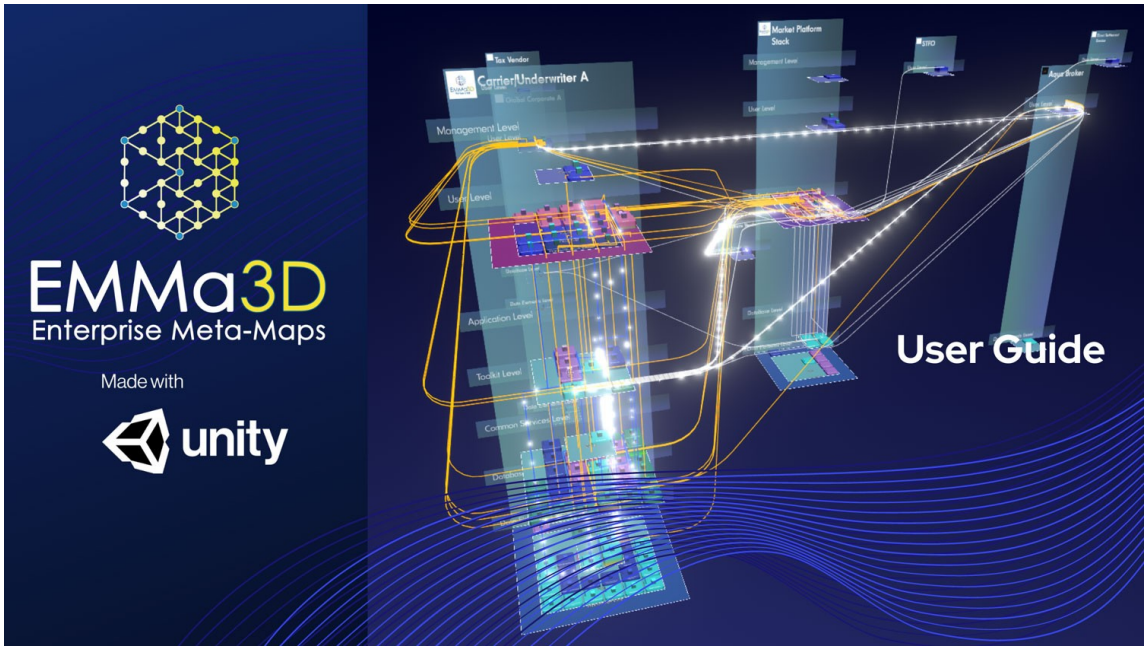

Last updated: 30/12/2021 | Guide v5.1

Map Maker 1.2.12 / Map Reader 0.6.30

Key: 🟢 New section | 🟠 Updated section | 🔴 Deprecated section

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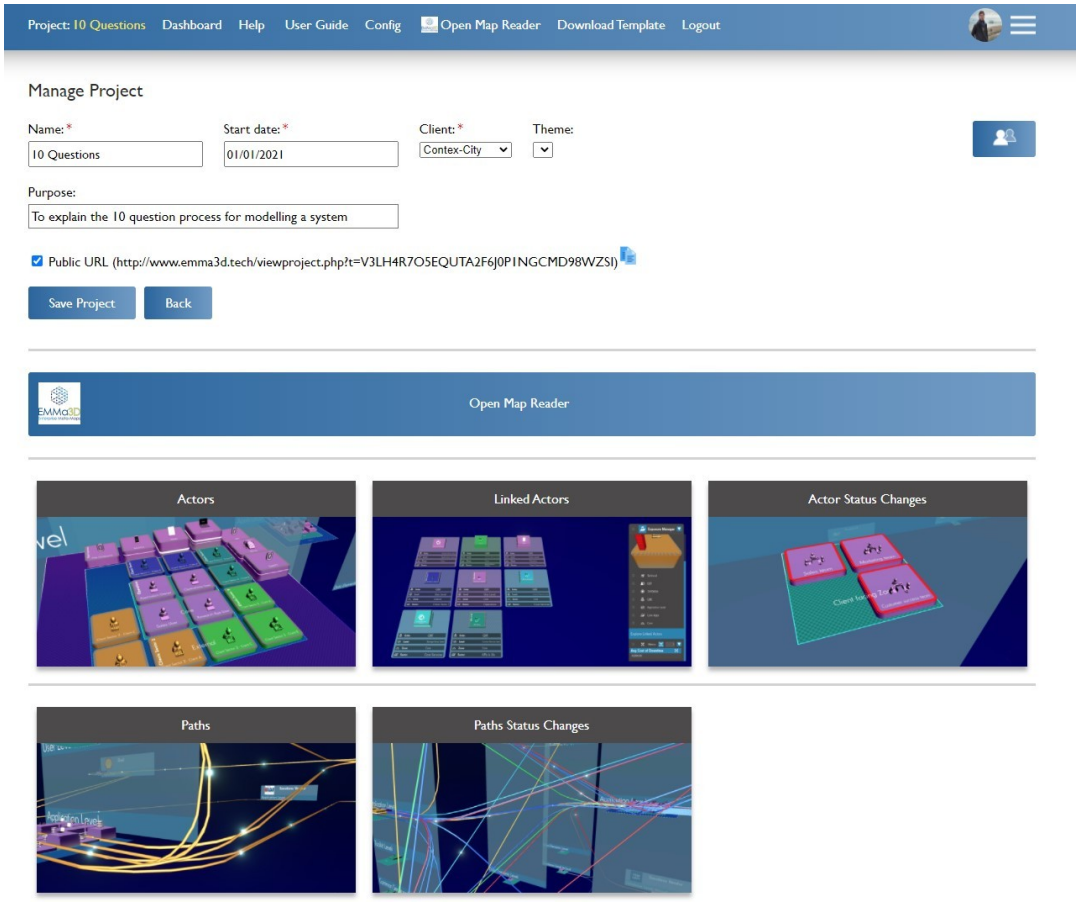
What is EMMa3D?

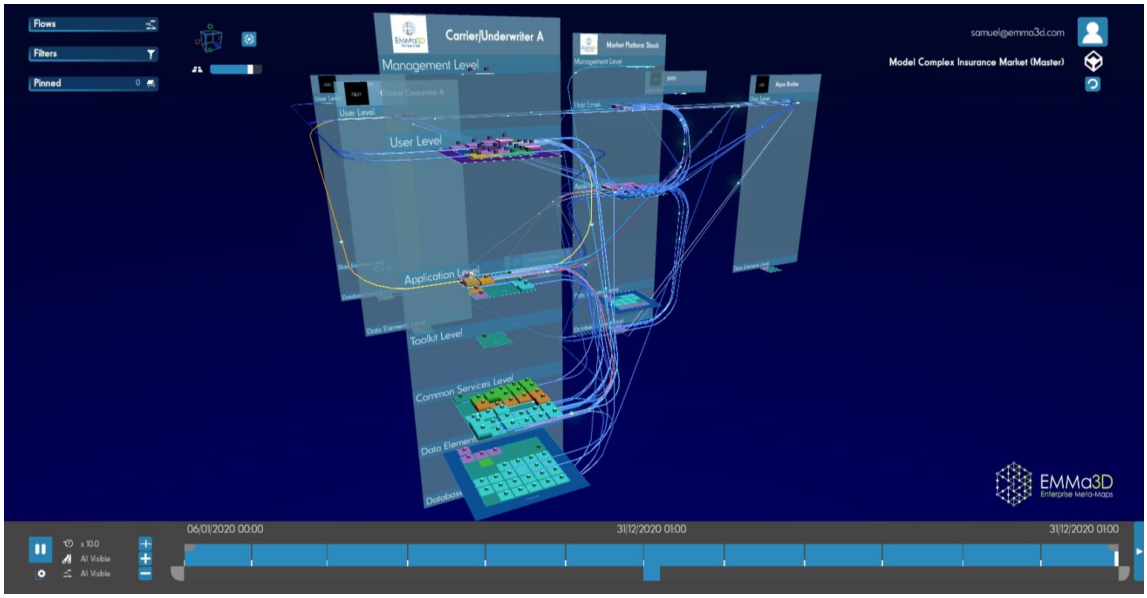
EMMa3D is an intuitive **multi-dimensional 3D software** that helps you understand how complex organisations work end to end, take better decisions for you and your team and execute strategy more

effectively.

A combination of a user interface (**Map Maker**), where you can create and customise projects, and a viewer (**Map Reader**) to visualise and fly around these projects in 3D makes this possible.



Map Maker project dashboard showing the existing sections inside a project.

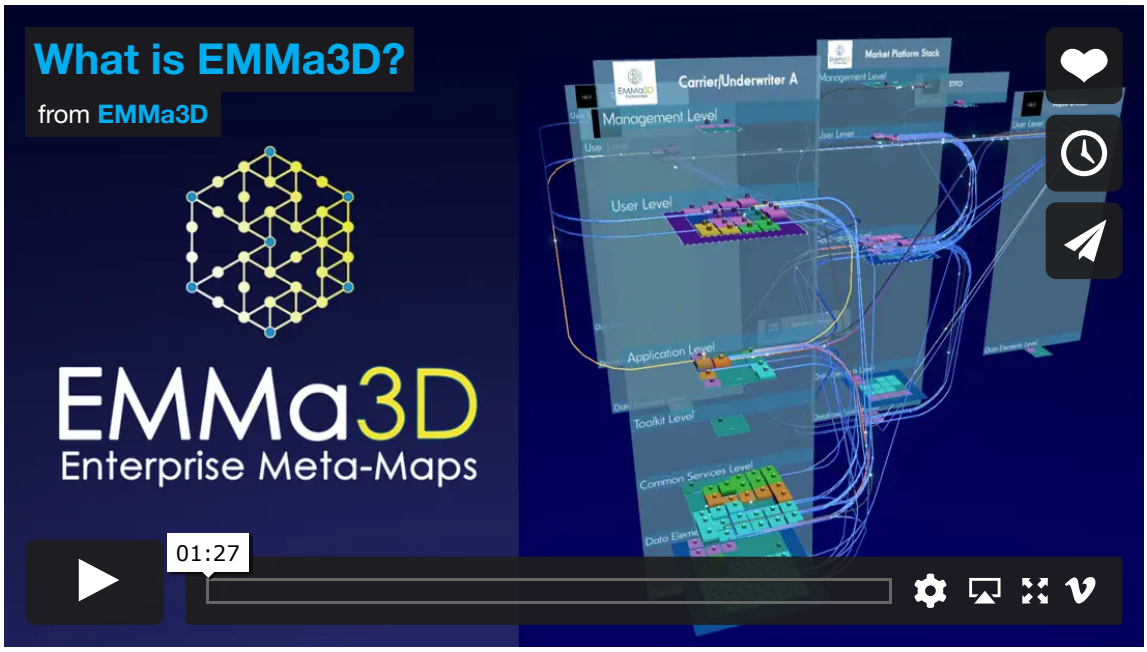


Map Reader main window after opening an existing project.

The 3D interactive and scalable space allow your team or clients to quickly grasp the bigger picture and more detailed nuances of your workflow or offering.

This guide is intended to help new EMMa3D users to get started using the EMMa3D tooling.

For a first glance on what you can achieve with EMMa3D, see the video below 👇



First steps: Sign up/login, Map Maker and Opening the Map Reader for the first time.

To get started on EMMa3D, having an account is a requirement.

If you already have an account, fill in your credentials to **log in**. If, on the contrary, you are a new user, go to the Sign Up section on our website and set up your email, password and details. You will be redirected and logged in to the Map Maker Dashboard.

On the **Map Maker** you will be creating your projects metadata associated with your models or meta-maps.

Have a look at this easy process down below 👇

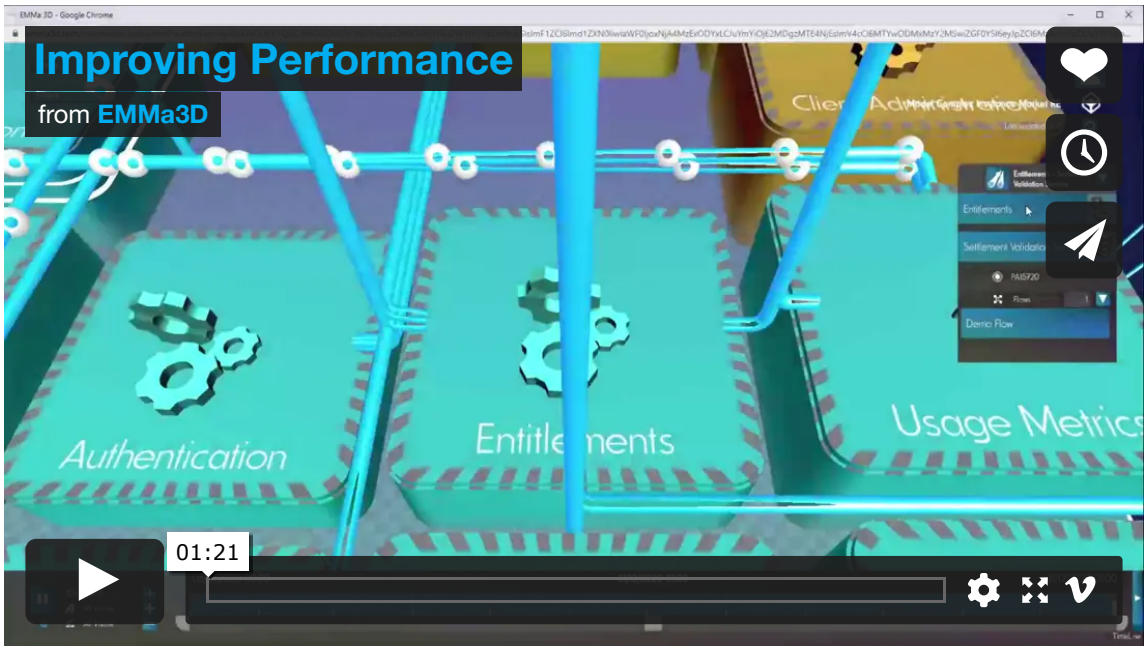
For a proper operation of EMMa3D and to avoid compatibility issues, we strongly recommend using Google Chrome as the browser of choice. See the performance section below for further information.

Getting the most out of EMMa: Improving Performance ⭐

To make sure you squeeze all the power of EMMa3D, there are some checks you should tick before you set to it.

- EMMa3D is a **GPU demanding** tool, so it is recommended to run it from a computer that uses a dedicated graphics card. Some laptops have both an integrated and dedicated GPU. In this case, it is recommended to have them plugged in to take advantage of the latter one as, on some occasions, saving energy mode prevent dedicated GPUs from running to save battery.
- **Always run** both the Map Maker and the Map Reader in **Google Chrome if possible**. The tooling is optimized for the best performance on this browser, and we cannot ensure 100% compatibility on other browsers.
- **Make sure Chrome is up to date**. Go to Customize and Control Google Chrome (three dots) > Settings > About Chrome. If a new version is available, you will be able to update it there.
- Check that the **User hardware acceleration when available** option is enabled in **Chrome**. In the browser, go to Customize and Control Google Chrome (three dots) > Settings > advanced > system > “Use hardware acceleration when available”.
- **Check your frame rate**. Once you open a project in the Map Reader, you can quickly look at this by pressing the “=” key on your keyboard. This shows a series of values such as the **Map Reader Build** you are using and three **frames per second counters**: minimum, current, and maximum. The most useful value is the Current FPS outcome. If you have constant lag issues

on the Map Reader, this can be due to a low FPS count. The bare minimum for the Map Reader to be usable is 15 frames per second, but the average should be 24. For total smoothness, the aim is to hit 30 fps and up.



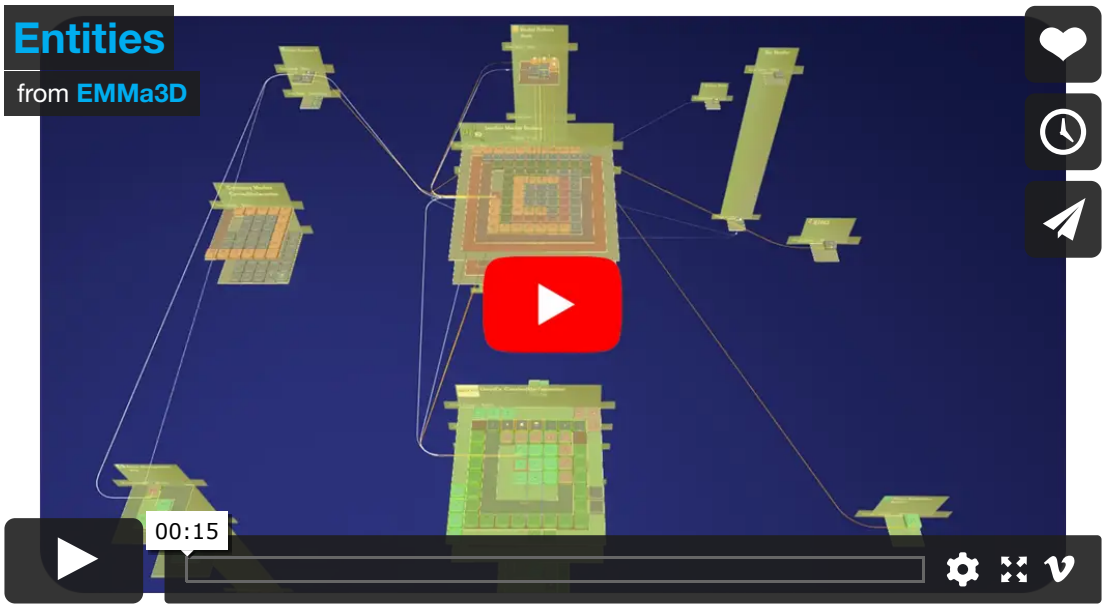
Elements in an EMMa3D project / Meta-Map

Before you dive into creating your first meta-map project, it is a good idea to familiarise yourself with the overall structure of an existing project. You need to populate the following elements to be able to visualise them into the Map Reader.

> ***To be able to visualise a model, actors need to be added first**. Otherwise, the Map Reader will not load an empty project.*

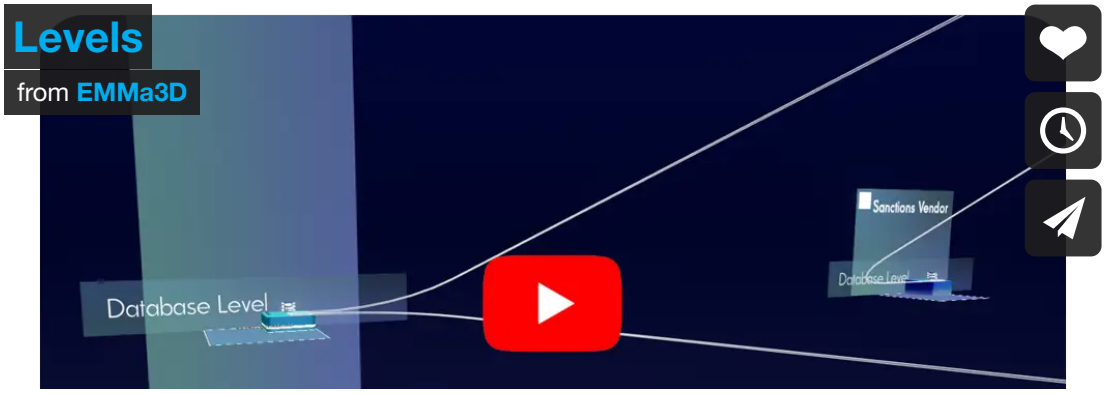
Entities

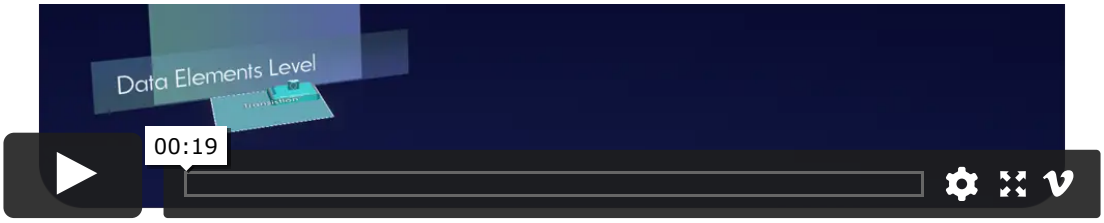
They are highlighted in yellow below. Think of them as independent stacks that can contain as many different elements as you like. We can use them to represent things like different legal entities or different parts of an organisation. Have a look at the following video 👇



Levels

They provide a way of representing a vertical hierarchy within an entity. The minimum number of levels you can have is one, but you can add as many as you like. Every level can showcase their organisation from the very top all the way down to field levels of information. See the video below for more details 👇





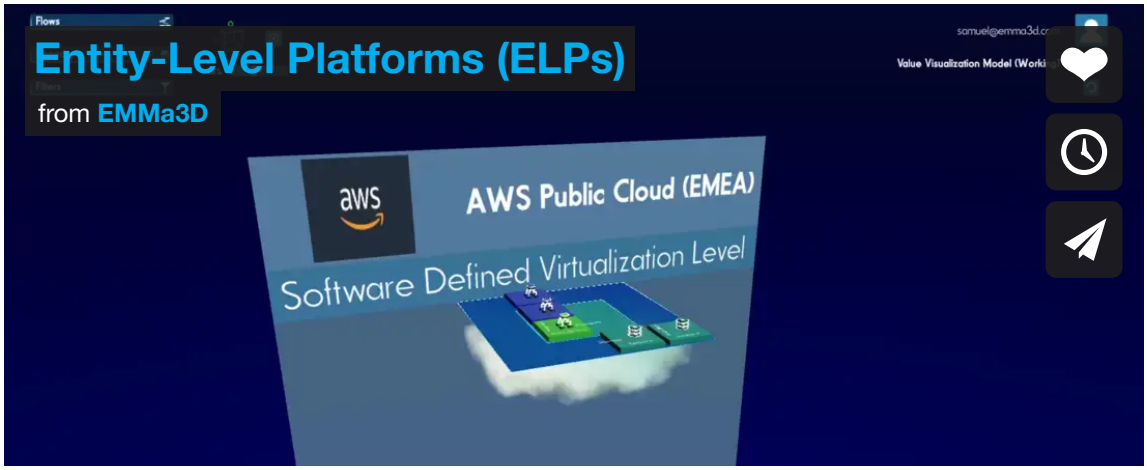
Entity-Levels Platforms (ELPs)

Entity-Level Platforms are a new concept implemented to be able to identify and label specific levels within a specific entity, and for these to potentially be different from other levels which are at the same height.

As it happens with other elements on EMMa, these platforms can change over time by applying different statuses through time.

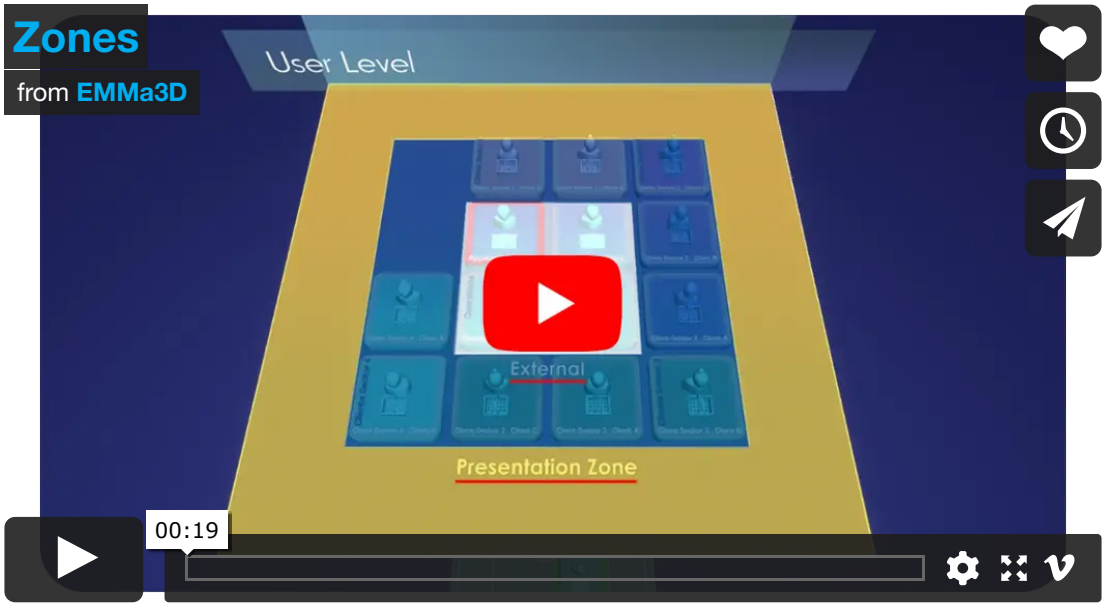
Entity-Level Platforms can be customised, so a user will be able to add an image on their levels and to choose from the material foundation of the platform, be it bricks, cloud (to represent cloud-hosted technology), earth or tin.

In addition, you can assign an **Alias** to the Entity-Level platform, and change the level name to something more convenient. This is very useful as gives a sense of more perspective in the model when looking bottom-up as you see the underneath of a level. See the video below for more details 👇



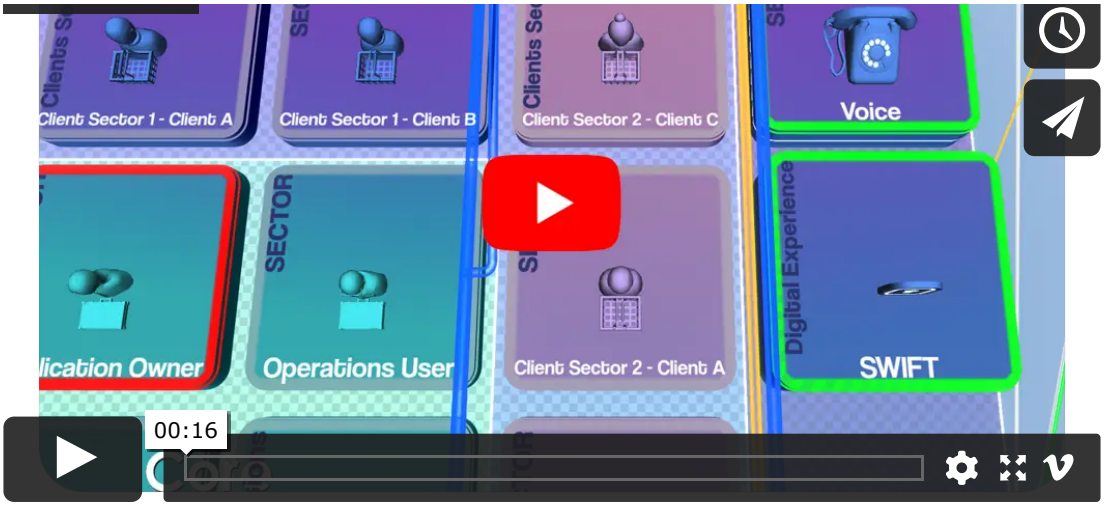
Zones

Zones represent a horizontal relationship between actors in a model. They form concentric zones from an inner zone outward to the most external one. You can have any number of zones from one to as many as you want within any level. Watch the below video to discover more about zones 👇



Sectors

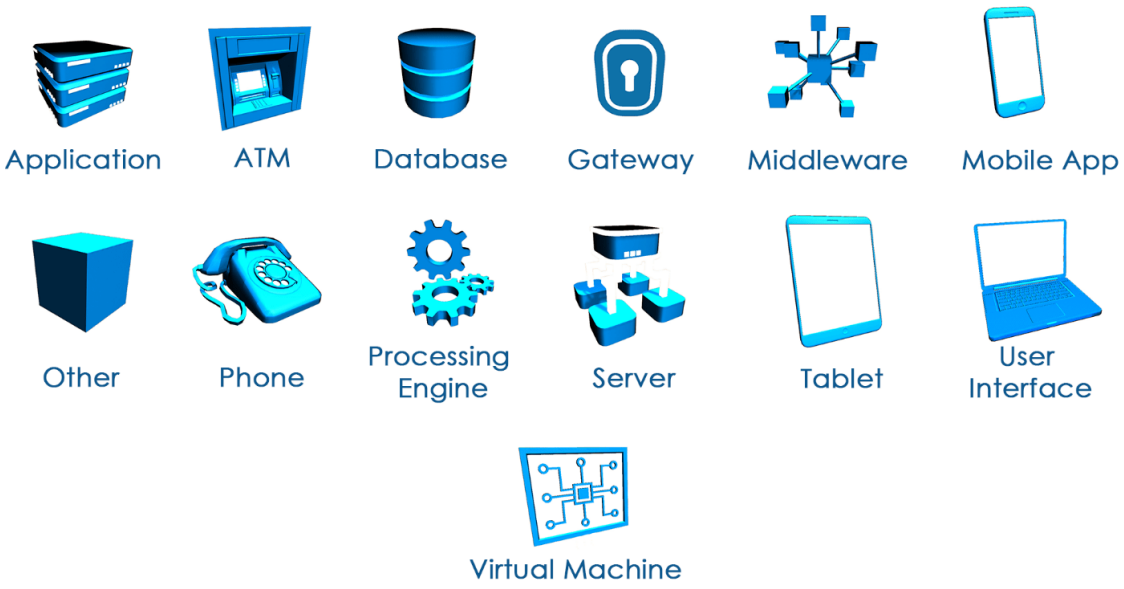
Offer the ability to further sub-divide the levels and zones, allowing the creation of different teams or parts inside an organisation. Each sector has a distinctive label on its actors' plinths, so it is easier to recognise the actors that belong to each sector. See the following video to learn more about sectors 👇



Actors

Actors are a vital element in any system. Each of them on a plinth. They can perform actions within a flow. See the following video to become familiar with them 👇

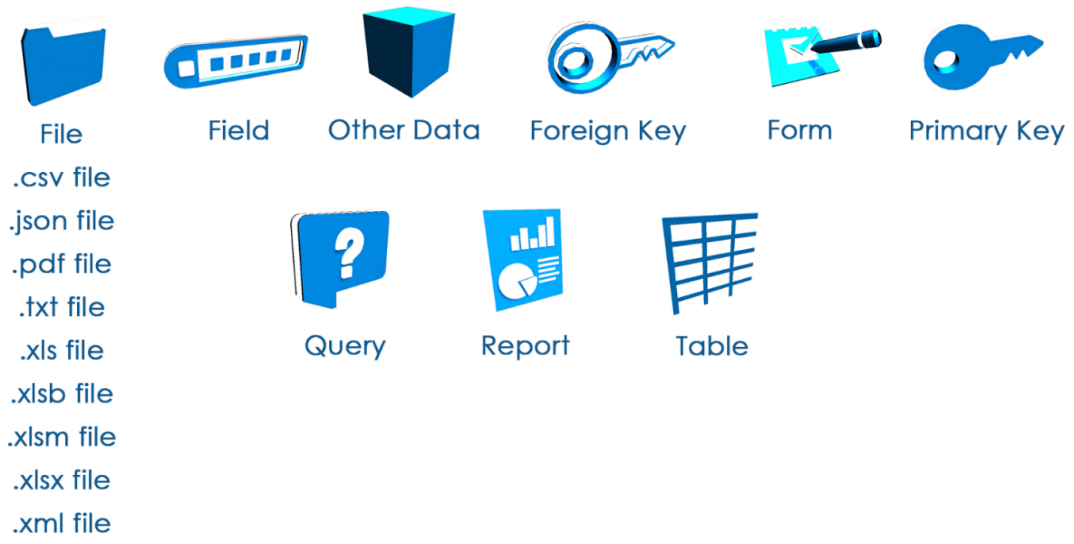
Have a look at the **5 types of actors** (technical, human, institutional, data and Archimate) and the ones included on each category:



Technical actors represent pieces of technology such as gateways, user interfaces or applications.

