

Fast & Studious- Tutorial

This document is a basic tutorial on how to create a fast, high-quality project planning using Fast and Studious.

Note:

In order to avoid any confusion in the following tutorial regarding the use of word “project”, we are defining some terms:

- Project: refers to the project that you intend to do planning with the help of Fast & Studious
- Project model: term referring to a FS project that will host all data for your project planning. In FS you can create as many projects model as you want to do planification for different type of projects or project variants.

I. How to get Fast & Studious

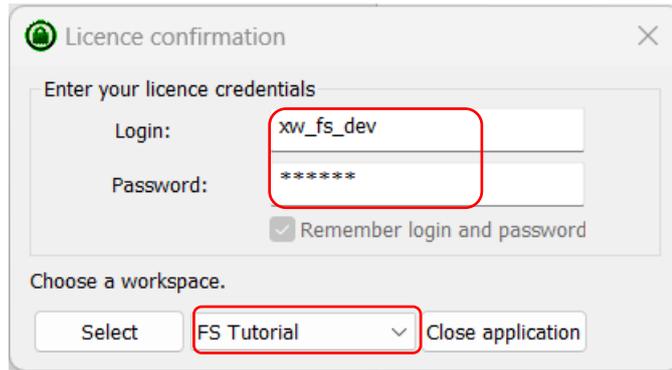
- Go to the following link: www.fastandstudious.com
- Register and download F&S solution
- Unzip it to some user directory (it is advised to use some destination directory where user has got all rights by default) let's consider the archive is unzipped into « user//My Documents//FS »
- **WARNING:** depending on your country, please take care not to special characters (e.g. “é”) in the path of your distribution otherwise your service may not be fully available.

II. Launch FS

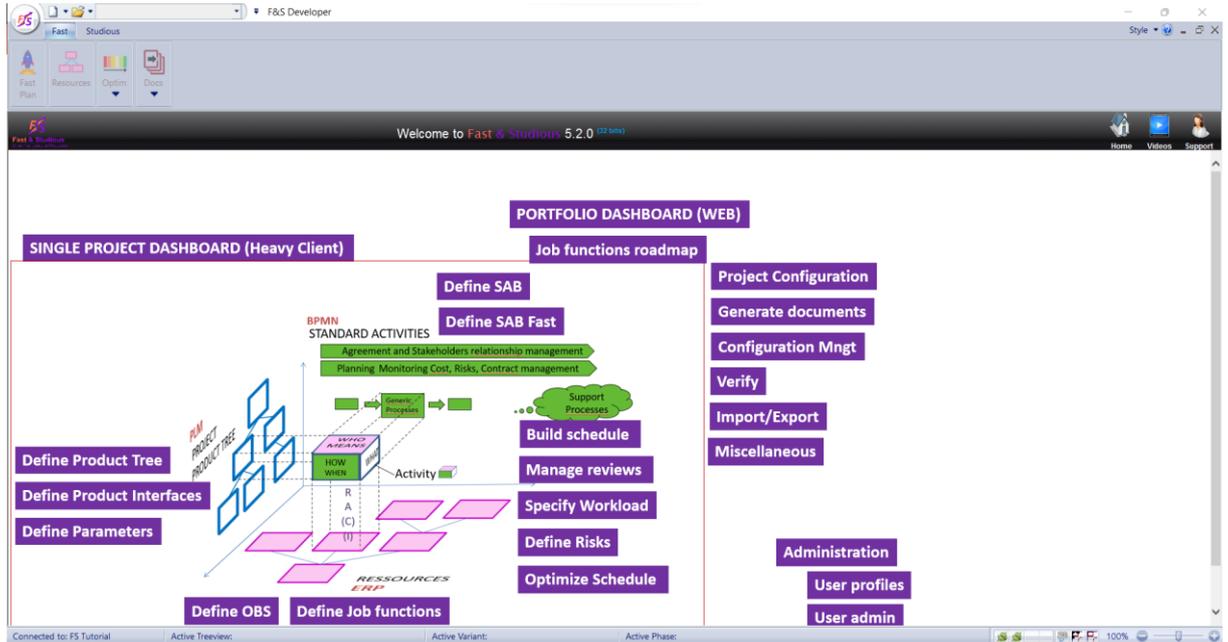
- Go to « user//My Documents//FS » (directory where archive is unzipped)

Name	Date modified	Type	Size
ArkiScripts	17/05/2023 12:14	File folder	
Config	04/04/2023 17:04	File folder	
Help	04/04/2023 17:04	File folder	
logs	04/04/2023 18:07	File folder	
PythonLib	04/04/2023 17:04	File folder	
Scripts	04/04/2023 17:04	File folder	
_FS	27/03/2023 15:29	Application	21 757 KB
boost_chrono-vc140-mt-1_65_1.dll	27/03/2023 15:29	Application extens...	26 KB
boost_date_time-vc140-mt-1_65_1.dll	27/03/2023 15:29	Application extens...	41 KB
boost_filesystem-vc140-mt-1_65_1.dll	27/03/2023 15:29	Application extens...	104 KB
boost_iostreams-vc140-mt-1_65_1.dll	27/03/2023 15:29	Application extens...	68 KB
boost_log-vc140-mt-1_65_1.dll	27/03/2023 15:29	Application extens...	498 KB
boost_python-vc140-mt-1_65_1.dll	27/03/2023 15:29	Application extens...	193 KB
boost_regex-vc140-mt-1_65_1.dll	27/03/2023 15:29	Application extens...	679 KB
boost_serialization-vc140-mt-1_65_1.dll	27/03/2023 15:29	Application extens...	183 KB
boost_system-vc140-mt-1_65_1.dll	27/03/2023 15:29	Application extens...	20 KB
boost_thread-vc140-mt-1_65_1.dll	27/03/2023 15:29	Application extens...	87 KB
boost_unit_test_framework-vc140-mt-1_6...	27/03/2023 15:29	Application extens...	448 KB
CodeGenerator.dll	27/03/2023 15:29	Application extens...	591 KB
concr140.dll	27/03/2023 15:29	Application extens...	239 KB
CrashRpt.dll	27/03/2023 15:29	Application extens...	121 KB
crashrpt_lang	27/03/2023 15:29	Configuration settl...	9 KB
CrashSender	27/03/2023 15:29	Application	1 106 KB
DataBase.dll	27/03/2023 15:29	Application extens...	736 KB
libconfig++-dll	27/03/2023 15:29	Application extens...	79 KB
mfc140.dll	27/03/2023 15:29	Application extens...	4 594 KB
msvc140.dll	27/03/2023 15:29	Application extens...	430 KB

- Double click on « _FS » to start F&S application
- Enter your login and password received during registration
- Select a workspace in the dropdown list (if it is not selected)
- Click « Select » button

