# Software Requirements Specification: Threads

## Requirements:

### File IO Need: Risk: Status:

User must be able to load a process from a static file Critical Low Alpha

User must be able to save a process to a static file Critical Low Alpha

### Display Need: Risk: Status

Display a process in steps or layers from right (end) to left (start) Critical Low Alpha

Use Case: As a scientist I would like to be able to view a manufacturing process from start to finish

When programmatically altering the display, should be animated Should High In Prog

UX: User expectation in modern software that movement of Vertices should be animated in some way

### Controls: Need: Risk: Status:

User must be able to add a Vertex to the display (vertex) Critical Low Done

User must be able to remove a Vertex from the display Critical Low NS

User must be able to connect a Vertex with another Vertex (edge) Critical Med In Prog

User should be able to move a Vertex up- or downstream NTH High NS

### Vertex Functions Need: Risk: Status:

Vertex must display name of Vertex Critical Low Done

The Vertex map will be nonsensical if some Vertex identification isn’t displayed

Vertex should be able to display chemical structure NTH Med NS

Note: Not all threads will be associated with chemical structures (i.e. document structure)

Use Case: As a scientist, I would like to see the chemical structures of the process as I am displaying them in a manufacturing process

User should be able to rename vertex Critical Low NS

## Edge Functions Need: Risk: Status:

User should be able to add direction to a connection (edge) Should Low NS

Use Case: As a scientist, I would like to see the cause and effect of one Vertex on another Vertex

Note, it may be enough to have the software determine the direction, but it should be displayed, for example by the use of an arrow-head.

User should be able to add weight to an edge NTH Med NS

Note, this isn’t required for all types of thread diagram and should be prioritised only if cause-effect diagrams become a key part of the software.

As a scientist, I would like to visualise the size of an effect one Vertex has on another Vertex