cost unit *

Flow type * (cannot be changed afterwards)

State

Description

Company flows

Flow name	Flow type	Quantity	Cost CHF	EP UBP pts	State	Description	Manage
Electricity EU low Voltage	Input	1'800'000.00 kWh	2'360'000	979'704'000	n/a	Keine Abnung in welcher Form die Energie sein sollte, stimmt aber etwa in der Grössenordnung.	Edit Delete
Heat air water heat pump CH	Input	2'731'000.00 kWh	102'000	370'000'000	n/a	Werte waren zuerst bezogen auf MJ. EP wurden im Editor angepasst.	Edit Delete
Phosphoric acid industrial grade	Input	1'000.00 kg	3'500	5'384'600	Solid		Edit Delete
Raw Milk	Input	10'000'000.00 kg	5'000'000	35'000'000'000	Liquid	Eigens erstellt (ohne "_") zu testzwecken.	Edit Delete
Raw Milk Loss	Output	580'000.00 kg	320'000	2'030'000'000	Liquid	Eigens erstellt (ohne "_") zu testzwecken.	Edit Delete
Sodium Hydroxide	Input	1'000.00 kg	3'500	1'280'600	Solid		Edit Delete
Tap water	Input	62'600'000.00 kg	58'900	287'960'000	Liquid	oder eigenes "Wasser" erstellen? EP wurden im Editor angepasst (+0).	Edit Delete
Waste Water	Output	62'600'000.00 kg	58'900	27'560'000	Liquid	Eigens erstellt zu testzwecken. EP angepasst im Editor.	Edit Delete
xTestEPKim	Input	333.00 kg	3'333	110'889	Solid	Just messing around	Edit Delete

- Confirm by clicking *Add flow*.

Add Processes (at least *name, used flows*).

- Select your process from the predefined list.

Flow Component Process Product Allocation

Add process

Process name *

* mandatory fields.

Company processes

Process name	Used flows	Comments	Manage	
cIP pasteurising	Heat air water heat pump CH(Input)	Delete		
	Raw Milk(Input)	Delete		
	Phosphoric acid industrial grade(Input)	Delete		
	Sodium Hydroxide(Input)	Delete		
	Waste Water(Output)	Delete	Edit	
	Tap water(Input)	Delete		
	Raw Milk Loss(Output)	Delete		
	Electricity EU low Voltage(Input)	Delete		
	electricity supply	Electricity EU low Voltage(Input)	Delete	Edit
	Heating water	xTestEPKim(Input)	Delete	Edit
	Heat air water heat pump CH(Input)	Delete		
	Waste Water(Output)	Delete		

- Enter the flow you want to link and click *Add process*.

Note: You can enter more than one input and output flow per process.

6 Identification of Cleaner Production potential

Now that flows and processes are defined, the flows have to be allocated to the different processes. Under Allocations, you can specify how much of a flow is used for one process. Under *Services > Identification of CP measures* you get an overview of your allocations where you can delete or edit them.

Note: You can always change your company data under *Dataset management*.

Create allocations

Follow these steps to proceed:

- Go to *My Projects > Open your project*.
- Under *Services*, select *Identification of CP measures > Create allocation*.



- Enter the fields (the allocation means how much you need from a flow to execute a process, for example 10% of the electricity is used to light the area). You have to either fill in the allocation percentage or the amount. They can be different for cost and environmental impact.

Please select a process then a flow to allocate (mandatory)

Please fill in the missing values (all fields are mandatory)

Select process: electricity supply

Select flow: electricity_lv_rer (input)

Select flow type: input

Company flows

Name	Amount	Cost
district_heat_mswl	2731000.00 kWh	102000.00 CHF
electricity_lv_rer	1800000.00 kWh	2360000.00 CHF
phosphoric_acid	1000.00 kg	3500.00 CHF
raw_milk	10000000.00 kg	5000000.00 CHF
rawmilk_losses	580000.00 kg	320000.00 CHF
sodium_hydroxide	1000.00 kg	3500.00 CHF
wastewater	62600000.00 kg	58900.00 CHF
water	62600000.00 kg	58900.00 CHF

Amount: 90000.00 | Amount unit: kWh | Allocation (%): 5 | Accuracy (%): 80

Cost: 236000.00 | Cost unit: CHF | Allocation (%): 10 | Accuracy (%): 80

Environmental impact: 183528000.00 | EP: EP | Allocation (%): 20 | Accuracy (%): 80

Reference: 1 | Unit: m² | Name of reference: area

KPI: 90000 | KPI unit: kWh/m² | KPI definition: Electricity for Light per square meter

Save data | Cancel

Check other allocations of selected flow

- Enter a *reference*, including unit and description. This will give you a KPI of the produced amount per amount of input for comparison.
- Save the data.

