

ECOMAN USER GUIDE

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INTRODUCTION

This user manual will guide you through ECOMAN different functionalities

HOW DOES ECOMAN WORK IN A NUTSHELL?

The Companies database:

Users enter existing companies in the database. The user will provide information on the flows of this company, informing if the flow is an input or an output of the company, the quantity, the price, etc. The location is also provided for each company

The Project database:

The user then creates a “project”. Each project includes some specific companies, selected by the user when creating the project. ***The further functionalities of Ecoman work on a project base, meaning that the user will need to open a project before beginning further analysis.***

The Analysis functionalities:

- CP – Potential Identification:
- IS – Potential Identification: The Industrial Symbiosis Potential Identification allows to identify opportunities for companies to exchange some flows, or to mutualize their supply or clearing. When using the IS potential identification, the user selects the flows and the companies of interest within the project that is currently opened. Then Ecoman will run through the database to identify if companies have opportunity to synergize their flows. The user will then have the possibility to save some detected opportunities in a “scenario”.
- GIS:
- Cost-Benefits analysis:
- Eco Tracking:

ECOMAN HOME PAGE

Ecoman homepage is pictured below

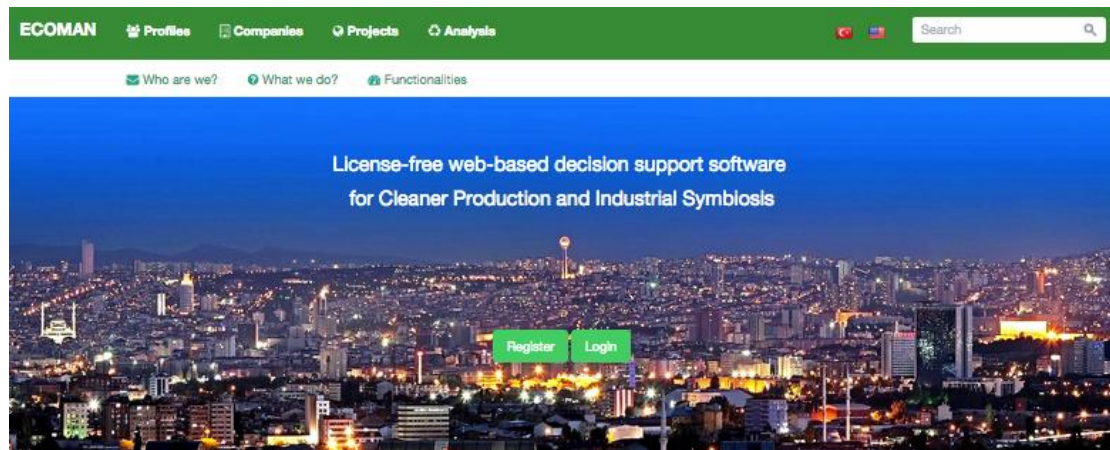


Figure 1: Ecoman home page

THE “PROFILES” TAB

The “profiles” tab leads the user to:

- Consult the list of all consultants registered in Ecoman (“consultants” button)
- Login and logout, if the user already has a profile on Ecoman (“login” and “logout” buttons)
- Edit an existing profile if the user is logged in (“Edit Profile” button, appears only if logged in)
- Access to the Profile page if the user is logged in (“name of profile” button, appears only if logged in)
- Create an Ecoman profile (“register” button)

THE “COMPANIES” TAB

The “company” tab leads the user to:

- consult the companies that he previously entered in Ecoman database (“my companies” button)
- consult all the companies registered in the Ecoman data base (“all companies” button)
- create a company (“create a company” button).

THE “PROJECT” TAB

The “project” tab leads the user to:

- consult the projects that he previously entered in Ecoman database (“my projects” button)
- consult all the projects registered in the Ecoman data base (“all companies” button)
- create a company (“create a company” button).

THE “ANALYSIS” TAB

The “Analysis” tab leads the user to:

- operate a CP – Potential Identification
- operate a IS – Potential Identification
- use the GIS
- operate a Cost-Benefits analysis
- use the Eco Tracking tool

Note that the “functionality” page gives a short explanation of the objectives and purposes of each Ecoman functionalities.

THE “WHO WE ARE” PAGE

The “who we are” page displays the involved stakeholders and partners of the Ecoman projects, and their contacts.

THE “WHAT WE DO” PAGE

The “what we do” page gives a short explanation on the main objectives and purposes and the Ecoman tool.

THE “FUNCTIONALITY” PAGE

The “functionalities” page gives a short explanation on the main objectives and purposes and each Ecoman functionalities.

Note that the different functionalities can be accessed through the “Analysis” tab.

HOW TO USE ECOMAN

1. HOW TO CREATE A PROFILE / HOW TO LOG IN / HOW TO REGISTER AS A CONSULTANT

How to create a profile

- In the “profiles” tab menu, the user click on the “Register” button. The “register” page then displays. If the user is on the Ecoman home page, he can also click on the green “register” button in the center of the page (see Figure 1).
- Once on the “register” page, the user fills in the form
- To finish, the user then clicks on the “register” button at the lower end of the page. The page of the new profile then displays. The user is then automatically logged in with the new profile.

How to log in

- Note that the user is automatically logged in if he creates a new profile. If the user wants to login with an existing profile, this is how:
- In the “profiles” tab menu, the user click on the “Login” button. The “Login” page then displays. If the user is on the Ecoman home page, he can also click on the green “login” button in the center of the page (see Figure 1).
- Once on the “login” page, the user fills in the username and password
- To finish, the user clicks on the “login” button on the lower end of the page.

How to register as a consultant

- First access to the profile page. Note that the user is automatically logged in and his profile page will automatically be displayed when finalizing the creation of a new profile (see previous paragraph). If the user wants to change the status to “consultant” for an existing profile, he can access the profile page by logging in (see previous paragraph).

- Once the profile page displays, the user clicks on the “become a consultant” button, located in the left upper corner of the page (see Figure 2).

Figure 2: profile page

2. HOW TO CREATE A COMPANY PROFILE / HOW TO ADD SOME COMPANY FLOW DATA

How to create a company profile

- In the “Companies” tab menu, the user clicks on the “create company” button. The “create company” page then displays.
- The user fills in the form. All fields are required except the logo field.
- To finish, the user then click on the “create company” button at the lower end of the page. The page of the new company then displays.

How to add some company flow data

- First access to the company page. Note that the company page will automatically be displayed when finalizing the creation of a new company (see previous paragraph). If the user wants to add flows to an existing company, he can access the company page by going on the “companies” tab menu, then click on the “My companies” or on “All companies” button to access the list of companies in which the targeted company is included.

- Once the company page displays, the user clicks on the “edit company data” button, located in the left upper corner of the page (see Figure 3).

FOOD INDUSTRY				
Description	aaaa			
E-mail	aaaa@gmail.com			
Work Phone	0000000			
Fax Number	0000000			
Nace Code	47.11.01-PERAKENDE TİCARET			
Address	street country			

Company flows				
Name	Flow type	Quantity	Cost	EP

Company processes		
Name	Flow name	Flow type

Company components	
Flow name	Name

Figure 3: Company page

3. HOW TO CREATE A PROJECT / HOW TO OPEN A PROJECT

The first step in order to operate the following functionalities is to create and then open a project. Indeed, *the further analysis will be operated on a project base* (meaning the analysis will consider only the companies and flows included in the specific project).

How to create a project

- In the “Projects” tab menu, the user clicks on the “create project” button. The “create project” page then displays.
- The user fills in the form.
- To finish, the user then click on the “create project” button at the lower end of the page. The page of the new project then displays.

How to open a project

- First access to the project page. Note that the project page will automatically be displayed when finalizing the creation of a new project (see previous paragraph). If the user wants to open an existing project, he can access the project page by going on the “projects” tab menu, then click on the “My projects” button to access the list of projects in which the targeted project is included. The user then click on the targeted project to access to the project page. Note that the user only can access the project page of the projects to which he was assigned or that he created.
- Once the project page displays, the user clicks on the “Open Project” button, located in the left upper corner of the page (see Figure 4).

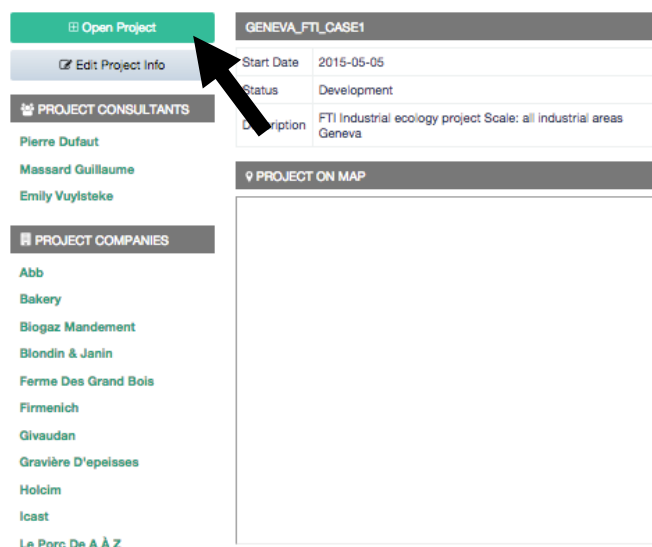


Figure 4: project page

4. HOW TO USE THE CP – POTENTIAL IDENTIFICATION

After opening a project, user can see the CP Potential Identification button in the Analysis tab.

User will be directed to the CP scoping management page. Page shows companies and their allocation in the table and new allocation assignment button.

