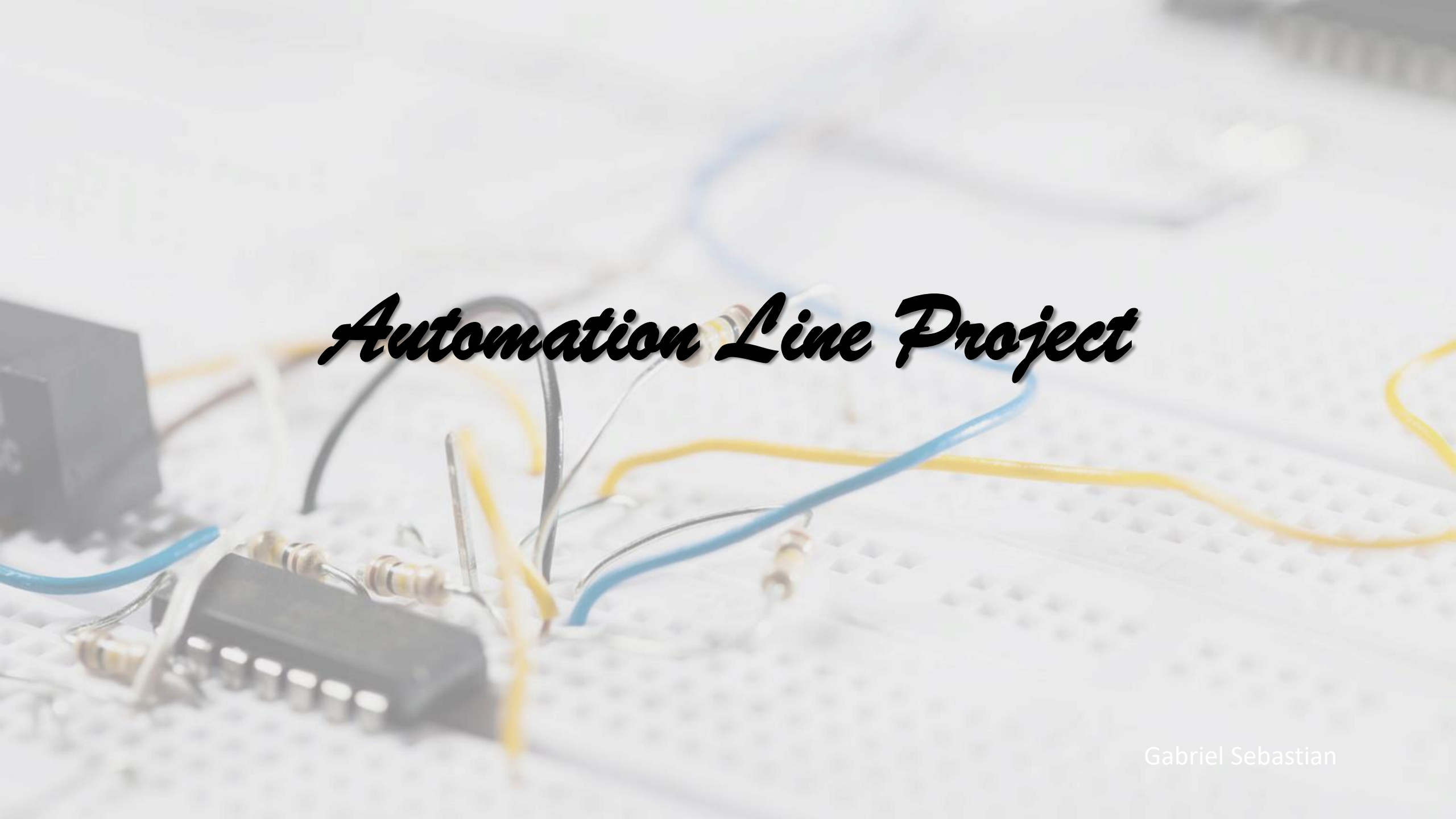


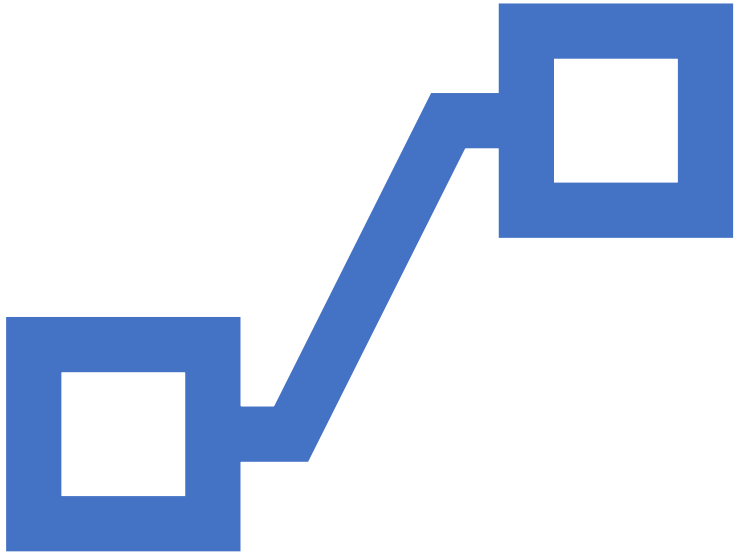
Automation Line Project

Gabriel Sebastian

Instructions

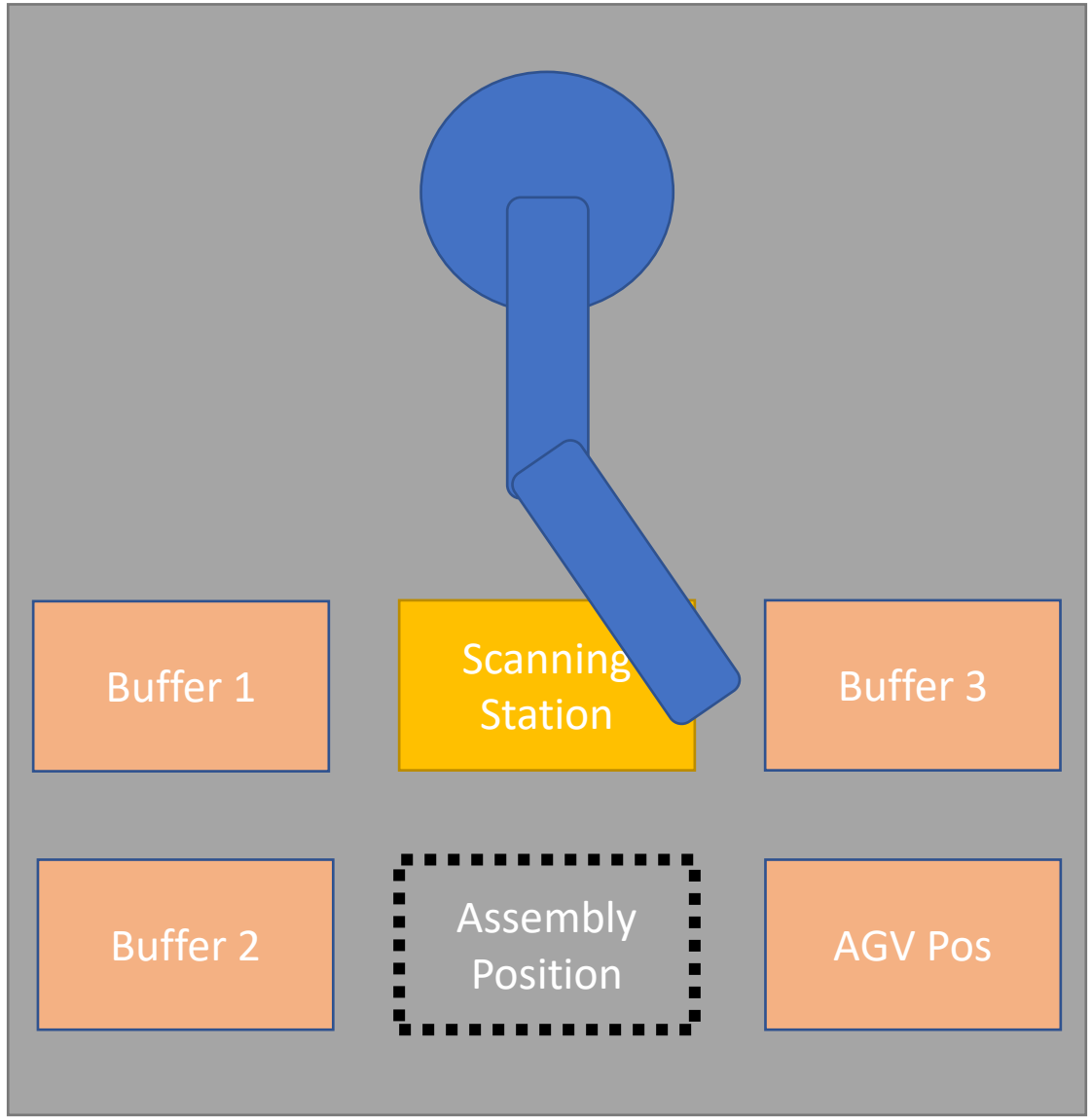
- All details of the project is similar to the main project file.
- Only the flow of the program is changed for this version.
- Please consult with the main document for instructions on the function blocks and other
- The AGV request button in Station is Swapped with **ixAGVatStation** variable now to make the AGV available as many times as possible to do the new project.