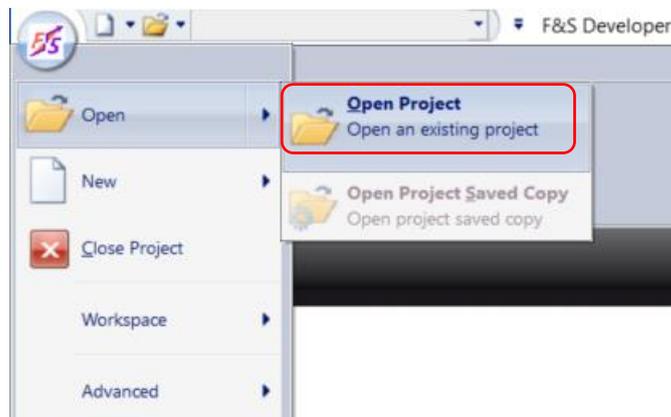


- Once connected to your session, you will get to FS main window



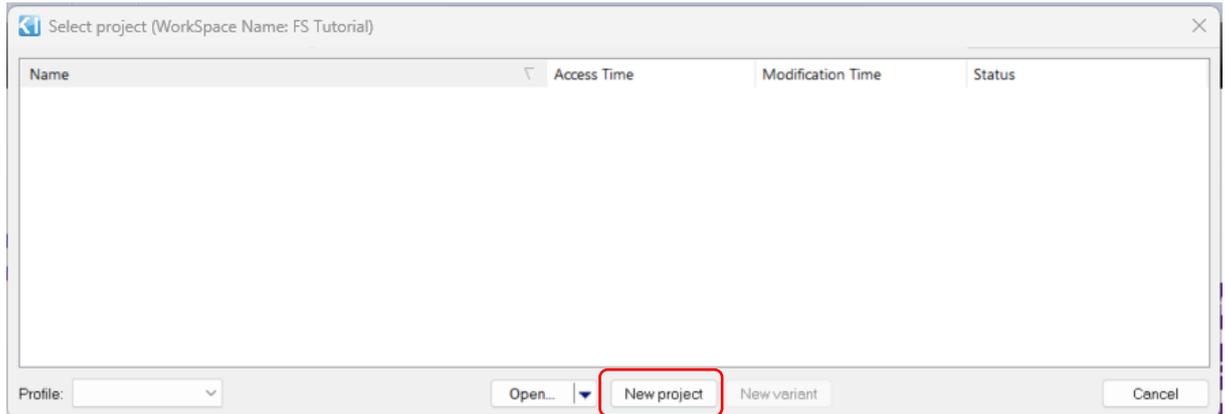
III. Open project model in FS

1. Create a new project model
 - Open the menu
 - Click on "Open Project"

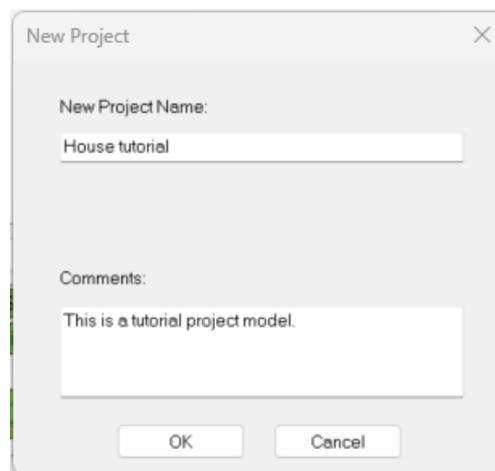


A new window opens listing all project models in your current workspace.

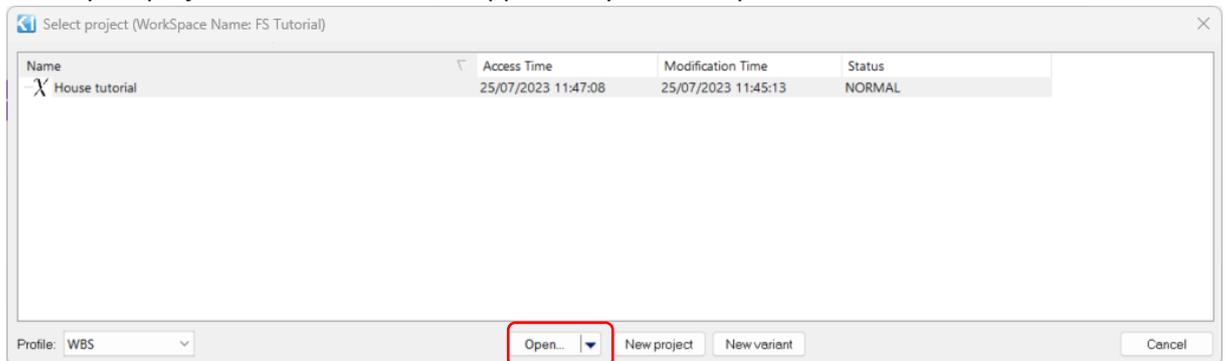
- Click on “New Project”



- In the new project window, enter a project model name and comments (as optional), validate with OK



- When your project model is created, it appears in your workspace window as follow



2. Open a project model

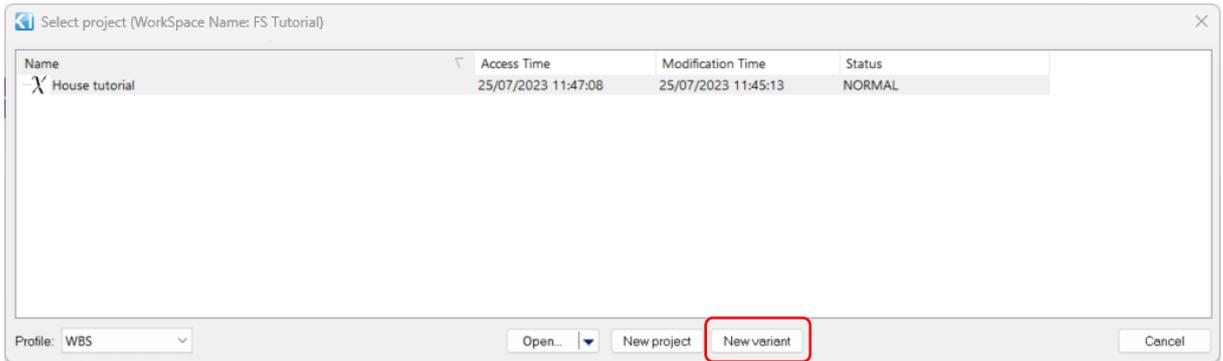
To open a project model, just select it and click on “Open” button.

You can also double click on the project model.

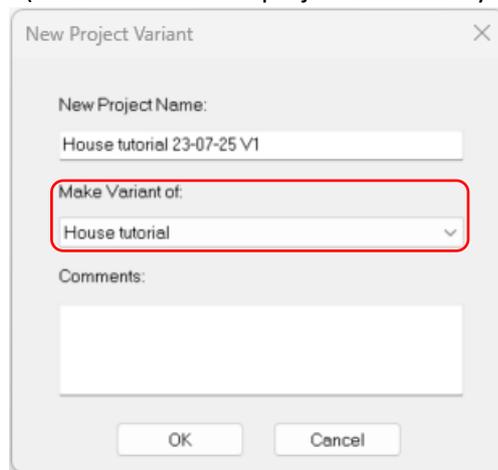
3. Make a copy of a project model

It is possible to create a copy of a project model to manage variants or for other purposes.

- In the “Open Project” window
- Select the project model you want to copy
- Click on “New variant”

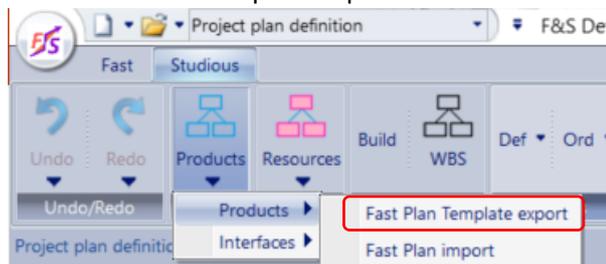


- In the new window, enter a name for copied project model and comments if needed, then click on OK
- To change the project model you want to make a copy of, select another project model in “Make variant of” drop list (the list includes all project models in your current workspace)