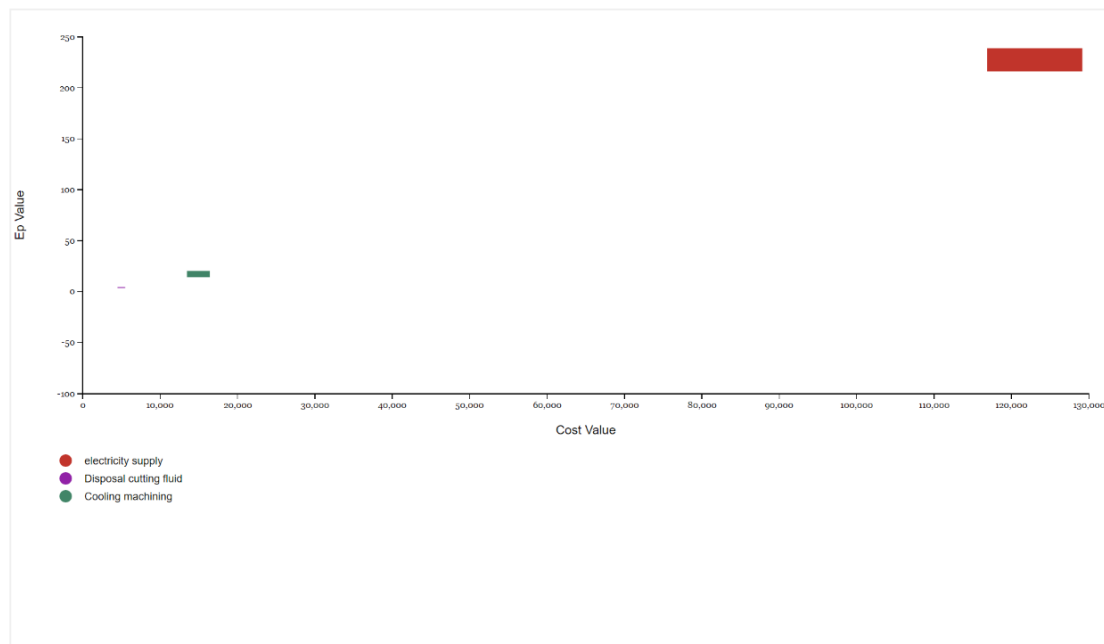
The screenshot displays the CELERO software interface. The top navigation bar includes the CELERO logo and tabs for Profiles, Companies, Projects, Analysis, and Reporting. The Analysis tab is active, showing sub-options: CP - Potential Identification, IS - Potential Identification, GIS, Cost - Benefit Analysis, and Eco Tracking. The main content area is titled 'Cleaner Production Potentials Identification' and 'View and Edit Allocated Cleaner Production Potentials Identifications'. It lists companies under a case study for 'st. gallen', including 'machining company st. gallen' and 'printing company'. Each company has 'Create allocation' and 'Dataset management' buttons. A table titled 'machining company st. gallen' shows allocated flows with columns for Process name, Flow name, Flow type, and Manage. The table contains five rows of data, each with 'Edit allocation' and 'Delete allocation' buttons.

Process name	Flow name	Flow type	Manage
Cooling machining	cuttingfluid	Input	Edit allocation Delete allocation
Cooling machining	Electricity	Input	Edit allocation Delete allocation
Cooling machining	Water	Input	Edit allocation Delete allocation
Disposal cutting fluid	spent cutting fluid	Output	Edit allocation Delete allocation
electricity supply	Electricity	Input	Edit allocation Delete allocation

This page directs users to CP Scoping analysis pages and user can access the CP Potential Identification page by clicking “View CP Potentials Identification” page.

Users also can edit allocations and delete them if they want by clicking management buttons on the right side of the allocations table.

Cost and environmental impact graph of processes



CP potentials identifications

Input flows	Total	electricity supply	Cooling machining	Disposal cutting fluid
Electricity Set IS candidate	920545 kWh	885545.00 kWh 80%	35000.00 kWh 50%	
	127900 CHF	123000.00 CHF 90%	4900.00 CHF 50%	
	238.59 EP	227.59 EP 96%	11.00 EP 50%	
cuttingfluid Set IS candidate	1200 Liter		1200.00 Liter 95%	
	9960 CHF		9960.00 CHF 95%	
	6.14 EP		6.14 EP 90%	
Water Set IS candidate	11 m³		11.00 m³ 90%	
	95 CHF		95.00 CHF 90%	
	0.01 EP		0.01 EP 80%	
Output flows	Total	electricity supply	Cooling machining	Disposal cutting fluid
spent cutting fluid Set IS candidate	11000 kg			11000.00 kg 95%
	5000 CHF			5000.00 CHF 80%
	3.92 EP			3.92 EP 80%

Cost and environmental impact data of processes

[See changes](#)
[Cancel all changes](#)
[Save all changes](#)

Process	EP	Lower EP value	Upper EP value	Cost	Lower cost value	Upper cost value	Comments
electricity supply	227.59	216.21	238.97	123,000.00	116,850.00	129,150.00	
Disposal cutting fluid	3.92	3.53	4.31	5,000.00	4,500.00	5,500.00	
Cooling machining	17.15	14.09	20.21	14,955.00	13,476.25	16,433.75	Cooling circuit metal machining

In the potentials identification page user can see the automatically generated process – flow – flow type table and the process total cost and ep value calculations based on this table as an overall table and graph. Users can zoom in and out by using mouse wheel in the graph and compare processes of the company they are working on.

Users also can add comments to the process by clicking comment bar in the Cost and environmental impact data of processes table then save the changes they made.

5. HOW TO USE THE IS – POTENTIAL IDENTIFICATION

When the user clicks on the “IS-Potential Identification” button, a scroll down menu appears. The user can choose to:

- Operate a automatic IS detection (“Automated IS” button). When operating an Automated IS detection, Ecoman automatically detects Potential IS by matching the flows that have the same name. The user then selects from the pool of Potential IS the ones that seem the most relevant.
- Operate a manual IS detection (“Manual IS” button). When operating a Manual IS detection, Ecoman displays all available flows from the opened project and the user himself matches the flow that can be mutualized.
- Display the IS scenarios that have been previously saved by this user (“IS Scenarios (Supervisors)” button)

Automated IS

Please refer to the beginning of the chapter “how to use the IS – Potential Identification” to understand what an Automated IS detection is. Here is how to operate an Automated IS detection:

Step 1

Step 2

Step 1: Flows

Step 2: Select a company and calculate IS potentials

Calculate IS Potentials Save a table with relevant IS potentials Select all companies Print

IS Scenario Type: All IS Candidates

Company	Flow	Flow Type	Flow Family	Quantity	Unit	Cost	Availability	Quality	Output Loc	Substitute F	Description	Action
1 abb	wood pallet	Output	Woods	2000.00	pieces/year	60.00		Bonne				Dataset N
2 abb	cuivre	Input	Metals	24000.00	kg/year	600.00		Fil de cuivre				Dataset N
3 abb	steam	Output	Energy	20000.00	m3/year	12.00		Hot water, a				Dataset N
4 abb	sand	Output	Inert materi	100.00	kg/year	0.00						Dataset N
5 abb	cuivre	Output	Metals	1200.00	kg/year	250.00		Chutes de fi				Dataset N
6 abb	aluminium	Output	Metals	4000.00	kg/year	340.00						Dataset N
7 abb	steam	Input	Energy	60000.00	m3/year	12.00		Pure				Dataset N
8 bioqaz man	organic was	Input	Other	12000000.0	kg/year	0.00						Dataset N
9 bioqaz man	heat	Output	Other	100.00	kWh	0.00						Dataset N
10 blondin & ja	heat	Input	Other	100.00	kWh	0.00						Dataset N

Page 1 of 5

Displaying 1 to 10 of 44 items

Step 3

Step 3: Select IS potential from table

Add Potential IS Clear all Print

From Company	Flow	Quant	Unit	Flow Type	To Company	Quant	Unit	Flow Type
abb	alumi 4000	kg/ye	Output	lem	2400	kg	Output	
abb	alumi 4000	kg/ye	Output	qivaudan	5200	kg	Output	
abb	alumi 4000	kg/ye	Output	serbeco	6000	kg/ye	Input	
abb	cuivre 1200	kg/ye	Output	serbeco	6000	kg/ye	Input	
abb	cuivre 2400	kg/ye	Input	serbeco	6000	kg/ye	Input	
abb	wood 2000	piece	Output	serbeco	8000	piece	Input	

Step 4

Step 4: Save IS potential(s)

Save a table with relevant IS potentials Close Map Clear all Print

Company	Quantity	Company	Quantity	Flow	Flow Type	Action	Map
abb	4000.00	qivaudan	5200.00	aluminium		Delete	See on Map
abb	4000.00	serbeco	6000000.0	aluminium		Delete	See on Map

Figure 5: Automated IS

- Step 1: Flows (left upper table)

The user selects the flows that will be considered in the IS potential detection (multiple choice is possible).

- Step 2: Select a company and calculate IS potentials (right upper panel)

During this step, the user selects the companies and the type of IS that will be considered in the IS potential detection:

- o To select a company, the user needs to click on the company name in the table. The selected line will then highlight in yellow (see *1 in Figure 5). Multiple choices are possible. If the user would like all the company to be selected, he can click on the "select all companies" (see *2 in Figure 5)

Notes:

- No specific flows are selected in step 2 (even if a flow name is linked to the line that is selected).