- The first container to arrive the station decide the color of buffer that the station will receive.



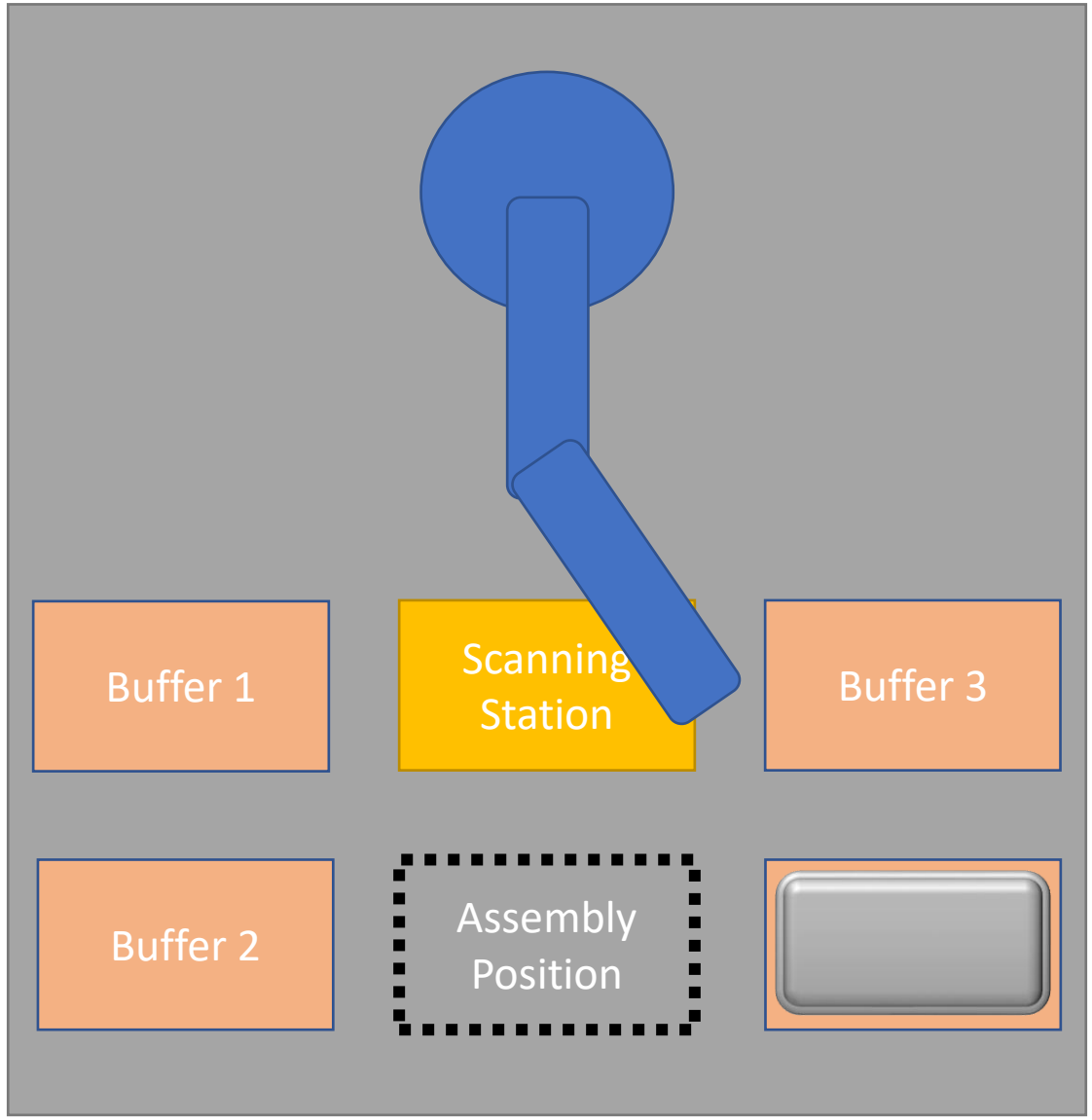
Project Flow

S1