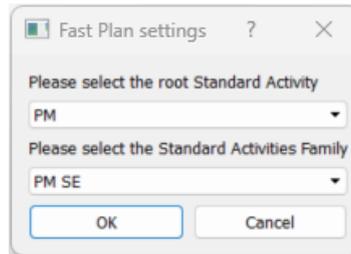


IV. Filling project information in Fast Plan template

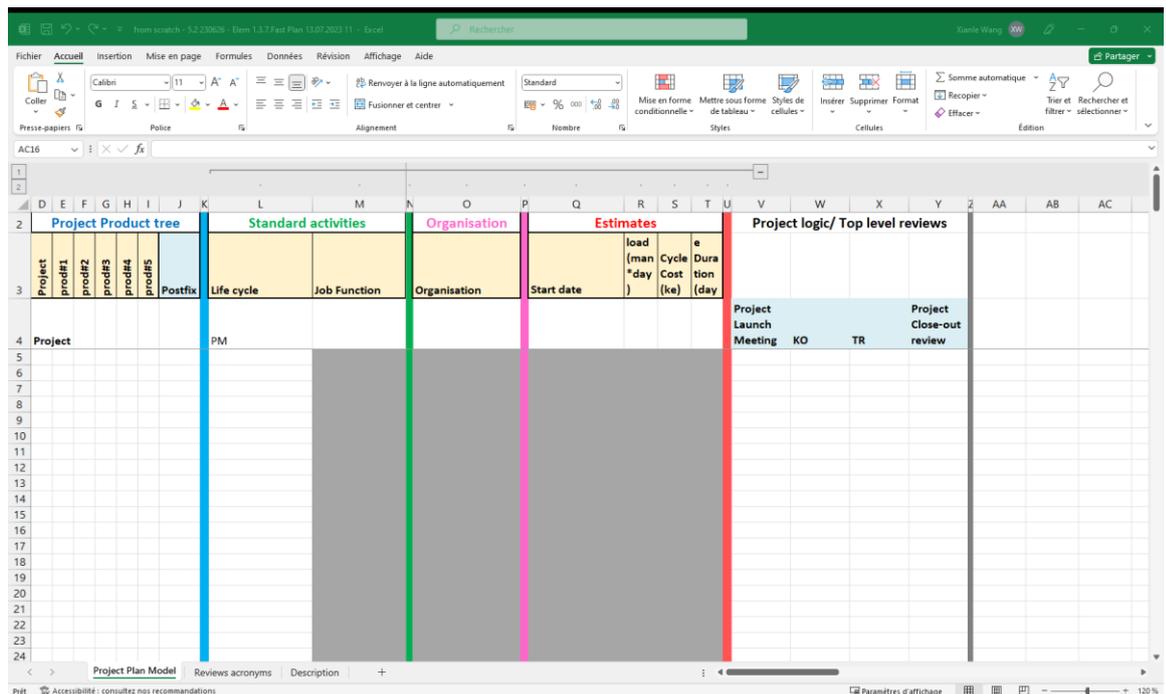
1. How to get Fast Plan template?
 - You first need to have opened a project model in FS (can be empty or not)
 - In tab Studios, under Products
 - Select Products and click on Fast Plan Template export



- A confirmation window will pop up for empty project model
 - Leave the default values
 - Click on OK



- The template will be generated in Excel format
 - It will be empty if your original project is empty
 - Or filled with project information otherwise



2. How to fill Fast Plan template?

The template is composed of 5 areas:

- **Project product tree:** tree like breakdown of project products. Breakdown shall respect functional hierarchy from Systems Engineering point of view i.e., sub products are contributing functionally to their parent product.
- **Standard activities:** to describe all the activities to be done for a said product. It is a paired values of Systems Engineering life cycle and job function. Each of the life cycle is a set standard processes from SE.
- **Organization:** entity responsible for product
- **Estimates:** cost and workload estimation (based on REX, models...)
- **Project top level reviews:** synchronize product milestones to top level reviews. Describing when an activity shall start and end.

In the following parts, we are going to fill some essential information of a House project in the template. We deliberately make the product tree light for the purpose of the example, feel free to add more products.

i. Project product tree (PPT)

In the PPT area, first column is to name your project and only the first row need to be filled with project name (“House” in the example).

The rest of the project products can be defined in a tree like as in the image below. “100-Land development” is a parent product of both “110-Earthmoving” and “120-Land trenches”. Columns named from “prod#1” to “prod#5” are level of depth of the PPT. You can add additional columns “prod#6”... and so on if needed.

To summarize the PPT below, we have 3 top level products and 5 products of level 2 belonging to 2 separate parent products.

Project Product tree						
Project	prod#1	prod#2	prod#3	prod#4	prod#5	Postfix
House						
	100-Land development					
		110-Earthmoving				
		120-Land trenches				
	200-Building					
		210-Building trenches				
		220-Reinforcement of building foundations				
		230-Raw building				
	300-Electric meter					

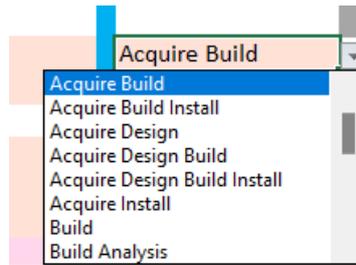
Column “Postfix” purpose is to affect incremental numbers in order to differentiate products with the same name. It allows reusing rows of product. The example below will create 2 distinct Water meter product once imported.

Project Product tree						
Project	prod#1	prod#2	prod#3	prod#4	prod#5	Postfix
House						
	Water meter					1
	Water meter					2

ii. Standard activities

In the next step, you have to define the life cycle you intend to apply on each product. As explained earlier, these are Systems Engineering standard processes.

To help you fill life cycles, a drop list of available life cycles will show when you click on a cell in the Life cycle column.



By default, PM (Project management) is applied to the project (here “House”).

For the rest of the products, you only need to apply life cycle to leaf product (without further child product). Plus any life cycle in regard to acquire/ACQ means no job function is needed from the from your own company.

“100-Land development” doesn’t need life cycle nor job function because they are defined in its children products.

“300-Electric meter” needs a life cycle and job function because it is a leaf product.

“110-Earthmoving” doesn’t need job function description.

Project Product tree							Standard activities	
Project	prod#1	prod#2	prod#3	prod#4	prod#5	Postfix	Life cycle	Job Function
House							PM	Head of work
	100-Land development							
		110-Earthmoving					Acquire Build	
		120-Land trenches					Acquire Build	
	200-Building							
		210-Building trenches					Acquire Build	
		220-Reinforcement of building foundations					Acquire Build	
		230-Raw building					Build	Mason
	300-Electric meter						SFI_ACQ_temp	

iii. Organisation

In this step, you only have to define organization/company that is carrying out the activity on the product. Once again project “House” needs an organisation but not parent product.

Project Product tree							Standard activities		Organisation
Project	prod#1	prod#2	prod#3	prod#4	prod#5	Postfix	Life cycle	Job Function	Organisation
House							PM	Head of work	House Builder
	100-Land development								
		110-Earthmoving					Acquire Build		Earthmoving Company
		120-Land trenches					Acquire Build		Earthmoving Company
	200-Building								
		210-Building trenches					Acquire Build		Earthmoving Company
		220-Reinforcement of building foundations					Acquire Build		Earthmoving Company
		230-Raw building					Build	Mason	House Builder
	300-Electric meter						SFI_ACQ_temp		House Builder

iv. Estimates

In this part, you have to define workload, cost and cycle duration estimation for each of the work package (product-life cycle-organisation). These estimations can REX or models based.

Note that cycle duration is generally larger than workload since it includes any wait stages that occurs between tasks.

Project Product tree						Standard activities		Organisation	Estimates				
Project	prod#1	prod#2	prod#3	prod#4	prod#5	Postfix	Life cycle	Job Function	Organisation	Start date	Work load (man *day)	Cycle Cost (ke)	Cycle Duration (day)
House							PM	Head of work	House Builder		10		
	100-Land development												
		110-Earthmoving					Acquire Build		Earthmoving Company		0.5	5	10
		120-Land trenches					Acquire Build		Earthmoving Company		0.5	2	10
	200-Building												
		210-Building trenches					Acquire Build		Earthmoving Company		2	10	20
		220-Reinforcement of building foundations					Acquire Build		Earthmoving Company		2	10	20
		230-Raw building					Build	Mason	House Builder		100	15	60
	300-Electric meter						SFI_ACQ_temp		House Builder		1	5	2

v. Project logic/Top level reviews

In this last step, you define project main milestones with top level reviews to build a chronological logical. Reviews can be defined with raw date or can be referred as xx days/weeks/months/years after as referenced review.