- Only the company of the opened project will display
- To choose which type of IS to consider, the user click on the “IS Scenarios Type” scroll down menu (see *3 in Figure 5).

Depending on the “IS scenario type” selected, the results displayed in the next step will show:

- Potentials to exchange a flow (if selected IS scenario type is “input and output mutualisation”)
- Potentials to mutualize the supply or the clearing of a flow (if selected IS Scenarios type is “input mutualisation” or output mutualisation”)
- All Potentials (if selected IS Scenarios type is “All candidates”).

Finally, the user clicks on the “calculate IS potentials” button (see *4 in Figure 5) to operate the IS detection. The results display in “step 3 “ table (see bellow).

- Step 3: Select IS potentials from table (left lower table)

During this step, the user selects the IS potentials he further wants to analyze.

- Understanding the results: This specific table displays all identified IS Potentials. Each line correspond to one IS Potential, with each
 - A specific flow and corresponding quantity (in the “flow”, “quantity” and “units” column)
 - The concerned companies (in the “from company” and “to company” columns)
 - The direction of the flow for each company (in the two “Flow type” columns). Those columns inform the user if the flow is an input or an output respectively for each company, and therefore informs the type of IS scenario.

E.g. If the line shows “input” twice, the IS scenario type is an “input mutualisation”.

- To select a IS potential, the user needs to click on the line of the targeted potential name in the table (the selected line will then highlight in yellow) (see *5 in Figure 5).
- Finally, the user clicks on the “add potential IS” button (see *6 in Figure 5) to add the selected potential in the “step 4” table. All the selected IS potentials appear in the “step 4 “ table (see bellow).

Notes:

- Multiple choices are not possible when selecting the IS potential, but multiple potential can be selected by just repeating the whole step 3.
- Step 4: Save IS potentials (right lower table)

The steps 1 to 3 can be repeated to progressively fill in the table of step 4 with new IS potentials. When the user has completed his analysis, he can save the Potentials of the table of step 4 in a “scenario” by clicking on the.”save a table with relevant IS potentials” button (see *7 in Figure 5). A pop out will then display, into which the name of the scenario and the status will be informed. The scenario can then be further analyzed in the “IS Scenario page” (see “IS Scenario” paragraph).

Manual IS

Please refer to the beginning of the chapter “how to use the IS – Potential Identification” to understand what a Manual IS detection is. Here is how to operate a Manual IS detection:

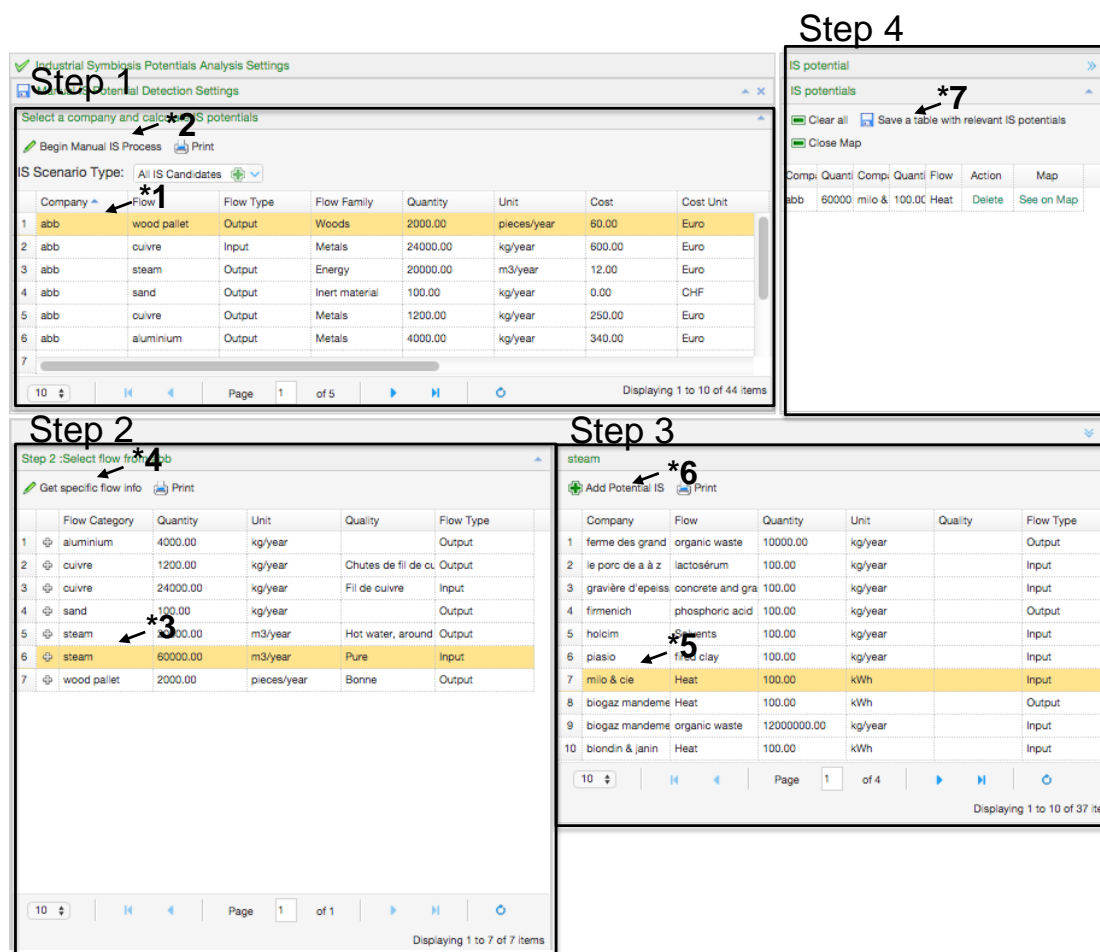


Figure 6: Manual IS detection

- Step 1: Select a company for which flow matching is required (left upper table)

During this step, the user selects the company for which a flow matching is required:

- o To select a company, the user needs to click on the company name in the table. The selected line will then highlight in yellow (see *1 Figure 6 Notes)
 - No specific flows are selected in step 1 (even if a flow name is linked to the line that is selected).
 - Only the company of the opened project will display
- o Then, the user click on the "get flow details for this company" button (see *2 in xx)

- Step 2: Select flow from the company (left lower panel)

During this step, the user selects the flow that will be considered in the matching process:

- To select a flow, the user needs to click on the flow name in the table. The selected line will then highlight in yellow (see *3 in Figure 6).
- Then, the user clicks on the “Get specific flow info” button (see *4 in Figure 6) to operate the flow matching.

- Step 3: Specific flow (right lower table)

During this step, the user creates a matching between two flows: the previously selected flow in step 2 and a flow to select from the table of this step. This is done if a flow does not have the same name as the flow selected in step 2 but is actually exchangeable. In this case, through the manual IS, the user can match the two flows and create a Potential IS

- Understanding the table: The table displays all flows of this project.
- To create a matching of flows that do not have the same name, the user needs to click on the line of the targeted flow in the table (the selected line will then highlight in yellow) (see *5 in Figure 6).
- Finally, the user clicks on the “add potential IS” button (see *6 in Figure 6) to add the selected potential in the “step 4” table. All the selected IS potentials appear in the “step 4 “ table (see bellow).

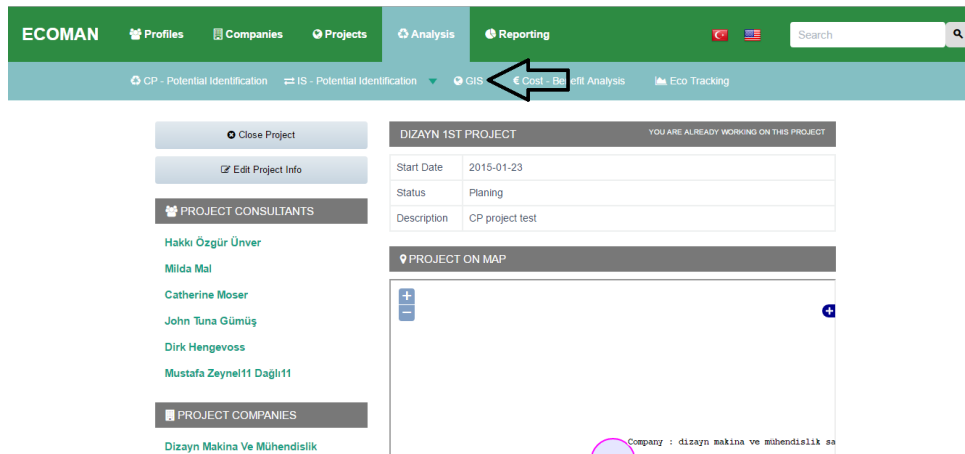
Notes:

- Multiple matching and Potential IS creation can be selected by just repeating the whole step 3.