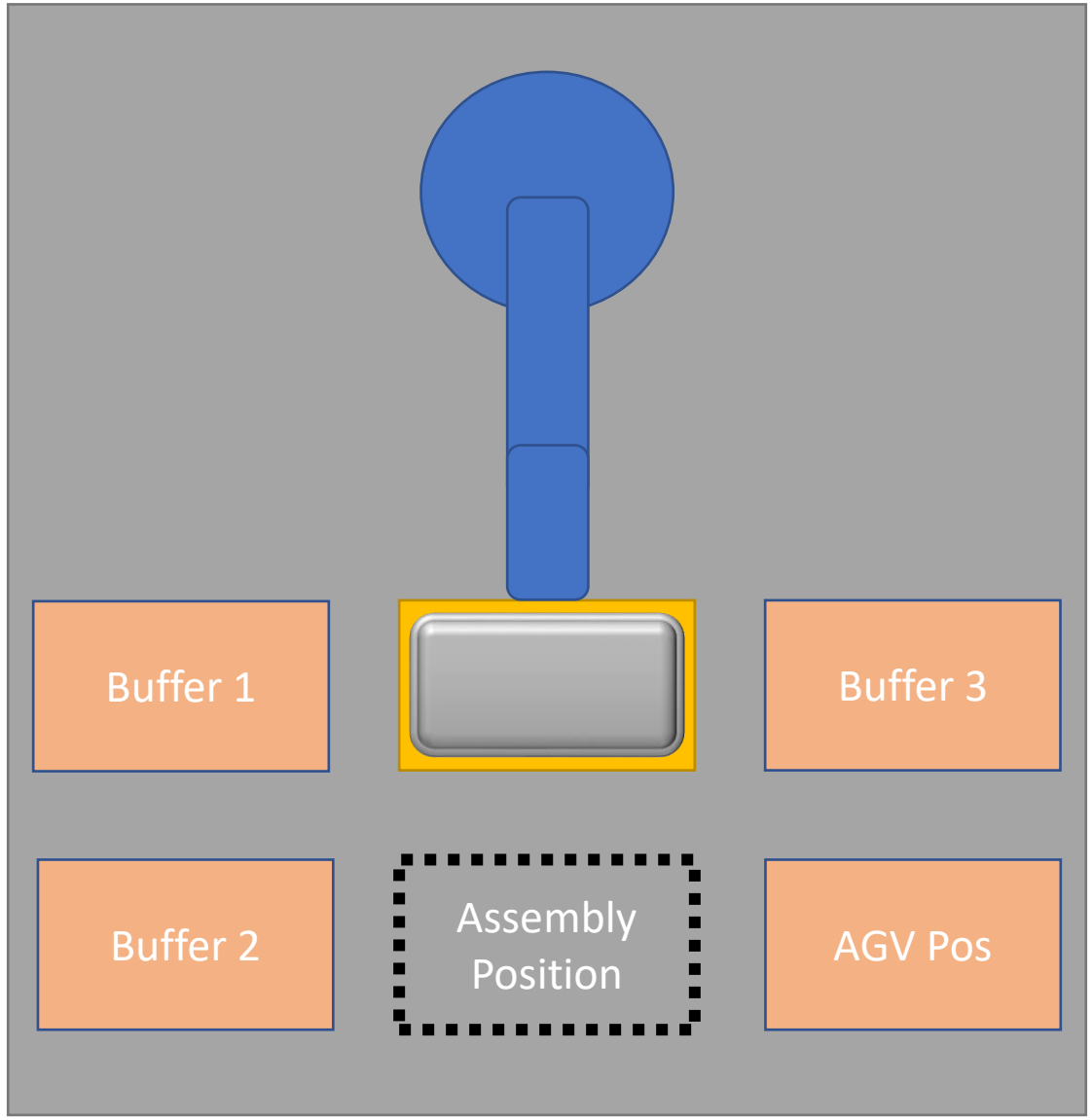
- When the Station Starts, All buffers are empty
- Station goes to AutoMode
- Station Status : 100
- Then Station Status : 200 when IO station books the station.