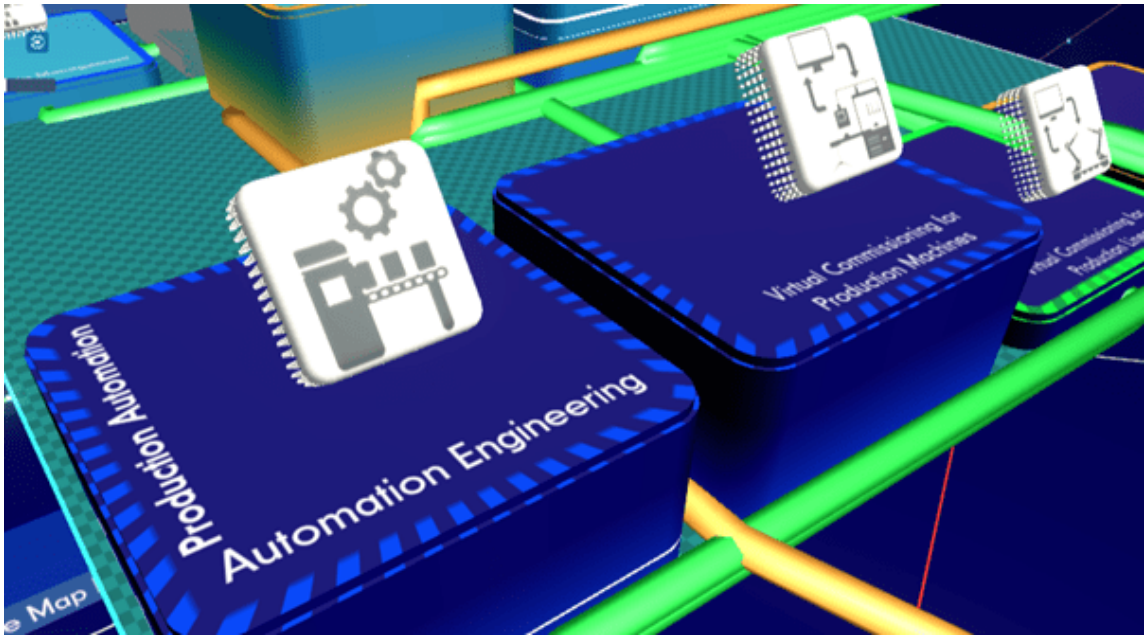
Human actors are normally those performing different activities within an organisation. A good example are clients, contractors, employees, partners, etc.

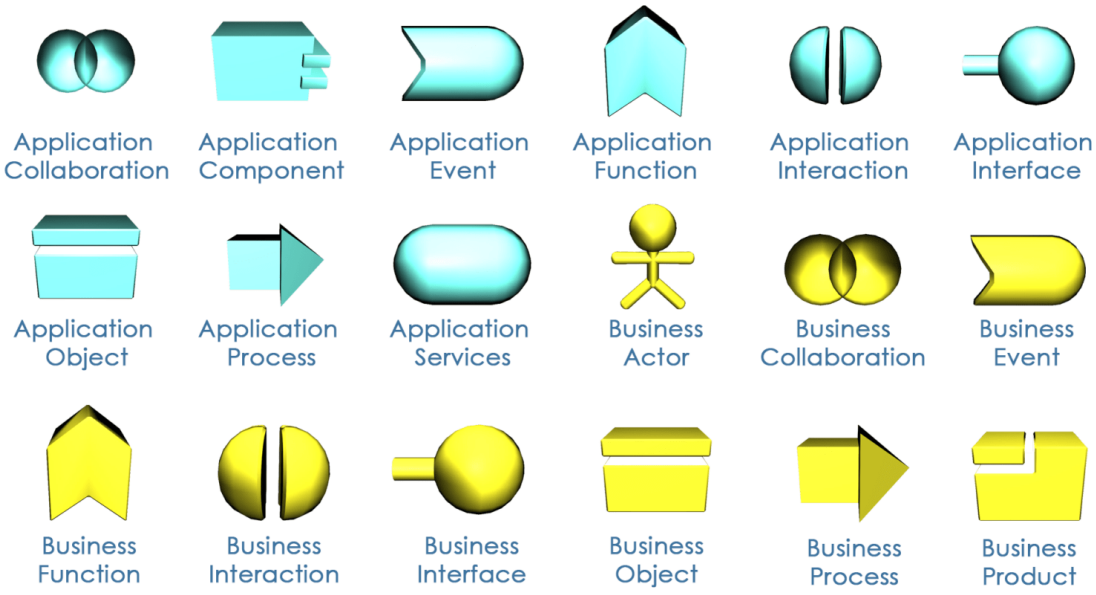
Institutional actors represent groups, organizations, or meetings. They can continue to exist and operate although the people making up the group or organization may change around.



Data actors represent reports, tables, fields, or different document formats such as pdf, json, spreadsheets, etc.

Image Avatar data actor: this is an actor type specifically designed to showcase images from a camera angle. When you click on it is much better visible compared to, for example, an Application actor type. The resolution of the uploaded image does not matter if and when the picture uploaded has a 1:1 square aspect ratio.


Production Automation
Automation Engineering
Virtual Commissioning for Production Machines
Map


Application Collaboration
Application Component
Application Event
Application Function
Application Interaction
Application Interface
Application Object
Application Process
Application Services
Business Actor
Business Collaboration
Business Event
Business Function
Business Interaction
Business Interface
Business Object
Business Process
Business Product

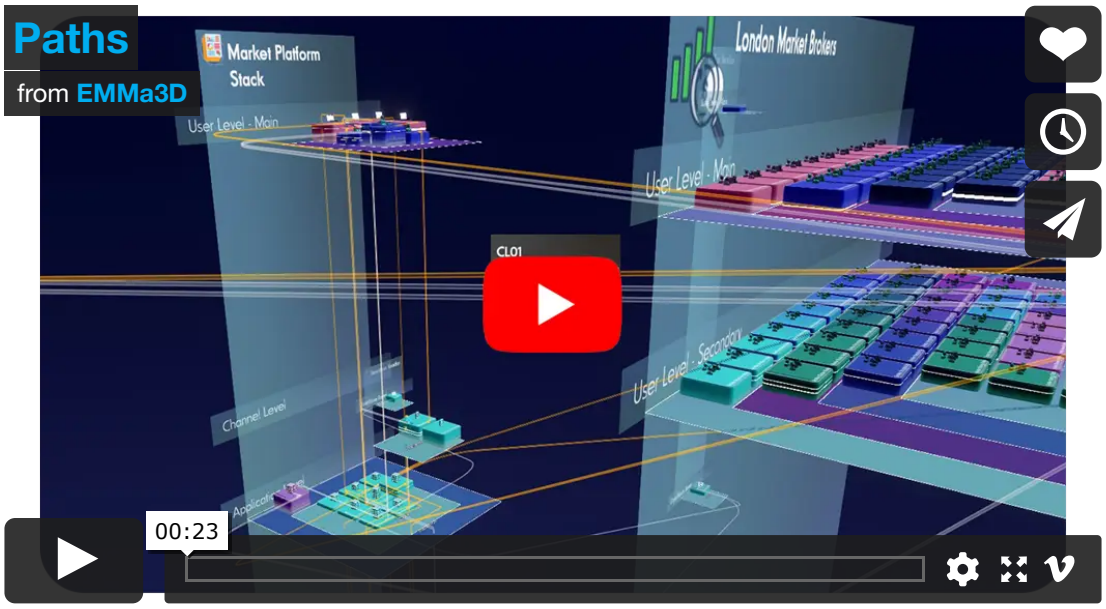
Archimate actors are based on relationships, connectors and processes replicating the Archimate language elements. Business processes, applications, events, technology, or motivation goals are some of them.

Paths

They define all possible communication pathways and methods between actors within a system.

By hovering over a path, you can see the origin and the destination actor they drive. An information window opens by clicking on it, showing (if any) the flows involving the selected path.

It is possible to access and play these flows by clicking on each of them. See a preview of paths on the Map Maker on the video below 👇



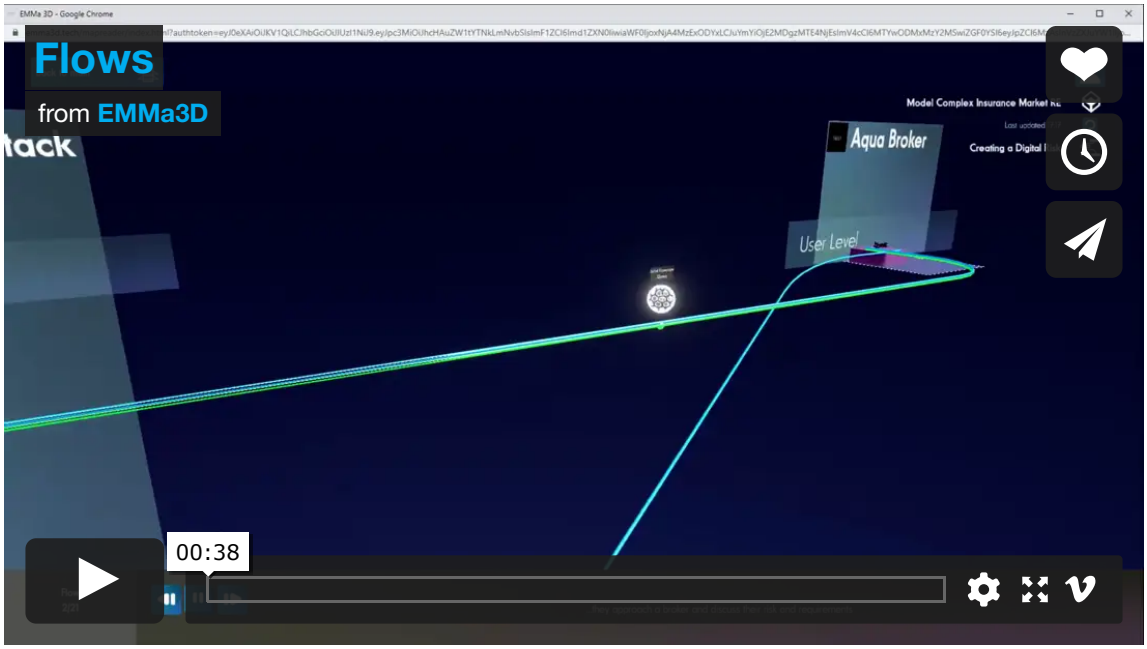
Flows

They are a combination of paths and actors that conform and describe an activity across the entire model within the flow. Flows are automated fly through journeys used to tell different stories and actions happening within your project utilizing actors in a system.

Actors in Motion (AiM) can be created when moving data across paths from one provider actor to a consumer one is required, so the main purpose is to make possible the communication between actors by sending information.

It is possible to customise actors in motion with variables such as the **actor type** or if they have **structured data** or not.

Discover more about flows in this short video 👇



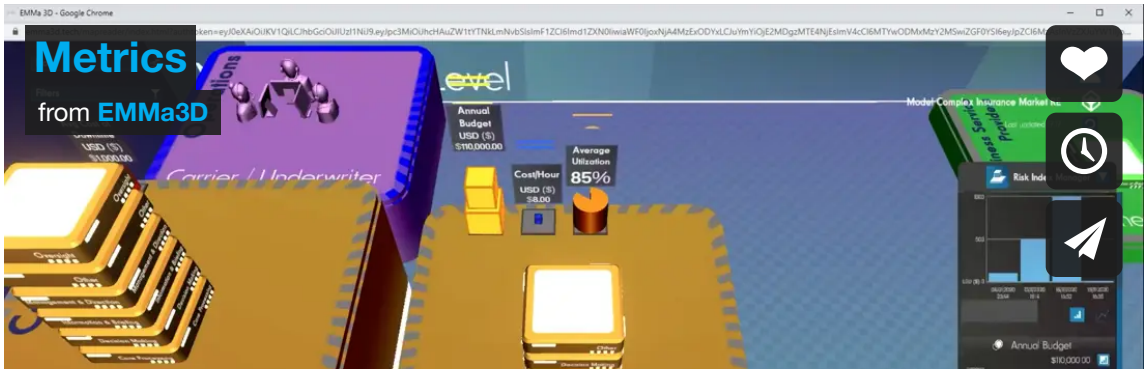
Metrics

Metrics are a way of associating a value to an actor. For this reason, you can set Linked Metrics to them. They also explain how things change their value over time.

The best way to understand metrics is by thinking of hundreds of bank accounts. In the video example below, they are represented by institutional actors, and each of them will have a changing value. In this case, “Account balance”.

As it happens with actors, metrics have a start and end time you can set.

In the video below, you can see how metrics look like in the Map Reader and how to create them on the Map Maker 👇

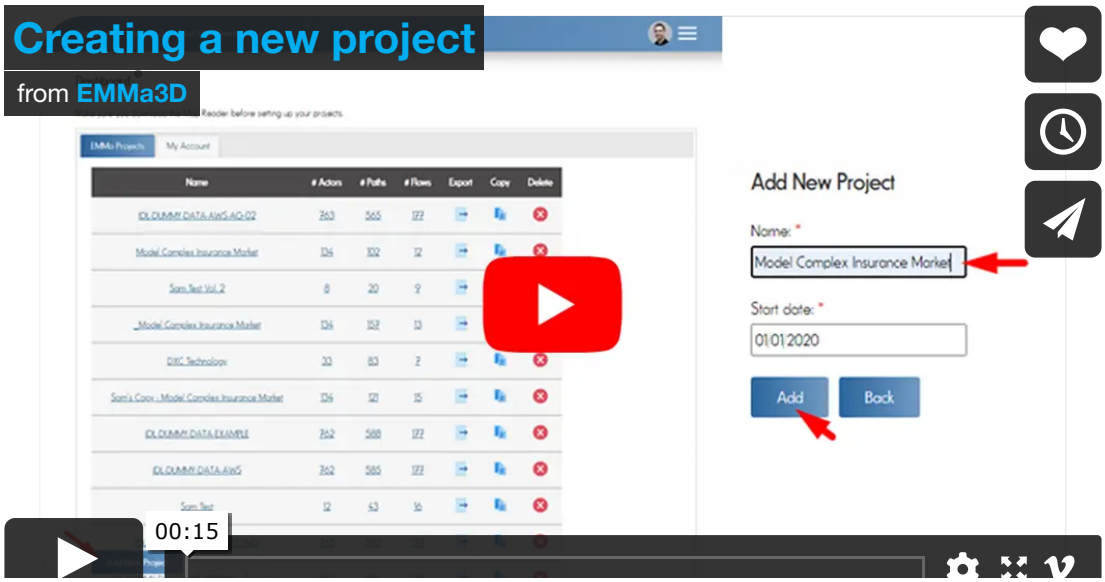


Creating your first Meta-Map

In this section, the multiple steps to build a project of your own are covered. Remember, you need to have your EMMa3D account to create a project, as described **in this section above**.

Create a new project

After logging in and once in the dashboard, on the EMMa Project section, click on the **Add New Project** button at the bottom of the page and choose a new name for it. Additionally, you can set a start date and a brief description of the project purpose. This way, you can start setting up the structure of your project 👇



Before starting to use the Map Maker: Auto-save function

An **auto-save** function has been implemented for most of the tables in the Map Maker. This way, it will be easier for the user to keep track of data creation progress. To avoid loss of data while working on a project, you must take into consideration how auto-save currently works:

- If you are editing/creating actors, for example, and inactive, the auto-save will jump up every 10 seconds after the last change.
- After making changes, **you can move to another tab in your browser** (i.e., checking your Gmail inbox or in a Teams call via browser) and leave the Map Maker window you are editing on; then, auto-save will pop up every 10 seconds.
- On **Change Status tables** (i.e., Actor Status, Path status changes, etc.), a user can add multiple rows. In the process of filling them, only the complete required fields will auto-save, so if there are four required cells and all of them have a value in, they will be saved.
- When, after the result of auto-saving, there are blank cells/fields on the Map Maker Actor table (including no Name value), the Map Reader should display actors with no name on their plinths. To change this, go back to the Actor Table on the MM, edit their names, and refresh the Map Reader.
- When, after the result of auto-saving, there are blank cells/fields on the Map Maker **Paths table** (provider and consumer actor showing "—"), these paths should not be visible in the Map Reader nor be usable creating flows on the Swim Lane Creator or Flow Steps table.

Entities creation and upload images to assign to entities/actors

In the **Project Structure** section, you can create the structural elements that will conform to your meta-map. This is crucial. Otherwise, it will not be possible to create actors or the rest of the elements.

Start by **creating an entity** or editing the default one. You can **add logos and images** and link them to a particular entity or actor within the project. This allows visual association between existing applications logos and these elements.

Most common image types are supported (.jpg, .png, .bmp, etc.). We suggest the uploaded files do not exceed 4MB.

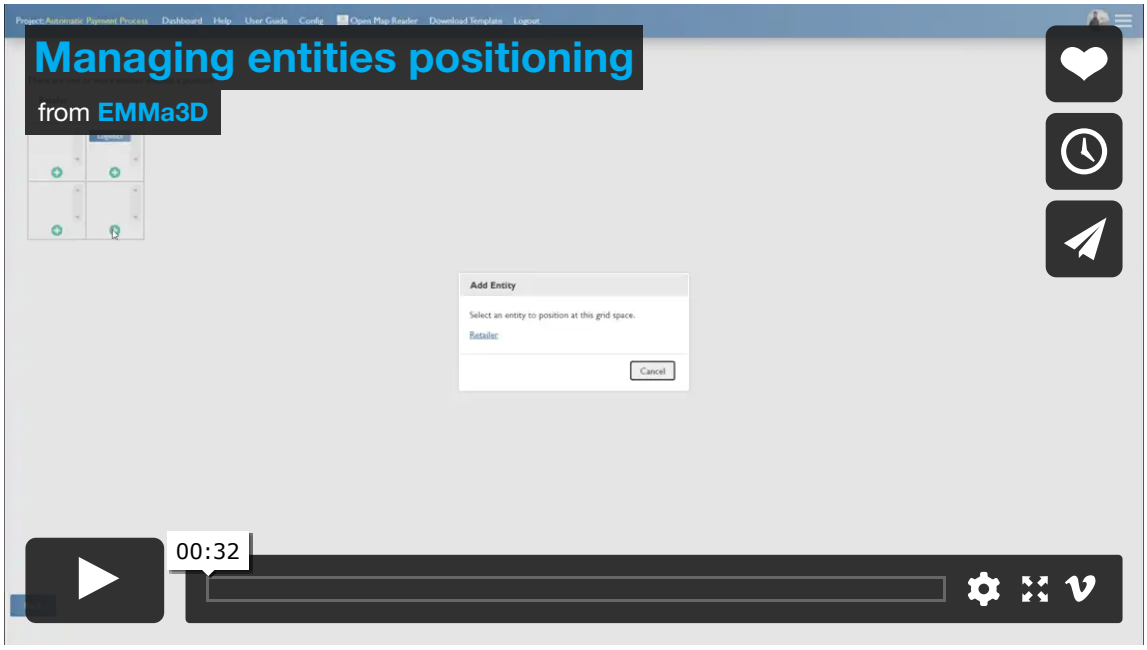
Go back to entities and choose the image you have previously uploaded from the Image dropdown.

It is possible to use **images on technical actors** for them to show in the Map Reader. Supported actor types for images are: **Application, Mobile App, Tablet and User Interface** 👇

Manage entities positioning

To have more control and flexibility over entities, it is possible to assign them to a **grid cell** via the "**+**" button inside the **Manage Entity Positions option**. More than one entity can be added to a cell, and the outcome will be layered on the Map Reader, being the first one positioned above.

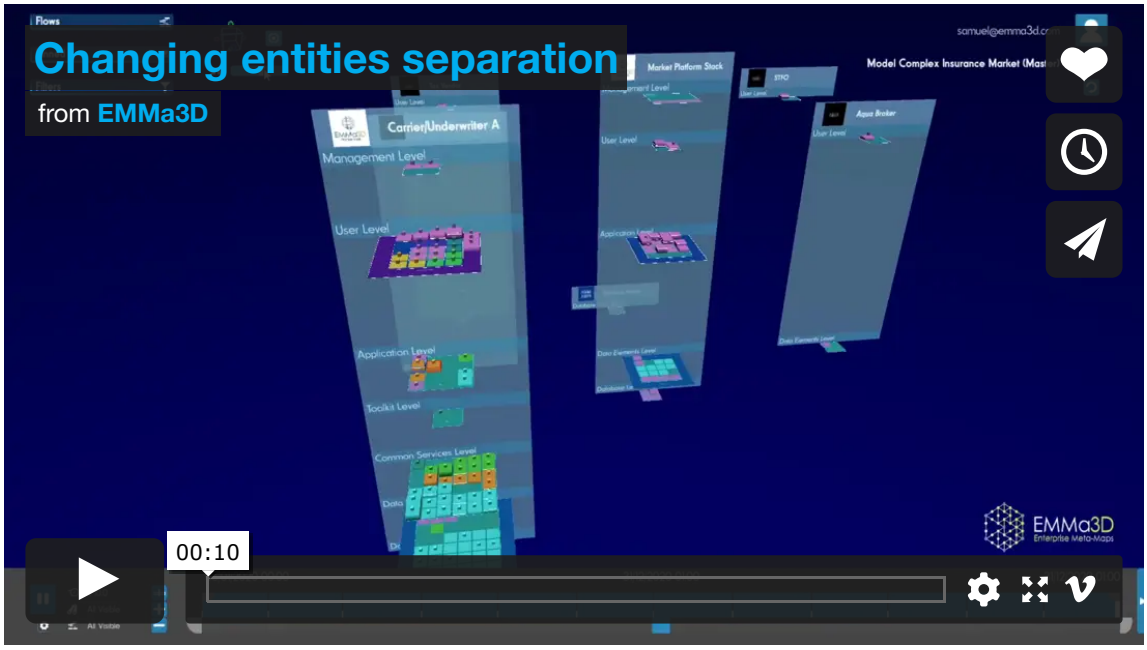
To **delete entities** already positioned or rearrange, hover over them in the grid, and a red circle with a white **X** will appear to click and delete. See how to do it 👇



Changing entities separation (Map Reader Slider)

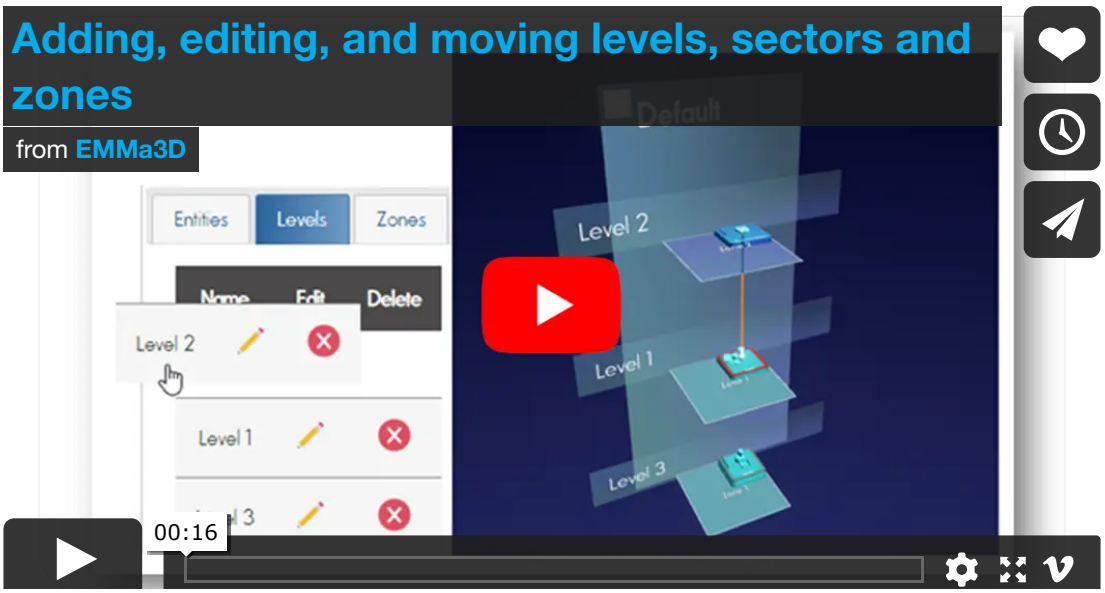
Entities spacing can be tweaked so they are closer or further with each

other by using a new built-in slider.



Add, edit, and move levels, sectors, and zones

Once entities are ready, add as many levels, zones and sectors as you need. One level can have different sectors and zones. Notice you will only be able to visualise a model if you've added actors to it. Please have a look at this section to find out how to add them to your meta-map.

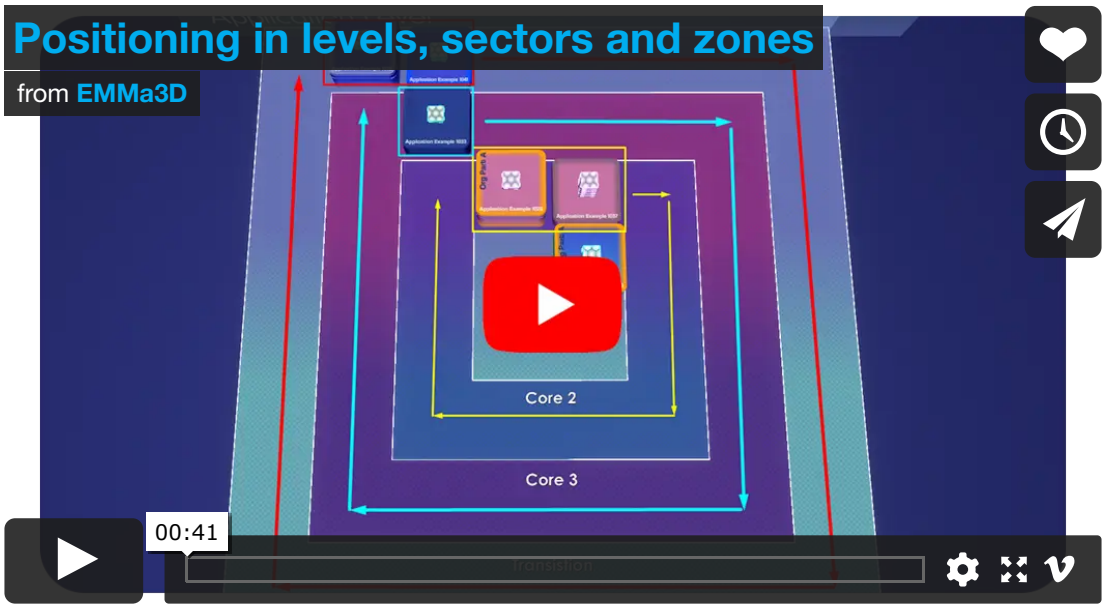


Positioning in levels, sectors, and zones

You can change and rearrange the order of **levels**. By design, the level you position first in the Map Maker will be the top-level represented on the Map Reader.

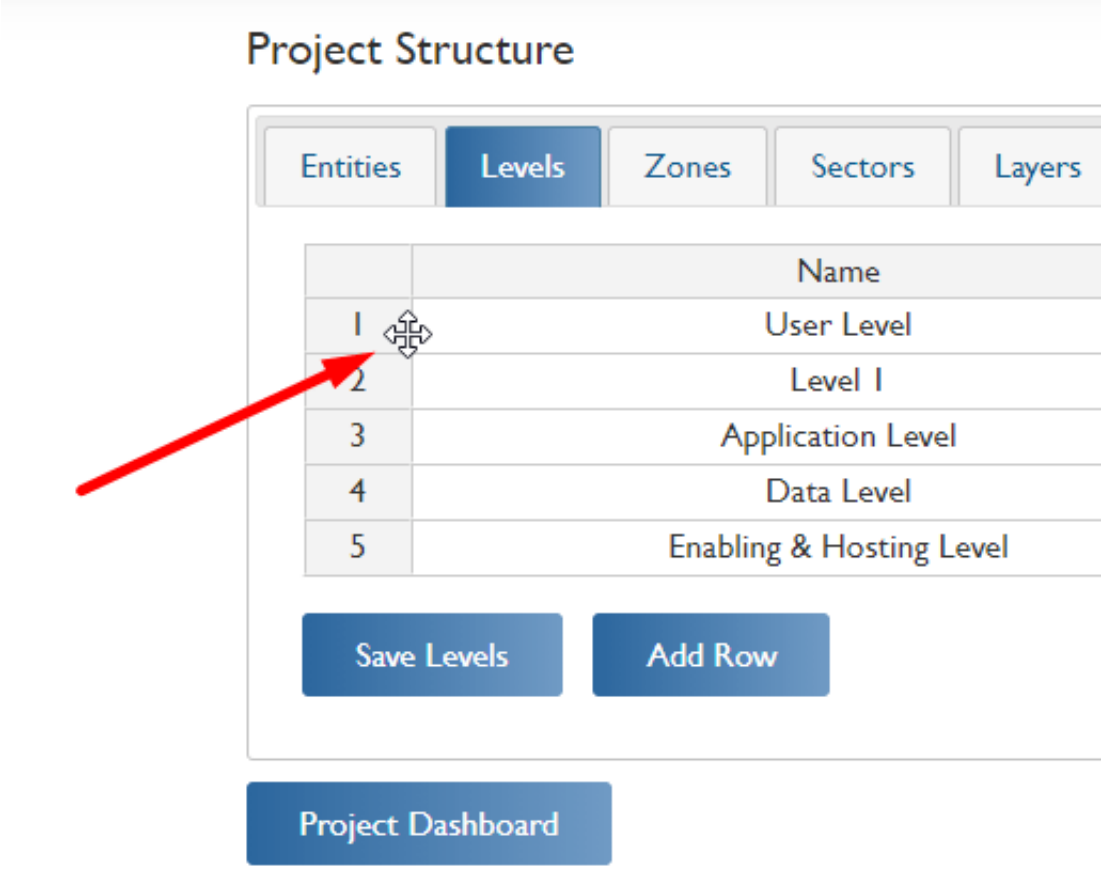
Newly created zones consolidate on the upper left corner of your previous zone. From here, actors within start to spread around clockwise.