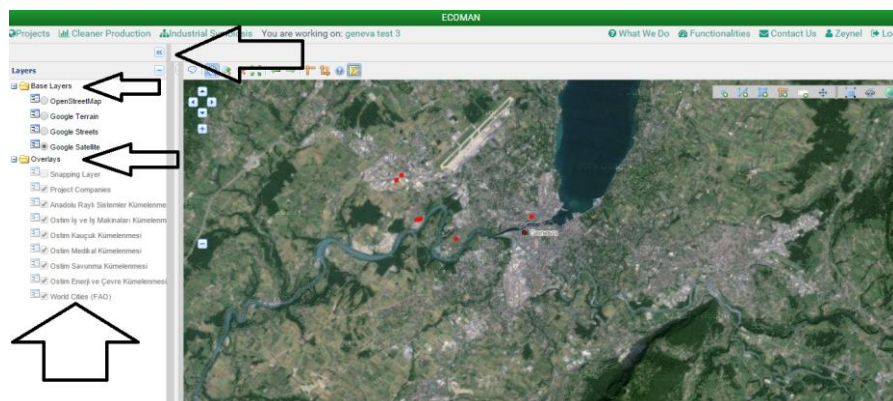
- Step 4: Save IS potentials (right upper table)
 - This specific table displays all added IS Potentials. Each line correspond to one IS Potential, with each
 - A specific flow and corresponding quantity (in the “flow”, “quantity” and “units” column)
 - The concerned companies (in the “from company” and “to company” columns)
 - The direction of the flow for each company (in the two “Flow type” columns). Those columns inform the user if the flow is an input or an output respectively for each company, and therefore informs the type of IS scenario. E.g. If the line shows “input” twice, the IS scenario type is an “input mutualisation”.
 - The steps 1 to 3 can be repeated to progressively fill in the table of step 4 with new IS potentials.
 - When the user has completed his matching and Potential IS creation, he can save the potentials of the table of step 4 in a “scenario” by clicking on the “save a table with relevant IS potentials” button (see *7 in Figure 6). A pop out will then display, into which the name of the scenario and the status will be informed. The scenario can then be further analyzed in the “IS Scenario page” (see “IS Scenario” paragraph).

6. HOW TO USE THE GIS

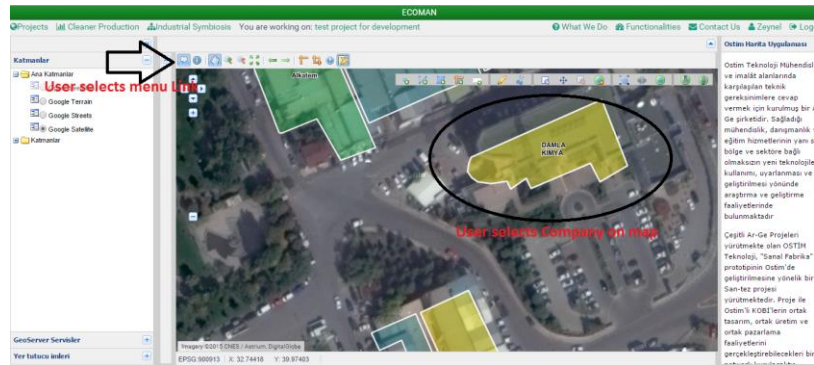
The user logs to the application and opens a project(Open Project) .The user clicks on the “GIS” button, under the ‘Analysis’ tab on the main menu. The map page opens,



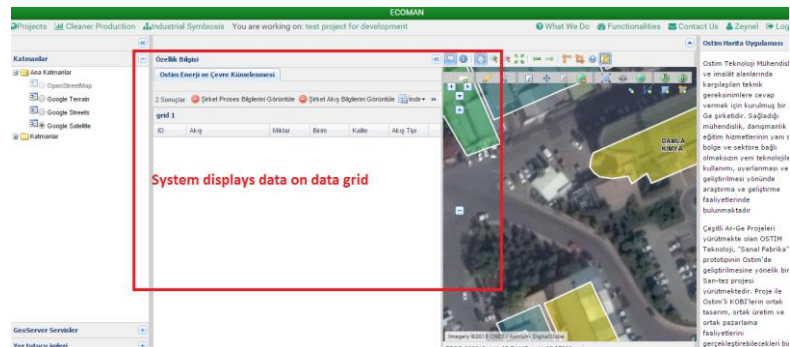
- Step 1: User displays map page
 - On map page , on left panel , the user sees the layers used in the map
 - User may close or open left panel , by clicking on the button at right top side of the panel



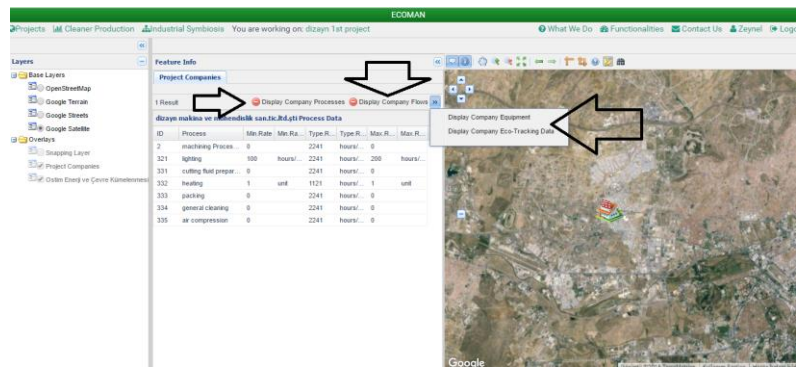
- Step 2: Map Usage,
 - How to display flow, equipment, eco-tracking, process data of a company on map
 - User selects data tool on the map menu and a company on map



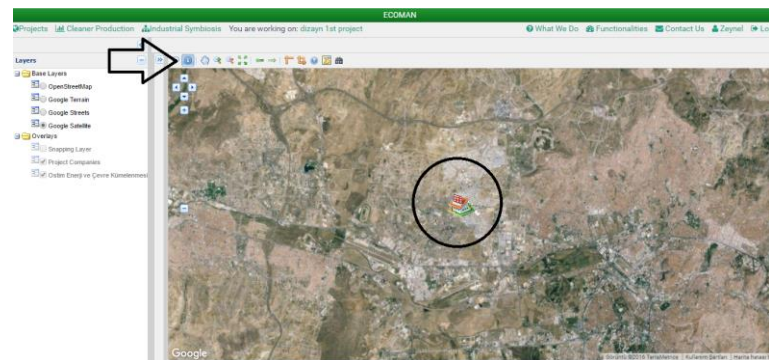
- On the map page hidden panel opens, the panel displays companies flow, processes, equipment, eco-tracking



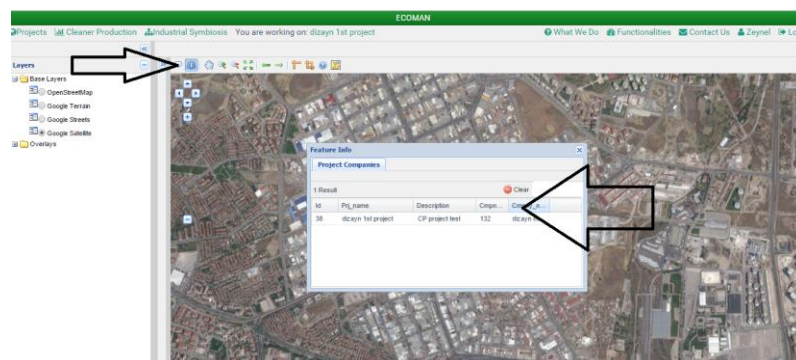
- User may change displayed data by clicking on tabs on the newly opened panel



- How to display general info of a company on map,
- User selects info tool on the map menu and a company on map

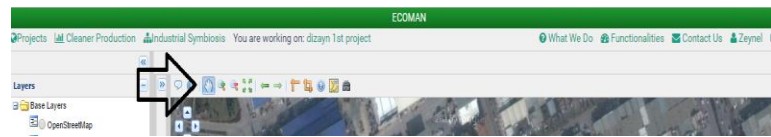


- On the map page pop up window opens, the panel displays general info of selected company



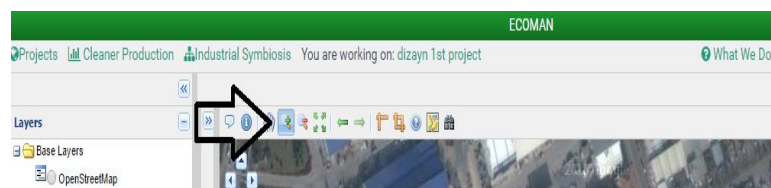
- How the user pans on map,

- User selects pan tool on menu and clicks on map



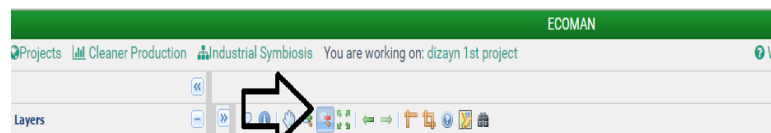
- How the user zoom in on map

- User selects zoom in tool on menu and clicks on map



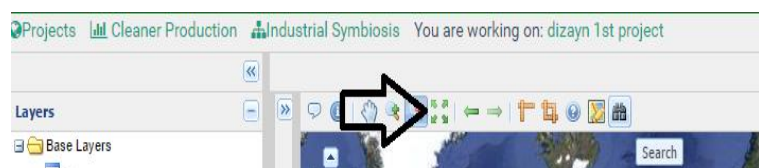
- How the user zoom out in on map

- User selects zoom out in tool on menu and clicks on map



- How the user zoom extends on map

- User selects zoom extend tool in tool on menu and clicks on map

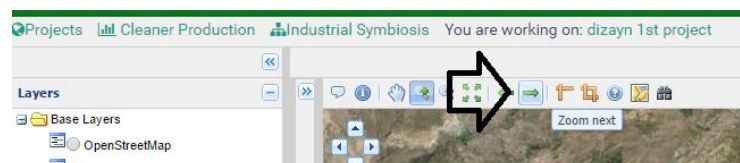


- How the user extend previous stage on map

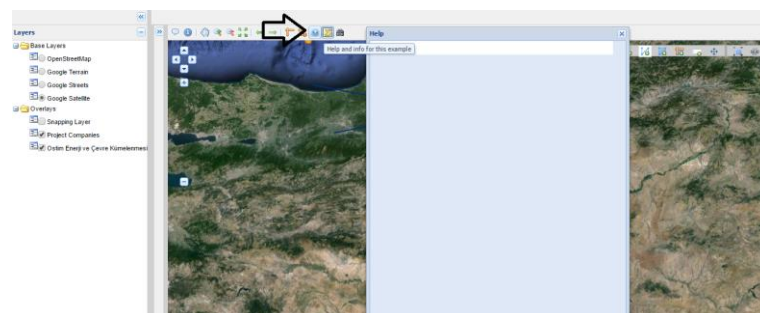
- User selects zoom previous tool in tool on menu and the map extends previous