The **Identification of CP measures** window gives you an overview over all allocations you made within your project. Once you have created all allocations you wanted to, you can view the results with clicking on *View CP Potentials Identifications*, *View and Edit KPI Calculation*, and *View Cost-Benefit Analysis*.

Cleaner Production Potentials Identification

Companies under milk example

cow farm

Create allocation Dataset management

milk processing

Create allocation Dataset management

View and Edit Allocated Cleaner Production Potentials Identifications

milk processing

View CP Potentials Identifications View and Edit KPI Calculation View Cost Benefit Analysis

Process name	Flow name	Flow type	Manage
CIP pasteurising	raw_milk	Input	Edit allocation Delete allocation
Heating water	district_heat_mswl	Input	Edit allocation Delete allocation
Pushing milk	rawmilk_losses	Output	Edit allocation Delete allocation
Sterilisation	district_heat_mswl	Input	Edit allocation Delete allocation
Sterilisation	electricity_lv_rer	Input	Edit allocation Delete allocation

The McKinsey-Graph under **View CP Potentials Identifications** shows you Cost value vs. EP value. In the table below you see the flow allocations you just entered.

Follow these steps to proceed:

- You can set the flows as candidates for IS improvements. This makes them available to the Industrial Symbiosis-Tool.
- Be sure to hit *Save all changes* if you've made any.

CP potentials identifications

Input flows	Total	CIP pasteurising	Sterilisation	Pushing milk
Raw Milk	60'000 kg 30'000 CHF 210'000'000 EP	60'000 kg 50% 30'000 CHF 50% 210'000'000 EP 50%		
Electricity EU low Voltage	18'000 kWh 23'600 CHF 9'797'040 EP		18'000 kWh 50% 23'600 CHF 50% 9'797'040 EP 50%	
Heat air water heat pump CH	136'550 kWh 5'100 CHF 18'500'000 EP		136'550 kWh 50% 5'100 CHF 50% 18'500'000 EP 50%	
Tap water	3'130'000 kg 45 CHF 14'398'000 EP		3'130'000 kg 50% 2'945 CHF 50% 14'398'000 EP 50%	
Output flows	Total	CIP pasteurising	Sterilisation	Pushing milk
Raw Milk Loss	464'000 kg 256'000 CHF 1'624'000'000 EP			464'000 kg 50% 256'000 CHF 50% 1'624'000'000 EP 50%

Cost and environmental impact data of processes

Cancel all changes Save all changes

Process	EP	Lower EP value	Upper EP value	Cost	Lower cost value	Upper cost value	Comments
CIP pasteurising	210'000'000.00	199'500'000.00	220'500'000.00	30'000.00	28'500.00	31'500.00	
Sterilisation	42'695'040.00	39'635'288.00	45'754'792.00	31'645.00	29'807.75	33'482.25	

Define KPI Benchmarks

Now it's time to optimize and come up with improvement scenarios. For that you have to define a benchmark. The benchmark shows a potentially reachable KPI to compare the previously defined allocations to. The graph below the table helps you compare the Benchmark with your baseline KPI.

Follow these steps to proceed:

- Back in the *Identification of CP measures* Window: click on **View and Edit KPI Calculation.**
- For every allocation, enter the field *Benchmark KPI (target)* and *Cost Benefit option name*. It's advised to describe what your scenario is all about. There is also the possibility to upload a document with your Benchmark-Source.

KPI View and Edit Table

Cancel all changes Save all changes

Allocation	KPI	Benchmark*	KPI unit	KPI definition	Cost Benefit option name *	Description	Is option?	allocation
1 CIP pasteurising - raw_milk - Input	0.03636	0.01	kg/kg	Cheese milk losses at pasteurizing and CIP	Increase batch size of cheese milk fo	Resource consumption of CIP after pasteurizing of cheese milk (and other milk) is equal for a batch size of 10'000 kg and 20'000 kg. At a batch sizes of 20'000 kg. Milk losses in water/milk phase (3.5%) and	<input checked="" type="checkbox"/>	Edit
2 Sterilisation - electricity_lv_rer - Input	0.0016	0.02	kWh/kg	Electricity consumption CIP		See option cold sterilization	<input type="checkbox"/>	Edit

- If you identify an interesting scenario, tick the box under *Is option*. This will make it appear in the CBA. The Edit-Button lets you change your previously made allocations.
- Don't forget to click *Save all changes*.