By default, there are 4 top level reviews in the template: Project launch meeting, KO (kick-off), TR (transfert) and Project close-out review. For our example we added 3 more reviews in between: Star construction, Foundations reviews and End of work.

Above reviews name, you can define date constraints as shown.

- Project launch meeting shall begin on the 1st July 2023
- KO begins 1 month after PLM*
- ...
- TR begins 15 days after End of work*

Project Product tree						Project logic/ Top level reviews							
Project	prod#1	prod#2	prod#3	prod#4	prod#5	Postfix	01/07/2023	PLM+1m	KO+1m	KO+2m	KO+5m	EoW+15d	EoW+1m
House							Project Launch Meeting	KO	Start construction	Foundatio ns review	End of work	TR	Project Close-out review
	100-Land development												

*1 as you can see, we use acronyms defined in excel tab "Reviews acronyms" to refer reviews one to another more easily.

Project Plan Model	Reviews acronyms	Description
Acronym	Review	
PLM	Project Launch Meeting	
EoW	End of work	

Finally, for each of the not leaf product, you have to define at which review it starts and at which it ends. While there is no product starting at PLM or KO, there are still some activities related to project (from PM life cycle) to be carry out between these reviews.

Project Product tree							Project logic/ Top level reviews						
Project	prod#1	prod#2	prod#3	prod#4	prod#5	Postfix	01/07/2023	PLM+1m	KO+1m	KO+2m	KO+5m	EoW+15d	EoW+1m
House							Project Launch Meeting	KO	Start construction	Foundations review	End of work	TR	Project Close-out review
	100-Land development	110-Earthmoving	120-Land trenches						Start	End			
	200-Building	210-Building trenches	220-Reinforcement of building foundations	230-Raw building					Start	End	Start	End	
	300-Electric meter										Start	End	

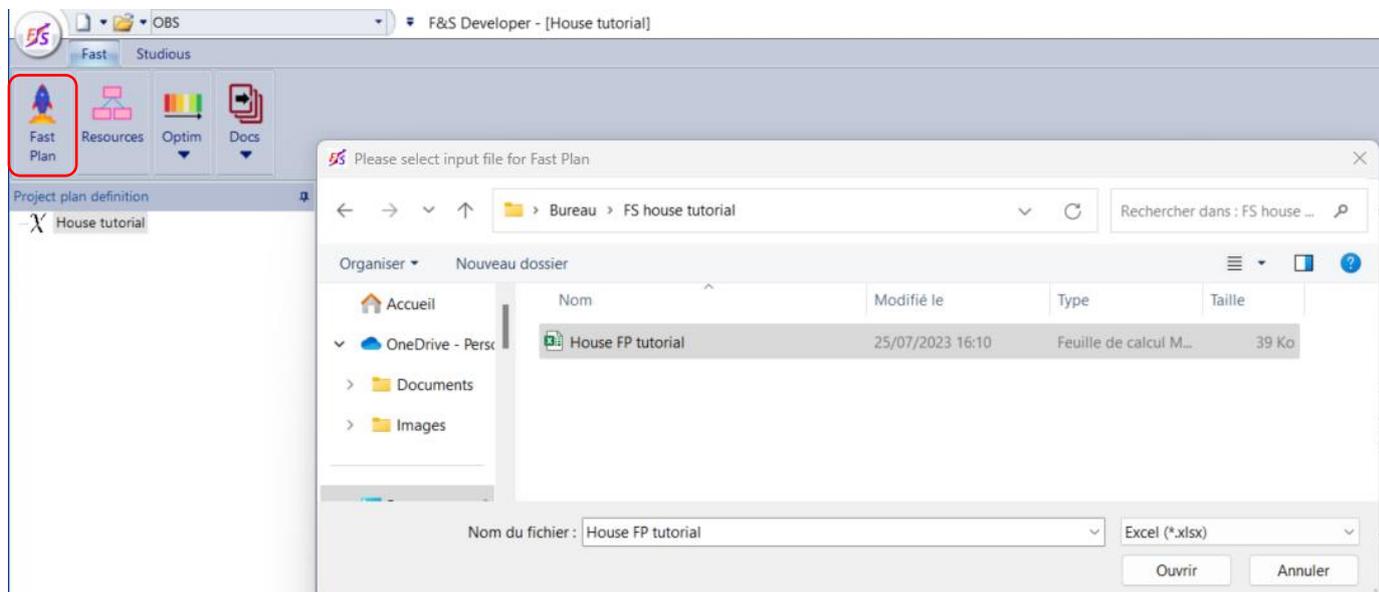
Congratulations, you have now done 99% of the work for a fast planning of your project.

Save your template.

V. Run Fast plan in FS

Now let's go back to F&S.

- Open a project model in F&S (“House tutorial” in the example)
- Click on button “Fast Plan”
- Select your fast plan template from your save location



Depending on the size of your template, fast plan import can take up to 3min.

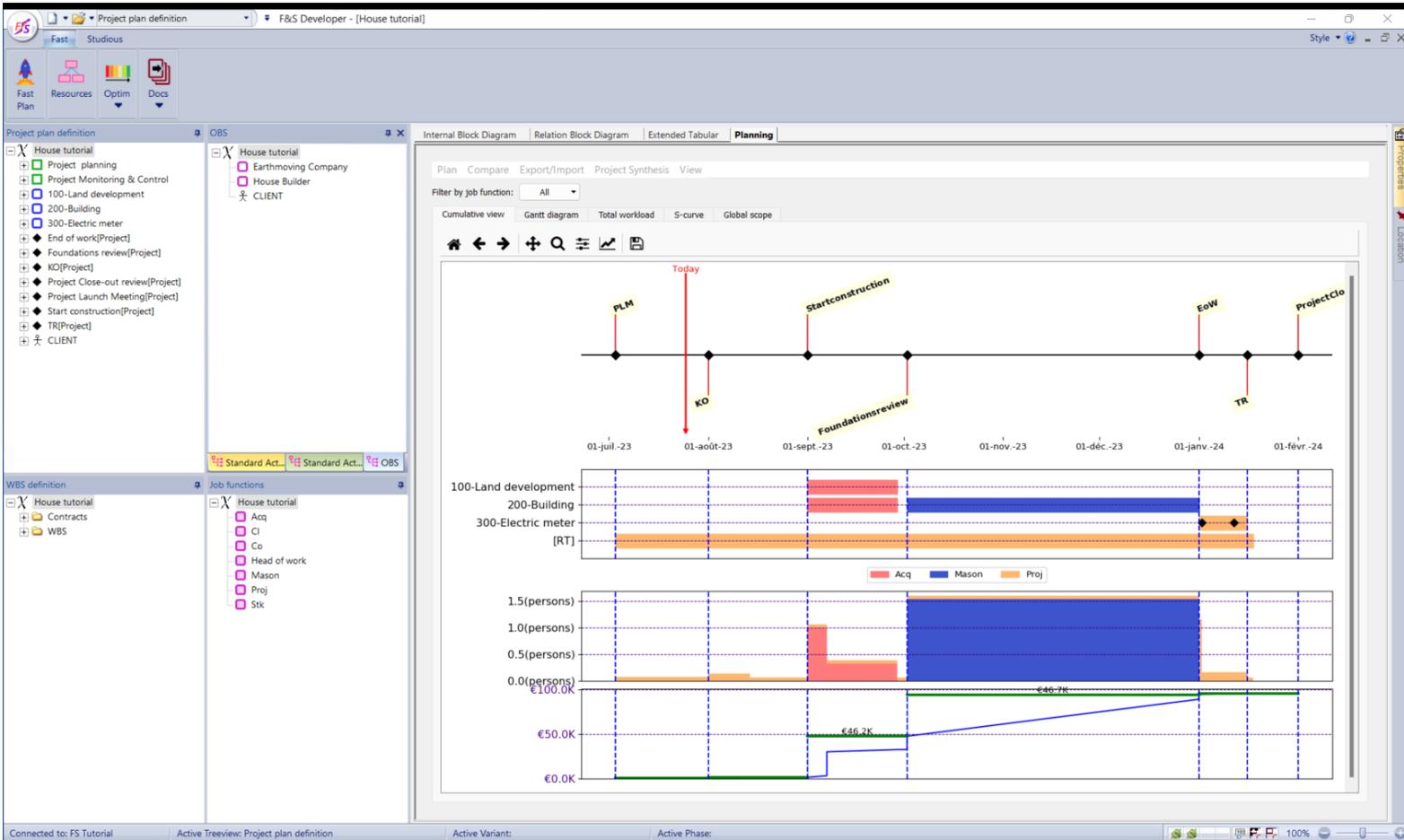
VI. Viewpoints

1. Cumulative view

Once the import is done, your project model should be like this.