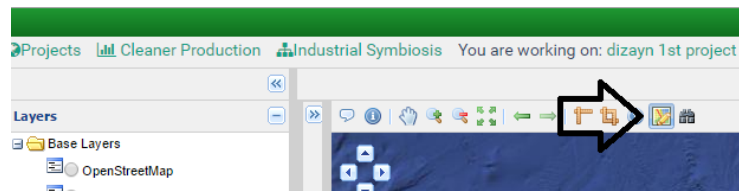
- How the user extend next stage on map
- User selects zoom next tool in tool on menu and the map extends previous



- How the user displays help menu on map
- User selects help tool in tool on menu and the map displays a pop up window



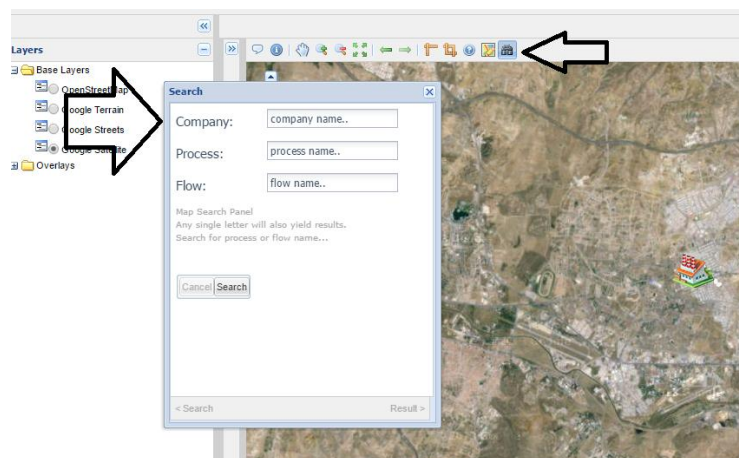
- How the user draws features on map
- User selects draw tool in tool on menu and the map displays a pop up window



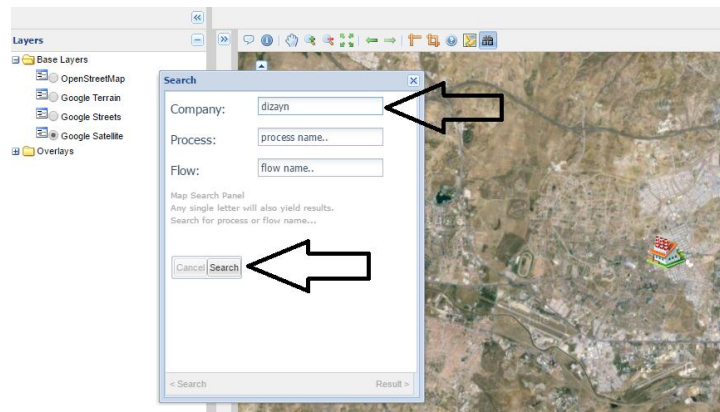
- A new tool opens on map, user select a drwing tool and draws on map



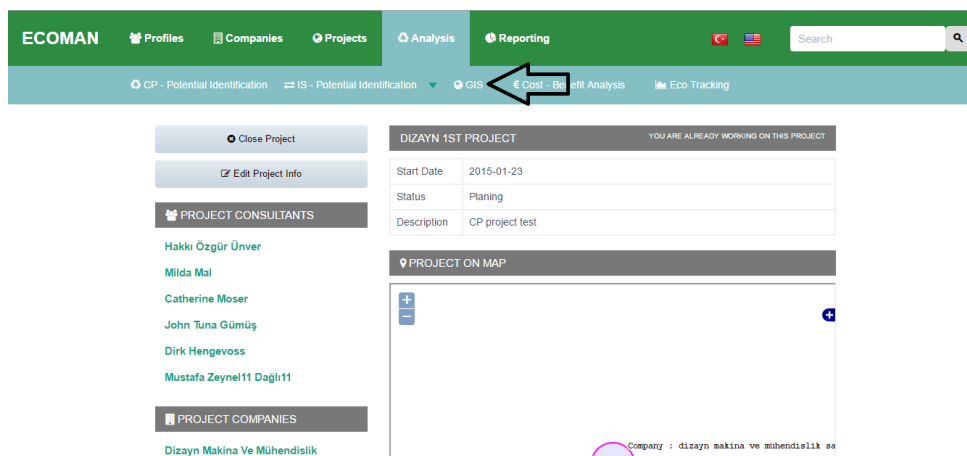
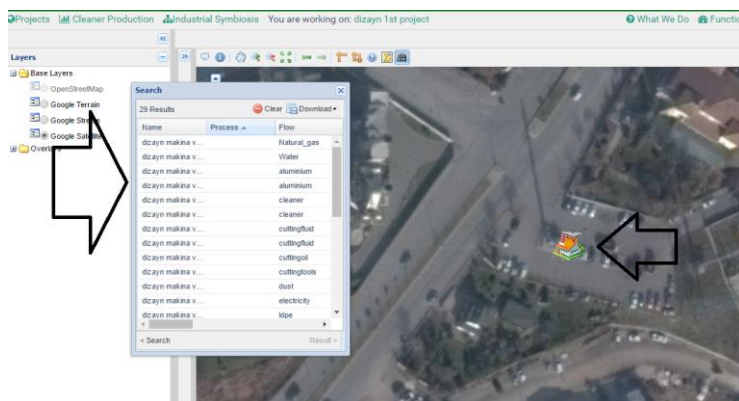
- How the user search a company , Flow or Process
- User selects serach tool on tool menu, a new pop up window opens on map



- User writes for a company, flow or process and clicks on search button,



Search results (companies, flows, processes) displays on pop up window, focusing on the companies found due to search results



(...)

7. HOW TO USE THE COST-BENEFITS ANALYSIS

Users can access the CBA pages by clicking Cost-Benefit Analysis button in the Analysis tab.

Cost - Benefit Analysis

machining company st. gallen

printing company

glas manufacturing

Please select a company to go to Cost - Benefit Analysis page

Users should select a company to work on in the first page of CBA module. After choosing a company CBA page will be shown the users.

machining company st. gallen

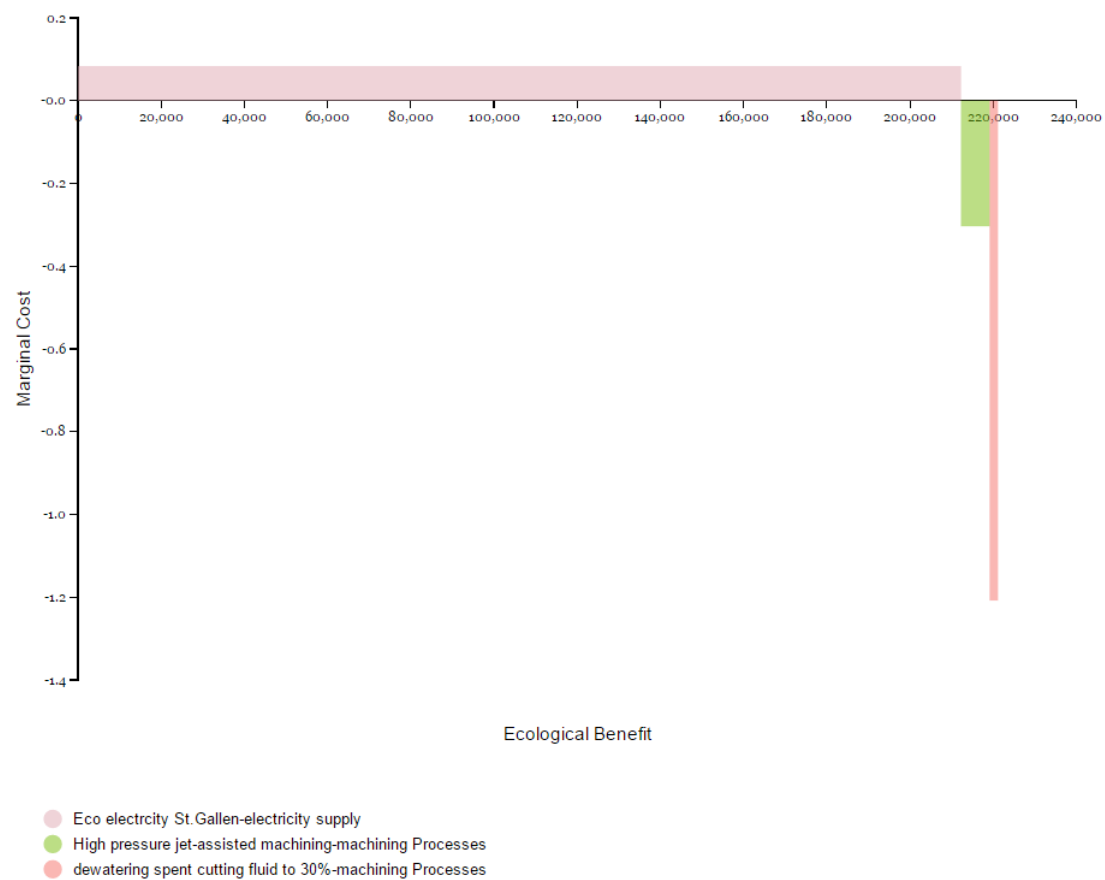
Cost - Benefit Analysis, CP and IS Potentials