Elements in a different **sector** within the same zone are placed in a different corner concerning elements in other sectors. Actors in other zones are placed in a different corner of the new zone. Only for a sector positioned within the inner zone, actors will load horizontally in **zig-zag** across the place 👇



Reorganise Levels, Zones and Sectors

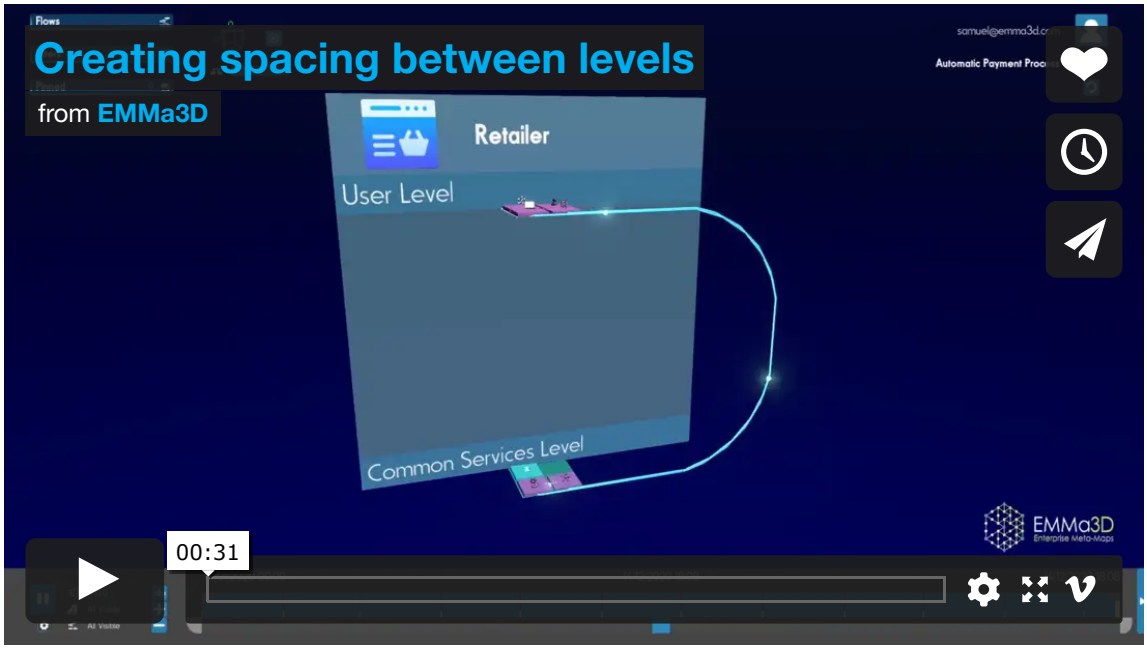
To alter the positioning of levels, zones and sectors (**Project Structure** section), you need to drag and drop the cells to rearrange them. To make this correctly, position the cursor where the grey and white area in the row merge, so a “special arrow” should appear. This indicates you can actually drag the cell.



Creating spacing between levels

In occasions where the default generated spacing between levels is not enough, there is a way to increase the gap. Inside a project within the Map Maker, go to the **Project Structure** section ➡️ **Levels** tab. Here, add a row, name it something you can identify afterwards like “Spacer 1”, and place it between the two levels for extra space in between. Once you are done, do not forget to **Save Levels**. Now, refreshing on the Map Reader will show an increased gap between

levels.



Actors creation, setup and deletion

Actors are the elements of a project that perform actions within a Meta-Map. It is mandatory to create some of them and assign an entity, level, and zone. Otherwise, the Map Maker will not load the project.

On the Actors section, add some actors to your meta-map. **Fill in** at least **the required (*) fields** (Name, Actor Type, Zone, Level, Entity). You will find **Human, Technical, Institutional, Data and Archimate** Actor Groups.

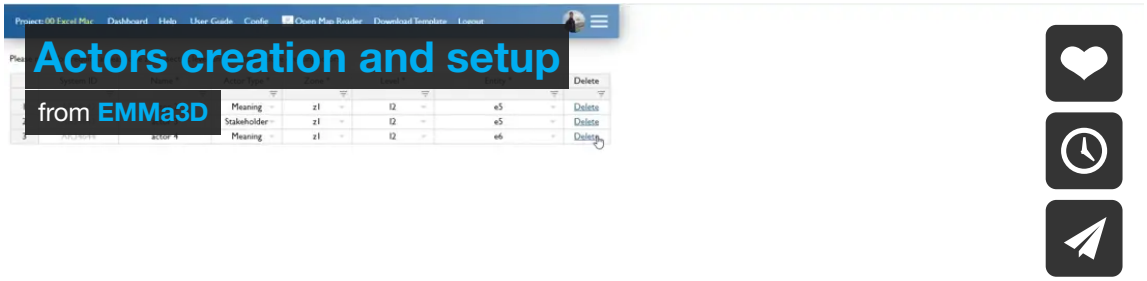
Click on the **Show/Hide Columns** bottom at the bottom left of the page if you wish only to see the above mentioned required fields.

To **add new actors**, press the **Enter key** on your keyboard or press the **Add new row button** below, and a new row will appear in the same fashion as a spreadsheet table. If you made this by mistake, click on **Undo** to amend and get rid of the row or fix the content of a single cell.

You can **create new elements** such as Levels, zones, sectors or entities from the Actors table. Type the name for this new element on the relevant cell and click on “Add”. The elements you have created will appear on each section, i.e., a new level will appear under Project Structure -> Levels.

To **delete an actor**, click on the delete column on the right-hand side.

See the video below to learn how to create and configure them 👇



Importing Actors via a spreadsheet template

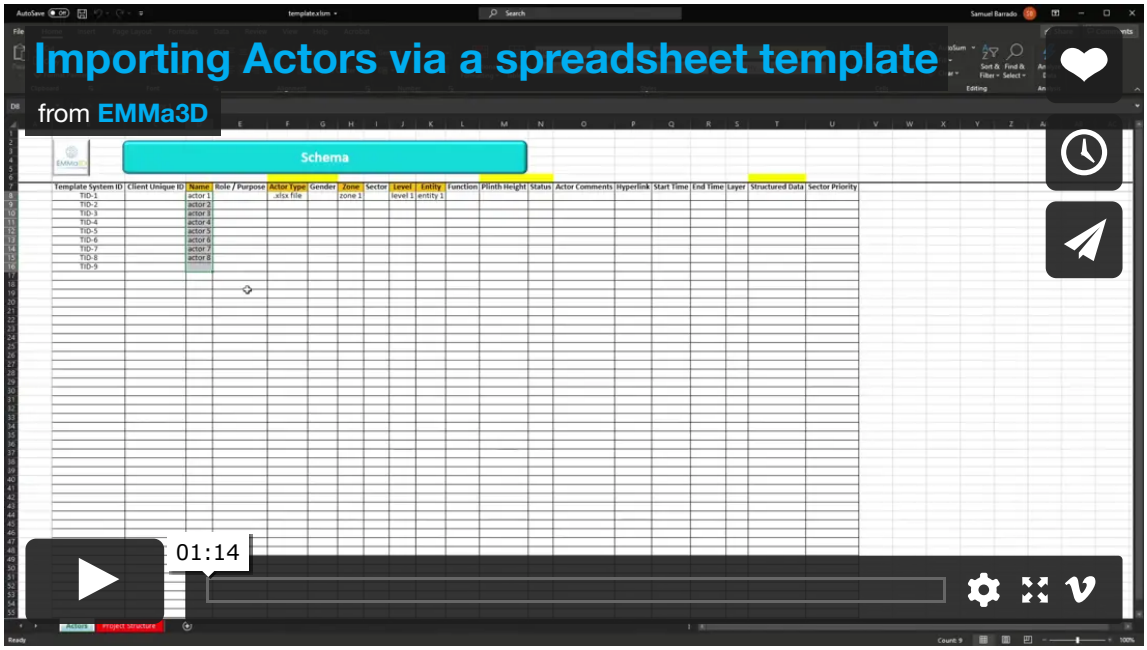
To make things easier and faster, you can now add a set of actors using a template you can download from the Map Maker top menu. Templates can be opened in Excel and allow a swifter editing process.

Once downloaded, open the file “template.xlsm”. Enable Editing and Macros to access all the content. You can start populating actors on the actors’ tab by filling in at least the required fields in orange. You can click and drag fields as you would on Excel.

The **project Structure** tab shows a summary of the zone, sectors, levels, entities, functions, or layers created in the template.

When finished, **close down Excel and save your template**. You will not be able to import actors on the Map Maker with Excel still in use, so this is key.

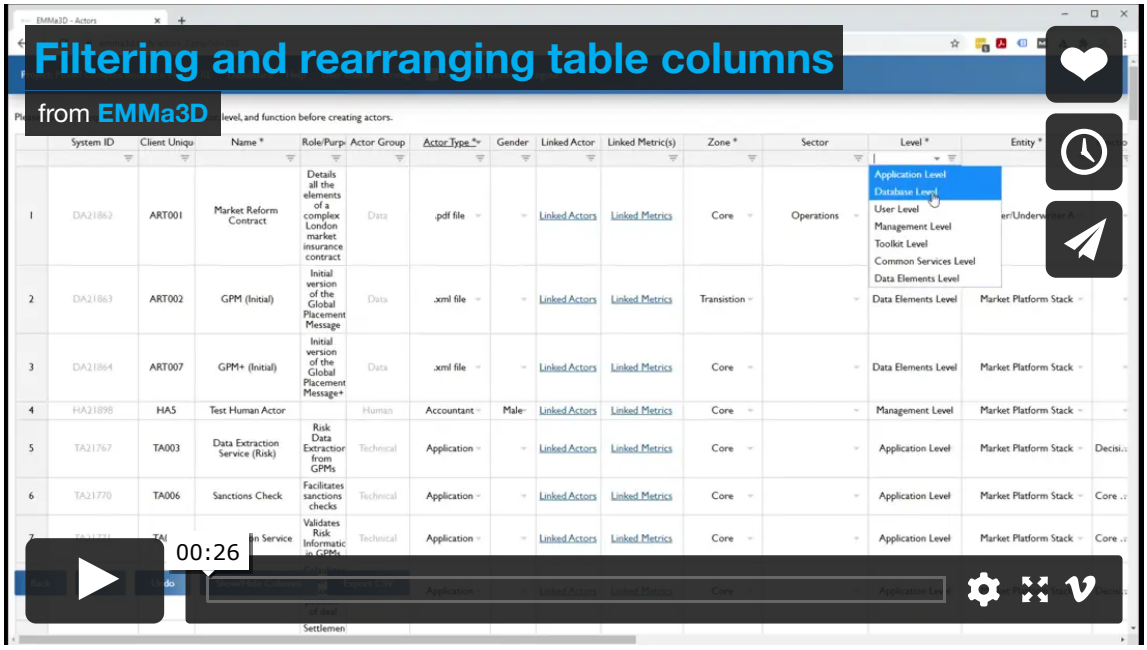
In the Map Maker Actors Table, select the "**Import Template**" option and choose your template file. After a few seconds, the table will display all the actors you created on the Map Maker. To add supplementary actors, you can still use the template by adding more rows to the document and re-importing in the Map Maker 👇



Filter and rearrange actor table columns

You can filter and rearrange actor table columns. To display or sort elements in descending or ascending order, double click on the top field of a column. If, on the contrary, you are seeking to **filter a certain amount of actors** regarding the entity they belong to or the class they are, double click on the filter icon (three lines) and select one or multiple elements by clicking on them. See the video below to

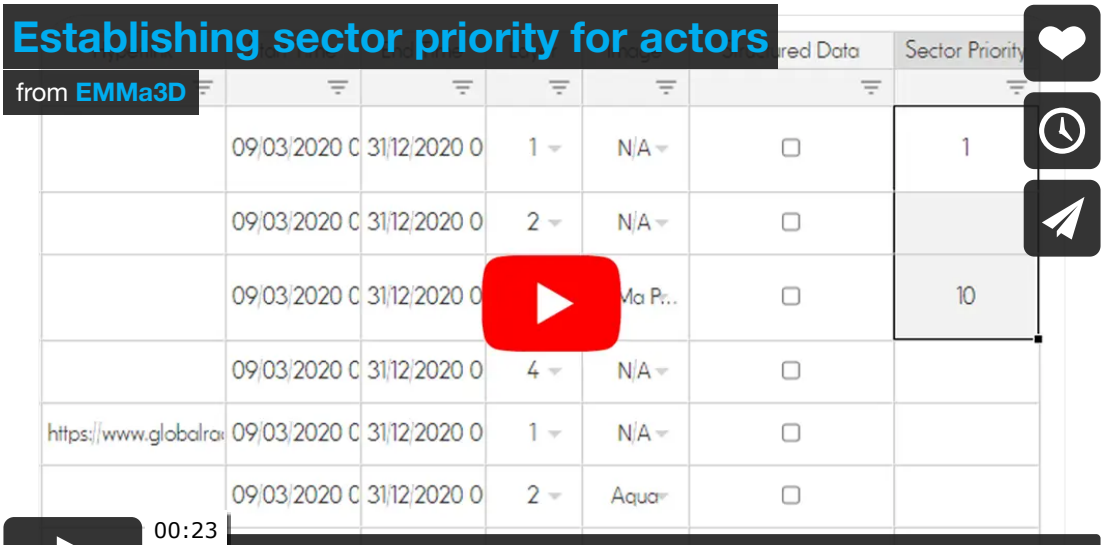
learn how to create and configure them 👇



Establishing sector priority for actors

It is possible to establish a sector priority for elements that belong to the same entity, level, zone and sector.

There is a column called **Sector Priority on the Map Maker Actor table**, where a numeric value can be set and change the actor positioning. 👇

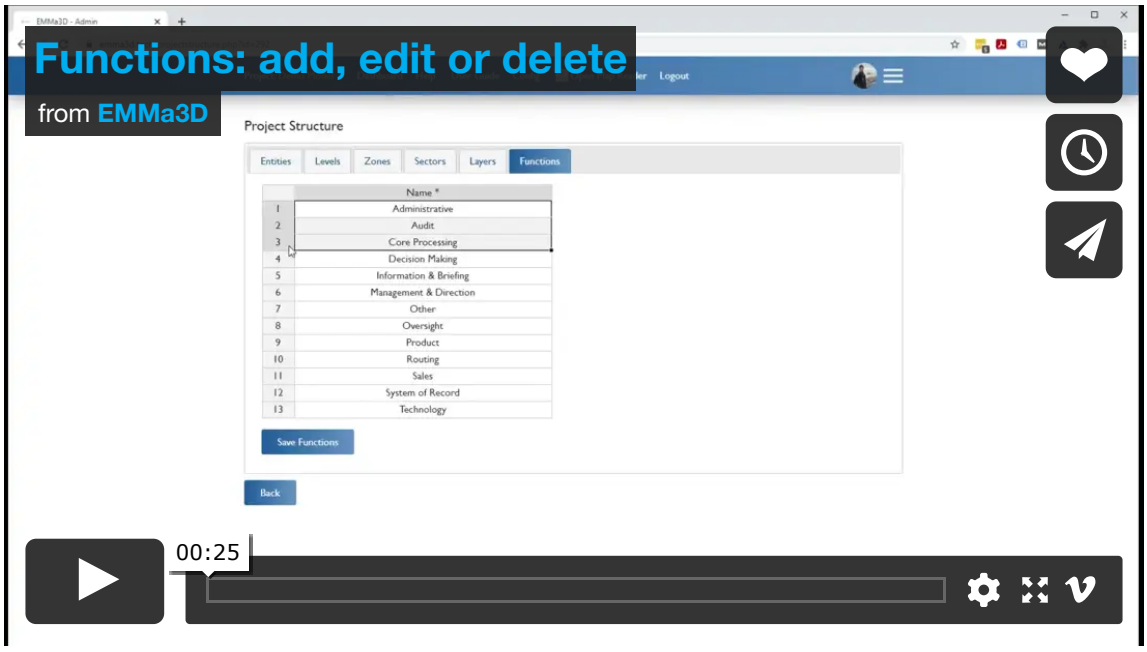


Functions: add, edit, or delete

On the Map Maker **Project Structure Section**, there are a series of functions that come by default. The best way to explain what functions are in the range of capabilities that an actor can undertake.

Functions only apply to **Technical Actors**. In this case, the selected functions will be shown as separate floors on the actor in the Map Reader.

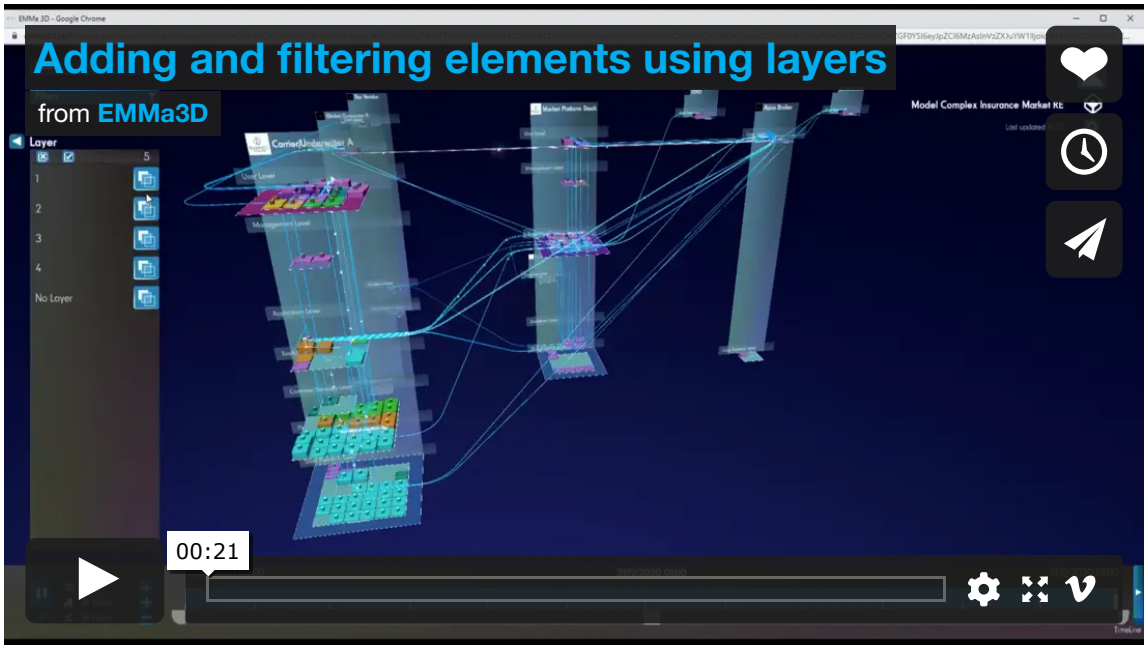
A series of functions come by default. Add new ones, edit the existing or delete them to match your needs. You can select as many functions as you like, but only the 7 on the top will be visible on the meta-map actor that carries them. See the video below 👇



Add and filter elements using layers

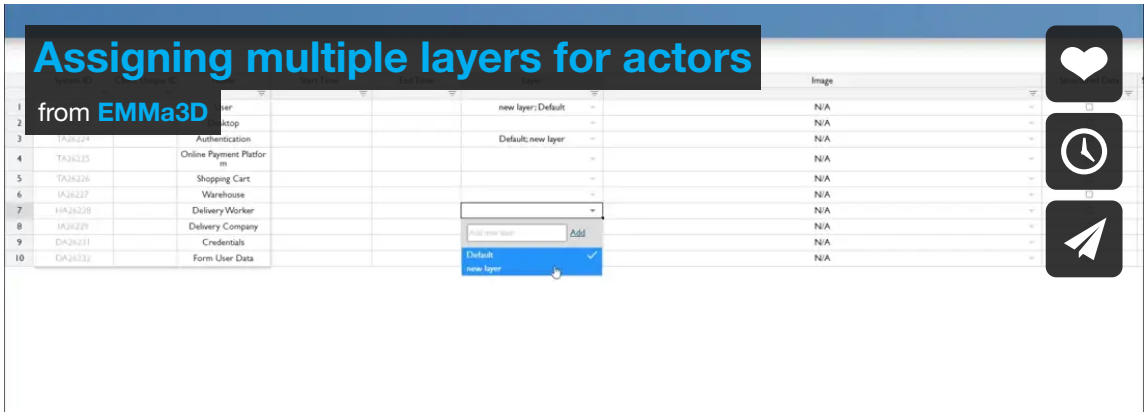
Layers act as an extra level of filtering. Create as many layers as you like in a model to assign different elements to them and showcase or hide them in your system.

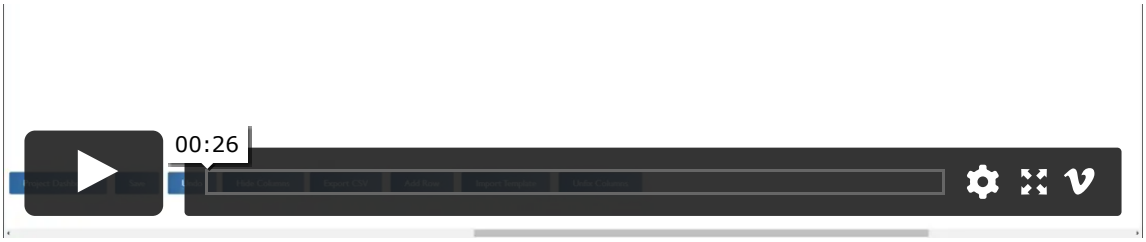
By altering what layers you see on the Map Reader, you can control what elements of the project are visible. Find out how to use layers to filter out elements on the video below 👇



Assigning multiple layers for actors

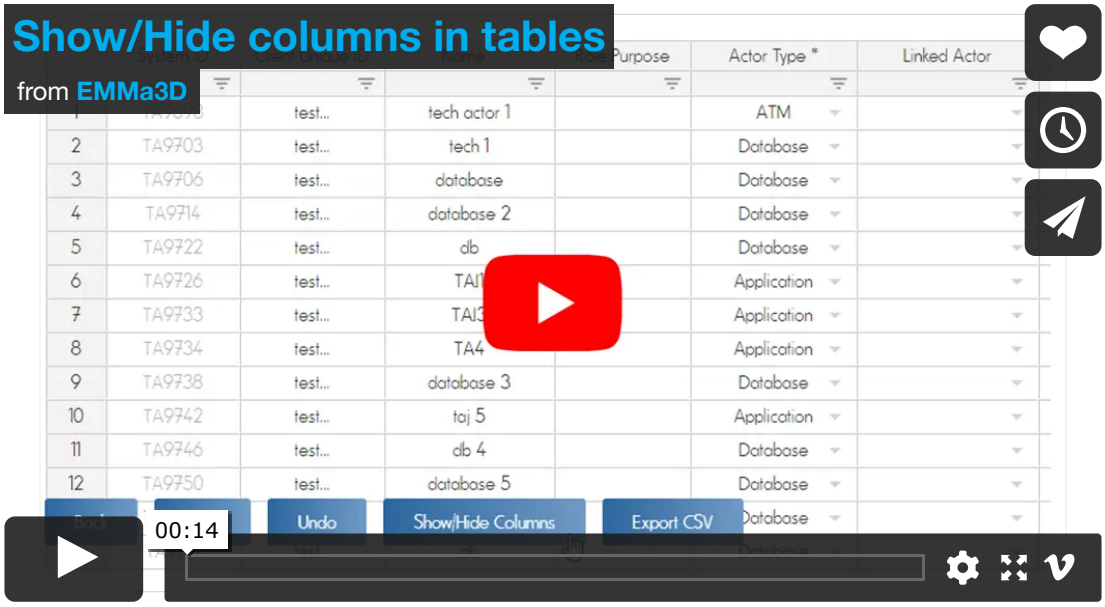
When creating actors, you can assign one to multiple layers. Double click on the layer cell you want to edit, then click on as many layers you want that actor to be in.





Show/Hide columns in tables

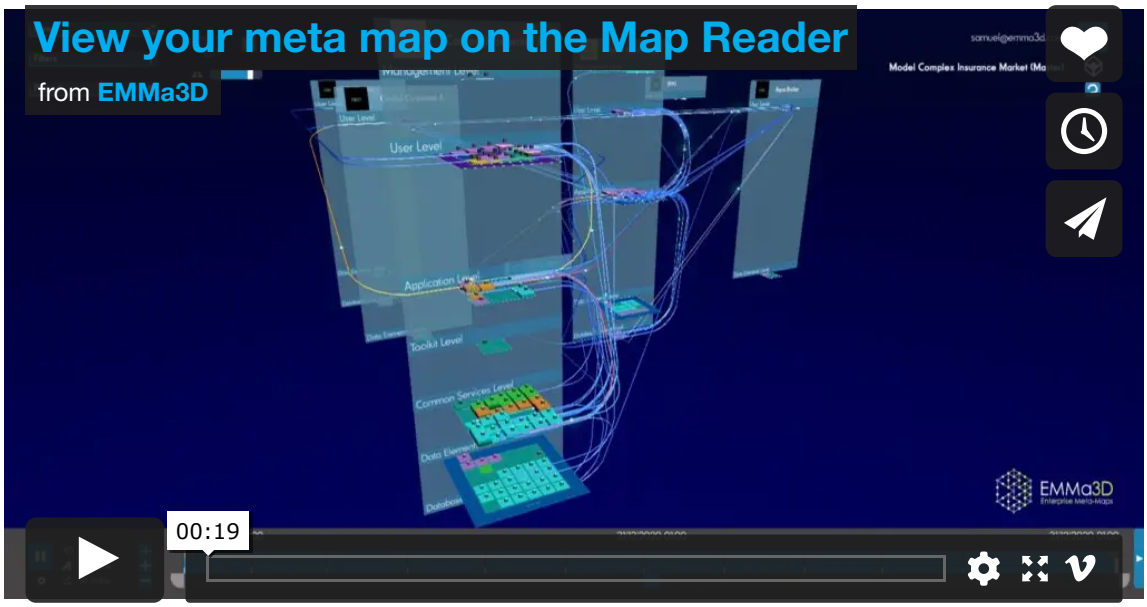
The **Show/Hide Columns** button allows viewing only mandatory fields in tables. This can be turned on/off in any table by default on the Map Maker Settings Menu 👇



View your EMMa3D model on the Map Reader

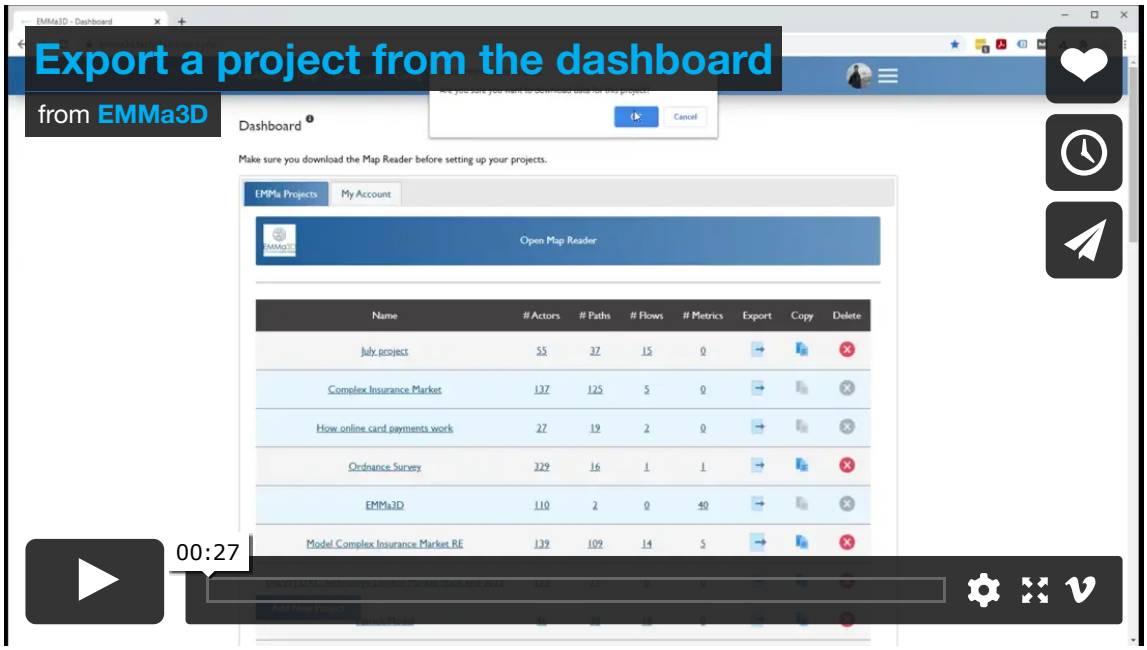
Once the **basic elements are added into a meta-map,** and this contains **actors**, you can view them in the **Map Reader** using the **Open Map Reader link** on the top menu on the Map Maker or

Project Dashboard. A new window will open with the visualizer in your browser. Have a look at this video to see what created so far 👇



~~Export a project~~ 🔴

It is possible to create a local backup of one or several of your projects using the export function in the Map Maker. Click on the **Export** icon over the name of the project you want to export on the Dashboard. Follow the instructions to do it below 👇



Creating your first flow

After a meta-map is ready, it is time to **create a flow** and see it playing on the Map Reader.