More to **Cost-Benefit Analysis** see Chapter 8.

7 Identification of Industrial Symbiosis potential

Now that internal CP measures are identified, let's search for Industrial Symbiosis potential with other companies. You can either manually enter the matching flows or have the tool calculate them automatically. For this it is important that the flow-names are identical over different companies!

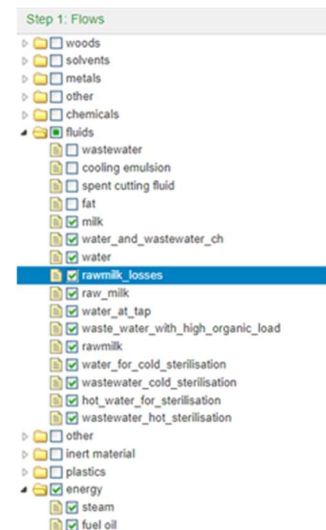
Follow these steps to proceed:

- Select *Identification of IS measures*.



Automated IS

- Select the relevant flows you need for your IS.



- Select one or more companies and click on *Find matching IS potentials*.

Automated IS Potential Detection

Step 2: Select company flows to find out if there are symbiosis potentials!

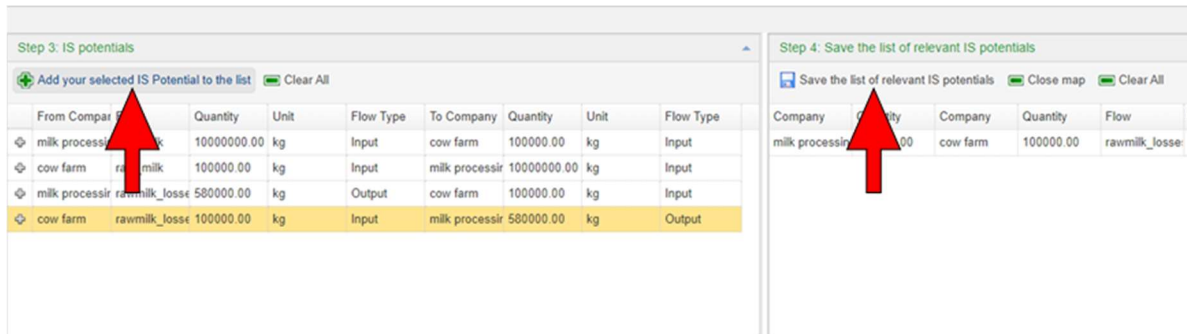
Find matching IS Potentials Select all companies Unselect all companies