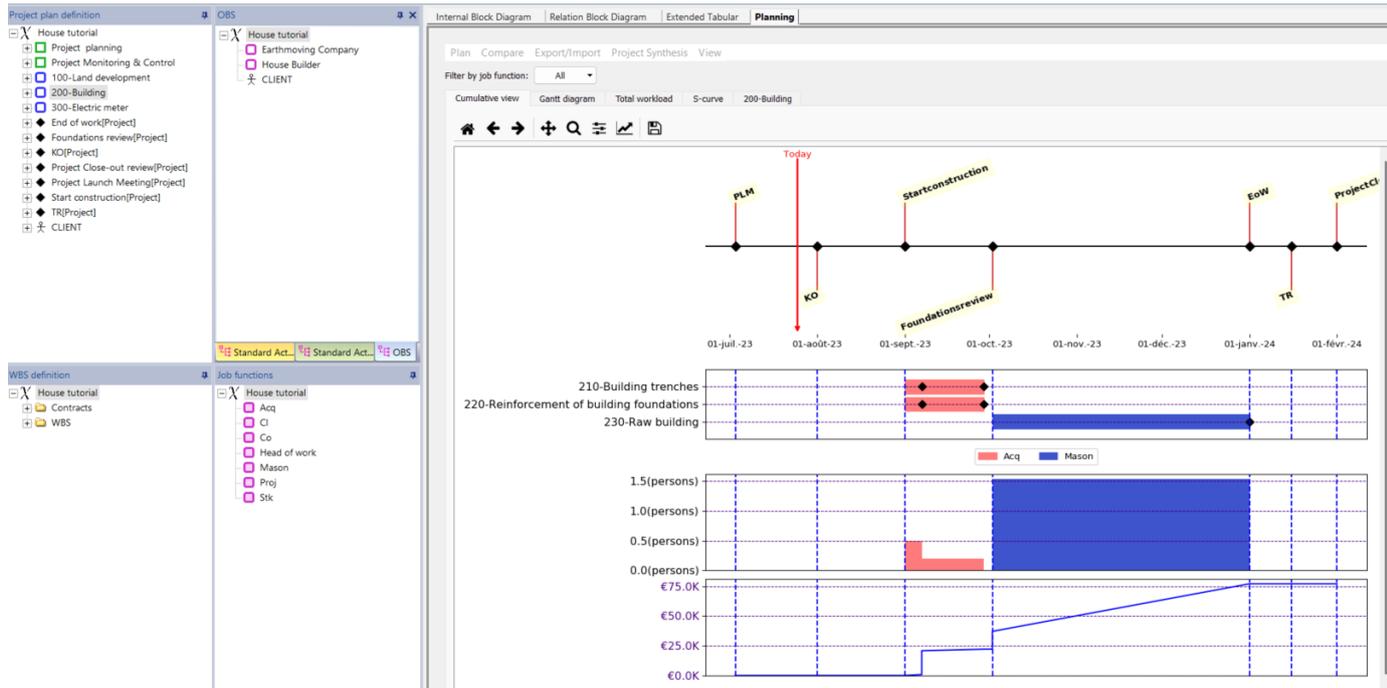
On the left, 4 treeviews capitalizing different types of objects: Product, Organisation, WBS and job functions.

On the right is for diagrams visualization. The default view is the Cumulative view where you can visualize products, workloads and cost planning projection in line with top level reviews that you have previously defined.



2. Navigating in F&S

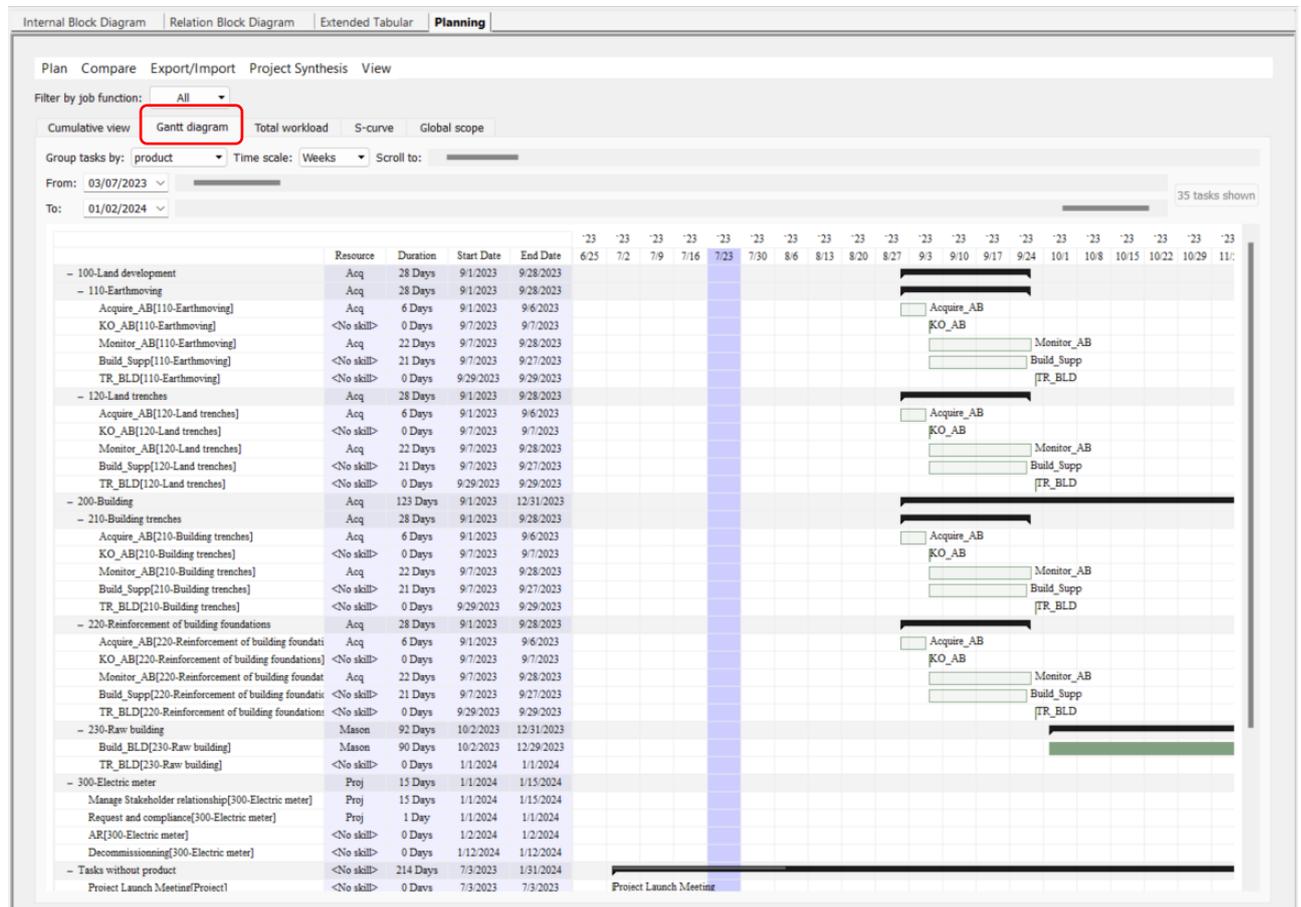
You can navigate through all type of objects directly in treewiews. For example, double click on product "200-Building" allows you to "enter" into this object and focus your view point on it. All diagrams will automatically change focus. Now the cumulative view is centered on sub products of "200-Building".