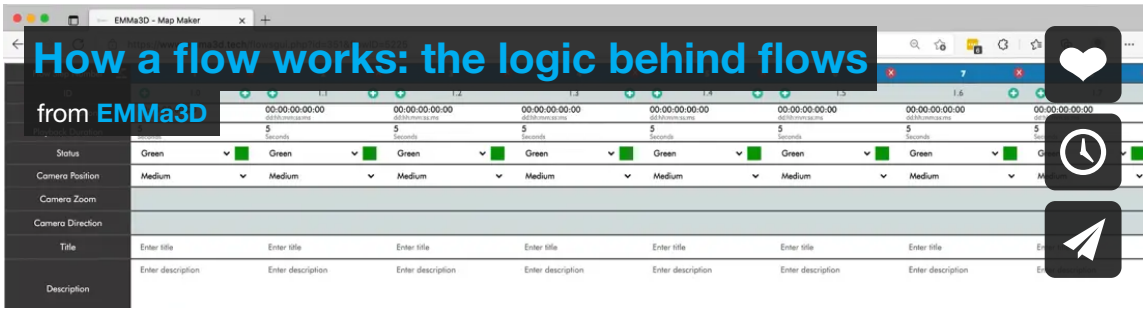
The easiest way to create a flow is by using the **Swim Lane Creator (SLC)**: a visual and intuitive way of building up flows within a project.

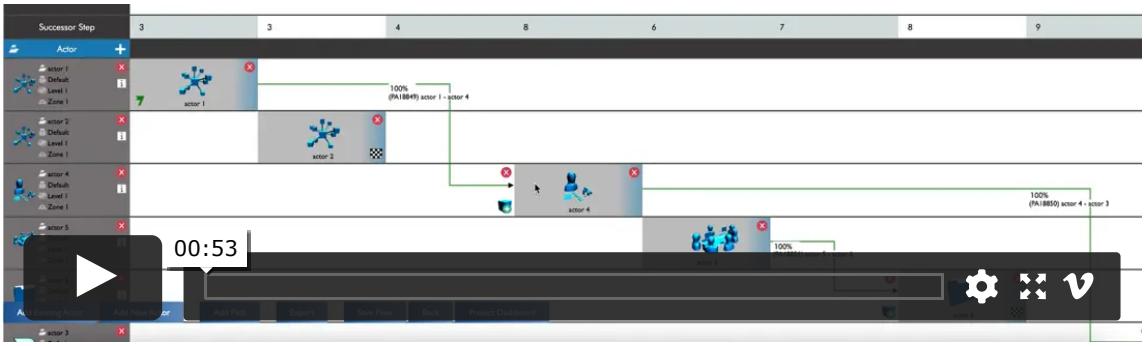
This building tool is a part of the **Map Maker** and provides a huge potential for analytical insight into how flows operate across the system.

Once you get in the creation screen you can **add existing or new actors** and place them wherever you want by **dragging** them around.

How Flows work: the logic behind creating flows and understanding flow steps

To start building flows, it is necessary to understand the logic behind them. **Successor Steps** in the **Flow Steps Table** and in the **Swim Lane Creator** should follow any outgoing paths by default. If there is no outgoing path, the successor step should default to the next chronological step in the flow.





The first thing to do for creating the first **automated flythrough** or **Flow**, is going to the **Flows section** in the Map Maker and add a new flow the same way you add a new actor: press Enter key to add a new row.

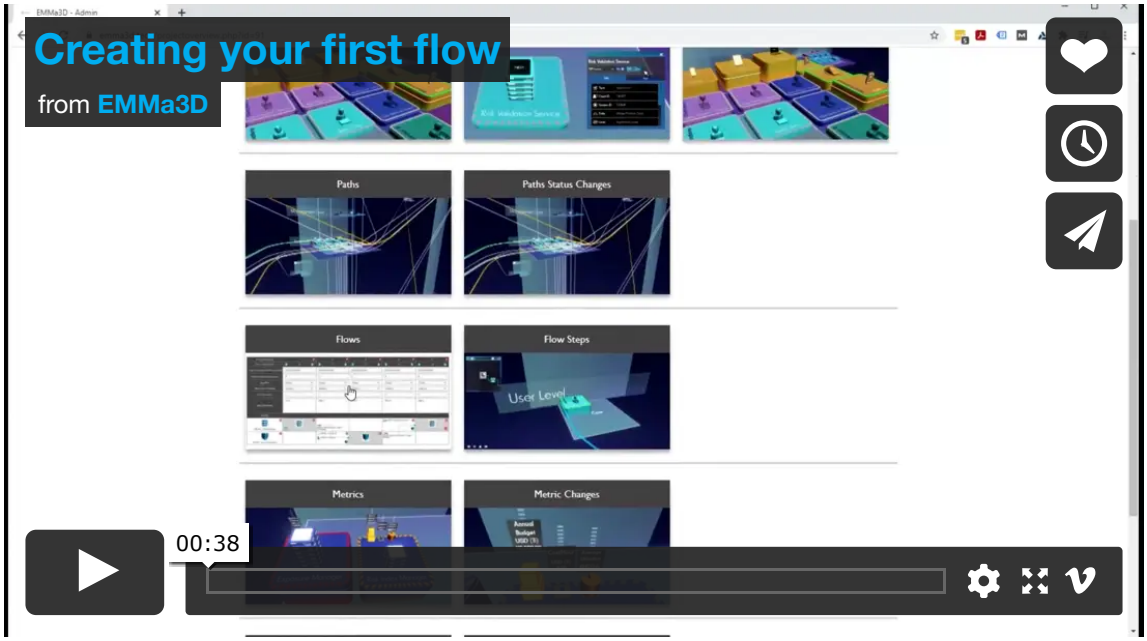
You have to give it a **Flow Name** and assign a **Client Unique ID**, which is a reference number for the tooling to handle the flow in the backend databases. You can use something like: “FL01”.

There are some elements you can tweak in order to customise the flow:

- **Criticality**: the level of significance of the flow from Very Low to Very High.
- **Start Time**: set a date for your flow to start appearing on the Map Reader.
- **Repetition Timeframe**: assigns a time unit for the flow to repeat. It can be every minute, every second, every hour, week, month or year.
- **Repetition Frequency**: it displays how many times the flow repeats having in mind the value set in the Repetition Timeframe.
- **End by Date**: set a date for the flow to end.
- **End After Occurrence**: the flow will not repeat anymore after the selected date.

Once you are satisfied with the above elements, you can start populating and configuring the flow to your needs.

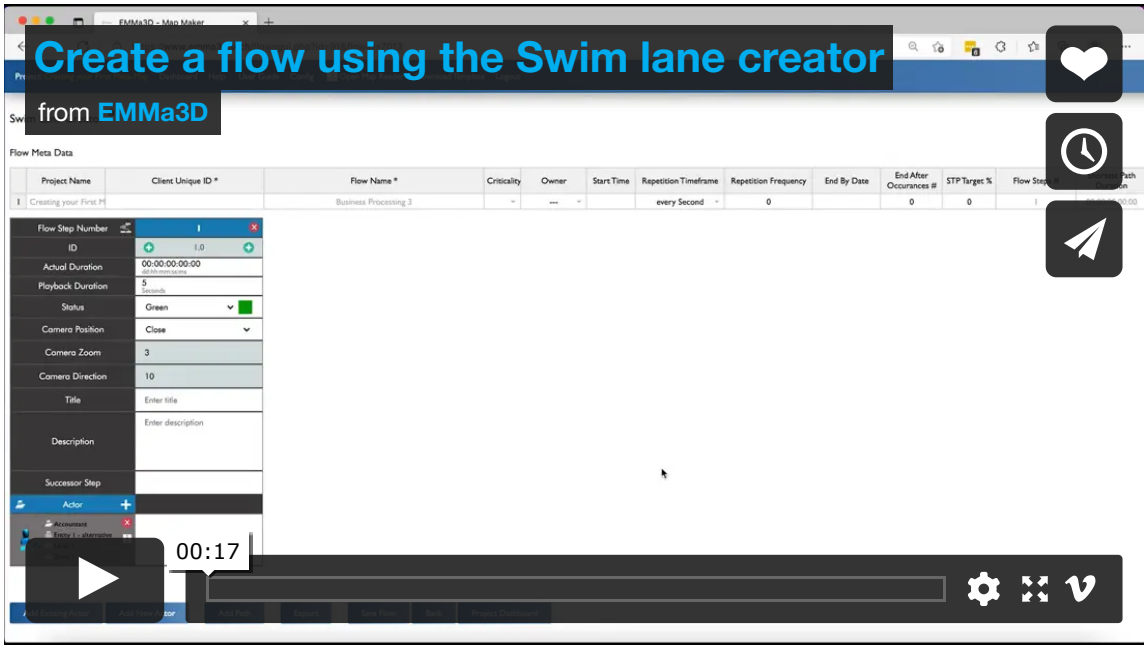
Step by step process on this video 👇



Create a flow using the Swim Lane Creator

As mentioned above, the **Swim Lane Creator** is visual and intuitive way of building up flows within a project.

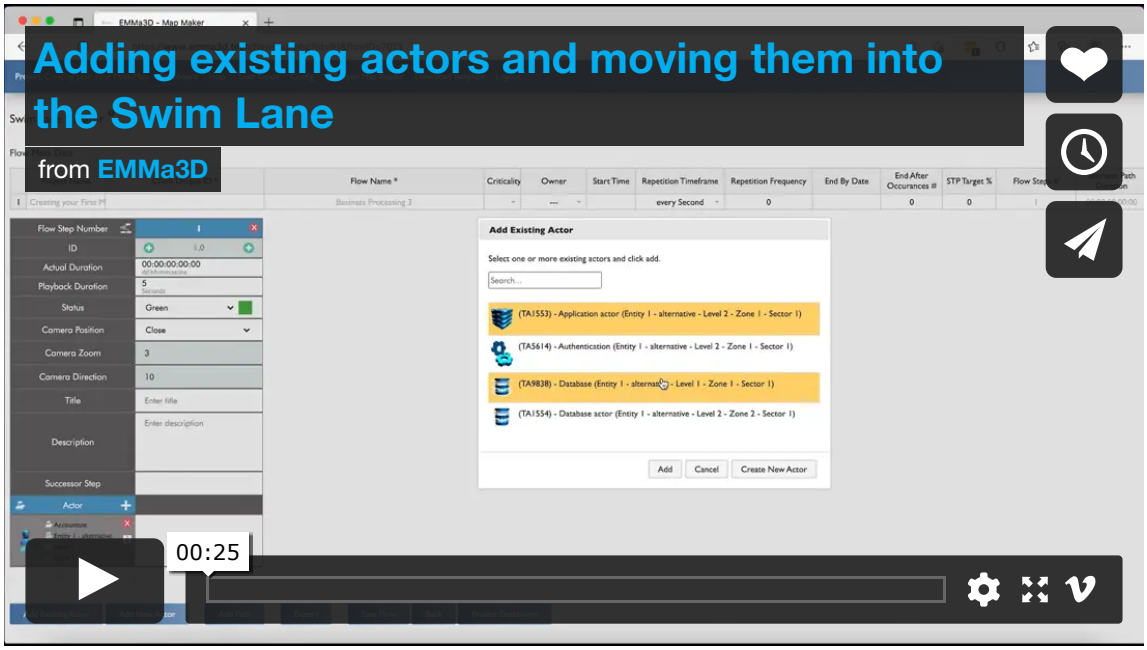
To use the Swim Lane Creator, select the option **View Swim Lane** on the row containing the flow you want to edit on the Flows Page, which has a link to access the Swim Lane Creator 👇



Adding existing actors and moving them into the Swim Lane 🟠

Once in the Swim Lane Creator screen, you can add existing or new actors and place them whatever you want by dragging them around keeping them on their swim lane (horizontally). Click on the ‘Add existing actor’ button on the bottom and select the one/s you want to add. These will be added into the Swim Lane ‘Actor field’.

To move them into an lane, drag an actor horizontally and drop it on one step. 👇



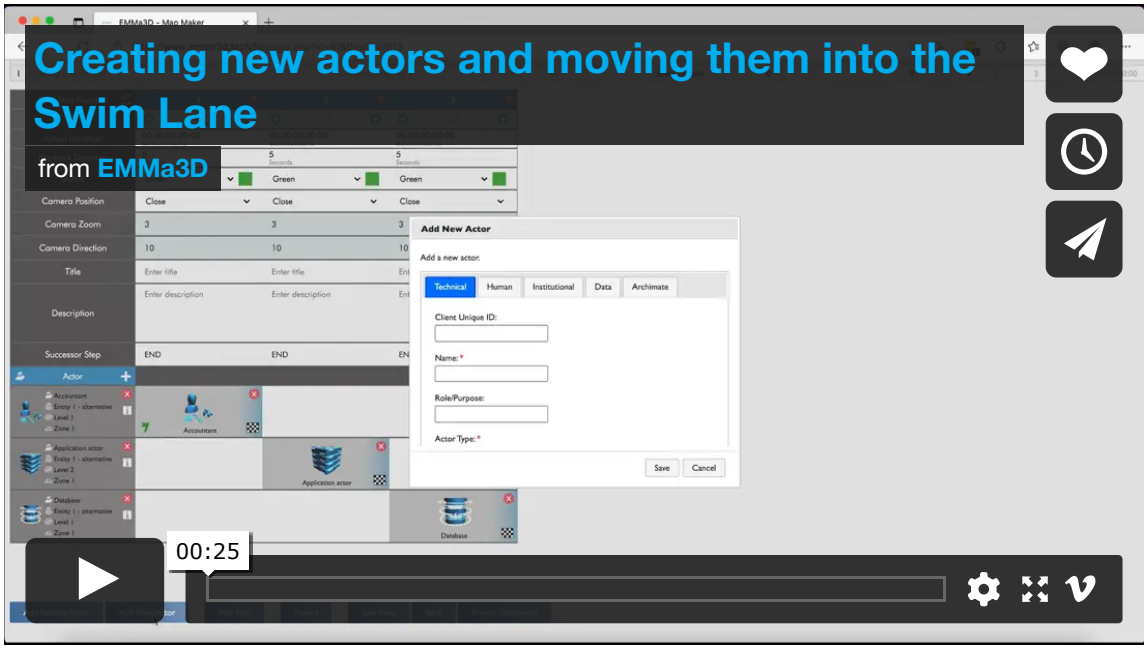
Creating new actors and moving them into the Swim Lane 🟠

There are two ways of adding new actors on the Swim Lane Creator. One is to click the ‘Add New Actor’ button, which will prompt a

window to select the actor type, give it a name and so on.

The other way is, as in the section above, to click over the ‘Add Existing Actor’ button. A window with a list of the existing actors will appear and a ‘Create New Actor’ button on the bottom right of this.

In both cases, the actors you add to the swim lane, be them pre-existing or newly created, will be added into the Swim Lane ‘Actor field’ for you to drag them across their lanes. 👇



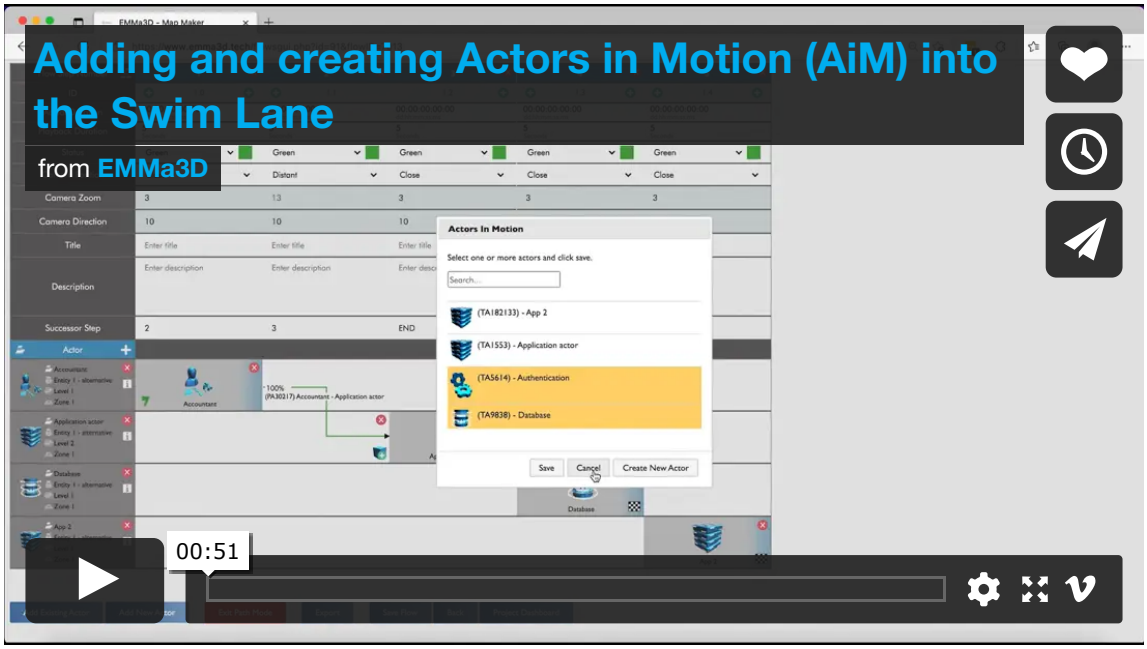
Adding and creating Actors in Motion (AiM) into the Swim Lane 🟠

In a similar fashion as adding new actors, to create an Actor in Motion is necessary to have two or more actors linked by a path. Once this is the case, click on the blue box with a plus symbol and a window pop up will appear to create Actors in Motion. There are 2 options here:

- To choose one or more actors from the given list (pre-existing ones). Select actor/s and add it/them by clicking on ‘Save’.
- To click on Create New Actor. This will follow the steps here, and

you will have to click on the blue box button again and select the actor in motion you have created from the list to include it in the swim lane.

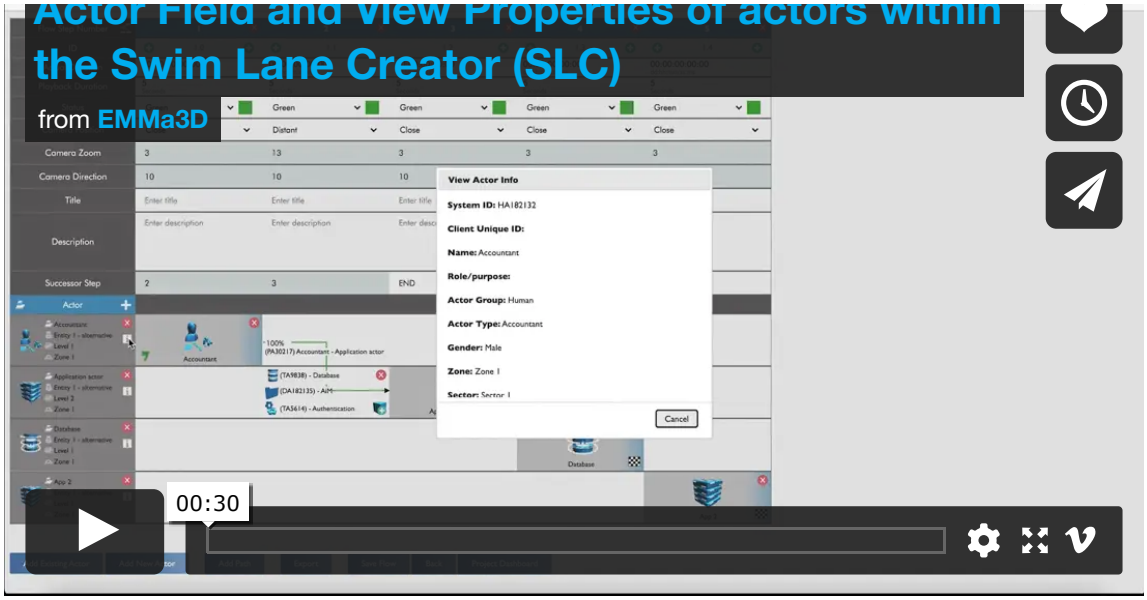
As opposed to creating Actors at rest, when we add Actors in Motion, these will not be added into the Swim Lane 'Actor field' as they tend to be data or information passed through paths. 👇



Actor Field and View Properties of actors within the Swim Lane Creator (SLC) 🟢

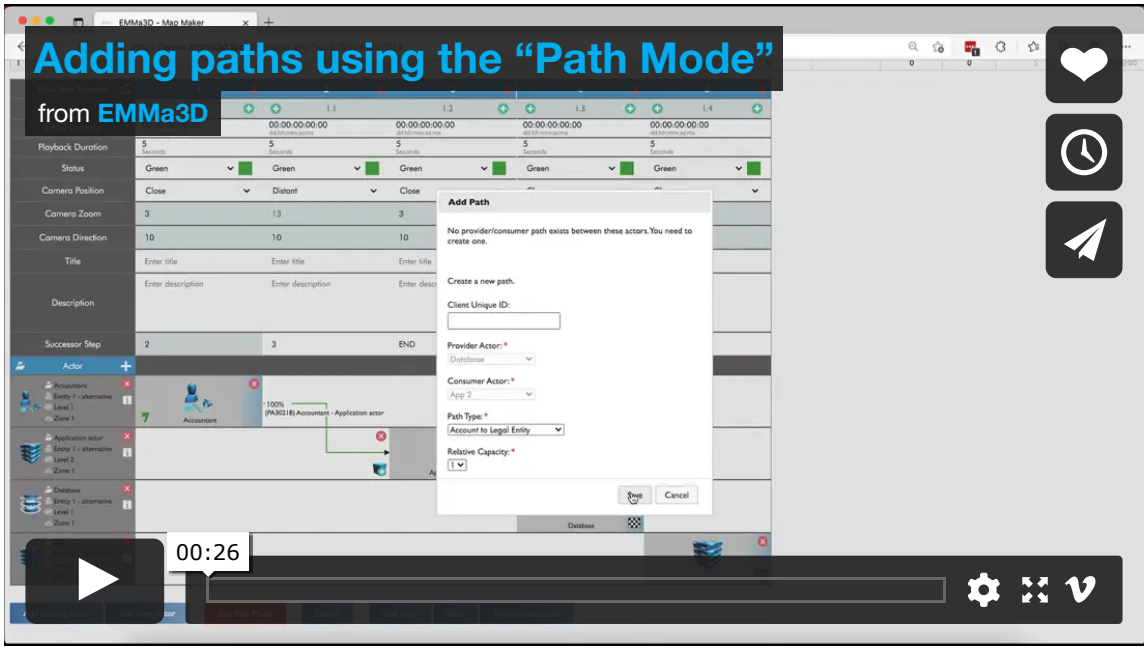
The Actor Field populates as you add new or existing actors to the Swim lane. This is the place from where you can drag them into their lanes. It shows an avatar of each actor as well ass some key information: Name, entity where it belongs, Level and assigned Zone.

In addition, there is a button to check all the information of a particular actor in detail. 👇



Adding paths using the “Path Mode”

When actors are distributed across the Swim Lane, you can set a link among them with paths. Enter the **Path Mode.** Once this is activated, it’s only a matter of clicking on the provider and consumer actor you want the path consist in. Along with paths, you can set **Actors in Motion** that communicate from one actor to another sending information or data as seen here. Step by step process on this video 👇

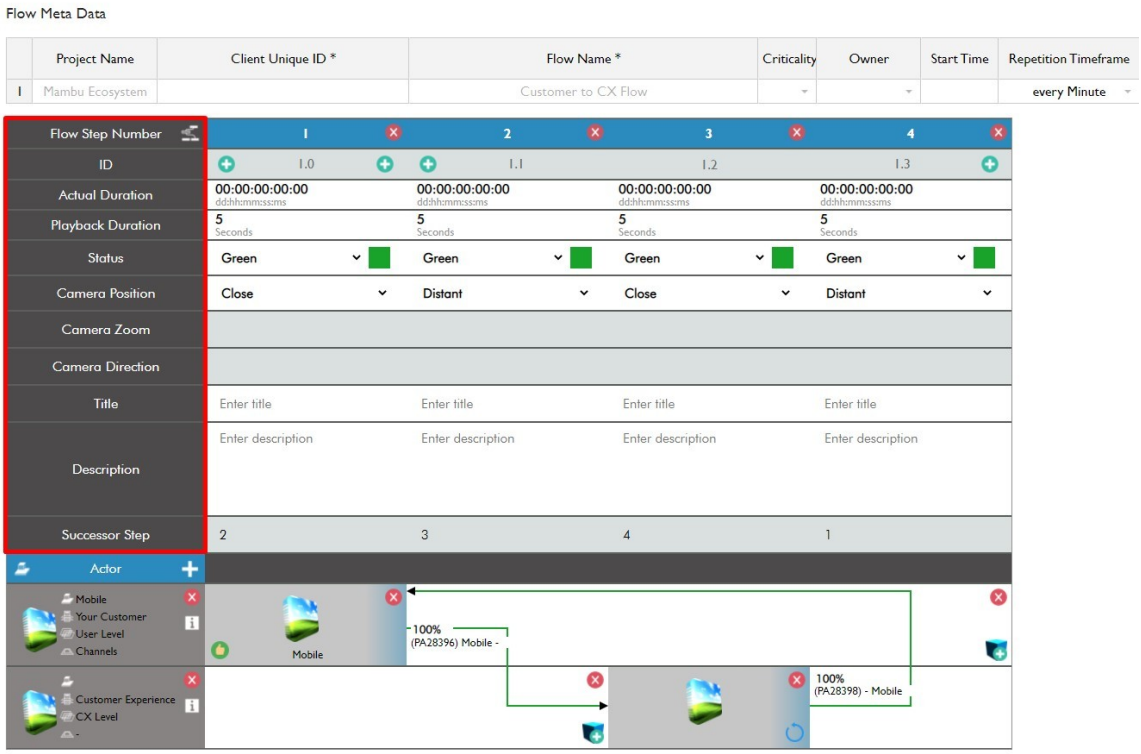


Configuring step properties (Hands-on with the Swim Lane Creator) 🟠

There are a series of things you can set for optimal step configuration:

- **Actual Duration**: it refers to the time it takes for a Flow to go from point A to B.
- **Playback Duration**: as opposed to the above, this reflects the time it takes for the step to complete during the Flow Playback in the Map Reader. The step duration is determined by the length of characters used on the description text box if the playback duration (seconds) cell is blank.
- **Status**: You can label steps (whether they are actor steps or path steps) in Red, Amber, Blue, Green, Ghost (Grey), and No Status, which for path steps stays black and for actors, it will appear as a shinny white edge on the plinth.
- **Camera Position**: a selection of camera angles you can modify to better adapt your needs depending on what you want to focus on in the specific step. For a full view of the different camera angles, go to this section.
- **Camera Zoom**: when the camera position is set to 'Custom', this field can be edited. Camera zoom sets the distance from the step subject, be it a path step or an actor step. For reference, the value of a Close zoom would be 3; Medium equals 8; and Distant to 13.
- **Camera Direction**: when the camera position is set to 'Custom', this field can be edited. Camera zoom sets the rotation angle with regards to the step subject. If the input value is 45, this step will be seen as a 45 degrees angle during Flow Playback.
- ~~**Flow Step Level (deprecated)**: this is a way of filtering steps to assign a numeric value, i.e., 1-5, depending on the hierarchy of importance. More on this here.~~
- **Title**: Ideal for decision points in a flow. This provides more detail for a user to understand what direction the flow will take depending on which step they choose.

- **Description**: in this field, you can add bits of information that describe what happens on each step to tell a better story of your flow.
- **Successor Step**: this indicates what step is next in the flow after the current one.

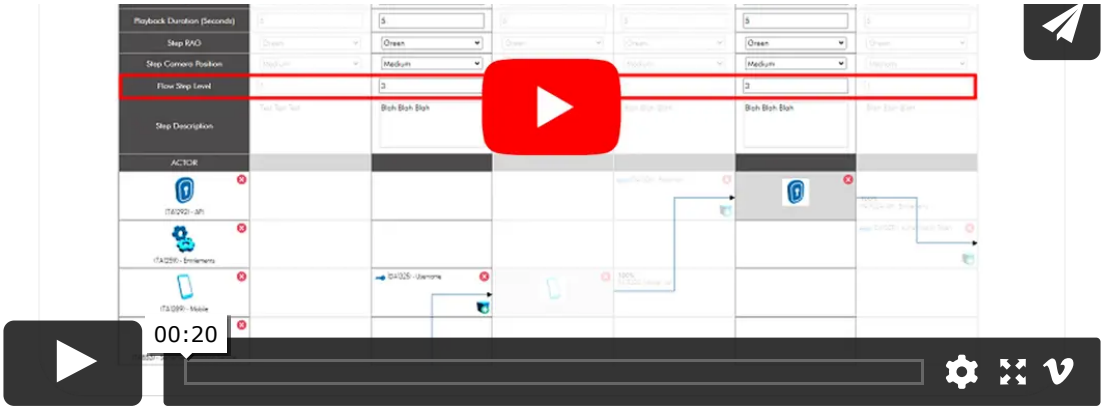


Configurable elements in the Swim Lane Creator

~~Level Filter~~ 🔴

Level filter is an easy way to **highlight the steps** matching a specific Flow Step Level.

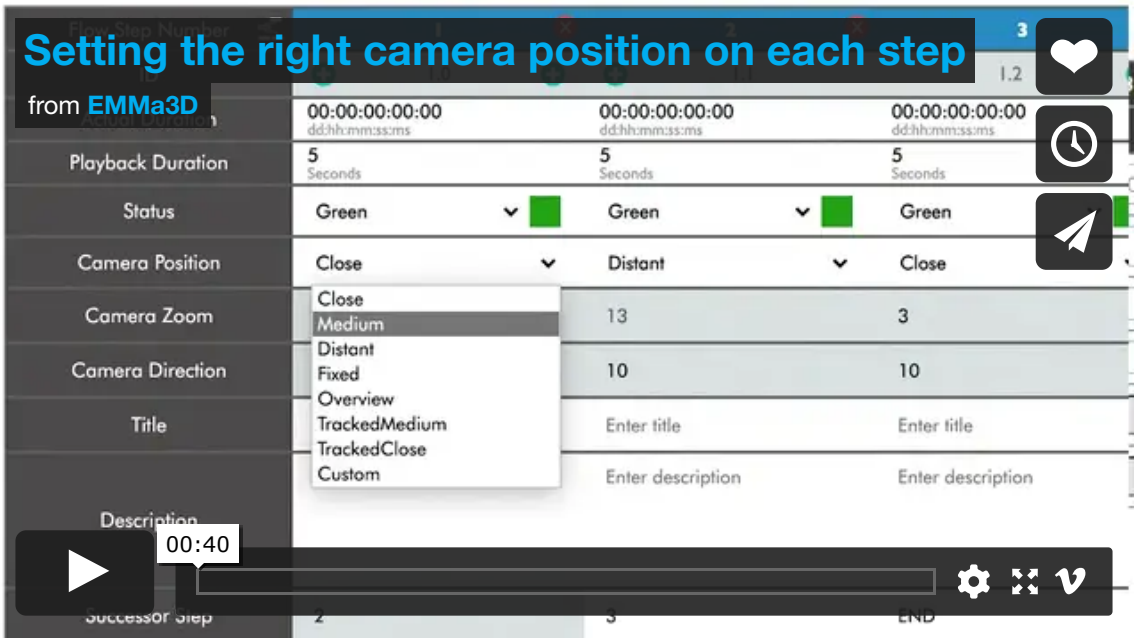
If a series of steps have a level 5 assigned and you type this value up on the **Level Filter text box**, the steps that do not match this will automatically grey out. 👇



Setting the right camera position on each step 🟠

Every step within a **flow** can be adjusted to a **different view in perspective** to adequate the user needs. Camera can be altered on each step on the **Flow Steps menu** or in the **Swim Lane Creator**.

