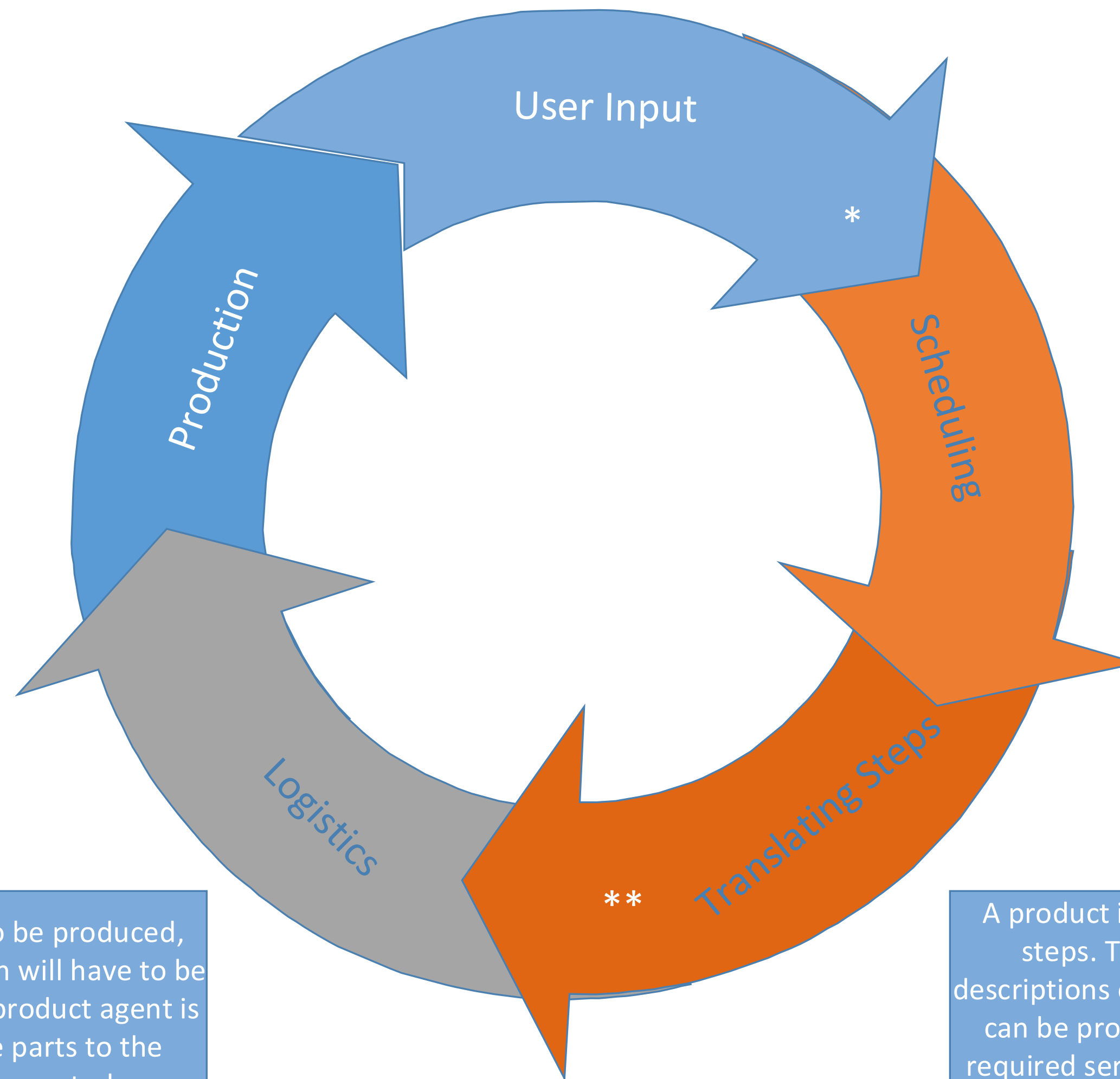


In order to create a product, we must first receive the blueprints for it. These blueprints find their way into the equilets through user input. The most desirable way to do so is using a GUI. In this GUI it should be possible to rebuild a certain blueprint with a set of simple steps; pick, place, paint, glue, etc. Once the design is finished, a product agent will be spawned with this blueprint. From this point onwards it will make sure the product will be fabricated.

After the product and required parts are available at the right equilets, the product steps will be executed by the equilets. The responsible product agent will receive feedback from the equilets containing information about the executed product step.



Once all the feasible equilets have been found, the product agent will start the scheduling process. During this process it will create a schedule based on which equilet can handle the most (consecutive) product steps, and has the least load. After an equilet has been chosen, the equilet will be contacted in order to schedule.

A product is defined by a collection of product steps. These products steps are abstract descriptions of manufacturing steps. Product steps can be processed by equilets which offer the required service. Services divide product steps in service steps, which are more specific actions. The service steps are divided in equilet steps by the modules. Equilet steps are concrete steps which ROS can perform.

Whenever the product is ready to be produced, part that are needed for production will have to be transported to the equilets. The product agent is responsible for transporting the parts to the proper equilet. Parts will be transported on a single robot, capable of carrying all parts needed for one complete product. This robot will navigate through the grid autonomously.