S2



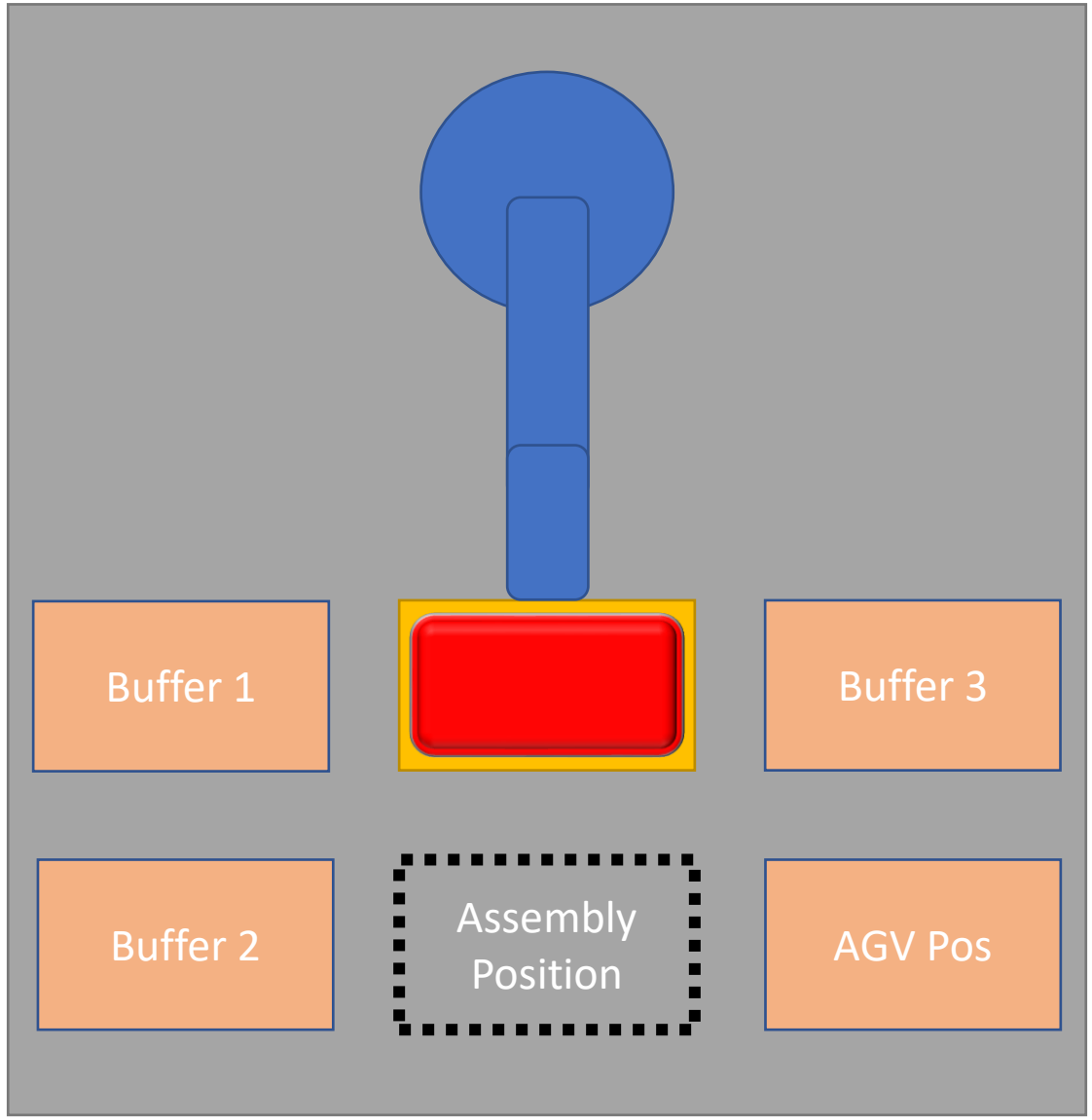
- ixAGVatStation=TRUE
- New container have arrived at the station