In proximity order from the closest to the furthest, these are the different options available: **Close, Medium, Distant, Fixed, Overview, TrackedClose, TrackedMedium and Custom** 👇

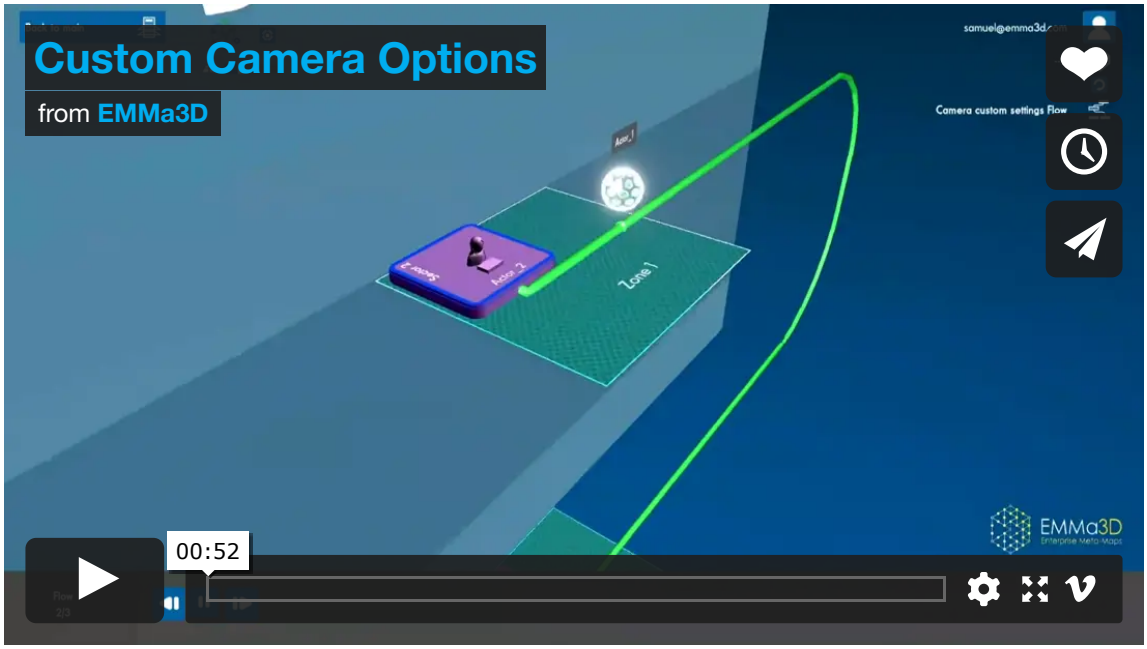


Custom Camera Options 🟢

The Custom Camera Angle allows more flexibility in the way flows are shown in case the other options are not enough. There are two main customisable variables:

- **Step Camera Zoom**: this parameter sets the distance from the step subject, be it a path step or an actor step. For reference, the value of a Close zoom would be 3; Medium equals to 8; and Distant to 13.
- **Step Camera Direction**: this sets the rotation angle with regards to the step subject. If the input value is 45, this step will be seen as a 45 degrees angle during Flow Playback.

Have a look on how it looks below 👇



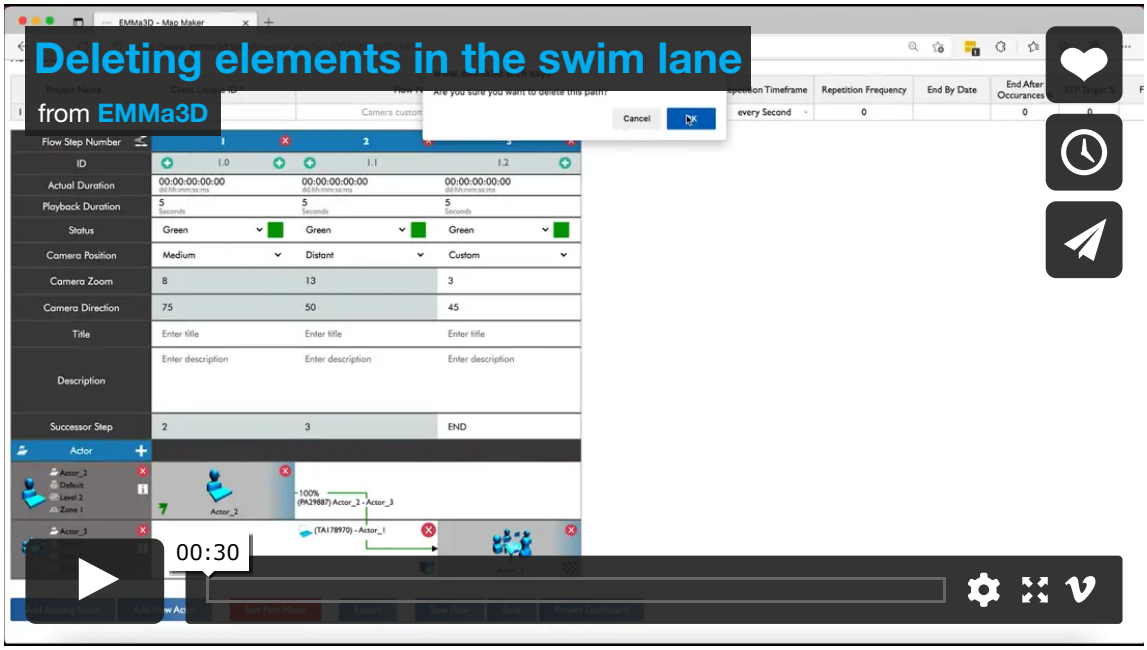
Deleting elements in the Swim Lane 🟠

It is simple to get rid of elements if you do not need them anymore in your flow. You can **remove actors, paths and steps**.

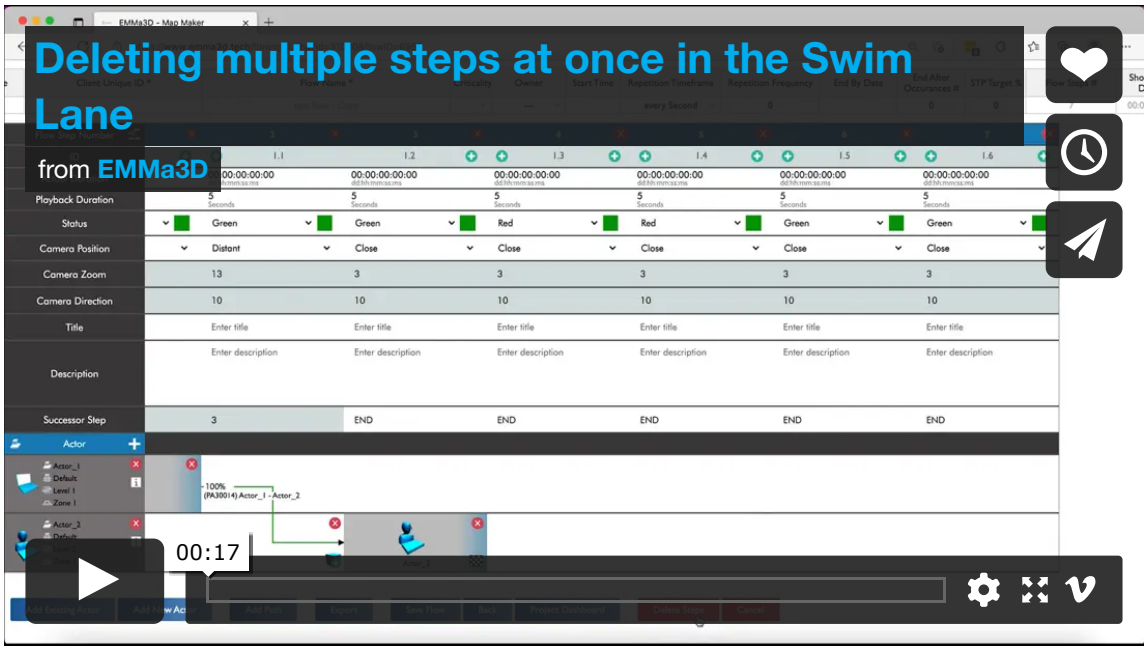
To delete one or multiple steps, click on the cross on top of each step/column. If steps are empty, the will be ready to be deleted and the cross icon will start to contract sporadically. At the same time, a

‘Delete Steps’ red button at the bottom will appear and clicking will make all the selected (and empty) steps will disappear.

If you try to delete steps populated by an actor or path, a pop up will appear explaining they can’t be removed until empty.



Deleting multiple steps at once in the Swim Lane 🟠



Successor Steps in the Swim Lane Creator (SLC)

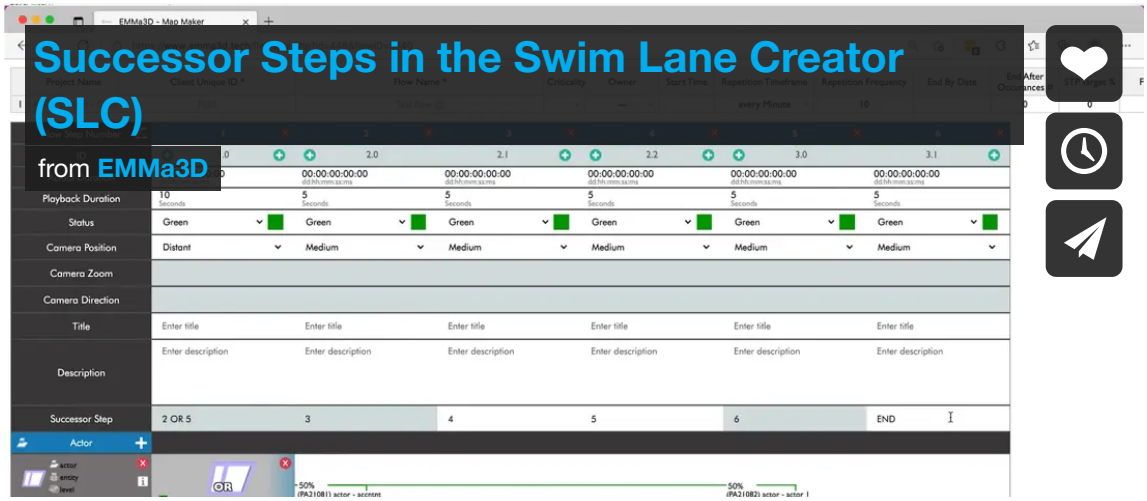
Successor steps indicate where the following steps of a flow are heading to. There is a row for successor steps in the Swim Lane Creator (SLC). As you connect actors with paths in the swim lane, the values in this row auto-populate and cannot be modified by default unless the value is an “END” or the cell is white (when grey it is non-editable). If this is the case, the successor step can change to any existing step number except its flow step value.

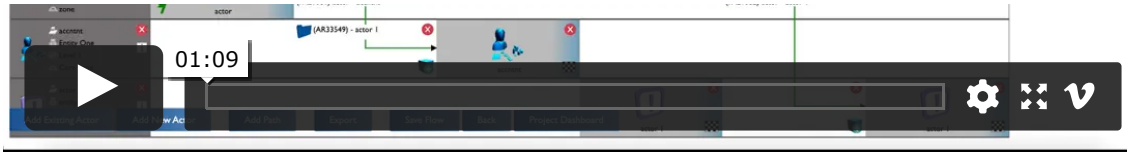
If an actor on the swim lane has a **Finish Line flag** sign on it, the successor field will have an **END** value, and the flow will stop on that step when played on the Map Reader. Adding new columns will update successor steps values where these have changed.

There are, however, some exceptions where a user cannot add new step columns:

- On the right-hand side of a **path step**
- It is impossible to add a column on the left-hand side in an **actor step** with a path incoming on its left.
- In **loop steps**, a user cannot add columns to the left-hand side.
- When there is an actor step with an outgoing loop step, no columns can be added to the right-hand side.

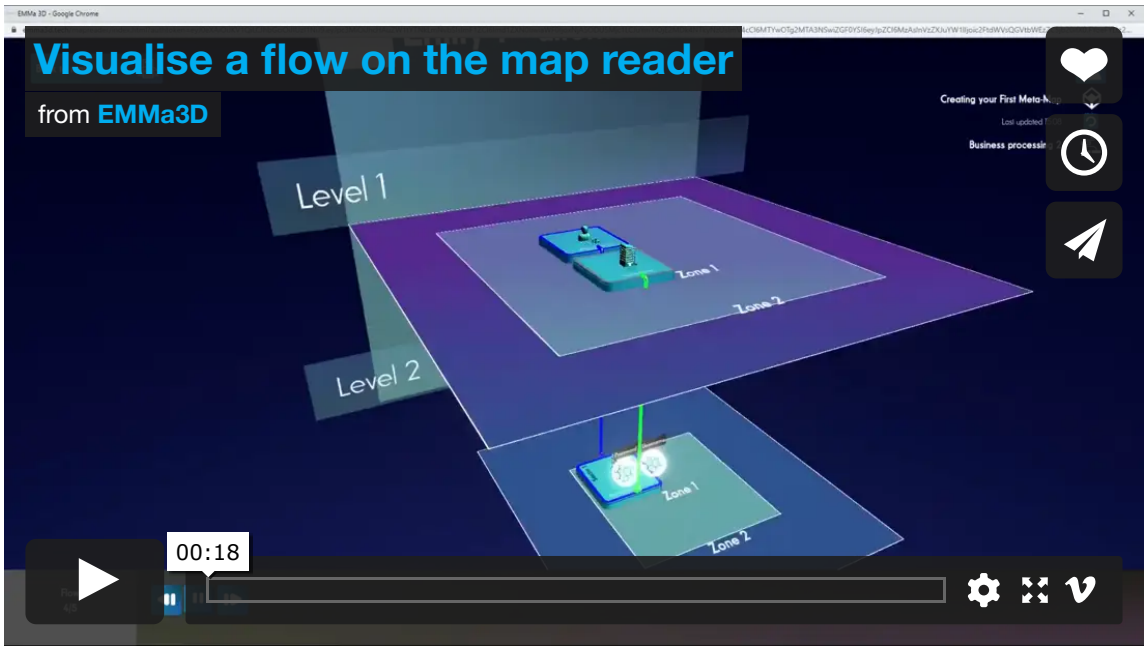
👇





Visualise a flow on the Map Reader

As seen above, once you are ready to view your meta-map, you can access to the Map Reader from a link on the top menu of the Map Maker Dashboard called “**Open Map Reader**“. 👇



AND/OR Gates

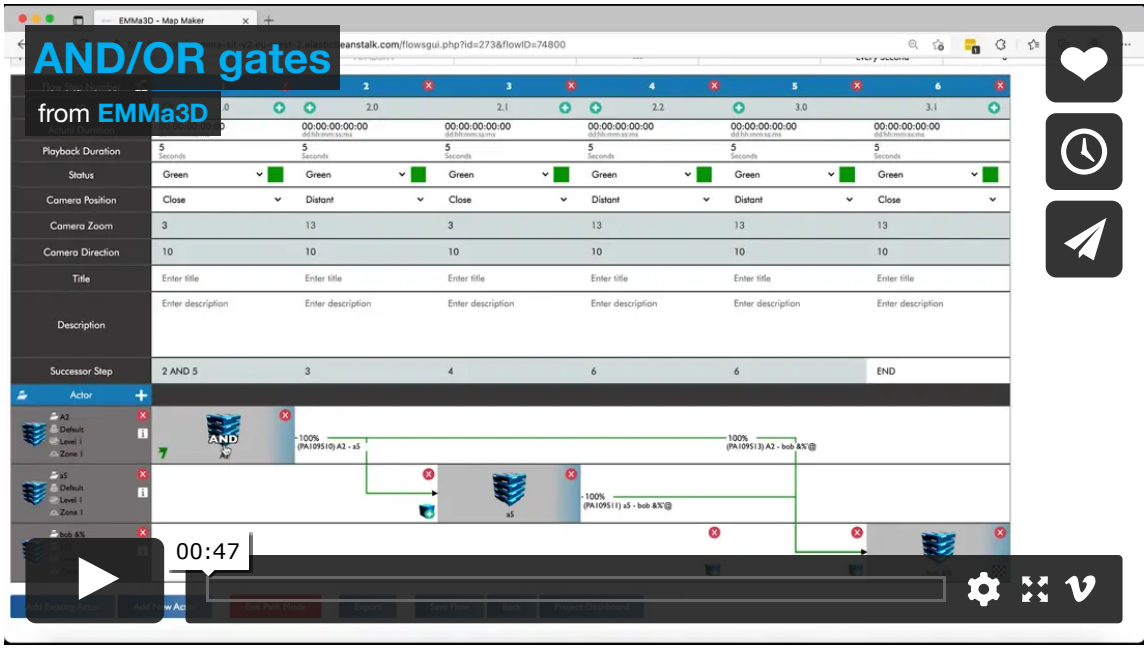
Besides creating a linear flow, it is also possible to add **multiple choices** so the user can decide what to do in each scenario. This includes **loops** over certain processes, add in new paths or fly over just the selected one.

- Once at least 3 actors are added, you can make the flow go from one actor **OR** another and indicate the bandwidth that belongs to each path in percentage. This **values will be in red if the sum exceeds 100%.**

- The other option is when an actor takes a specific path **AND** then the second is selected. This can be toggled by **clicking on the provider actor** so it will change from AND to OR step/gate type.

You can always go back to the **Last Decision Point** after you have chosen one way to go once in **Playback Mode**.

Watch how to create **AND/OR gates** on a flow within the **Swim Lane Creator** 👇



Navigation options in an EMMa3D model 🟠

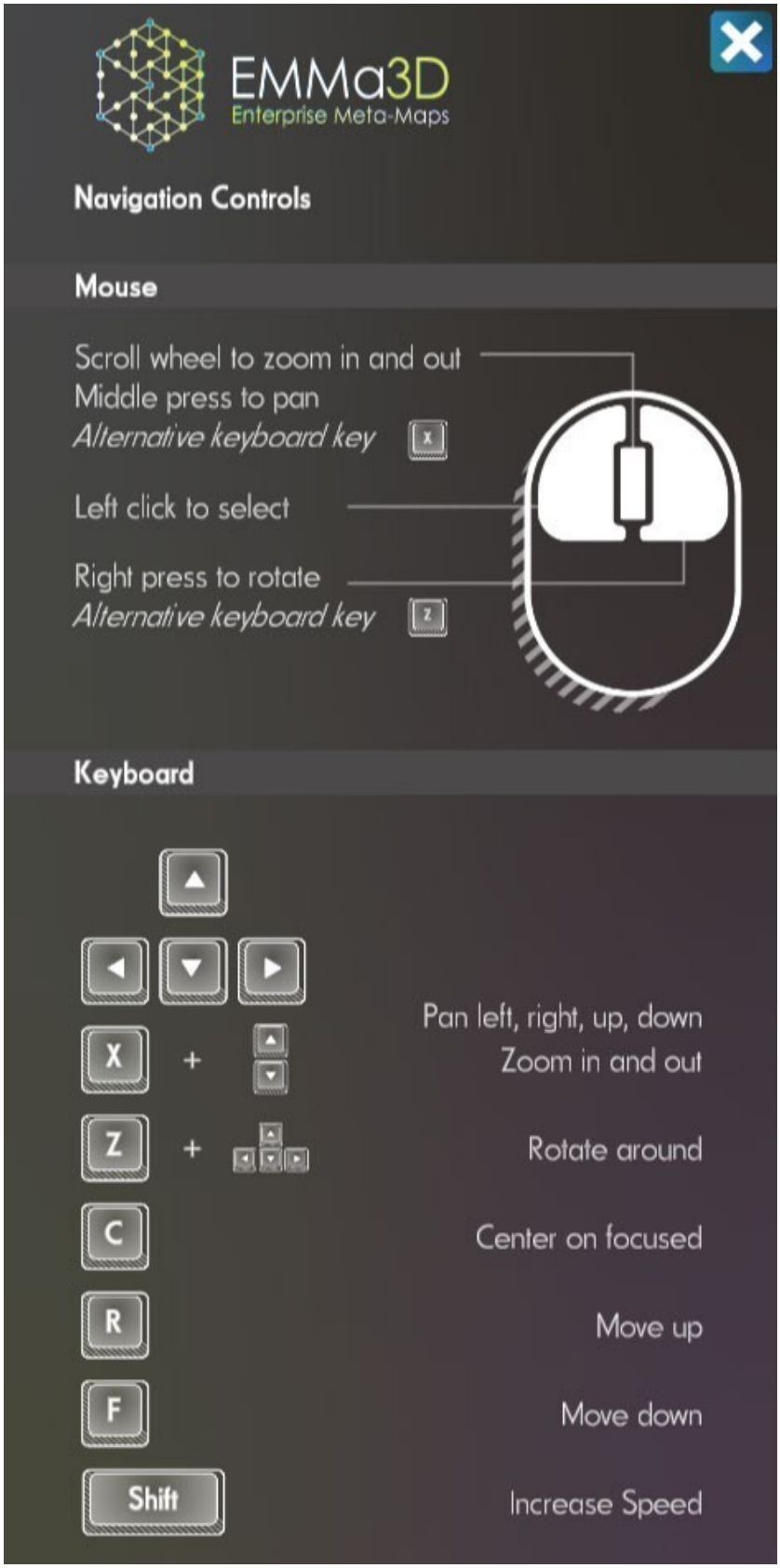
There is a wide variety of options to move and fly around a meta-map in the Map Reader: zoom, rotation, shift, etc., and all of them can be conducted using the keyboard, mouse or a combination of both.

- **Pan, tilt and rotation**: this allows to make panning movements from left to right and vice versa and a tilt top to bottom or backwards.
- **Zoom**: you can zoom in and out within the environment. This will let you come closer or further of elements and shift on both sides.
- **Directional Shift**: you will get to shift on the direction you

choose to, both horizontal and vertically speaking. Like using a lift.

- **Key combination**: you can make a more complex navigation by combining several of the above movements, i.e.: zoom in and shift to the right and also combining mouse and keyboard.
- **Speed**. In conjunction with the previous shortcuts, it's possible to move around the model at different speeds. To do it at an **increased speed**, press **SHIFT** at the same time you move around the model. To have a **slowed down** view, the key to press is **CTRL** together with any movement option.

Have a look at the **Navigation Commands list**:



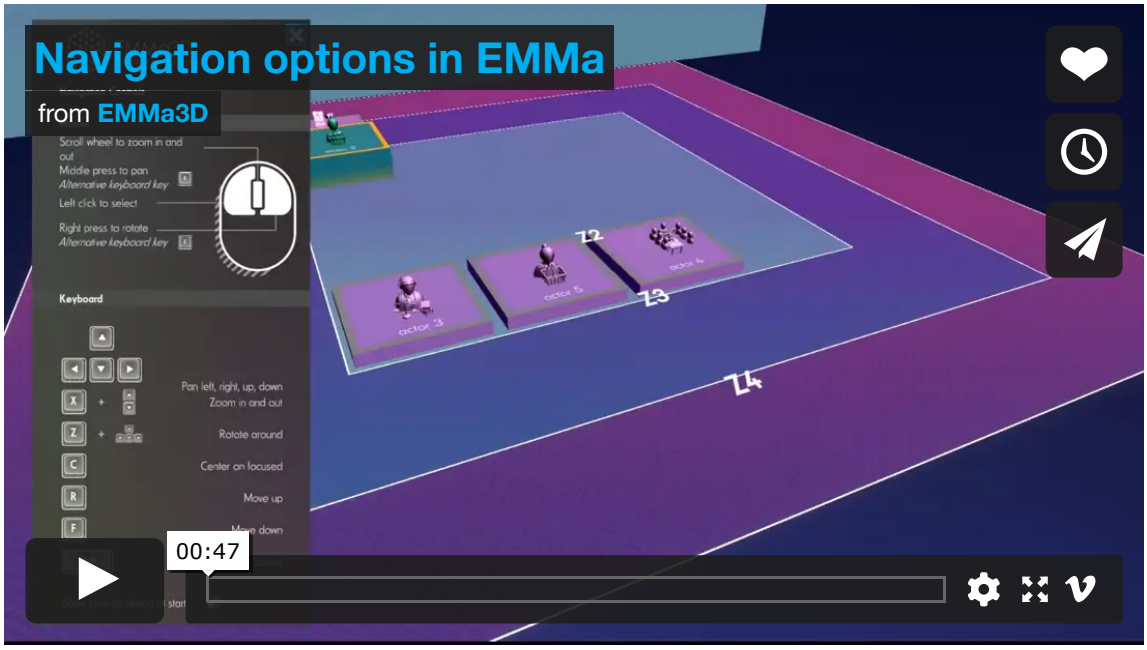
If you are using a laptop and an external mouse is not an option and you want to be able to rotate or pan throughout the model as you would with one,

there are two keys that mirrors these actions that must be used with the help of your laptop trackpad.

✓ Pressing the “x” key will mimic the middle/roller mouse button. Besides you have to click on your trackpad with one finger and drag another one to move.

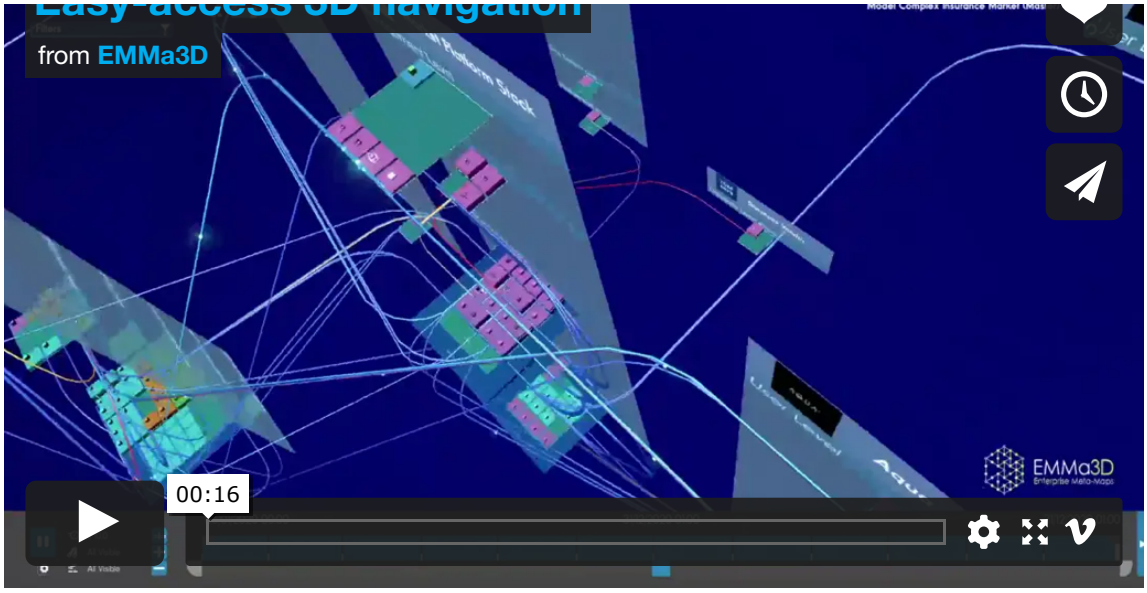
✓ “z” key will mirror the external mouse left click. Besides you have to click on your trackpad with one finger and drag another one to move.

See the complete range of options in the video below 👇



Easy-access 3D navigation

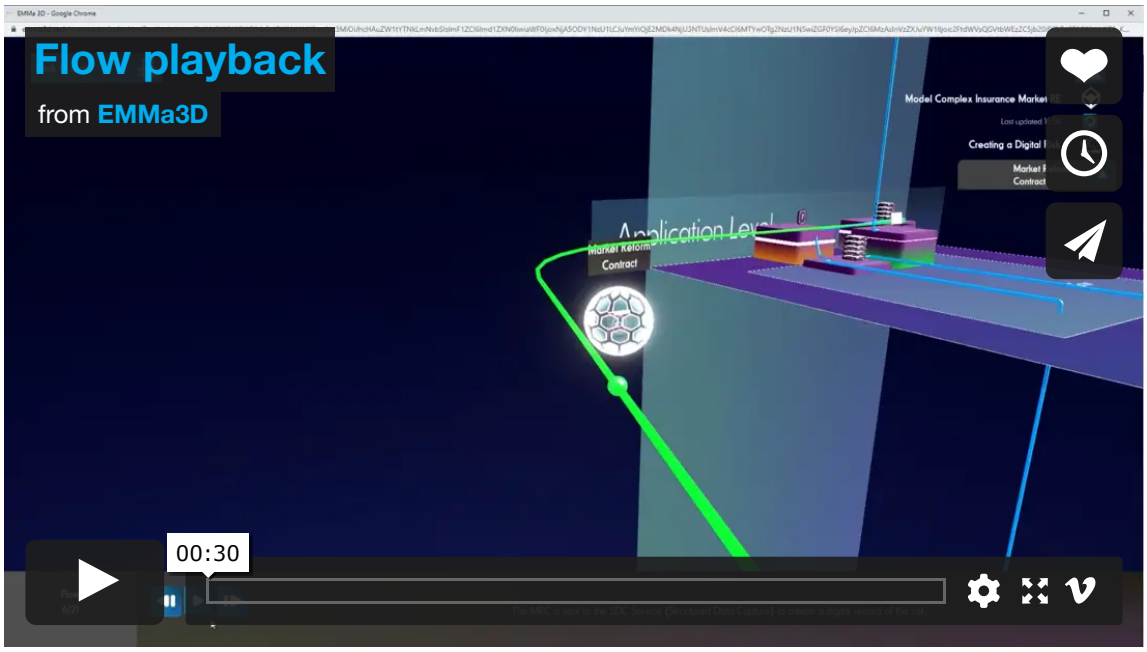
This allows to easily rotate and change the camera angle of the model, not only on the overview but also on a flow playback preview. Click on any of the balls next to the cube to change.