Option	Yearly CAPEX / rest value (CHF/yr)	Annual energy and material flows		unit	Specific costs (CHF/unit)	OPEX (CHF)	EP/ Unit	EP	Annual costs (CHF/yr)	Lifetime (yr)
High pressure jet-assisted machining	234.00	cuttingfluid	1200.00	Liter	8.3	9960	0.005116666666	6.14	15094	14
		electricity	35000	CHF	0.14	4900.00000000	0.762	26670		
		Fill	Fill	Fill	Fill	0	Fill	0		
		Fill	Fill	Fill	Fill	0	Fill	0		
		Fill	Fill	Fill	Fill	0	Fill	0		
		Fill	Fill	Fill	Fill	0	Fill	0		
		Maintenance	0	SUM	14860	SUM	26676			

Users should fill the necessary flow and allocation values in order to make CBA calculation at this page for every option. After inserting the data CBA page will calculate the results and show them as a table and a graph at the same page.

Cost - Benefit Analysis Summary Table

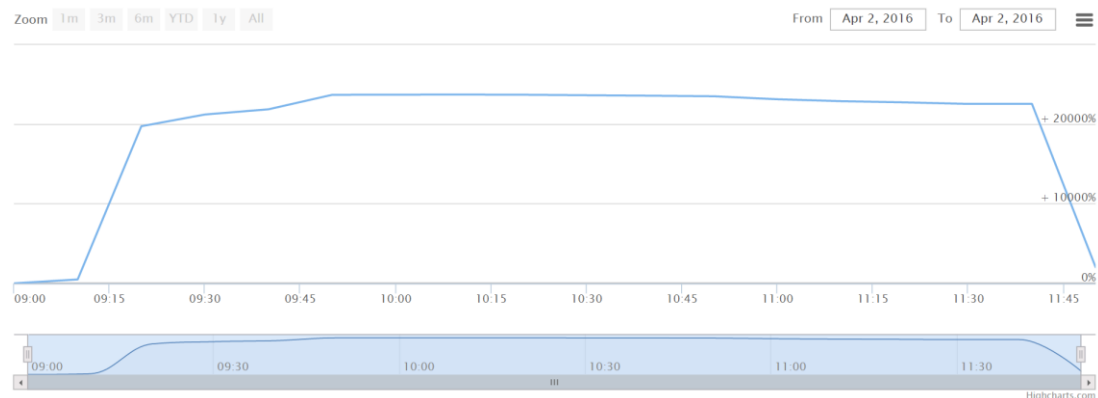
Option and Process Name	Marginal Cost	Ecological Benefit
Cooling machining - cuttingfluid - Input High pressure jet-assisted machining	-0.5658269605638027	26676
Disposal cutting fluid - spent cutting fluid - Output dewatering spent cutting fluid to 30%	-0.14293787766813024	23003
electricity supply - Electricity - Input Eco electrcity St.Gallen	0.00015152456191590285	116891940



By using these graph and table, users can decide which options are better than others based on Environmental and Economic Benefits.

8. HOW TO USE THE ECO TRACKING

Eco-tracking page can be access by clicking Eco-tracking button in the Analysis tab. Users can see the list of equipment in the same project that is opened in this page. By selecting an equipment they can see the eco-tracking data in the Eco-Tracking module.



Daily consumption values for Machine 1

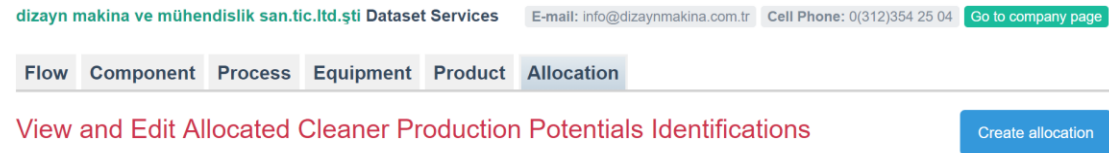
Instant Tracking Data

Date	Power 1	Power 2	Power 3
2016-04-02 11:00:00	1.70 kVa	1.70 kVa	1.70 kVa
2016-04-02 11:10:00	10.00 kVa	10.00 kVa	10.00 kVa
2016-04-02 11:20:00	336.20 kVa	336.20 kVa	336.20 kVa
2016-04-02 11:30:00	361.20 kVa	361.20 kVa	361.20 kVa
2016-04-02 11:40:00	372.32 kVa	372.32 kVa	372.32 kVa
2016-04-02 11:50:00	403.09 kVa	403.09 kVa	403.09 kVa
2016-04-02 12:00:00	403.40 kVa	403.40 kVa	403.40 kVa
2016-04-02 12:10:00	403.64 kVa	403.64 kVa	403.64 kVa
2016-04-02 12:20:00	403.27 kVa	403.27 kVa	403.27 kVa
2016-04-02 12:30:00	402.26 kVa	402.26 kVa	402.26 kVa
2016-04-02 12:40:00	401.25 kVa	401.25 kVa	401.25 kVa
2016-04-02 12:50:00	400.00 kVa	400.00 kVa	400.00 kVa
2016-04-02 13:00:00	393.63 kVa	393.63 kVa	393.63 kVa
2016-04-02 13:10:00	389.58 kVa	389.58 kVa	389.58 kVa
2016-04-02 13:20:00	387.00 kVa	387.00 kVa	387.00 kVa
2016-04-02 13:30:00	383.76 kVa	383.76 kVa	383.76 kVa
2016-04-02 13:40:00	383.76 kVa	383.76 kVa	383.76 kVa
2016-04-02 13:50:00	36.20 kVa	36.20 kVa	36.20 kVa

Users can change the time variable in the graph by using mouse scroll or entering the date values in the date fields.

9. HOW TO CREATE ALLOCATION

To create an allocation, user should go to dataset management page of a company and click the allocation tab then click “Create Allocation” button.



After clicking the create allocation button, users should chose a process, flow and flow type. System will insert dataset values automatically to the necessary fields. Users also can change the values and system will calculate the allocation rate and display in the needed fields. After entering accuracy rate and reference value to calculate a KPI for this allocation, user can create the allocation by clicking “Save data” value.

1 Lütfen başta bir işlem ve sonrasında akış seçerek paylaşımı tamamlayın

İşlem seçin

lighting

Akış seçin

electricity

Akış tipi seçiniz

Input

Firmanın akışları

İsim	Miktar	Maliyet
aluminium	10500.00 kg	126000.00 TL
aluminium	2100.00 kg	25200.00 TL
cleaner	6.00 kg	600.00 TL
cleaner	1.00 kg	500.00 TL
cuttingfluid	30750.00 Liter	16908.00 TL
cuttingfluid	27675.00 Liter	10000.00 TL
cuttingoil	1845.00 Liter	16605.00 TL
cuttingtools	350.00 unit	180000.00 TL
diş açma ürünü	123.00 bar	123.00 TL
electricity	462048.00 kWh	110891.00 TL
ldpe	12.00 unit	780.00 TL
Natural_gas	12000.00 m³	15000.00 TL
packagingwaste	1000.00 kg	2500.00 TL
steel	14000.00 kg	30800.00 TL
steel	2800.00 kg	7700.00 TL
titanium	400.00 kg	21600.00 TL
titanium	23.00 kg	3672.00 TL
vesconite	1000.00 kg	3500.00 TL
vesconite	200.00 kg	200.00 TL
wastewater	326.00 m³	6000.00 TL
Water	1260.00 m³	13104.00 TL

Firmanın ürünleri

İsim	Adet	Maliyet	Periyot
steel parts	5600	1 Euro	Annually
titanium parts	300	1 Euro	Annually
aluminium parts	4200	0 Euro	Annually
plastic parts	600	0 Euro	Annually

2 Lütfen tüm kutuları doldurun

Miktar

Sayı

Miktar birimi

Lütfen seçiniz

Paylaşırma (%)

Oran

Doğruluk oranı (%)

Oran

Maliyet

Sayı

Maliyet birimi

Lütfen seçiniz

Paylaşırma (%)

Oran

Doğruluk oranı (%)

Oran

Çevre etkisi

Sayı

EP

EP

Paylaşırma (%)

Oran

Doğruluk oranı (%)