Same can be done on job functions or work package if you want to see planning for a specific job of activities.

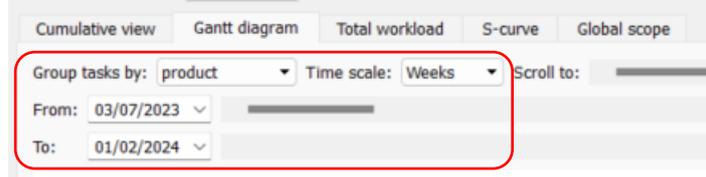
3. Gantt

Next to Cumulative view, you have Gantt. Clicking on it displays Gantt diagram of the current selected object.



A “time scale” is available to adjust displaying time scale to your project duration (days, weeks, months and years).

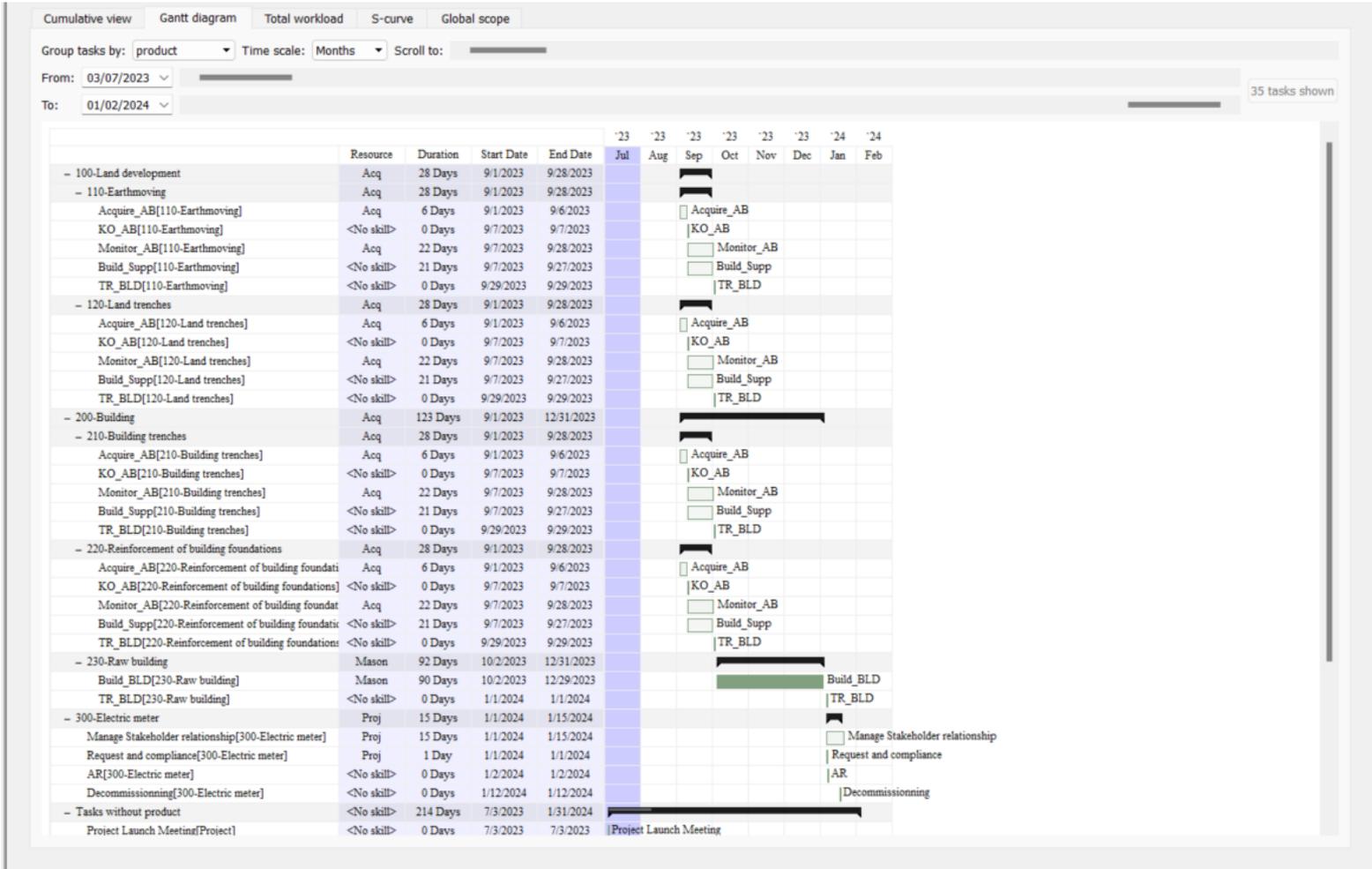
There is also a possibility to precisely narrow the period interval with exact dates to have a better focus.



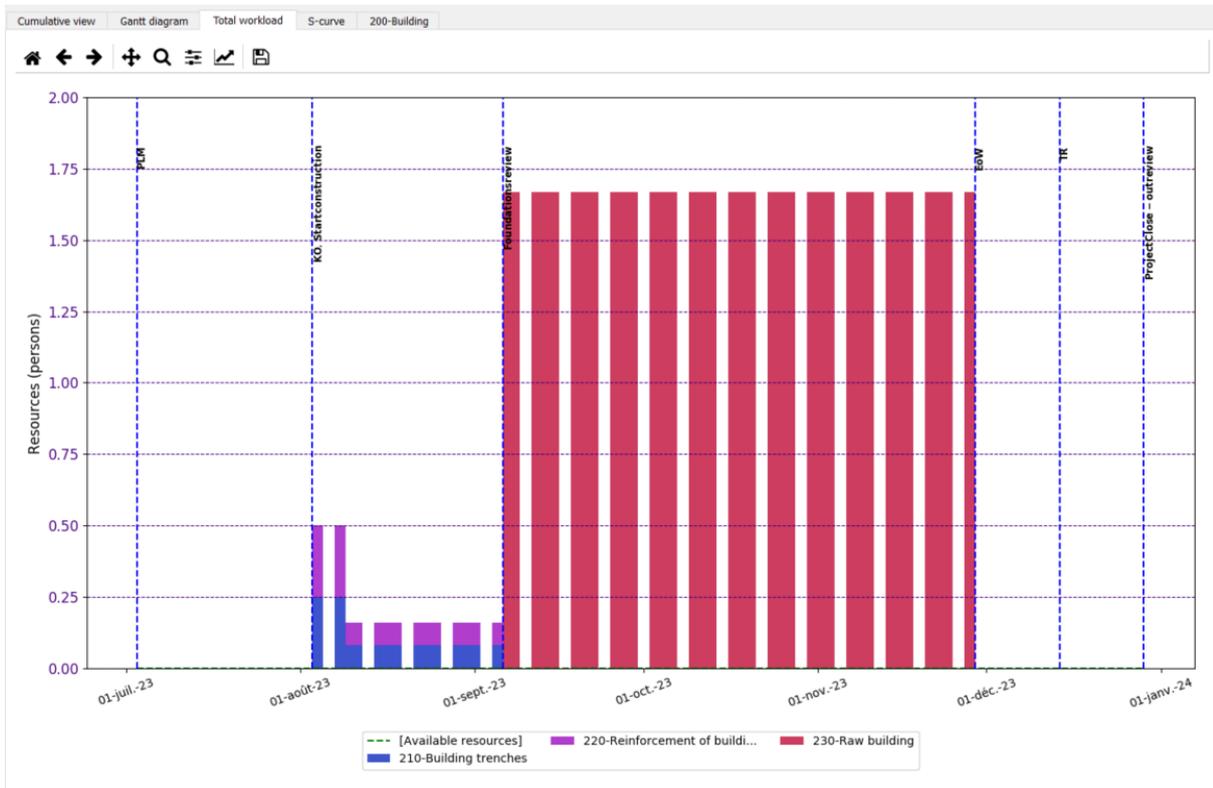
Filter “Group task by” allows to sort all activities by group nature, whether it is by job function, product, work package or organization. Images below show the difference between a sort by product and by job function.