Flow Playback

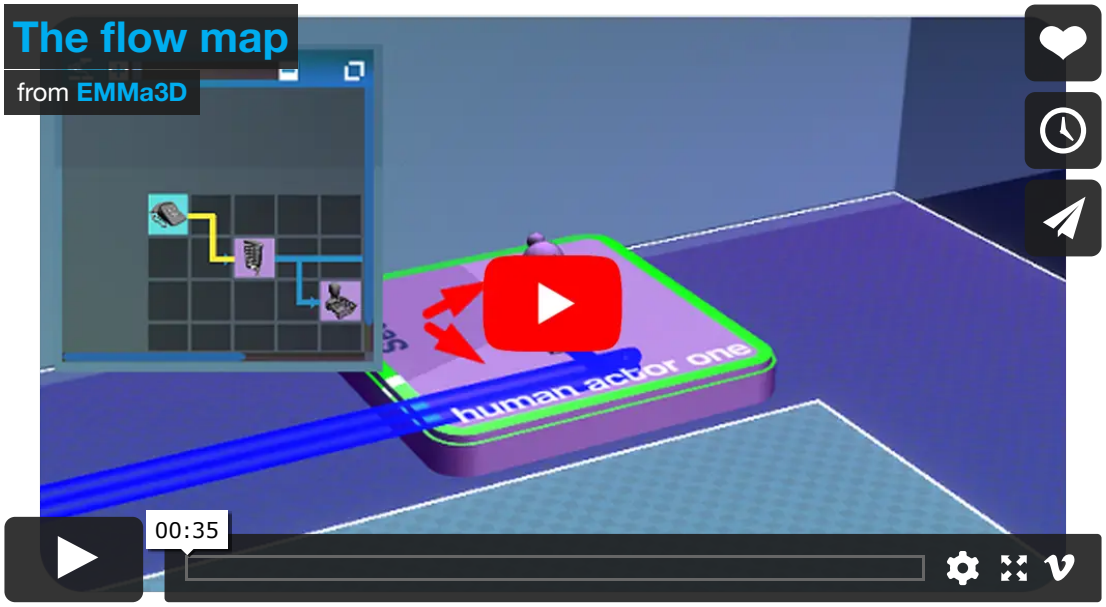
A **Flow** is an automated fly through of a process previously created on the Map Maker that tells a story. During a Flow you can go to the previous or next step or to pause at at any moment to understand what is going on.

You can **click on any element** to have a better understanding on how it is related to the whole project: s, actor type, client ID, etc. and then you can resume playback when you are ready to go. 👇



~~A flow preview: The Flow Map~~ 🔴

The **Flow Map** is a diagram that reveals all the actors within a flow showing the progression and how they lead to one another through paths. It moves as the flow flythrough occurs, and as a user, it is possible to navigate inside and click on any actor to go through that specific step within the flow. Watch the video below to learn more 👇

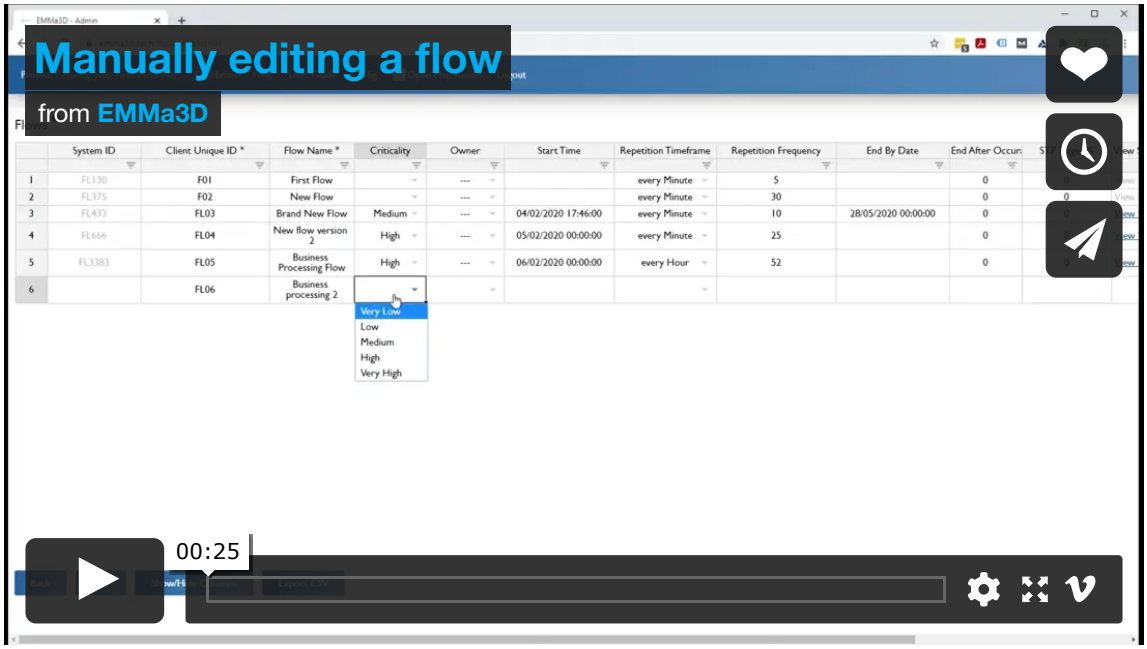


Flows in depth

Beyond a simple flow, there are much more settings susceptible to be customised that provide a wide range of information when visualising its representation inside the entire system on the Map Reader.

Manually editing a flow

Apart from a name and client unique ID, and back on the **Map Maker**, there are some other customisable fields that contribute to identify how many times a flow occurs, when it starts and finishes, if there is a repetition, etc. Have a look at them on the video below 👇 or see a description in this section above.

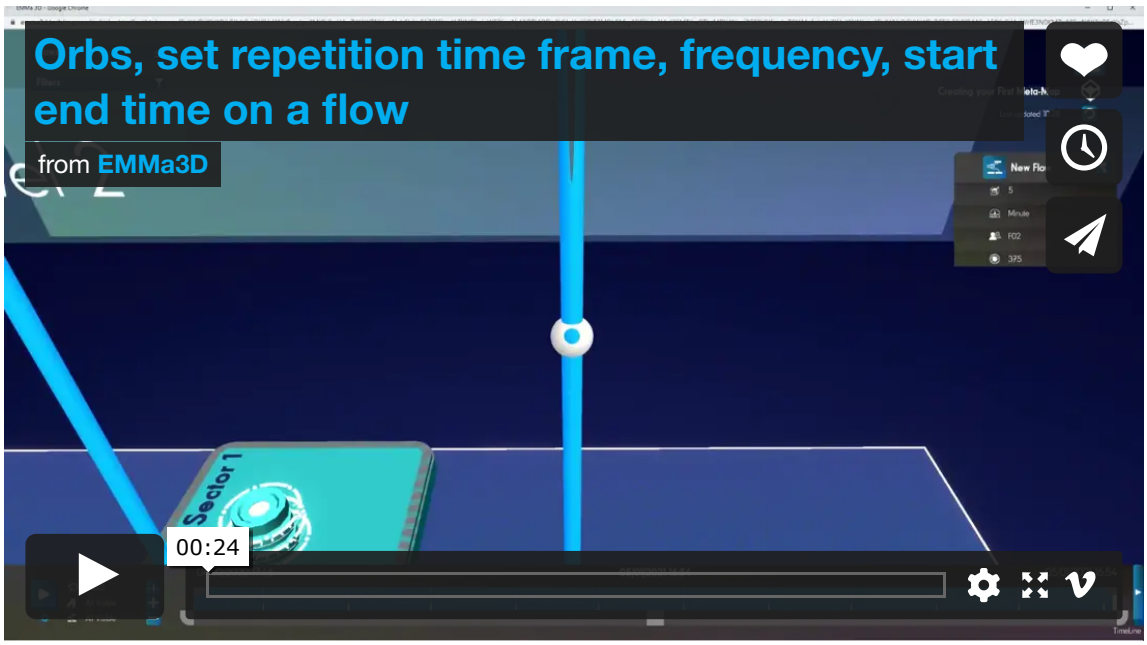


Orbs, Set repetition time frame, frequency, and start/end date on a flow

After setting flows for your project, you can set the frequency in which movement produces within paths. The visual representation of this within the Map Reader are **Orbs**.

Setting the right values will allow a proper visualisation so a flow represents correctly in each time frame and the information (and frequency) they send.

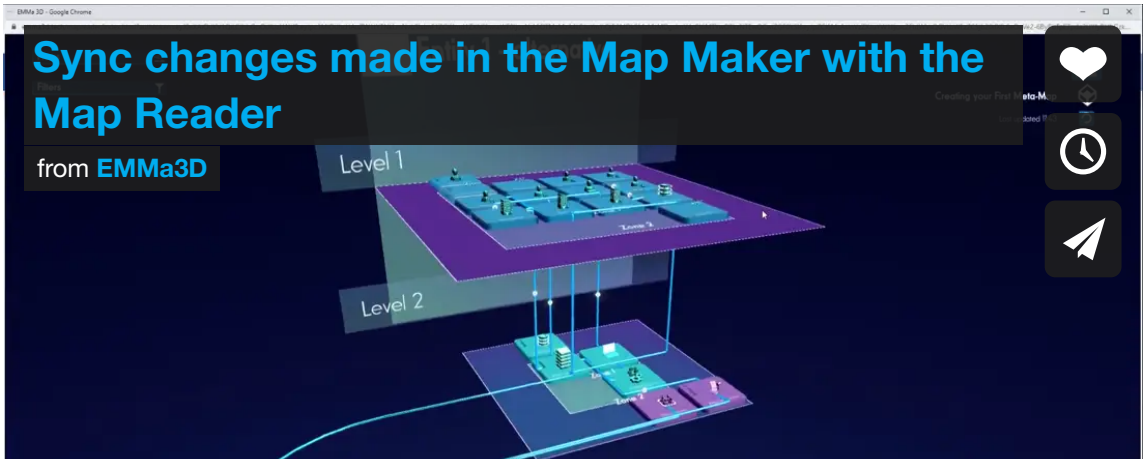
In the same way that happens with actors, you can **extract information by clicking on Orbs**. This shows the flow they belong to, repetition timeframe, flow ID, etc. 👇

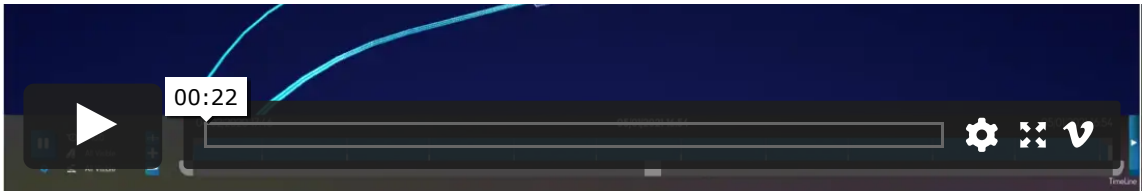


Sync changes made in the Map Maker with the Map Reader

You can **make changes on a project** within the **Map Maker** with your EMMa3D account and **sync changes** in nearly real-time by clicking on the Refresh button on the **Map Reader**.

Every time there is a change on the Map Maker such as: new actor added, entity name changed, repetition time-frame modified in a flow, etc., the Map Reader needs to be refreshed so it represents the up to date information of a meta-map. More details below 👇





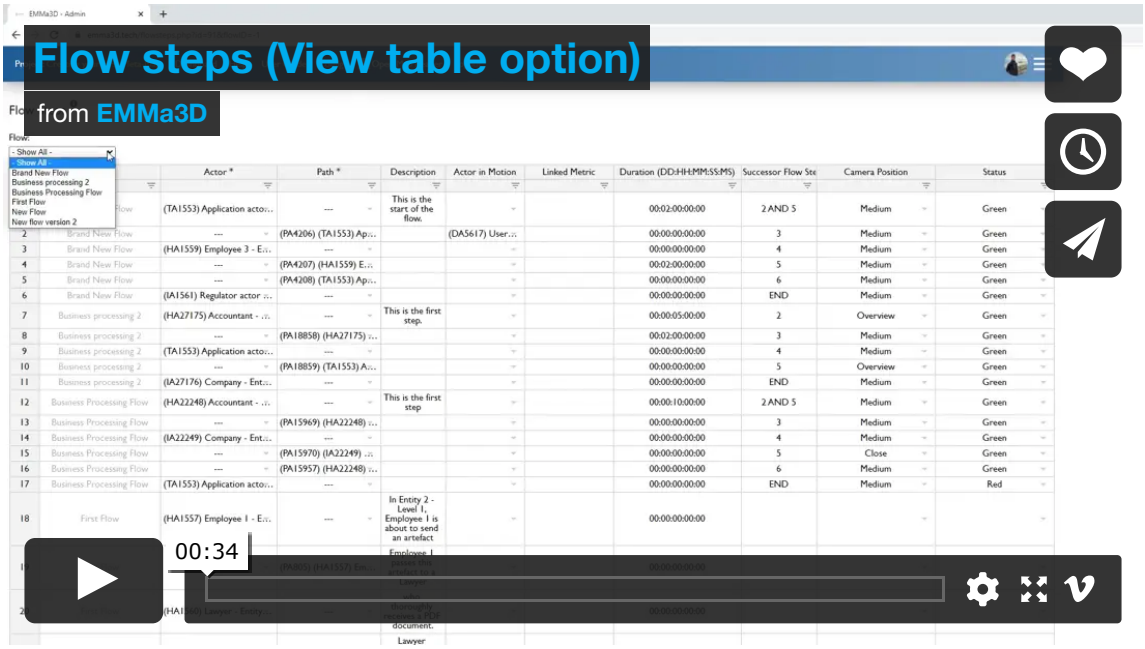
Flow Steps (View Table Option)

When creating a **Flow**, you can choose how to populate it. As we've seen above, it can be made with the Swim Lane Creator and through the **Flow Steps table.**

The View Table / Flow Steps page allows you to create or modify actors and elements in a Flow.

After you have chosen this, the Swim Lane option in the Flows page will be greyed out.

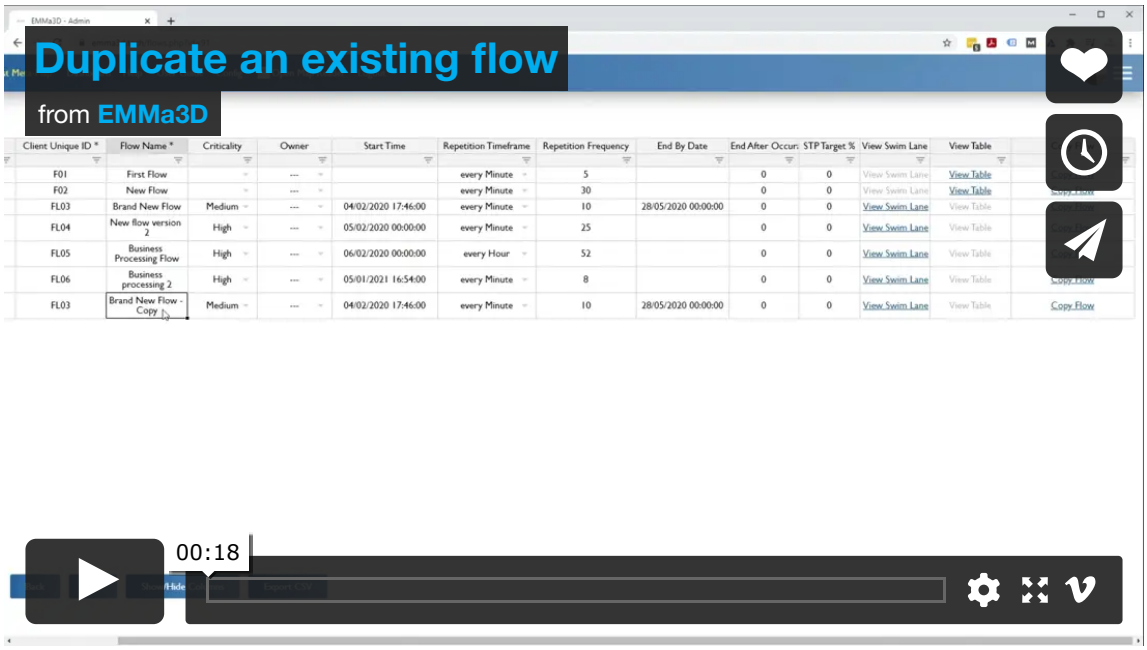
To access Flow Steps, simply click the given option in the Dashboard and then select the Flow you want to edit in the top left dropdown. See this video to learn more 👇



Duplicate an existing flow

An existing flow can be copied to make variations or tests on it. On the Dashboard Flows menu, you can access the list of already created flows or create new ones.

If there are already existing flows, scroll to the right hand side and click on the **Copy Flow** link in the row of the desired flow. A new copy will pop in below automatically. 👇



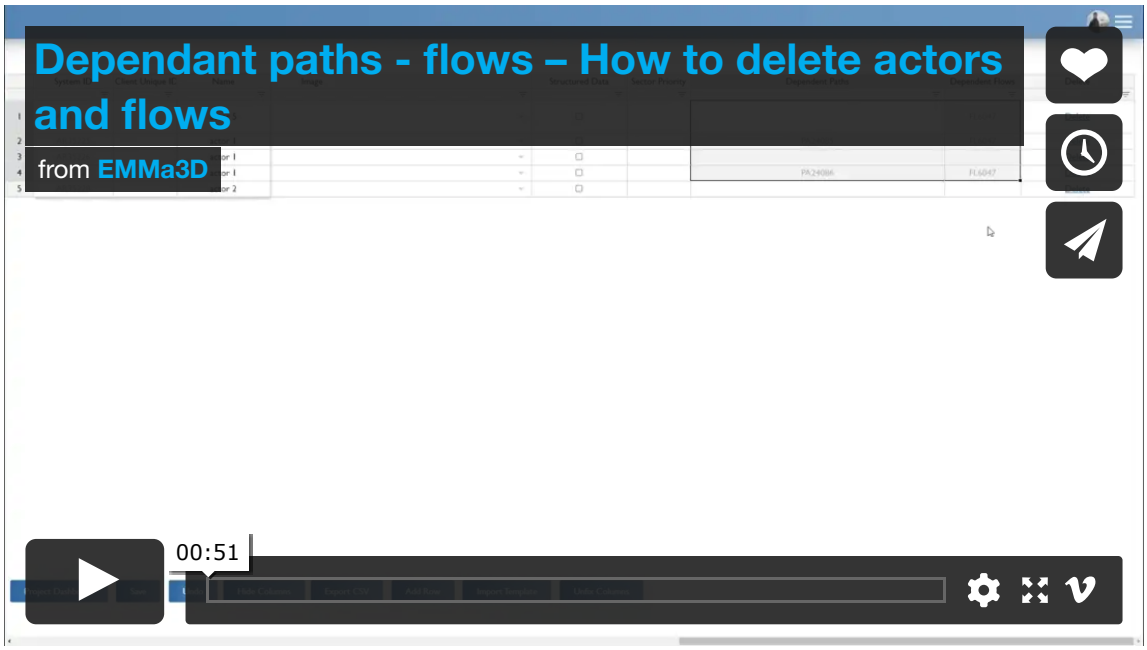
Dependent paths / flows: How to delete actors and flows

Now it is easier than ever to hint **what elements are connected with each other** thanks to the dependant columns added to both the Actors and Paths tables.

In case you want to delete an actor or a path, you might not be able to

do it in the first place if they are linked to other elements. For **Actors**, we see both dependant paths and flows. To delete an actor with both paths and flows attached, the correct order is to: 1) delete the flows it is connected to; 2) delete its path connections. Once this is done, come back to the Actors' table and delete the desired actor.

For **Paths,** it is very similar. In this case, there is only one dependant column that showcases the Flows these paths are connected to. As before, to delete a path with flows linked, delete its subordinate flow first, and then go back to the paths table to finally delete the desired path.



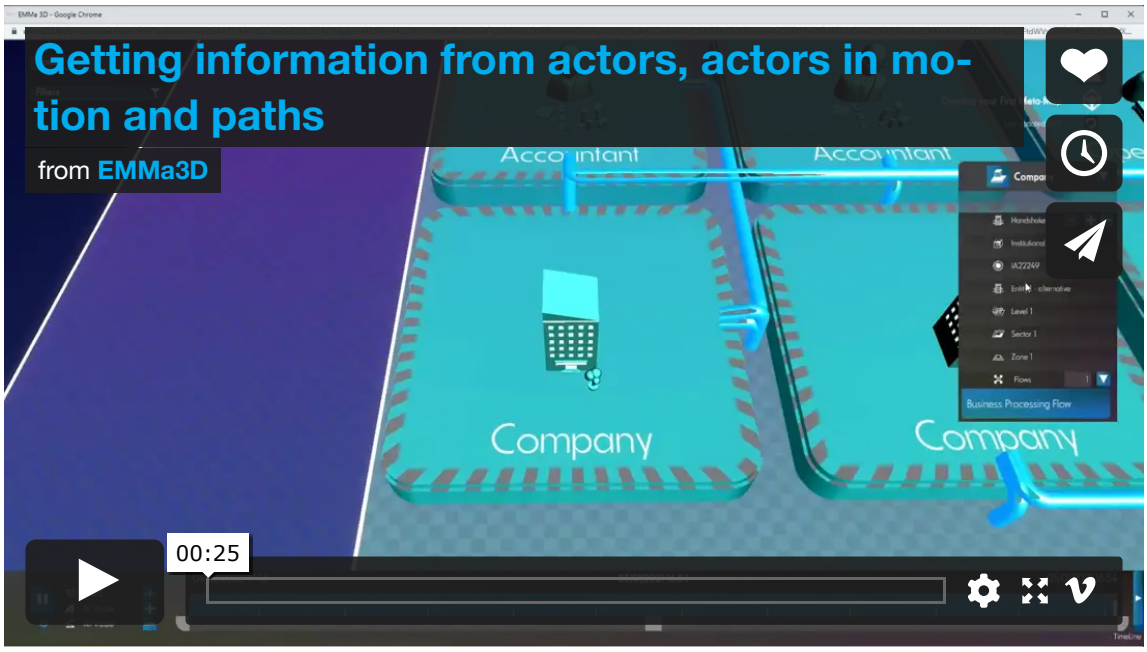
Functions of an EMMa3D model

The following features expand the scope of the EMMa3D tooling allowing a thorough customisation and giving many layers of visualisation.

Getting information from actors, actors in motion (AiM), and paths

To know more about an element on the **Map Reader**, simply click on it to reveal a text box showing you metadata such as status, elements taking part in it, where it belongs, etc. This applies for actors, paths and Actors in Motion.

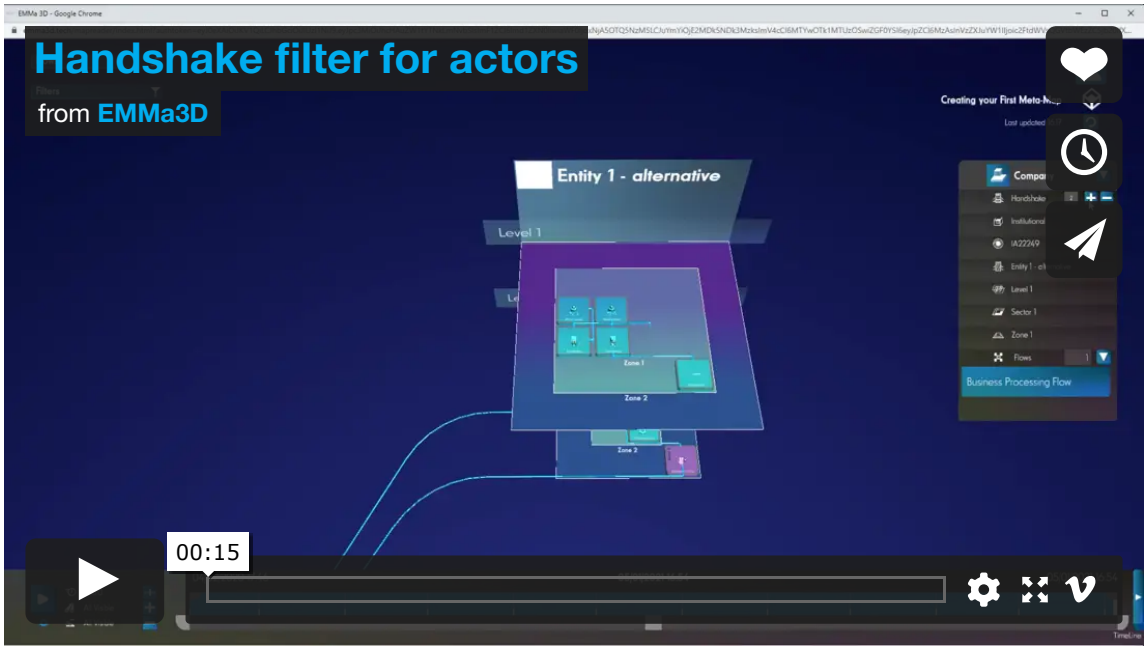
An **image preview** is available for actors and it is possible to rotate them inside the metadata box. For actors with an image assigned, you can enlarge this as well. See the following video for more details 👇



Handshake filter for actors

Handshake is a way of filtering by **connection levels of a selected actor**. To enable this, navigate to an actor you want to explore on the Map Reader and left click to obtain its info. The first option in the

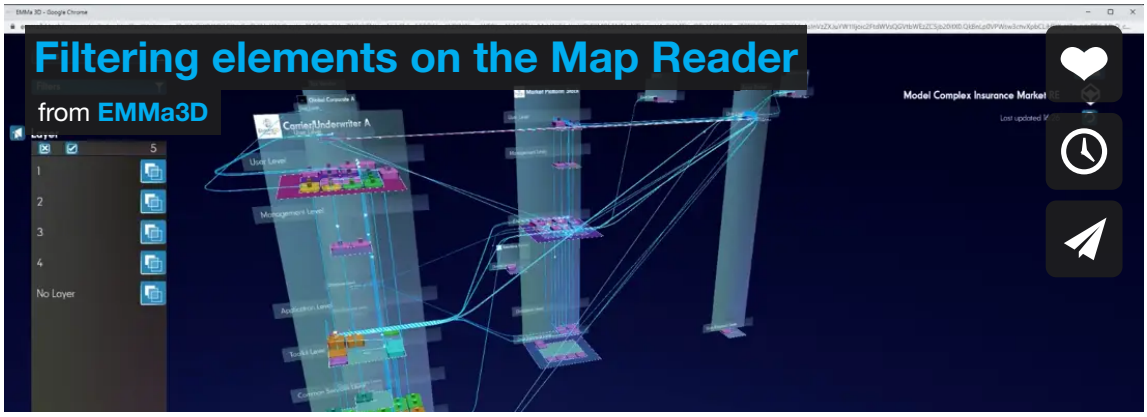
metadata box is Handshake. Click + or – to filter through more or less connection levels to that actor. 👇

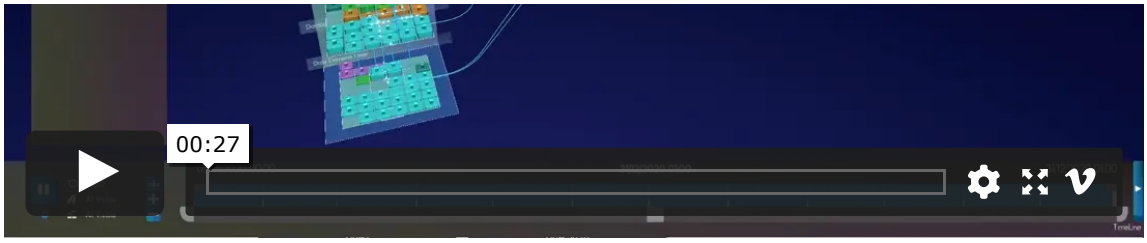


Filtering elements on the Map Reader

You can filter in and out any combination of data within the **Map Reader**. This can help visualise certain elements faster by making some disappear or by showing the ones you need on the right moment.

The **Filters menu** on the Map Reader gives the ability to filter any element you have in your meta-map. From levels, actors by type, class, path type, layers, etc. Discover more 👇



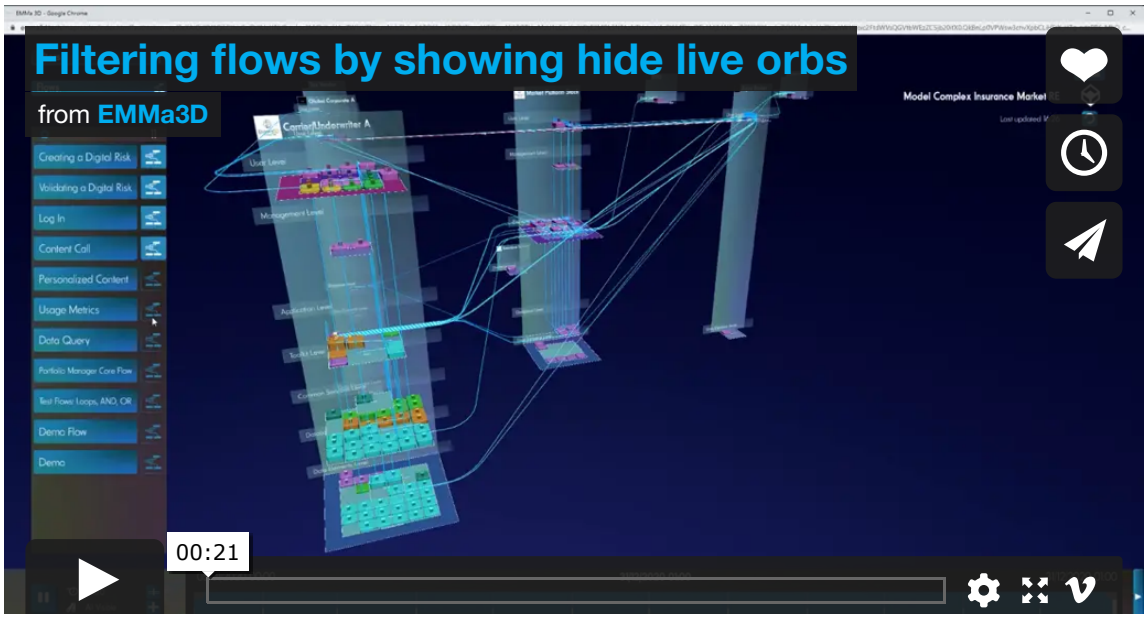


Filtering flows by showing/hiding live orbs

On the **Map Reader** you can filter flows by showing or hiding the **live orbs**, meaning a certain type of flows depending of their frequency can be filtered in/out if needed.