Oran

Referans

Sayı

Birim

Lütfen seçiniz

Referans ismi

Referans ismi

Kpi

NaN

Kpi birimi

Lütfen seçiniz/Lütfen seçiniz

Kpi açıklaması

Kpi açıklaması

Varlığı kaydet

3 Seçilen akış için diğer paylaşımlara göz atın

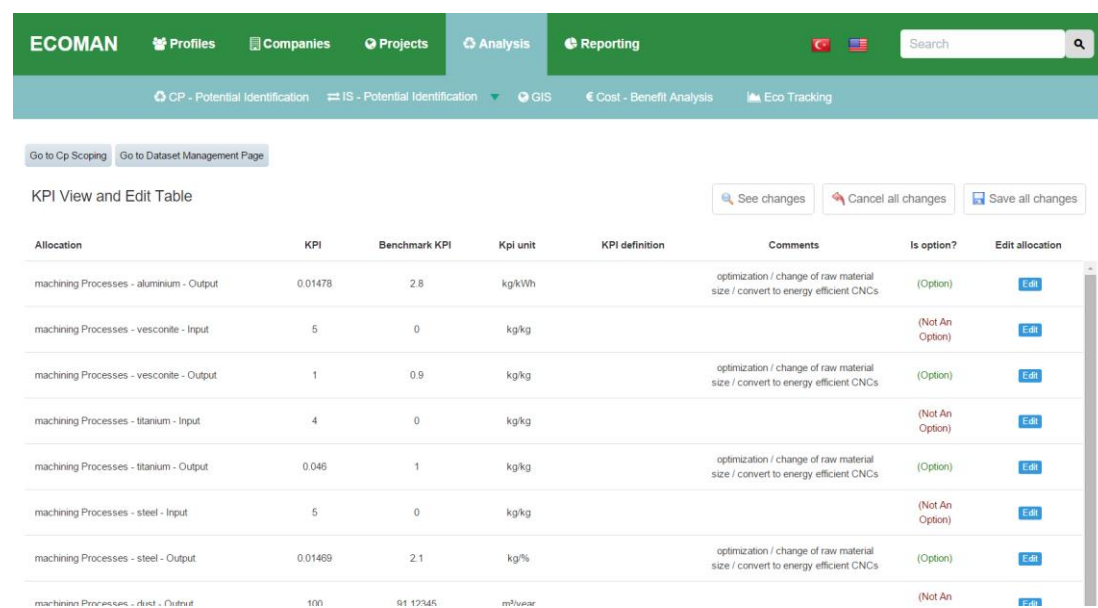
İşlem: machining Processes		
Miktar	346536.00 kWh	Doğruluk oranı: 75%
Maliyet	83168.00 TL	Doğruluk oranı: 75%
EP	232872.00 EP	Doğruluk oranı: 75%
İşlem: general cleaning		
Miktar	4620.00 kWh	Doğruluk oranı: 1%
Maliyet	1109.00 TL	Doğruluk oranı: 1%
EP	3021.00 EP	Doğruluk oranı: 1%

İşlem: heating		
Miktar	13861.00 kWh	Doğruluk oranı: 3%
Maliyet	3327.00 TL	Doğruluk oranı: 3%
EP	9331.00 EP	Doğruluk oranı: 3%
İşlem: Heating of grinding room		
Miktar	1000.00 kWh	Doğruluk oranı: 1%
Maliyet	250.00 TL	Doğruluk oranı: 1%
EP	654.00 EP	Doğruluk oranı: 1%

İşlem: air compression		
Miktar	18481.92 kWh	Doğruluk oranı: 4%
Maliyet	4435.00 TL	Doğruluk oranı: 4%
EP	9008.00 EP	Doğruluk oranı: 4%

10. HOW TO USE THE KPI CALCULATION

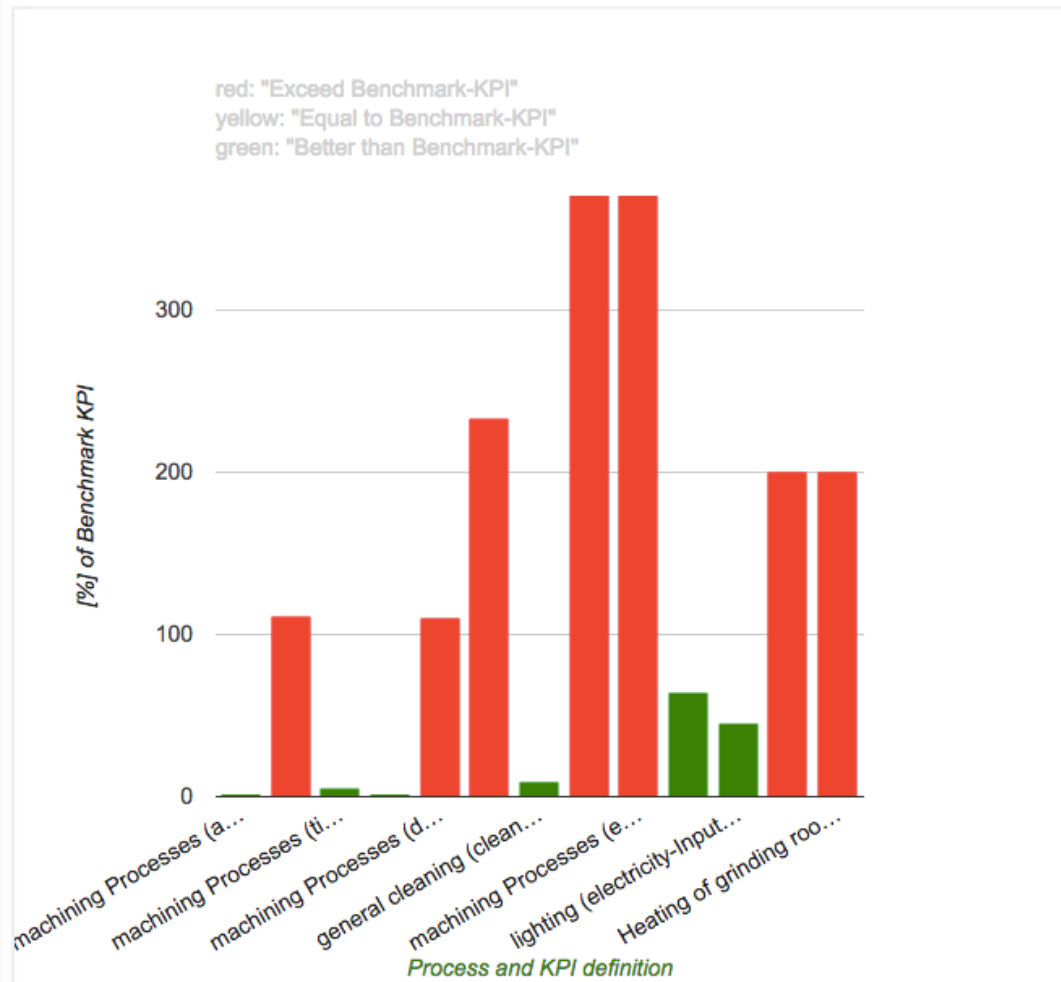
Users can access the KPI calculation page by clicking “View and Edit KPI Calculation” button in the CP scoping page. After accessing the KPI calculation page, allocations that entered in the dataset management page will be shown in the list with their KPI values. Users can enter Benchmark KPI values for comparison and options in the Comments bar in the table to analyze them in the CBA module. They can edit the allocations by clicking edit button in the same table.



Allocation	KPI	Benchmark KPI	Kpi unit	KPI definition	Comments	Is option?	Edit allocation
machining Processes - aluminium - Output	0.01478	2.8	kg/kWh		optimization / change of raw material size / convert to energy efficient CNCs	(Option)	Edit
machining Processes - vesconite - Input	5	0	kg/kg			(Not An Option)	Edit
machining Processes - vesconite - Output	1	0.9	kg/kg		optimization / change of raw material size / convert to energy efficient CNCs	(Option)	Edit
machining Processes - titanium - Input	4	0	kg/kg			(Not An Option)	Edit
machining Processes - titanium - Output	0.046	1	kg/kg		optimization / change of raw material size / convert to energy efficient CNCs	(Option)	Edit
machining Processes - steel - Input	5	0	kg/kg			(Not An Option)	Edit
machining Processes - steel - Output	0.01469	2.1	kg/%		optimization / change of raw material size / convert to energy efficient CNCs	(Option)	Edit
machining Processes - steel - Output	100	61.12345	m³/year			(Not An Option)	Edit

After saving the values, system will show the allocation comparison graph to the user. With this graph users can have an idea of the companies situation on the process level.

KPI ve Kıyaslama KPI'ı karşılaştırma grafiği



Users also can upload and search files they used in the KPI comparison module as reference by using document upload extension.

Döküman arama

Döküman yükleme

[Choose File](#) No file chosen

[Dosyayı kaydet](#)

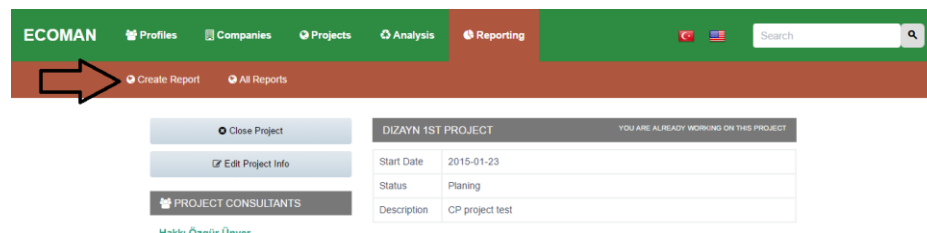
Yüklenmiş dökümanlar

Index	Dosya ismi	Yönet
1	Ecoinvent_KPIs_for_Dizayn.xlsx	Sil
2	Dry_machining_costs.pdf	Sil
3	Benchmark_KPIs_from_europe.docx	Sil
4	BREF_energy_parameters.pdf	Sil
5	Fraunhofer_benchmark_KPIs_for_machining.pdf	Sil

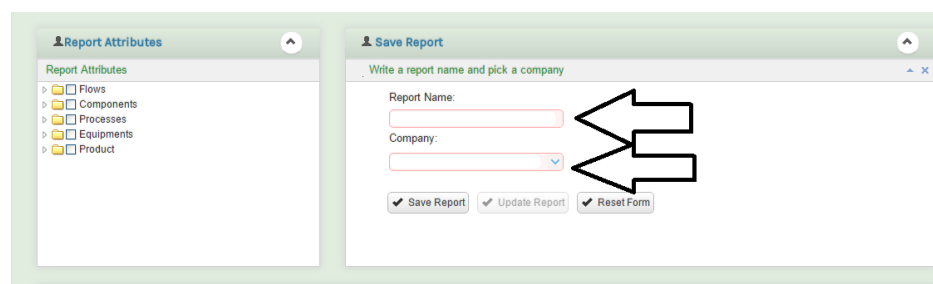
User also can delete and access files they uploaded to this project with the same document upload module.