IS interest type: All IS Candidates

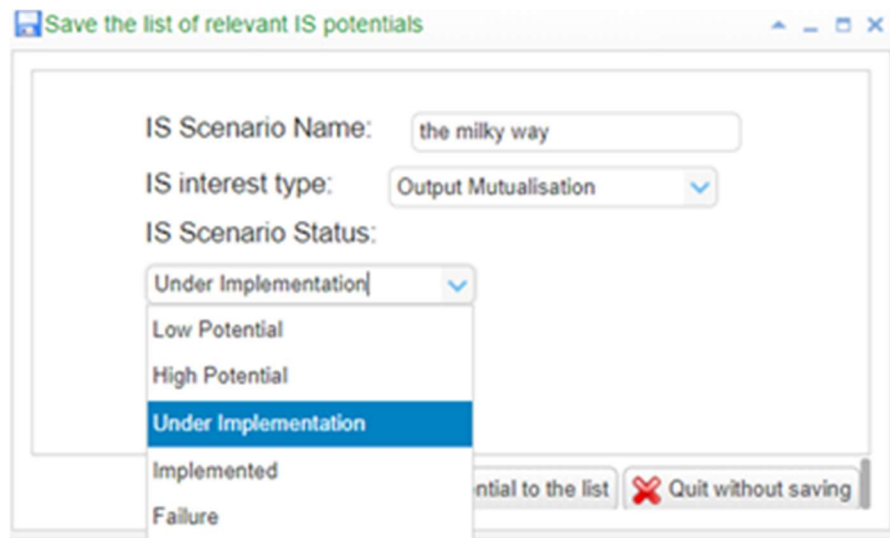
Company	Flow	Flow Type	Flow Family	Quantity	Unit	Cost	Description	Action
1 cow farm	rawmilk_losses	Input	Fluids	100000.00	kg	50000.00		Dataset Management
2 cow farm	raw_milk	Input	Fluids	100000.00	kg	50000.00	Calf feeding	Dataset Management
3 milk processing	wastewater	Output	Fluids	62600000.00	kg	58900.00	Waste water with high COD load	Dataset Management
4 milk processing	rawmilk_losses	Output	Fluids	5800000.00	kg	320000.00	Losses in milk/water phase at process start /end and from production failures. Total about 6% of rawmilk input	Dataset Management
5 milk processing	water	Input	Fluids	62600000.00	kg	58900.00	Supplied water	Dataset Management
6 milk processing	district_heat_msw	Input	Energy	2731000.00	kWh	102000.00	District heat (steam) from a waste incineration plant	Dataset Management
7 milk processing	sodium_hydroxide	Input	Chemicals	1000.00	kg	3500.00	Alkaline cleaning chemical	Dataset Management
8 milk processing	phosphoric_acid	Input	Chemicals	1000.00	kg	3500.00	Acidic cleaning chemical	Dataset Management
9 milk processing	electricity_lv_rer	Input	Energy	1800000.00	kWh	2360000.00	Electricity	Dataset Management
10 milk processing	raw_milk	Input	Fluids	10000000.00	kg	5000000.00	Conventional and organic milk, 1.65 million kg for cheese milk production	Dataset Management

Note: If you're only looking for either input or output mutualisation, you can choose these options under *IS interest type*.

- Select one or more potential IS that are relevant for you. Mark each one individually and click on *Add your selected IS potential to the list*.



- Save the list of relevant IS potentials. You can select which scenario type is relevant for you (either *All IS Candidates*, or *Input* or *Output Mutualisation*, or *Input & Output Mutualisation*) and you have to give a status to your scenario.



Manual IS

- Select one company.
- Click on the relevant rows and then click on *Get flows details for this company*. You once again have the ability to filter out your *IS interest type* via the dropdown menu.

Manual IS Potential Detection

Step 1: Select a company for which flow matching is required

Get flows details for this company

IS interest type: IS Candidates

Company	Flow	Flow Type	Flow Family	Quantity	Unit	Cost	Cost Unit	Description
1	cow farm	rawmilk_losses	Input	100000.00	kg	50000.00	CHF	
2	cow farm	raw_milk	Input	100000.00	kg	50000.00	CHF	Calif feeding
3	milk processing	wastewater	Output	62600000.00	kg	58900.00	CHF	Waste water with high COD load
4	milk processing	rawmilk_losses	Output	580000.00	kg	320000.00	CHF	Losses in milk/water phase at process start /end and from production failures. Total about 6% of rawmilk input
5	milk processing	water	Input	62600000.00	kg	58900.00	CHF	Supplied water
6	milk processing	district_heat_msw	Input	2731000.00	kWh	102000.00	CHF	District heat (steam) from a waste incineration plant
7	milk processing	sodium_hydroxide	Input	1000.00	kg	3500.00	CHF	Alkaline cleaning chemical
8	milk processing	phosphoric_acid	Input	1000.00	kg	3500.00	CHF	Acidic cleaning chemical
9	milk processing	electricity_lv_rer	Input	1800000.00	kWh	2360000.00	CHF	Electricity
10	milk processing	raw_milk	Input	10000000.00	kg	5000000.00	CHF	Conventional and organic milk. 1.65 million kg for cheese milk production

- Select one flow from the company and click on *Create flow matching*.

