JavaScript Tree Libraries

Name: jsTree
URL: https://www.jstree.com
The advantages are that it is free, open source. It supports HTML, JSON and AJAX. It provides drag and drop support, functions such as edit, create and delete nodes. There is a demo on the website where you can move the nodes around and it will automatically update the tree. The only downside I see is that it does not look like it has an option for shapes. The only examples they provide is in list form like folder, subfolders and checkboxes.

Name: Treant.js
URL: http://fperucic.github.io/treant-js/
The advantages are that it is free, open source. It creates tree structure charts with HTML, CSS and SVG (scalable vector graphics), which is an XML-based vector image format for two-dimensional graphics with support for animation. I am not sure about if we would be able to move nodes around with this library, but it does show an example where you click on a parent node and it either adds another child or it makes the children disappear.

Name: Arboreal.js
URL: https://github.com/afiore/arboreal
The advantages are that it is free, open source. It has different methods for updating and checking each node in a tree. Therefore, we should be able to move nodes around since it provides a remove method. The disadvantage is that it does not have a shapes structure.

Name: Treed
URL: http://jaredforsyth.com/treed/
The advantages are that it is free, open source. It allows you to display, edit dynamically data in a tree view, and it supports undo manager. It uses the MVC pattern which makes it easier to create different views for the tree. There is the option to create a single node class where you can add buttons or anything you want. It provides the drag and drop functionality. The disadvantage is that I do not know if we would be able to create many different shapes and it requires multiple libraries to be able to build the project; node.js and webpack.

Name: TreeModel
URL: http://jnuno.com/tree-model-js/ and https://github.com/joaonuno/tree-model-js
The advantages are that it is free, open source. It allows you to manipulate and traverse tree structures. It has all of the necessary functions that we need to be able to move nodes around. It has all of the following functions: find, findAll, traverse, dop, add, get node's path, etc. It does not show an example where you can drag and drop but I feel like that's something it shouldn't be complicated to implement since we have all of these functions available. Also, the example that they have you can see how the nodes move around so we would just need to find a way where you can do that using drag and drop. Another disadvantage might be the shapes because it does show a circular shape on each node on the example, but I am not sure if there are other shapes available in the library.

Conclusion: The best JavaScript library I have found so far is the jsTree since it is the only one that has the drag and drop feature available. I think that would make things way easier to do the implementation. I will download it and play around with it to see if there would be a way to create the shapes.

After downloading and playing around with all the libraries. I think the one that has all the functionalities that we are looking for is the Treed library. However, I still need to take a look at the code to make sure we would be able to do everything with this library. Another downside about the Treed library is that is taking a long time to download and I am also getting errors in some of the downloads.

Name: JavaScript Webix Tree
URL: https://webix.com/widget/tree/
The advantages are that it contains all the functionalities we are looking for such as add, remove, drag and drop. It is easy to style with CSS which makes it simpler and quicker. The nodes can be easy to expand and collapse. The downside is that there are two different versions (pro and free). There might be more useful tools on the pro version. But after downloading and looking at the free package, it looks like a really nice library and it gives you examples of each functionality which would make it easier to do the implementation. I think this is the best library I have found so far.

Name: jQuery Horizontal Tree
URL: https://codecanyon.net/item/jquery-horizontal-tree/4294567
It has all the functionalities and it is the first one I have found that it is not in a list format. The only downside is that it is not a free library. But other than that, I think it is exactly what we are looking for.

Name: jQuery Org Chart
URL: https://th3silverlining.com/2011/12/01/jquery-org-chart-a-plugin-for-visualising-data-in-a-tree-like-structure/
It is pretty similar to the previous library (jQuery Horizontal Tree). The advantage is that this on is free, open source. It is easy to download and build. It does not provide an option to change the shapes but it looks like they could be changed easily with the CSS. I found a really useful link with the code for different shapes that can be created using CSS:
http://1stwebdesigner.com/css-shapes/ Therefore, we would just have to change some of the CSS properties in the custom.css and jquery.jOrgChart.css files under .j0rgChart .node to apply the different shapes.