Cumulative view Gantt diagram Total workload S-curve Global scope				
Group tasks by: product Time scale: Weeks Scroll to: _____				
From: 03/07/2023 _____				
To: 01/02/2024 _____				
	Resource	Duration	Start Date	End Date
- 100-Land development	Acq	28 Days	9/1/2023	9/28/2023
- 110-Earthmoving	Acq	28 Days	9/1/2023	9/28/2023
Acquire_AB[110-Earthmoving]	Acq	6 Days	9/1/2023	9/6/2023
KO_AB[110-Earthmoving]	<No skill>	0 Days	9/7/2023	9/7/2023
Monitor_AB[110-Earthmoving]	Acq	22 Days	9/7/2023	9/28/2023
Build_Supp[110-Earthmoving]	<No skill>	21 Days	9/7/2023	9/27/2023
TR_BLD[110-Earthmoving]	<No skill>	0 Days	9/29/2023	9/29/2023
- 120-Land trenches	Acq	28 Days	9/1/2023	9/28/2023
Acquire_AB[120-Land trenches]	Acq	6 Days	9/1/2023	9/6/2023
KO_AB[120-Land trenches]	<No skill>	0 Days	9/7/2023	9/7/2023
Monitor_AB[120-Land trenches]	Acq	22 Days	9/7/2023	9/28/2023
Build_Supp[120-Land trenches]	<No skill>	21 Days	9/7/2023	9/27/2023
TR_BLD[120-Land trenches]	<No skill>	0 Days	9/29/2023	9/29/2023
- 200-Building	Acq	123 Days	9/1/2023	12/31/2023
- 210-Building trenches	Acq	28 Days	9/1/2023	9/28/2023
Acquire_AB[210-Building trenches]	Acq	6 Days	9/1/2023	9/6/2023

Cumulative view Gantt diagram Total workload S-curve Global scope				
Group tasks by: job function Time scale: Weeks Scroll to: _____				
From: 03/07/2023 _____				
To: 01/02/2024 _____				
	Resource	Duration	Start Date	End Date
- Acq	Acq	28 Days	9/1/2023	9/28/2023
Acquire_AB[110-Earthmoving]	Acq	6 Days	9/1/2023	9/6/2023
Acquire_AB[120-Land trenches]	Acq	6 Days	9/1/2023	9/6/2023
Acquire_AB[210-Building trenches]	Acq	6 Days	9/1/2023	9/6/2023
Acquire_AB[220-Reinforcement of building foundation]	Acq	6 Days	9/1/2023	9/6/2023
Monitor_AB[110-Earthmoving]	Acq	22 Days	9/7/2023	9/28/2023
Monitor_AB[120-Land trenches]	Acq	22 Days	9/7/2023	9/28/2023
Monitor_AB[210-Building trenches]	Acq	22 Days	9/7/2023	9/28/2023
Monitor_AB[220-Reinforcement of building foundation]	Acq	22 Days	9/7/2023	9/28/2023
- Mason	Mason	90 Days	10/2/2023	12/29/2023
Build_BLD[230-Raw building]	Mason	90 Days	10/2/2023	12/29/2023
- Proj	Proj	200 Days	7/3/2023	1/17/2024
Project planning[Project]	Proj	40 Days	7/3/2023	8/11/2023
Project Monitoring & Control[Project]	Proj	171 Days	8/1/2023	1/17/2024
Manage Stakeholder relationship[300-Electric meter]	Proj	15 Days	1/1/2024	1/15/2024
Request and compliance[300-Electric meter]	Proi	1 Dav	1/1/2024	1/1/2024



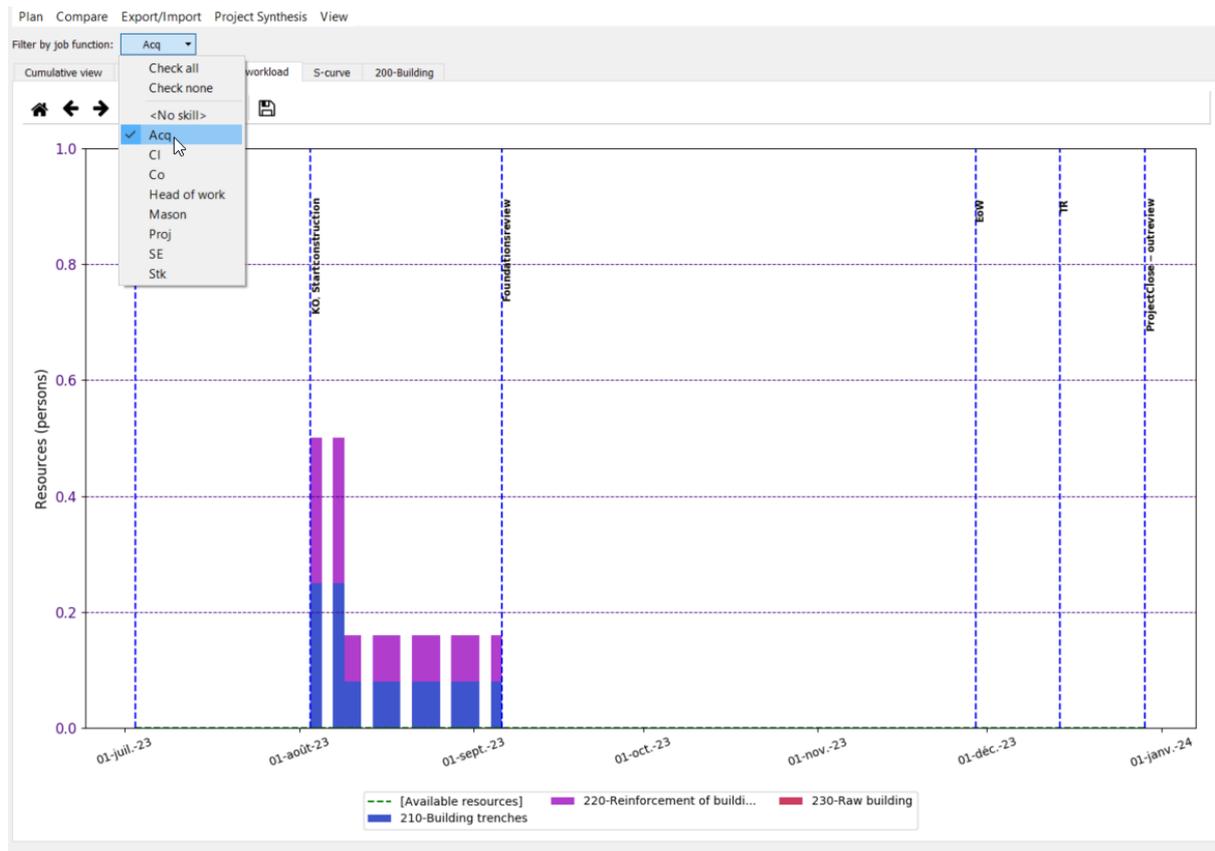
Total Workload



The total workload diagram displays the resources consumption along time in your project. Each color corresponds to a job function. Each vertical bar corresponds to a workload in a week. Days that are not worked appear as small blank zones between the bars.

In this picture “Available resources” curve is flat but in the application it’s possible to specify your job functions availability. The “Available resources” curve allows you to see if you overload your capacity.

