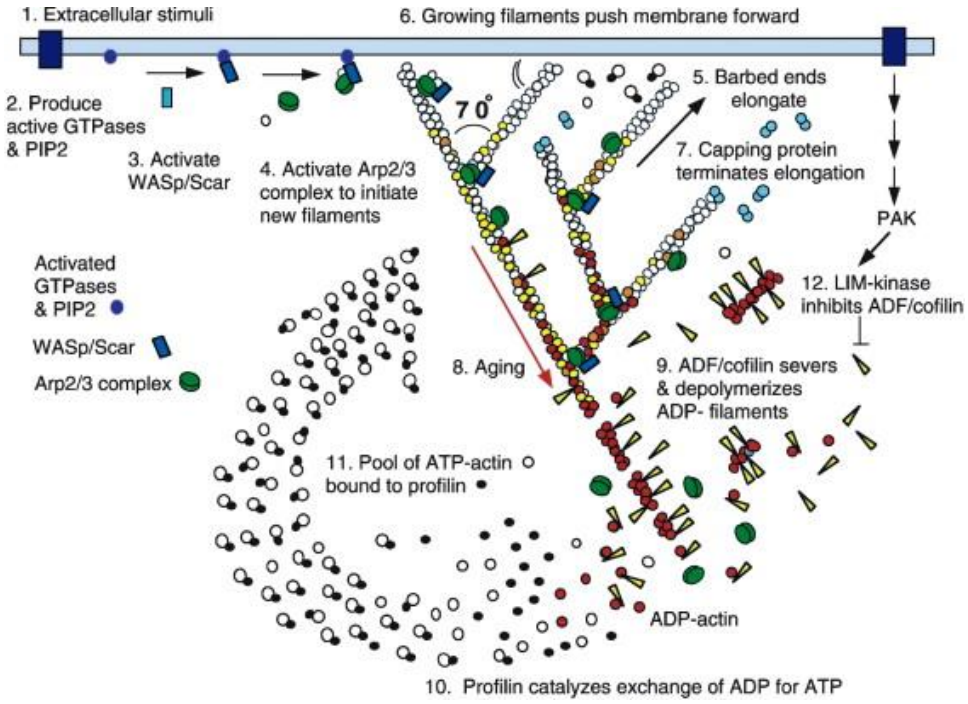
Reading 1 Annabel Droste

1. From Pollard, T. D., & Borisy, G. G. (2003). Cellular motility driven by assembly and disassembly of actin filaments. Cell, 112(4), 453–65. doi:10.1016/S0092-8674(03)00120-X



2. This visualization describes a process within a cell. The figure uses shape and colour to make distinct groups and symbols. However the visual variable I wanted to discuss first is position. The position of certain parts (the white balls bound to black, or ATP-actin bound to profilin) describes a process that occurs, namely the transport or diffusion of these molecules from the lower half of the picture to the upper half. The reason why this is so effective and clear is because the position of these double circles allows them to be grouped together, association, and it forms a symbol (an arrow) that describes the process at the same time. Thus, the position of the subparts of this picture plays a large role in the understanding of the process.

   Shapes also play a role to distinguish different proteins from one another. Generally speaking, different shapes depict different proteins, and in some cases the shape already hints to the function of the protein. Thus the different shapes allow selectivity. The actin proteins are all round and either white, yellow or red. These values describe different states of the same molecule, thus the value allows associativity.

   However, the filled blue circles are other proteins all together. It would have been clearer if only the actin molecules would have been circles.

3. Do you agree that visualization is a functional art?
   Not really no, the first and foremost goal of a visualization should be depicting the information as clear as possible in relation to the goal of the visualization. I do not know what the first goal of art is, to make people think, to shock, to create waves or to be nice to look at. None of these goals is to allow the fast and easy extraction by the viewer of information. Therefore, I do not believe that visualization should be classified as an art at all.

4. This graph should help me with understanding the several processes that are described by the picture. It should tell me which proteins perform what actions and whether they form structures or not. It should tell me the sequence in which the actions are performed.