To do this, open the **Flows menu** on the top left hand side on the Map Reader. You will see a **diagram button** on the right of each of them. When you disable one, the orbs linked to this flow will not appear on your meta-map when the timeline **playback is enabled**. This feature is useful when you intent to explore only a series of selected flows and how they are moving data across the meta-map.

Notice that orbs will only travel through paths when the timeline is running (**playback button**), and the cadence will depend exclusively on the **flow frequency** assigned on the Map Maker. Have a look at this example 👇



Flow Frequency Filter

A user can determine which flows can show as active in the Map Reader. This is done by setting different values in the Flow **Frequency Filter** and shows the **Repetition Time-frame** for flows which were previously within the **Map Maker Flows section**.

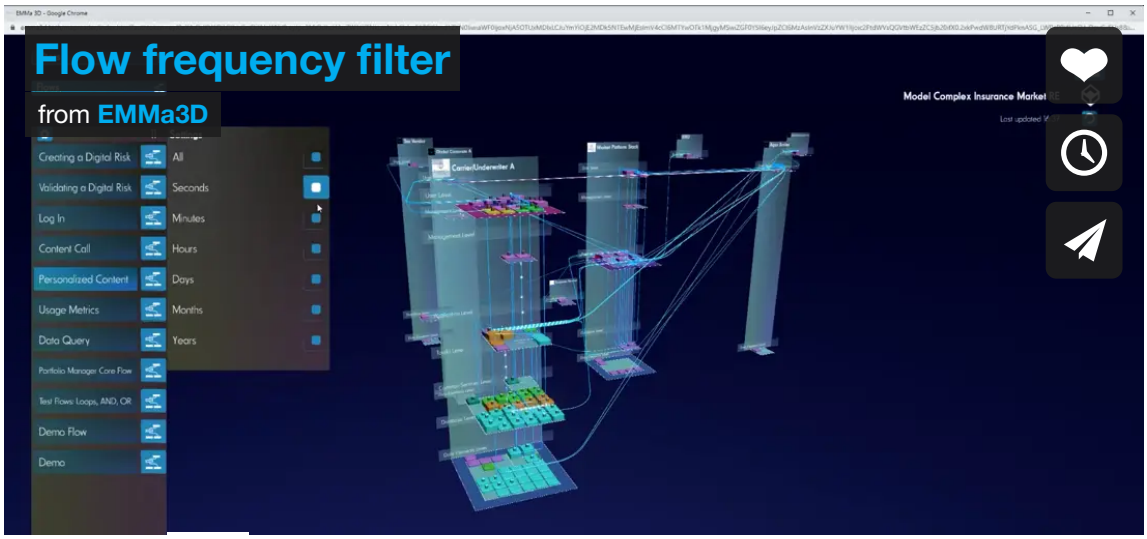
This can be tweaked clicking on the **Gear button** inside the **Flows menu** in the **Map Reader**.

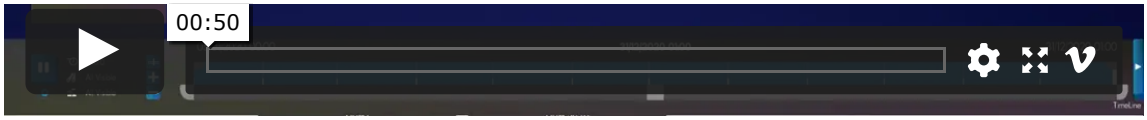
As a different value is set, the corresponding flows matching that value will stay visible or active. If **Seconds** is selected, it means the flows with this value rule over Minutes, Hours or anything else and these will remain unselected or not visible. When the filter is set to **All**, flow playback is in real time.

When Seconds option is selected, it means that one minute of **playback time** equals one second in **real time**. This is useful to slow down time in cases tons of processes are happening within a Flow.

The higher the real-time value is, the fastest the playback speeds are.

In a nutshell, users can determine which flows can show as active. Be it one that occurs every hour, week, month, etc. Learn how to do it 👇



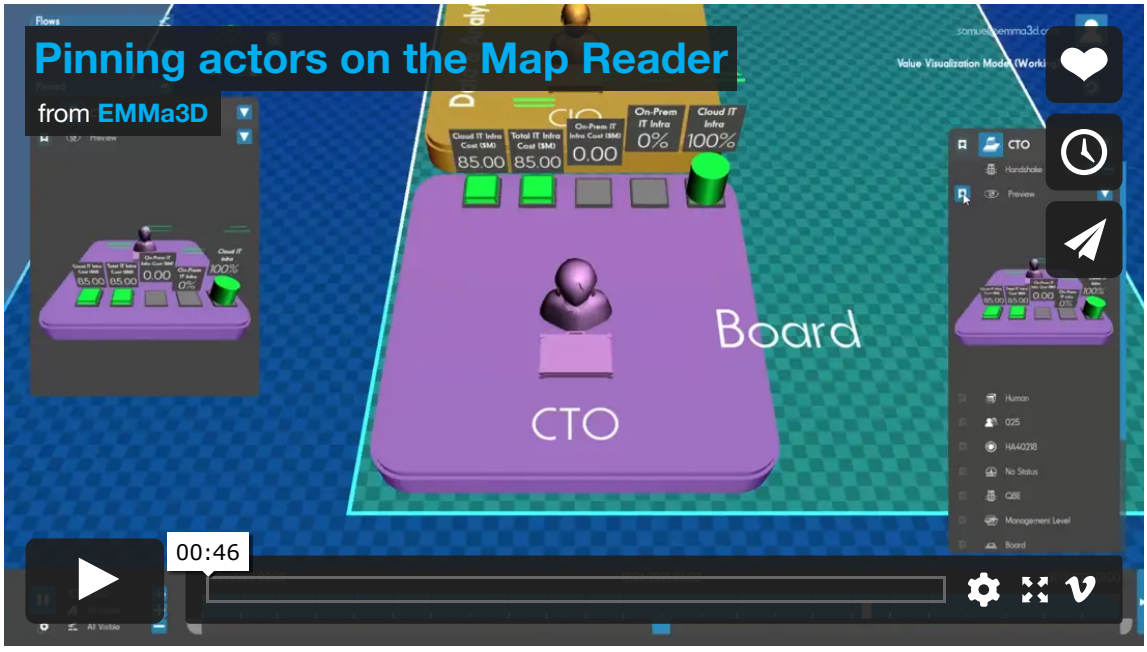


Pinning actors on the Map Reader

It is now possible to pin actors over the left-hand side on the Map Reader. This showcases a preview of the actor and its metrics (if any).

The way to do it is by clicking on any actor, which will open its metadata box on the right-hand side. Then, you can pin/unpin individually any element/feature of the actor by clicking on the star button on the left. These will appear on the **Pinned** drop-down on the top left of the screen.

The maximum number of pinned actors previews you can see on the drop-down at the same time is three. This feature is game-changer in EMMa, as it allows the user to clearly see activity that happens across the rest of the model as you move the time slider while the elements remain fixed, and can show what is happening to the actor(s) in question and their metrics.

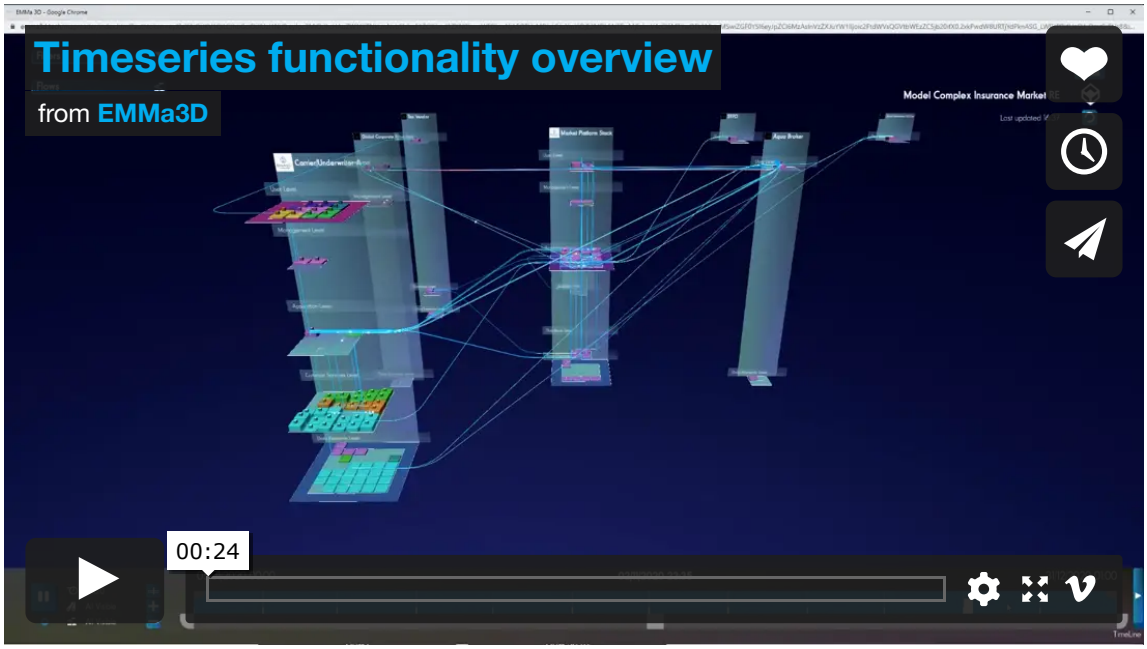


Time-series functionality overview

One of the key features of EMMa3D is the ability to explore and see how a Meta-Map or process **changes overtime**. A **timeline** on the bottom of the Map Reader allows to pass through the project stages on the selected point in time.

To be able to have a proper timeline, make sure you have set a **Project Start Date on the Map Maker**. This will be the beginning of your timeline. another way to add continuity to the timeline is to assign **Start Time** and **End Time** to elements such as **Actors, paths or metrics**.

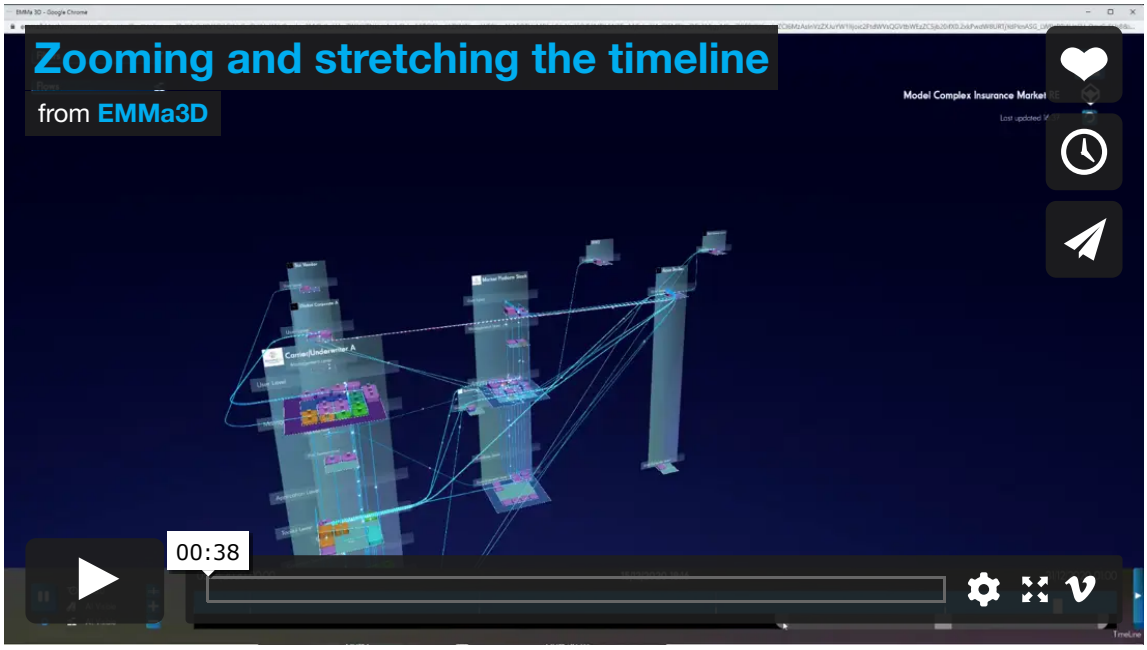
Once this is all set, you will be able to move through the timeline and see when the previously configured elements appear or disappear as you move across. Discover how it works on this video 👇



Zooming and stretching the timeline

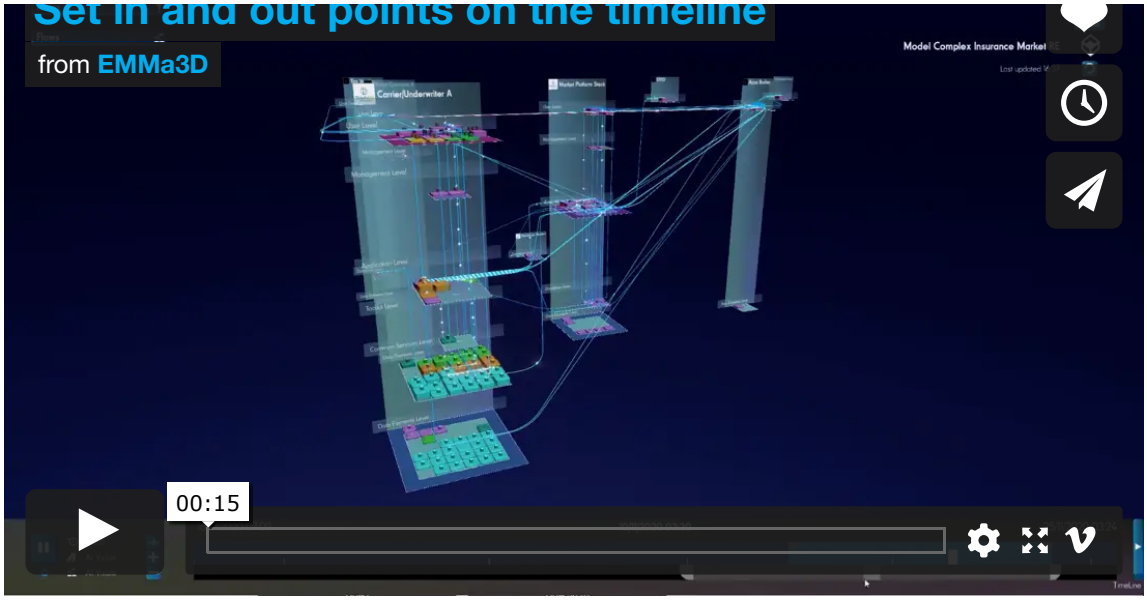
For a superior level of detail within the meta-map timeline and to see how the whole project has changed overtime in depth, it is possible to zoom in and out thanks to the **grey zoom bar below the timeline**. This permits to **explore a specific period within the timeline** by stretching one of the sides of the grey bar.

If this is done towards the central square, the **timeline zooms** in whereas if you stretch the grey bar to the opposite direction, you can see more of the timeline at once as it is zoomed out. This can also be achieved by clicking on the **buttons + and –** on the left hand side of the timeline. The button above + and – centers the timeline play-head. Find out more detail in this video 👇



Set In and Out points on the timeline

To **explore** and visualise what is happening over **a very short time-frame** it is possible to use **in and out points** with the hands located on both sides of the timeline. This can be **dragged and dropped** to conform a specific moment in the timeline and play through it as seen in the next video 👇

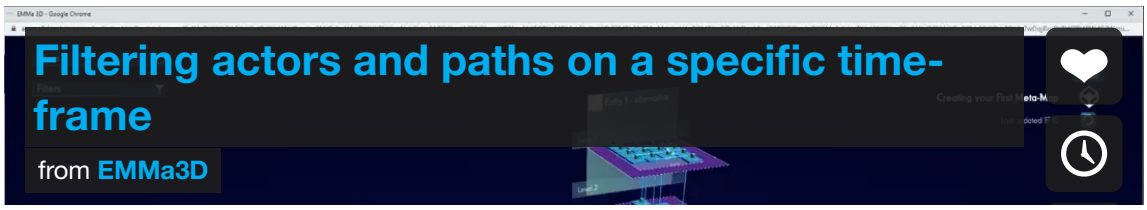


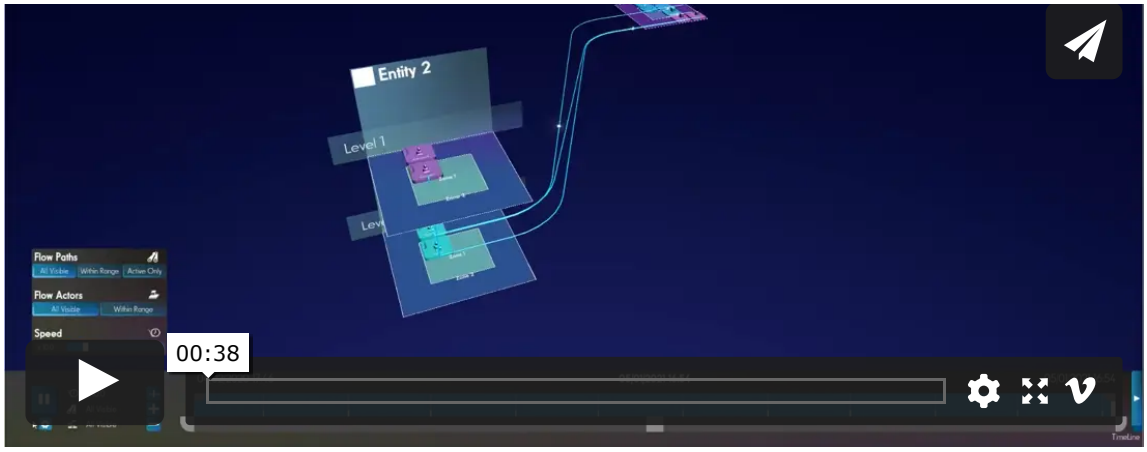
Filtering actors and paths on a specific time-frame

Filtering is also a thing when it comes to the **timeline**. In addition to the rest of the filtering options, it is possible to filter out the non-active elements such as actors and paths on a Meta-Map during a specific time-frame. A menu to trigger this function is located on the bottom left side of the Map Reader playback button. **Press the Gear** below to access. 👇

- **Actors** can be set to **All visible** or **Within Range**, meaning they are always visible or only visible within the chosen time frame.

- The same logic applies for **Flows**. **Within Range** shows the paths that are active at some point within the chosen playback time frame. In the **Active Only** option, paths are visible only when enabling a flow. As soon as the flow stops, it disappears.





Status changes over time (actors, paths, metrics and entity-level platforms)

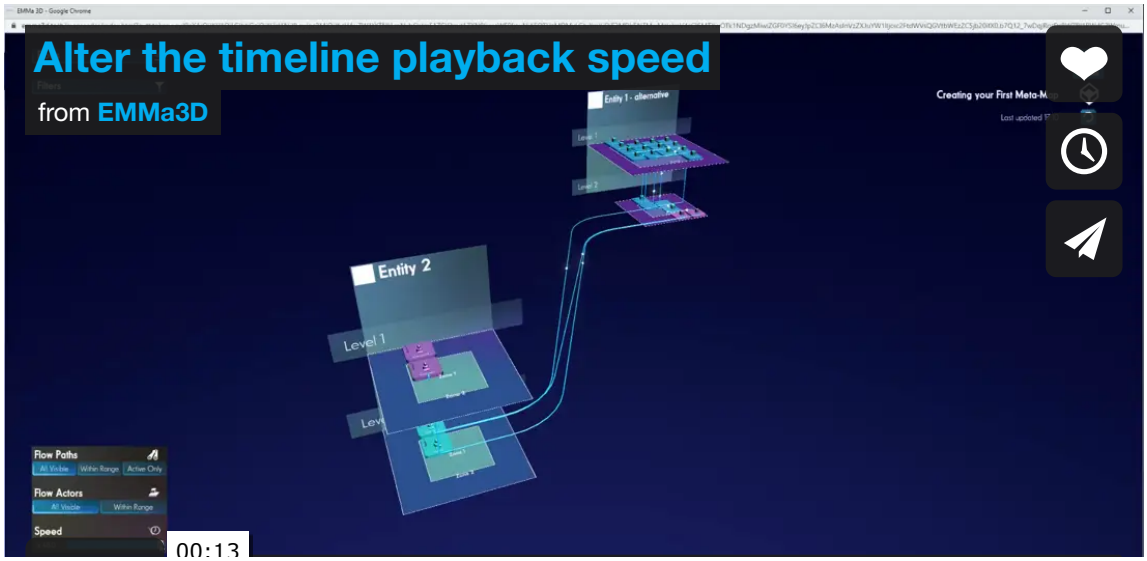
As in any complex system, in EMMa3D, you can set different elements to change over time. The status of Actors, paths and metrics can be modified if needed.

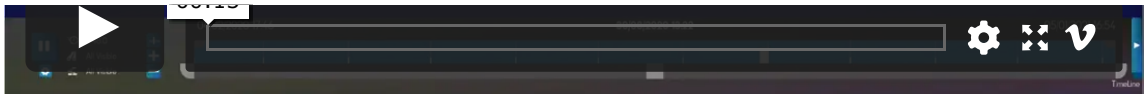
- You can set a current status (colour) in the Actors table. This change is assigned automatically to the project start date for actors. To add more changes, go to the **Actor Status Changes** section. Here you can select the actor to whom you want to apply variations. Set the actor, its status, and the date this will come into force. Once saved, the Map Reader will reflect this change.
- The same thing applies to **paths**. The current status can be assigned on the Paths table or add several status changes on the **Paths Status Changes** section.
- As seen on **Metrics**, once you add value to an actor, you can see, edit this, or add new changes over time to that metric on the **Metric Changes** section. You can access it via the Metrics table or in the Project Dashboard. If this section does not appear, this means the current project has no metrics on it.
- As seen on actors and paths, **Entity-level platforms** function

following the same pattern. Create one platform, and on the **Platform Statuses** section, you can add more subsequent changes. 👇

Alter the timeline playback speed

In the **same area** where paths and actors can be filtered according to a specific time-frame in the Map Reader, a user can change the **playback speed** of all the elements within a Meta-map. Default speed is set at x10 👇



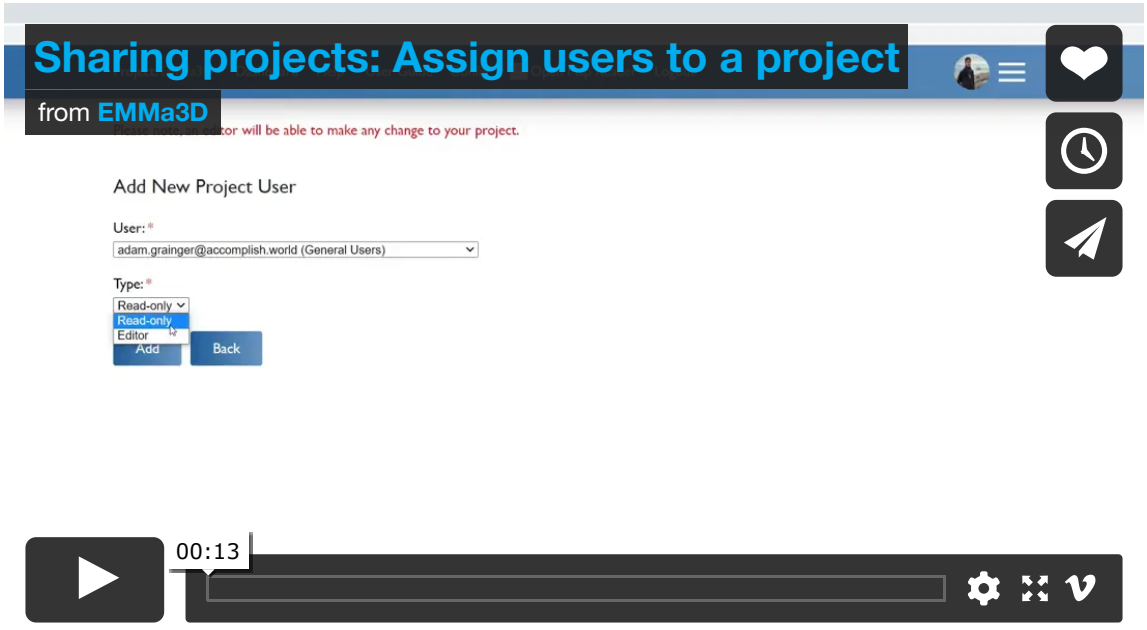


Map Maker Collaboration (Sharing projects and messaging) 🟠

There are different ways a user can collaborate with others within an EMMa3D account:

- **Share a Project**: a user can send invitations to other EMMa users so they can have access to the project they are sharing. There are two types of permissions that can be set: **read-only** and **edit permissions**.
  The default **Client Group** for a new user is “General users”, in which users are given **freemium permission**. Sharing a project among users on the General Users group will only show super users. This is by design in order to prevent seeing a list of all users on EMMa.

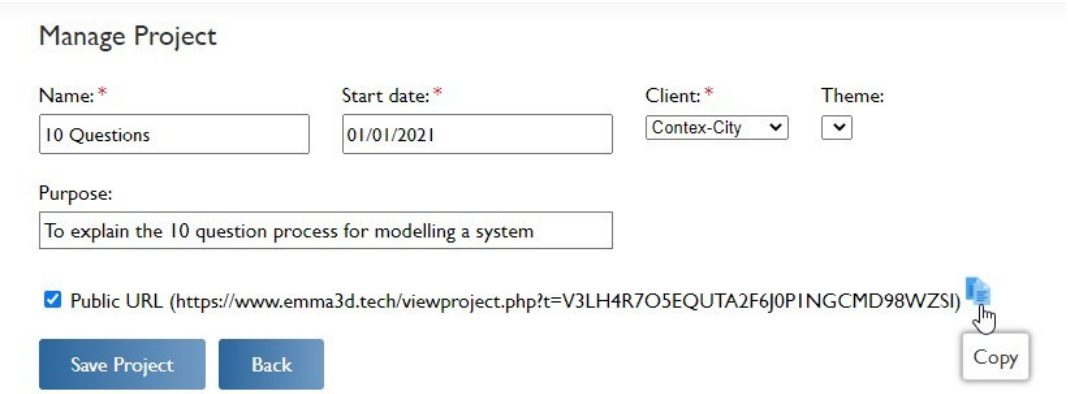
See the following video 👇



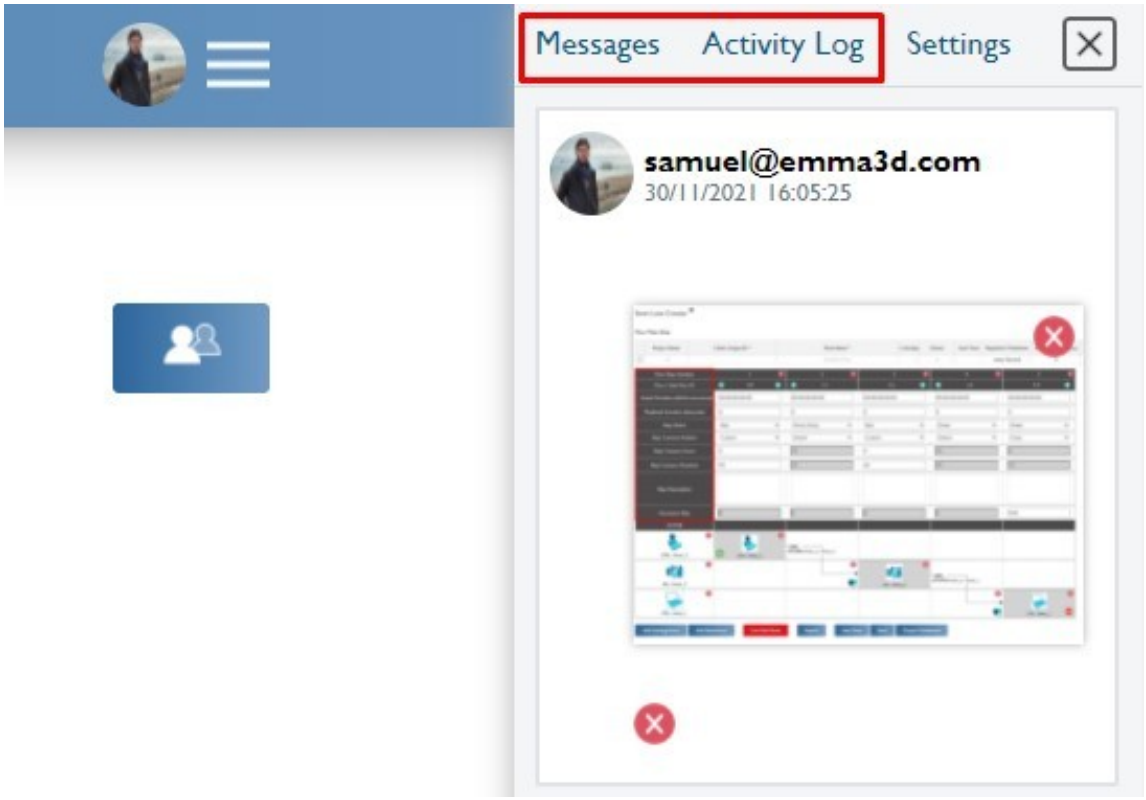
✓ To share a project with other users via the Project Users menu, all users have to be in the same Client Group, which needs to be different from General Users. Client groups can be added on “Config – Client Groups” by a Super User.

✓ When using the Map Reader and swapping projects, shared projects will appear at the bottom of the project list.

- **Project Public URL**: this option is especially designed with non-EMMa3D users in mind. Anyone can see how a model looks via a Public URL, so this can be navigated in any browser. This URL can be found inside any project with a tick that makes it appear and be copied.