11. HOW TO USE THE REPORTING

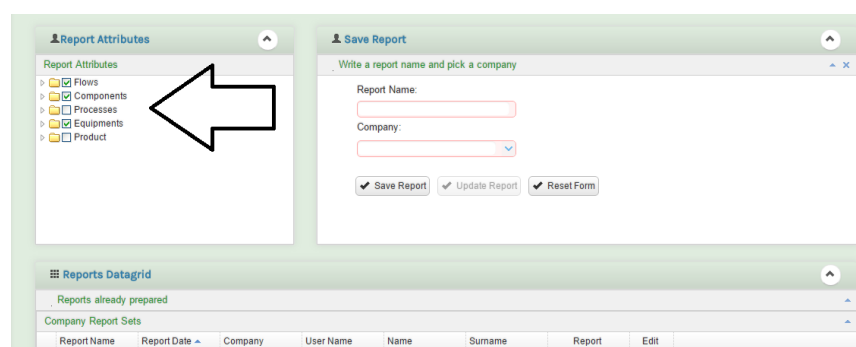
- The user logs to the application and opens a project(Open Project) .The user clicks on the “Create Report” button, under the ‘Reporting’ tab on the main menu. The ‘Create Report’ page opens,



- On the opening page User sets a report name and a company to fill related data



- Again on the page User checks attributes which will be shown on report under the ‘Report Attributes’ section tree structure



- After checked report attributes and filled report name and a company from dropdown under 'Save Report' section , User saves report by clicking on 'Save Report' Button

The screenshot shows the 'Save Report' form. On the left, the 'Report Attributes' section is expanded, showing a tree view with 'Flows', 'Components', 'Processes', 'Equipments', and 'Product'. A large arrow points to this section. In the 'Save Report' section, the 'Report Name' field contains 'test report' and the 'Company' dropdown is set to 'dizayn makina'. A large arrow points to the 'Save Report' button. Below the form, the 'Reports Datagrid' section is visible, showing a table with columns: Report Name, Report Date, Company, User Name, Name, Surname, Report, and Edit.

- Saved report displayed under the 'Reports Datagrid' section with reports already inserted in the system

The screenshot shows the 'Reports Datagrid' section. The table has columns: Report Name, Report Date, Company, User Name, Name, Surname, Report, and Edit. The first row is for 'test_design' and the second row is for 'test report'. A large arrow points to the 'test report' row.

Report Name	Report Date	Company	User Name	Name	Surname	Report	Edit
21 test_design	2016-03-08 07:30	dizayn makina ve r	zeynel	Mustafa Zeynel11	Dağır11	See Report	Edit
22 test report	2016-03-22 14:39	dizayn makina	zeynel	Mustafa Zeynel11	Dağır11	See Report	Edit

- User clicks row 'See Report' link on 'Company Report Sets' datagrid for the newly created report

The screenshot shows the 'Reports Datagrid' section. The table has columns: Report Name, Report Date, Company, User Name, Name, Surname, Report, and Edit. The first row is for 'test_design' and the second row is for 'test report'. A large arrow points to the 'See Report' link in the 'test report' row.

Report Name	Report Date	Company	User Name	Name	Surname	Report	Edit
21 test_design	2016-03-08 07:30	dizayn makina ve r	zeynel	Mustafa Zeynel11	Dağır11	See Report	Edit
22 test report	2016-03-22 14:39	dizayn makina	zeynel	Mustafa Zeynel11	Dağır11	See Report	Edit

- Newly created report displays on the 'Report' section on the lower side of page

Report

Mustafa Zeynel11 Dağlı11
Creation Date: 2016-03-22 16:39:
test report

Company Name: dizayn makina
Country: Turkey
Nace Code: 25.21.10
Nace Code Description: MAKINA VE EKİPMANLARI

Address: Ali Evran Cad. 38. Sok. No:1 Ostim 06370 Yenimahalle / Ankara - Turkey
e-mail: info@dizaynmakina.com.tr
Phone: 90 312 354 25 04
Work Phone: 90 312 354 24 41
Postal Code: NULL
Fax: 90 312 354 26 15

Flows

Component

Equipment

- If User wants to update an existing report, clicks on the 'Edit' action link on the 'Company Report Sets' datagrid

Report Attributes

Write a report name and pick a company

Report Name:

Company:

☒ Save Report ☒ Update Report ☒ Reset Form

Reports Datagrid

Reports already prepared

Company Report Sets

Report Name	Report Date	Company	User Name	Name	Surname	Report	Edit
21 test_design	2016-03-08 07:30:	dizayn makina ve r zeynel	Mustafa Zeynel11	Dağlı11		See Report	Edit
22 test report	2016-03-22 14:39:	dizayn makina	zeynel	Mustafa Zeynel11	Dağlı11	See Report	Edit

- Report attributes, name and company automatically displays on related sections of page

Report Attributes

- ☒ Flows
- ☒ Components
- ☒ Processes
- ☒ Equipments
- ☒ Product

Write a report name and pick a company

Report Name:

Company:

Reports Datagrid

Reports already prepared

Report Name	Report Date	Company	User Name	Name	Surname	Report	Edit
21 test_design	2016-03-08 07:30	dizayn makina ve ri	zeynel	Mustafa Zeynel11	Dağlı11	See Report	Edit
22 test report	2016-03-22 14:39	dizayn makina	zeynel	Mustafa Zeynel11	Dağlı11	See Report	Edit

- User can make change report attributes, name or company or all of the items and clicks on 'Update Report' button on the 'Save Report' section

Report Attributes

- ☒ Flows
- ☒ Components
- ☒ Processes
- ☒ Equipments
- ☒ Product

Write a report name and pick a company

Report Name:

Company:

Reports Datagrid

Reports already prepared

Report Name	Report Date	Company	User Name	Name	Surname	Report	Edit
21 test_design	2016-03-08 07:30	dizayn makina ve ri	zeynel	Mustafa Zeynel11	Dağlı11	See Report	Edit
22 test report	2016-03-22 14:39	dizayn makina	zeynel	Mustafa Zeynel11	Dağlı11	See Report	Edit

- Updated report displays with updated data on the 'Reports Datagrid'

Report updated successfully

Report Attributes

- ☒ Flows
- ☒ Components
- ☒ Processes
- ☒ Equipments
- ☒ Product

Write a report name and pick a company

Report Name:

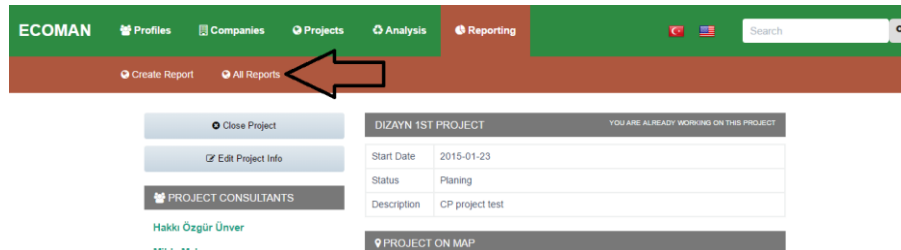
Company:

Reports Datagrid

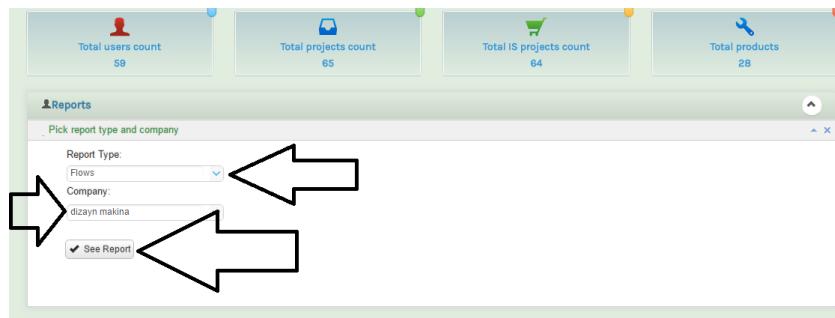
Reports already prepared

Report Name	Report Date	Company	User Name	Name	Surname	Report	Edit
21 test_design	2016-03-08 07:30	dizayn makina ve ri	zeynel	Mustafa Zeynel11	Dağlı11	See Report	Edit
22 test report2	2016-03-22 14:39	dizayn makina	zeynel	Mustafa Zeynel11	Dağlı11	See Report	Edit

- The user logs to the application and opens a project(Open Project) .The user clicks on the “All Reports” button, under the ‘Reporting’ tab on the main menu. The ‘All Reports’ page opens,



- User selects an already prepared report type and a company and clicks on ‘See Report’ Button



- Already prepared report displays on ‘Report’ section