Selecting the “Filter by job function” button, it’s possible to select one or several job functions and check workload for this selection. The colors then correspond to tasks using these job functions.



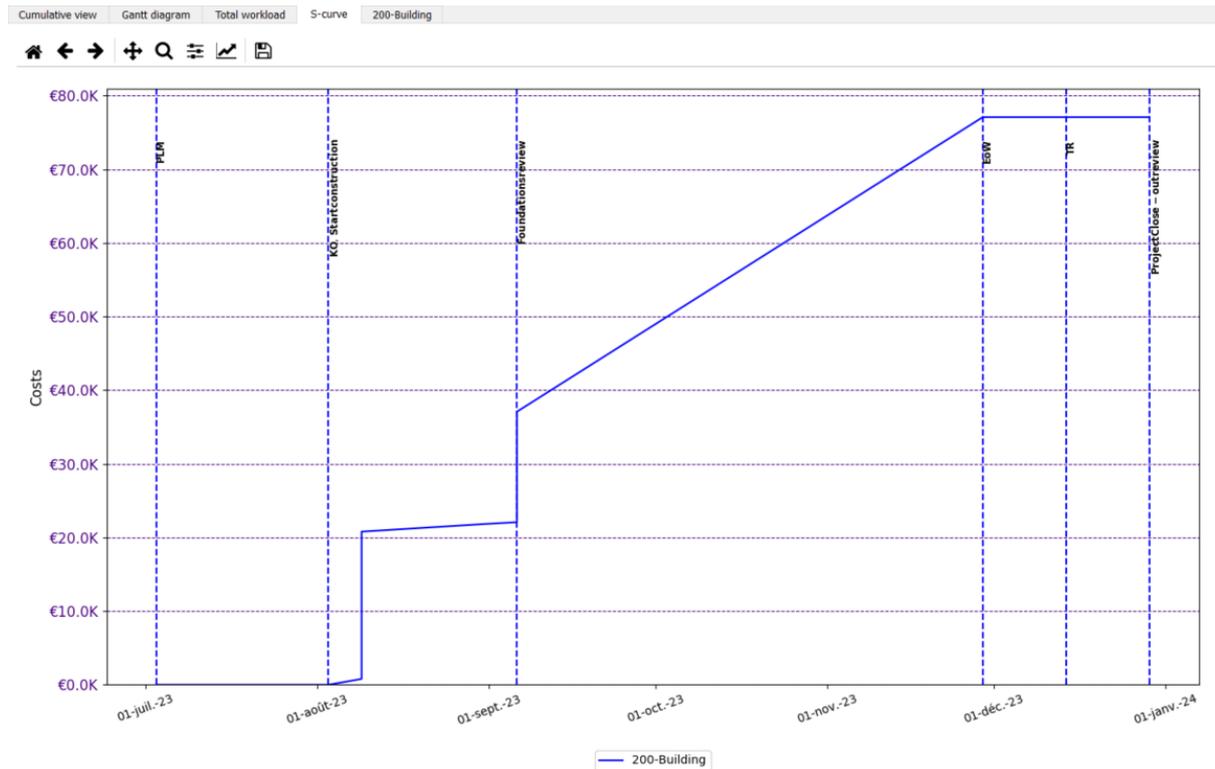
Selecting Check all, you return to the initial display.

4. S-Curve

The S Curve is an estimate of the cost of the project over time. It is based on hourly cost per job function and acquisition or fee related to every activity.

Vertical segments correspond to purchases. Expenses are supposed to be performed at the beginning of the related activity.

Reviews are reminded into the diagram.



5. Local view

Eventually a tab “global scope” or “local view” is available. It reminds all activities related to the selected scope. Selected scope depends on the treeview, it may be a product, an organization, a job function or a workpackage.

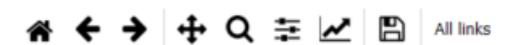
The diagram is two folded, the top part is a workload diagram, colors relating to activities/tasks according the legend of the diagram.

The bottom part is a Gantt like diagram, red colored activities correspond to activities you cannot move without impacting the critical path of the project, in simpler words changing duration of a red activity will often change duration of the project. Light colored activities you can move without impact on the critical path.

Take care color convention is different depending you look at the top or bottom part of the diagram.

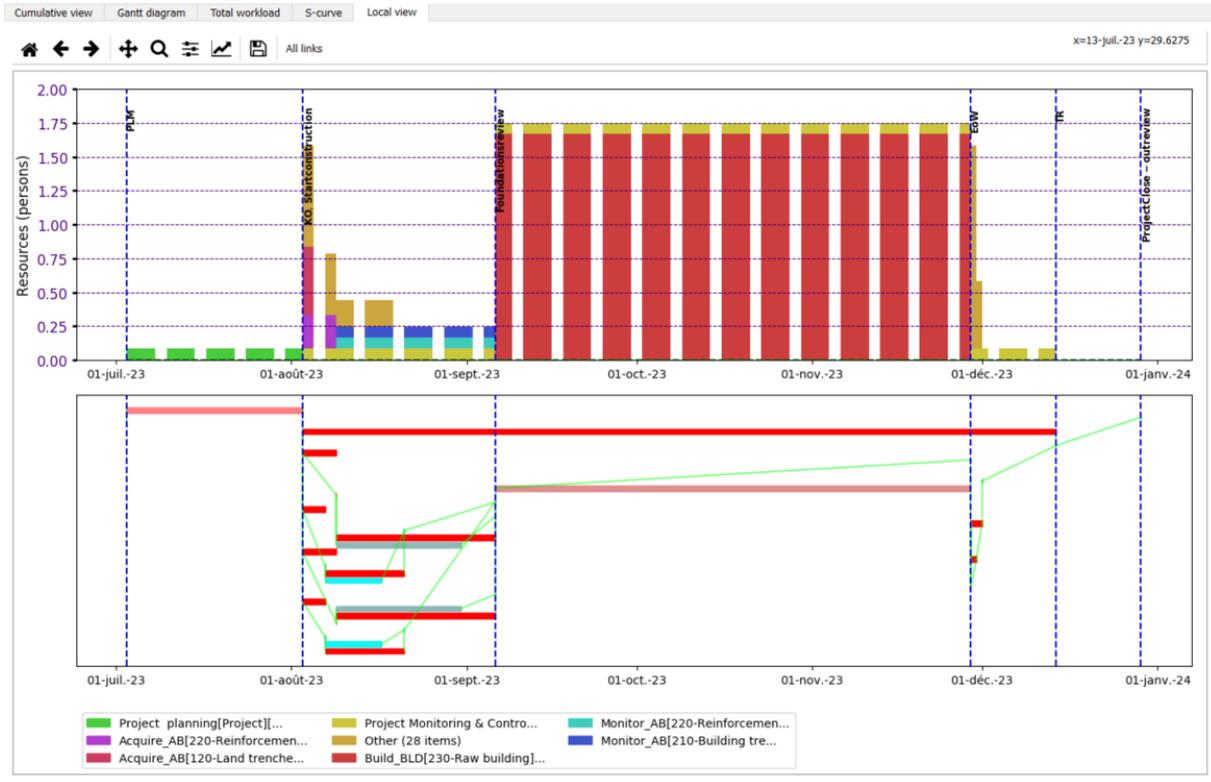
You can select an activity in the Gantt part and this will allow you changing its start date and duration. Simply move your mouse to a particular bar, the name of the activity will be highlighted, you can then right click on it to change the attributes. We will not explain this further in this tutorial, relate to user guide.

Finally, some operations are available in this diagram. You can zoom in the bottom part and look at a portion of the project where there is a problem with workload for instance.



🔍 Zoom in selection

↶ ↷ Undo redo allows undoing zooming operations for instance.



6. Next Stage

Now you are ready to design your Fast Plan for your own project and build a planning from it. At least you should be comfortable enough with our tool interface.

For more information and best practices you should apply to build your Fast Plan, please look at the available documents on our Support page: <https://fastandstudious.com/support/>