Step 2: Select flow from milk processing

Create flow matching

	Flow Category	Quantity	Unit	Flow Type
1	district_heat_msw	2731000.00	kWh	Input
2	electricity_lv_rer	1800000.00	kWh	Input
3	phosphoric_acid	1000.00	kg	Input
4	raw_milk	10000000.00	kg	Input
5	rawmilk_losses	580000.00	kg	Output
6	sodium_hydroxide	1000.00	kg	Input
7	wastewater	62600000.00	kg	Output
8	water	62600000.00	kg	Input

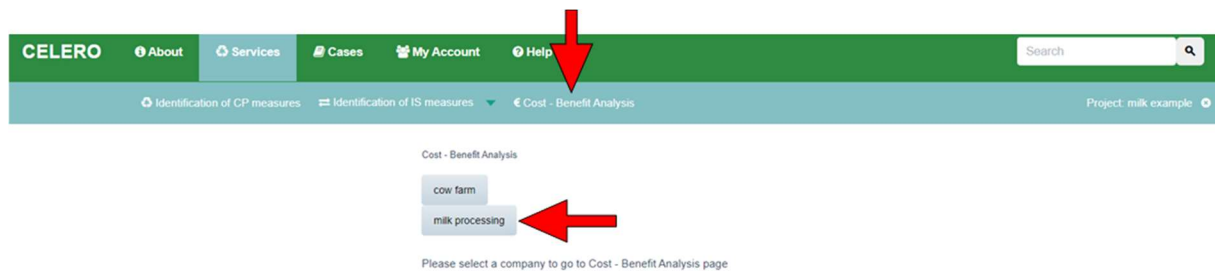
- Select the IS potentials that are relevant for you and click on *Add your selected IS Potential to the list*.
- Save the list of relevant IS potentials in the same way as for the Automated IS.

8 Cost-Benefit Analysis

The cost-benefit analysis shows you the marginal costs of implementing optimization measures and the ecological benefit of said measures. It lets you compare the different options and facilitates making a decision between your scenarios.

Follow these steps to proceed:

- Under *Services*, select *€ Cost-Benefit Analysis*, then select a company.



- In the left column (Baseline) you can add flows from the dropdown menu or fill in the Table manually. The fields OPEX and EP as well as Annual costs will fill automatically.


Increase batch size of cheese milk for pasteurization: Baseline

CAPEX (CHF/a)	Annual energy and material flows	unit	Specific costs (CHF/unit)	OPEX (CHF)	EP/ Unit	EP	Annual costs (CHF/a)
0.00	rawmilk	60000.00	kg	0.55	33000.00	3.522	211320.0000
	water	941000	kg	0.0019	1787.90	0.00419	3942.7900
	select flow						
	electricity	15000	kWh	0.131	1965.00	0.5098	7647.0000
	select flow						

- On the right side you can change the parameters for your option. You can enter Lifetime and Investment and alter the flows specific costs or its EP/unit.

Option	Lifetime (a)	Investment (CHF)	Discount rate (%)	CAPEX (CHF/a)	Annual energy and material flows	unit	Specific costs (CHF/unit)	OPEX (CHF)	EP/ Unit	EP	Annual costs (CHF/a)	
	0	0	5	0	raw milk	30000	kg	0.55	16500.00	3.522	105660.0000	21680
					water	471000	kg	0.0019	894.90	0.004193	1974.9030	
					electricity	9300	kg	0.131	1218.30	0.5098	4741.1400	

The part furthest to the right gives you an overview over your scenario: What are the flow-differences, what is the economic and ecologic benefit and how much can the OPEX be reduced. It also shows your Marginal costs as well as the payback time for your investment.

Flow Name	Differences of flows	Unit	Reduction OPEX (CHF)	Economic Benefit (CHF)	Ecological Benefit (EP)	Marginal costs (CHF/EP)	Payback time (a)	Save
raw milk	30000	kg	16500	-21106	105660	-0.18	0.00	
water	470000	kg	893		1968			
electricity	5700	kWh	747		2906			
MSWi heat	3000	kWh	152		408			

- Don't forget to save after you put in information.
- For the CP measures and the IS Potentials you identified, fill all the fields that doesn't fill automatically and click on *Save*.

At the bottom of the page you will find a table and a McKinsey graph with the *Marginal Cost* and the *Ecological Benefit*. They will show you; which scenarios and measures are most advantageous in relation to your input.

Option and Process Name	Marginal Cost (CHF/EP)	Ecological Benefit (EP)
Wastewater heat exchanger Heating water - district_heat_mswi - Input	-0.18	83434
Increase batch size of cheese milk for pasteurization CIP pasteurising - raw_milk - Input	-0.18	114472
Cold sterilisation Sterilisation - district_heat_mswi - Input	-0.05	131058
Milk powder from milk/water phase Pushing milk - rawmilk_losses - Output	0.04	206479
rawmilk_losses input IS potential from/to cow farm	-0.24	718838