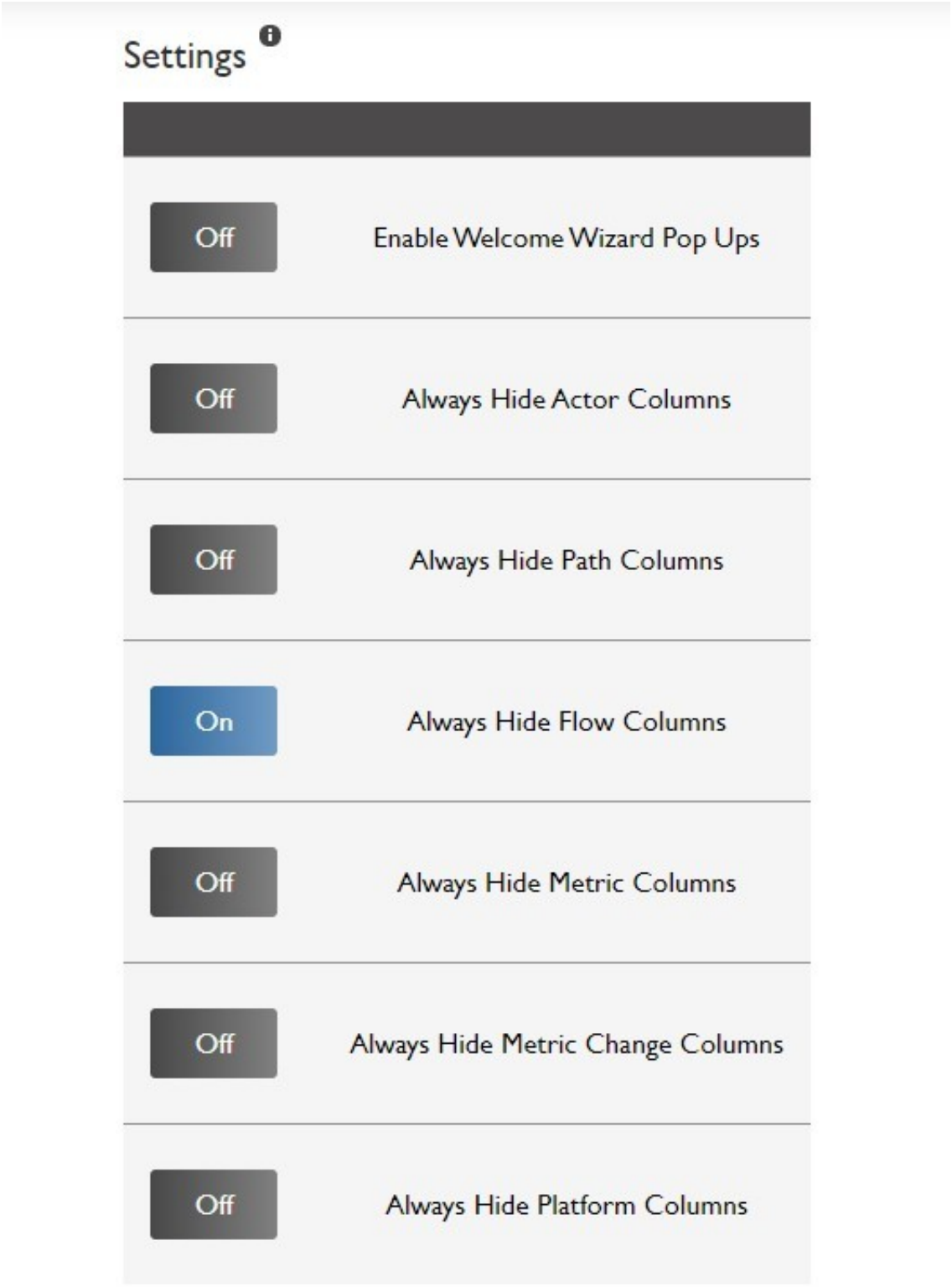
- **Messages and Activity Log**: a user can communicate and collaborate with others using the Map Maker with **Messages chat** and seeing the latest changes on a project via the **Activity Log** on the top right corner. On the Dashboard, you only have access to the General Activity Log. It is when you look into a project when you can see the messages history.



Map Maker Settings 🟠

The first time you log in you can find a **Welcome Wizard** to help you understand the key mission of the Map Maker and projects. You can disable this by clicking on “Don’t show me this again”, or on the **Map Maker settings** (three white lines on the top right, next to the user profile pic), this can be turned on/off.

Another option in the Map Maker settings is the ability to **Toggle Hide Columns** on tables. This can be done in any of the tables, i.e.; Actors table, Paths table, Metrics table… When Hide Columns is enabled, you will only see the required (*) fields/columns of the table. If, within the table, this option is clicked again (disabled), the user will see all of the columns.



Map Maker Settings screen

Linking actors / Metrics

information on actors

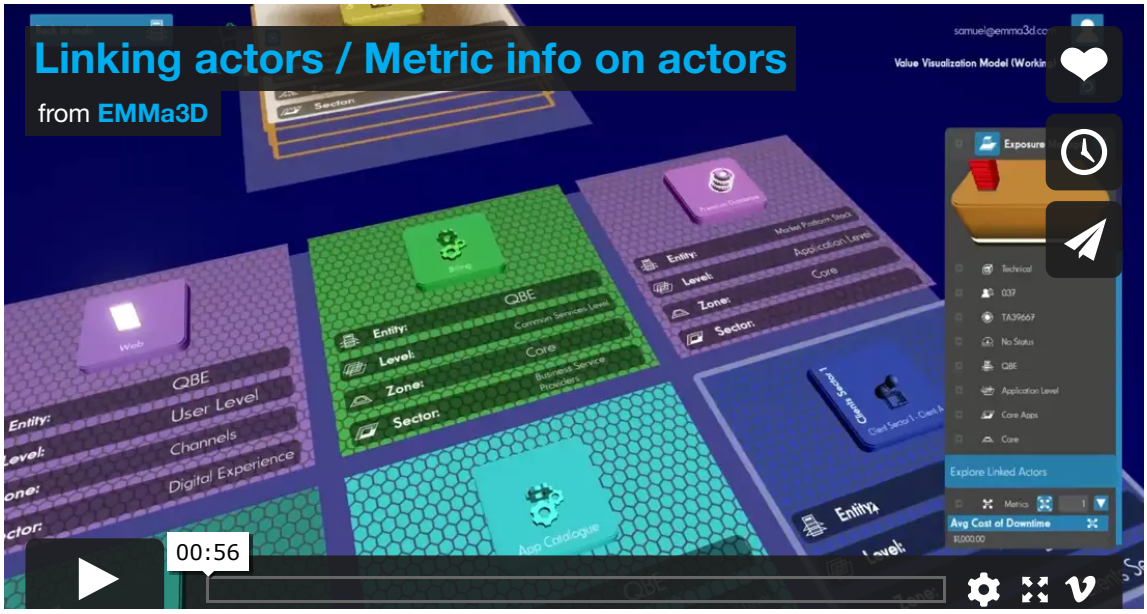
This feature provides the ability to explore how specific functions can be assigned to an actor, enabling **underlying levels of functionality** the user can explore.

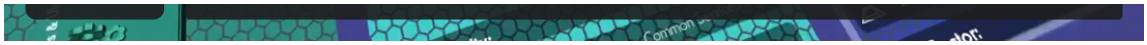
To **assign linked actors** to a main actor of choice, you must add them under the **Linked Actors** column found in the **Actors Table** or straight into the Dashboard. Then go to the **Map Reader** and find that actor, click on it and select the **Explore Linked Actors** option to navigate through it.

A linked actor can have **subordinate actors** below at the same time. When exploring the chain in the Map Reader, they will appear as a **Linked Tree** where you will be able to see the **parent actor and all the children**.

The same thing applies for **Linked Metrics**. You can add them on the **Metrics** option accessible through the Dashboard or in a column on the Actors Table.

Additionally, it is possible to **change the value of Metrics overtime** so once in the **Metrics table**, select the metric you want and scroll to the right until you see **Metric Changes** (also in the Dashboard). Here it is possible to assign different values for different points in time. 👇





Map Reader User Settings 🟠

The **User menu** on the **Map Reader** displays settings that are related to an EMMa3D account such as switching to a different project, sign out and customising some visuals of a meta-map project.

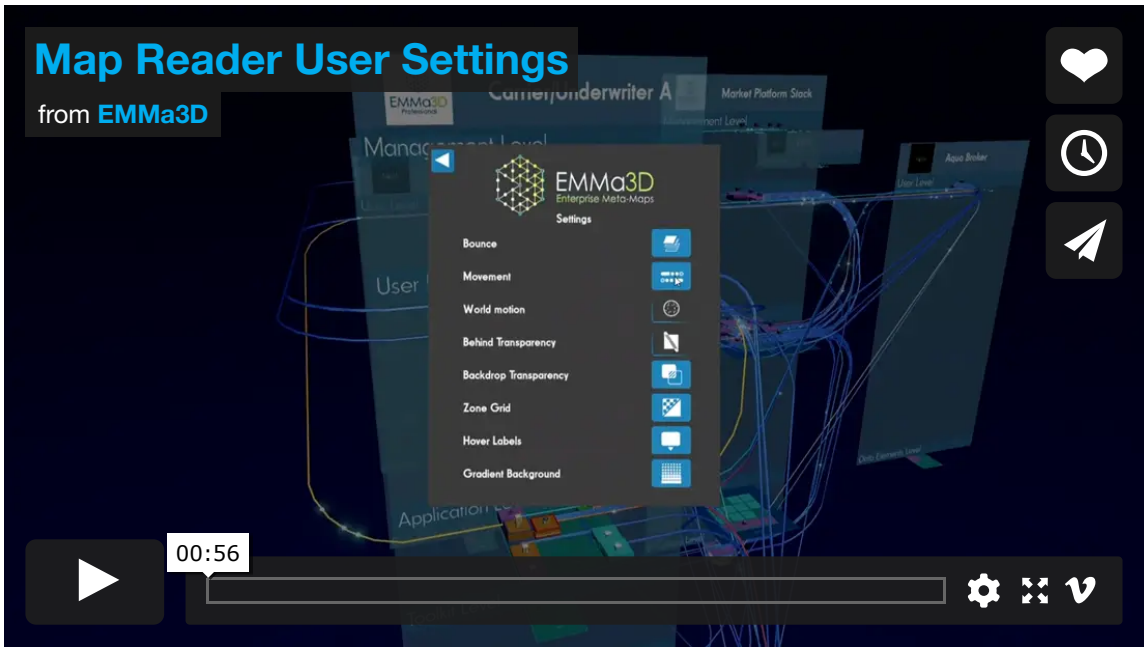
On the User menu you can find the following tweaks:

- **Projects**: swap between existing projects in your account.
- **Controls**: A quick guide on all the navigation controls to move around an EMMa3D model.

- **Settings**: you will find different options such as:
  - Bounce: when clicking on an actor within the Map Reader it will bounce as a reaction by design. This effect can be disabled here.
  - Movement: prevents or enables flow live orbs to show when the timeline playback is active.
  - World Motion: this is an automatic orbit of the model when left idle. It is deactivated by default but can be enabled and is very useful for showcasing purposes.
  - Behind Transparency: this function hides or shows paths that can be seen through levels or structures within the model.
  - Backdrop Transparency: this will switch ON/OFF transparency for the entities backdrop. When this is ON, you can see through the backdrop if there are elements behind.
  - Zone Grid: this will enable/disable the checkerboard surface by default on zones.
  - Hover Labels: when hovering over paths and entities, a pop up will appear to indicate the navigated area. This option allows to enable/disable it.
  - Gradient Background: swap between a gradient background and a solid color one.

- Hide UI: there is an option to fully hide the user interface if desired. This is enabled by pressing **Ctrl+H** on the keyboard.

Here is a glance on what can be modified on this menu. 👇



Client Admin Permissions (super users only)

There are two types of admin user permissions: **Super User**, designated for Contex-City personnel only, and **Client super user**, able to manage users and permissions for users within their client grouping. The latter has no ability to see anything outside of its client group.

- As a **Super user** you can add new clients or groups where users will be later assigned to.

  Besides, it is possible to **manage users**. Adding new ones or editing existing. Adding a new user consist of including an email address, setting their client group and what permissions they will receive. For permissions, a user can be set as another Client super user, **Map Maker user** to have the ability of editing projects,

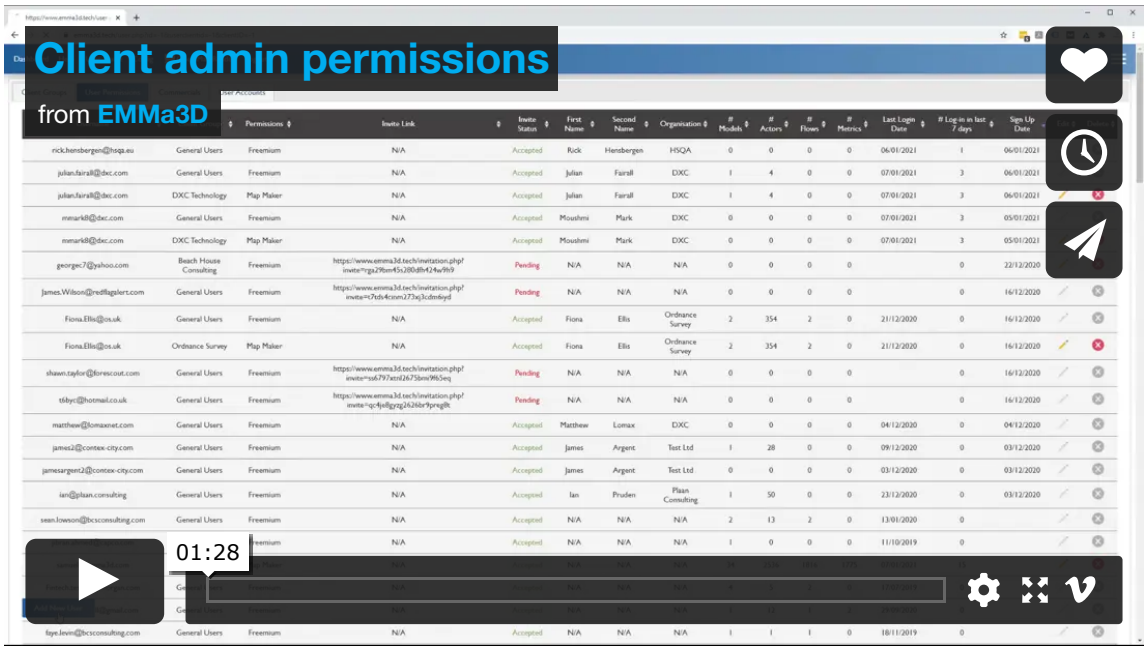
Map Reader user, which is read-only and a **Freemium** type which is limited to create 50 actors in total. When an invitation is sent, they will receive an email to sign up or sign in and accept it whether they are new or existing users.

It is possible to fully wipe a user on the **User Accounts** section and delete the desired ones. Login **reports** can be found per year as well.

A Super user is also able to **export users** or **copy projects** between different instances of the Map Maker.

- In comparison to the Super User features, **Client super user** can only manage users within the same client group they belong to. In the 'Config' section then, they will only be able to see users within the same group. In regards to **projects**, the 'Copy Project' function within the 'Config' section is disabled, and they can only share a project to users within their client group. If a user shares a project with them, they will not be able to delete or copy the project from the 'EMMa Projects' Dashboard tab.

  See the following video 👇



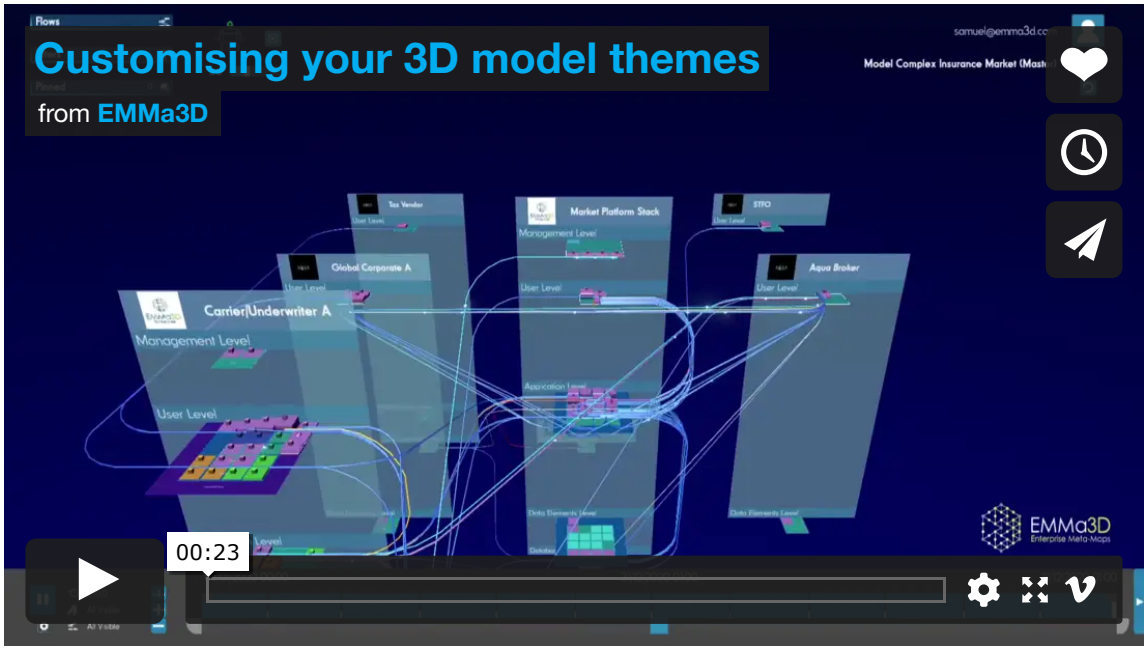
Customising your 3D model: Themes

Projects can be customised to match a brand visual design. EMMa now supports themes creation, where a user can modify the colour of multiple elements in a model, the fonts and even apply their own watermark (logo).

By default, and when creating a fresh project, you will find three themes you can choose from on the Project Dashboard Theme drop-down.

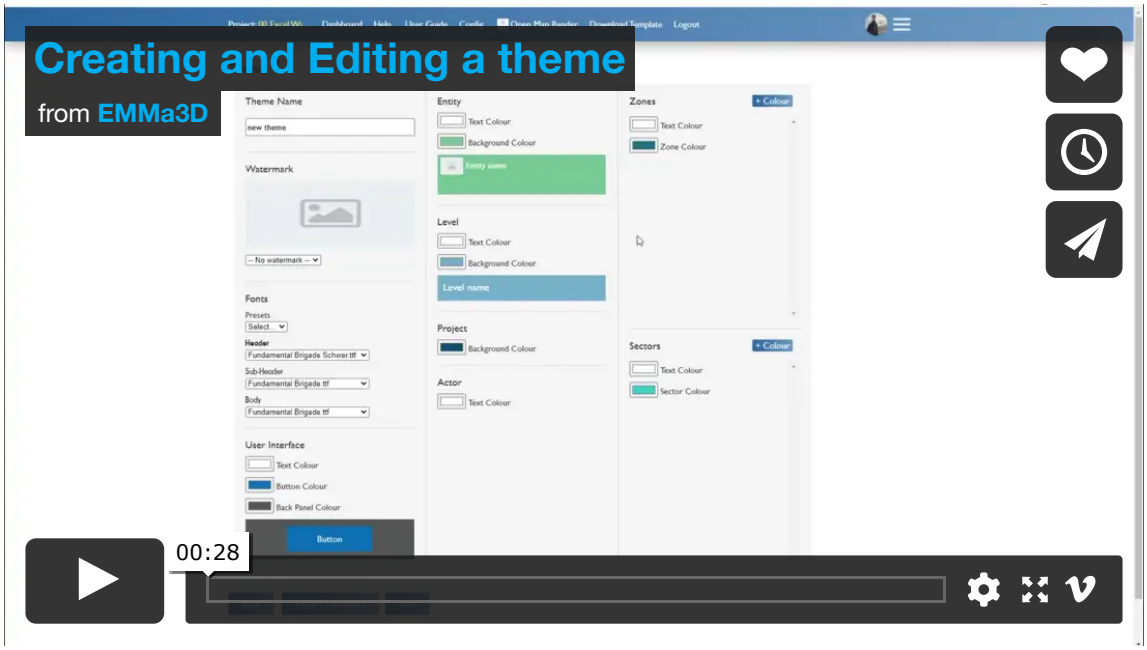
If you want to edit a theme, go to the Themes section on the Project Dashboard. Here you can:

1. Create and edit a new theme or edit the three default ones
2. Import new themes from other projects
3. Change the name and/or delete a theme



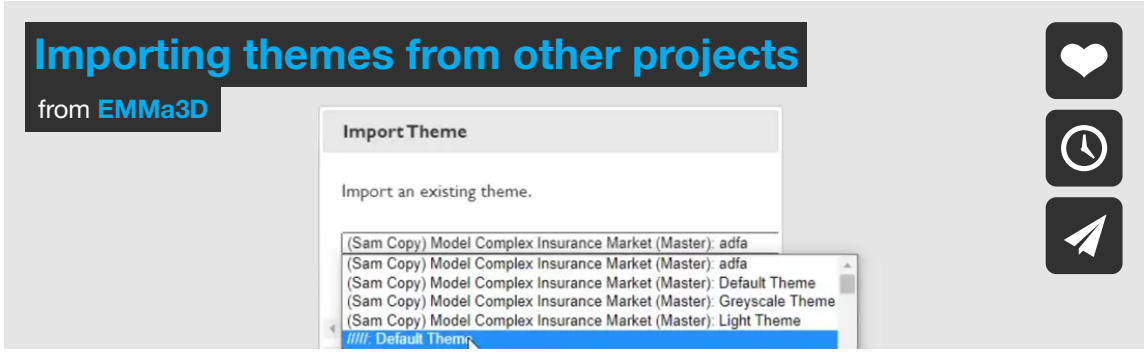
Creating and Editing a theme

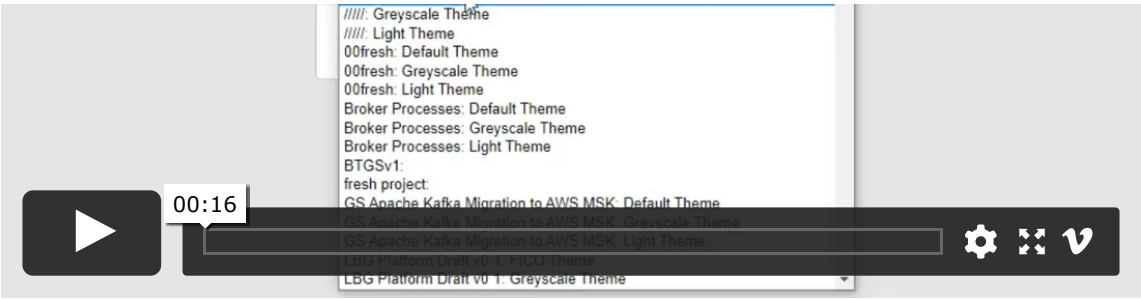
Whether if you are going to edit an existing theme or if it is new, click on the Edit link once you are on the Themes section. This will open a new page where you can edit the theme name, add a watermark (logo) to be displayed on your model, choose from the selection of available fonts or add/delete colours for the multiple elements that conform to an EMMa model, so you tailor your experience as much as you wish.



Importing themes from other projects

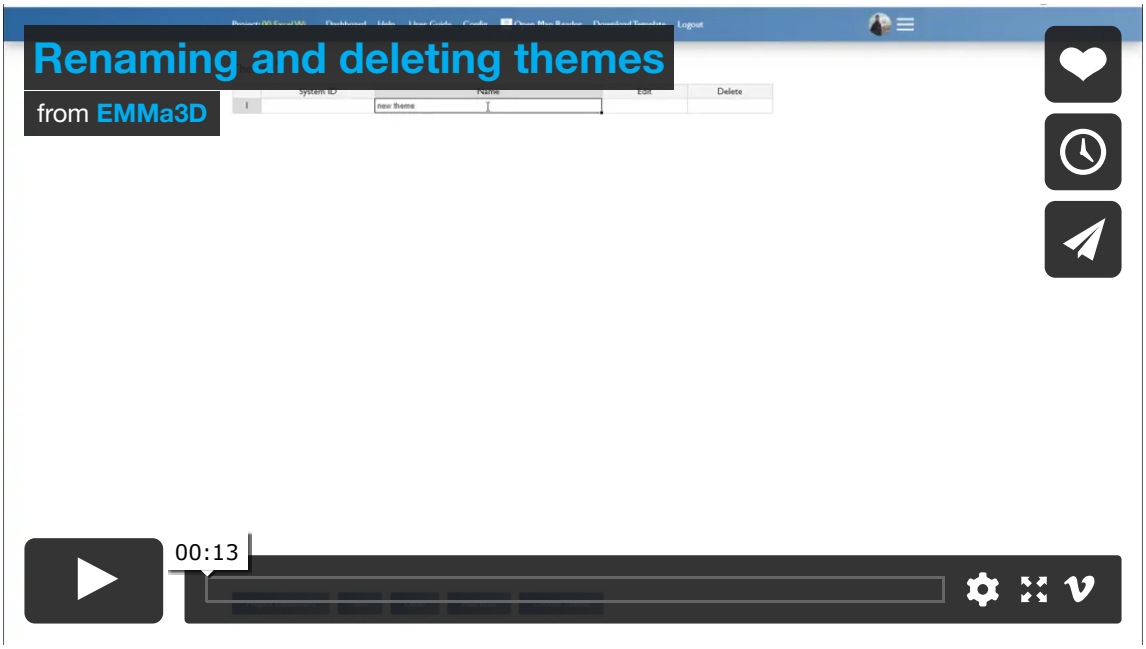
In the Themes section, there is a button called “Choose Theme” that allows you to import from a list of pre-existing themes and use them within your current project. This will only show themes that belong to the current user and super user-created themes (the three default ones).





Renaming and deleting themes

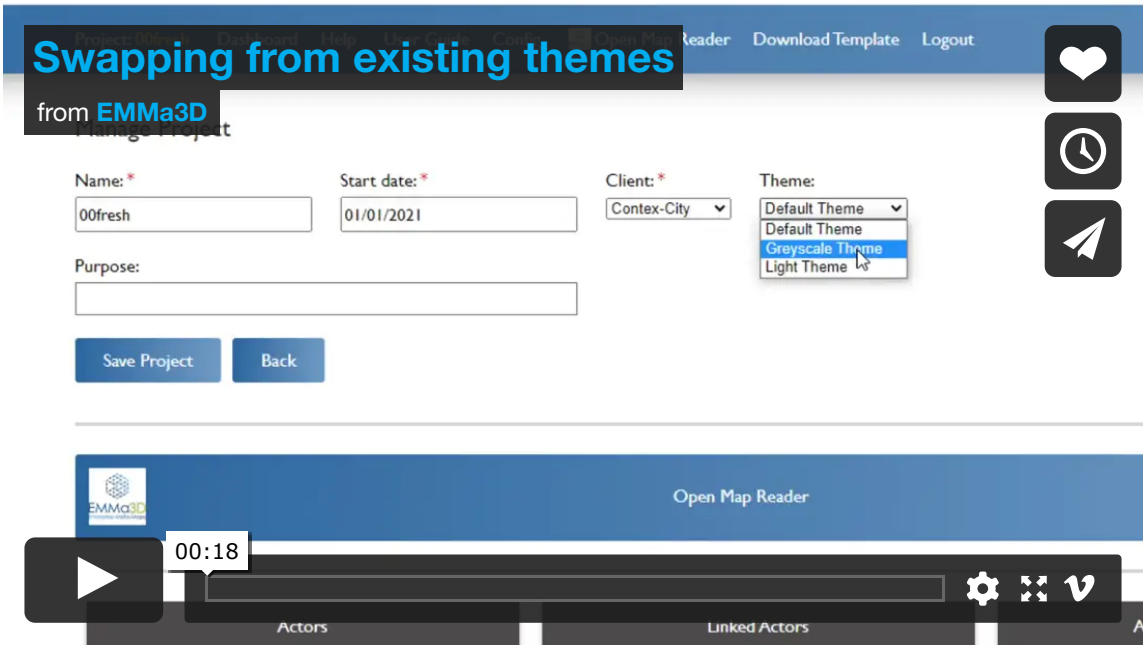
As you can do with other elements in the Map Maker, it is possible to rename a theme by double-clicking on the theme cell name. Also, you can delete one or several by clicking on the delete column.

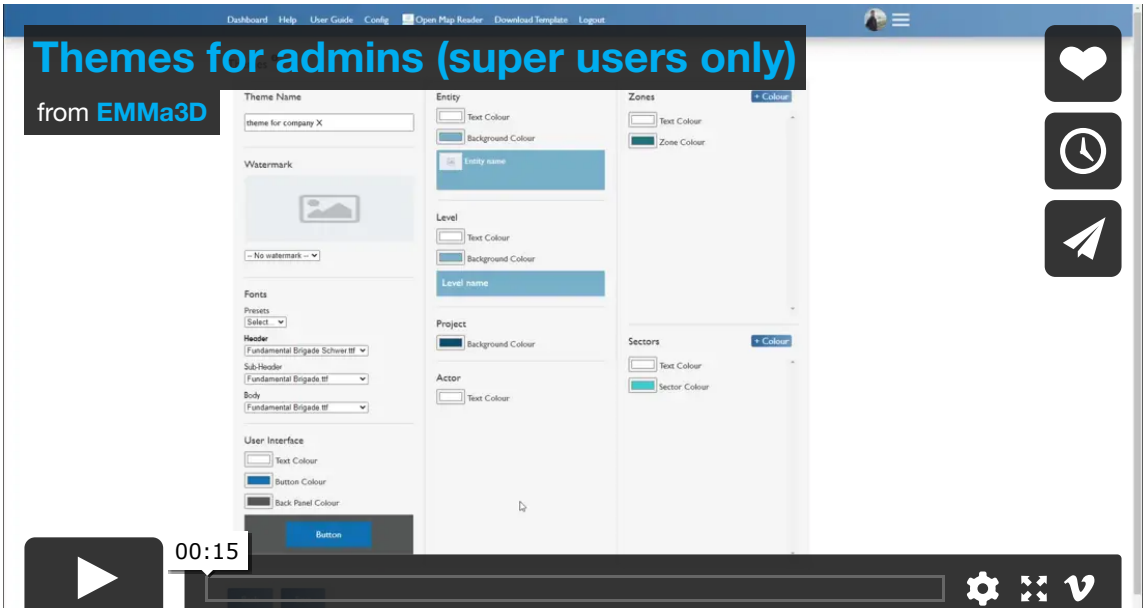


Swapping from existing themes

In the **project dashboard "Manage Project" section**, there is a drop-down where you can choose from the list of existing Themes. Make sure you save the project after your selection. Then, if your Map

Reader is already open, simply click on refresh and it will update to the selected one.



Themes for admins (super users only)

To have more control over Themes from an internal perspective, super users can access themes from the configuration menu: **Config** ➡️ **Themes** tab. The purpose of this is to create themes that are available to all users.