S3



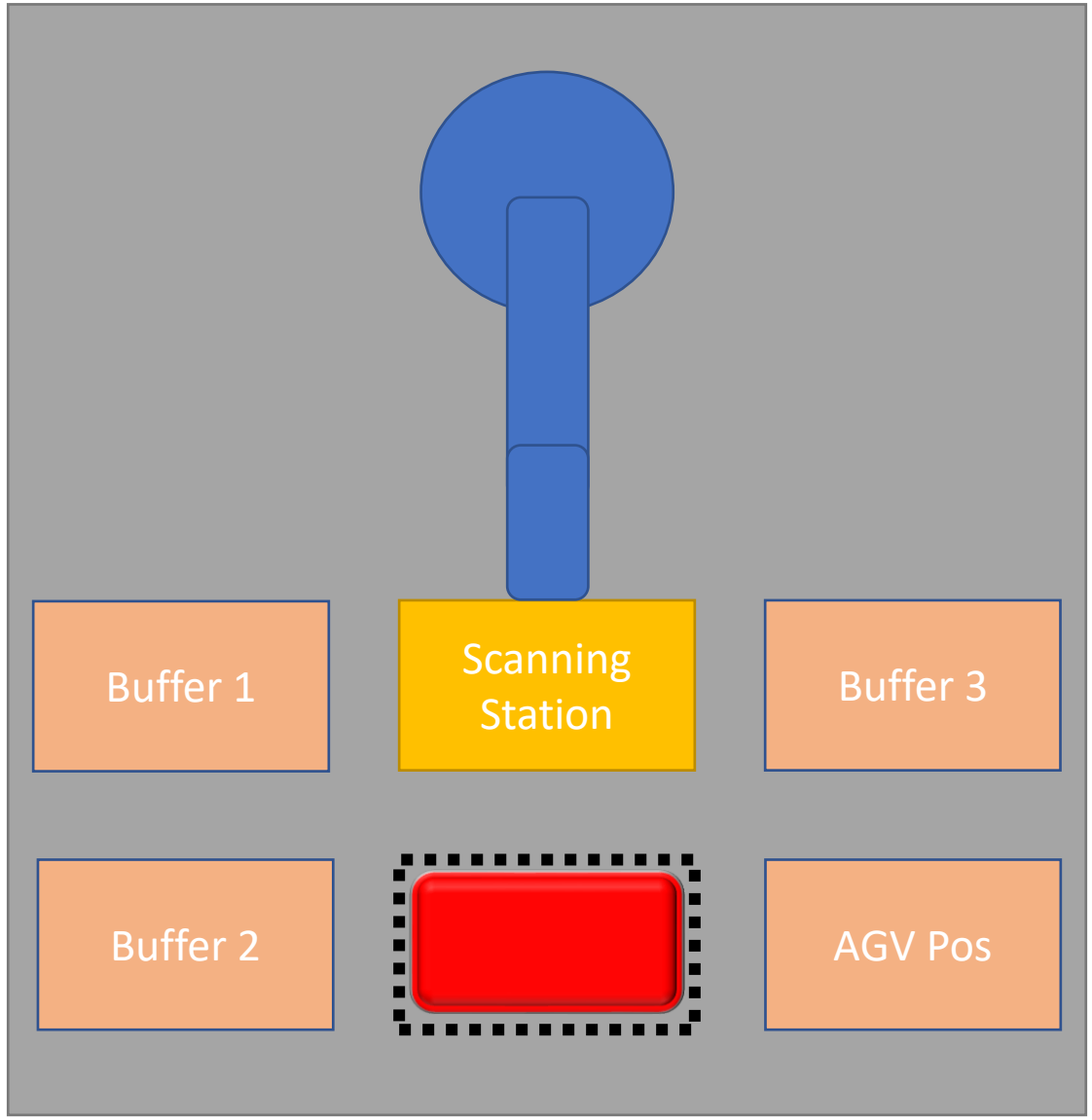
- ixAGVatStation:=FALSE
- Robot Scans the container to identify the color

S4



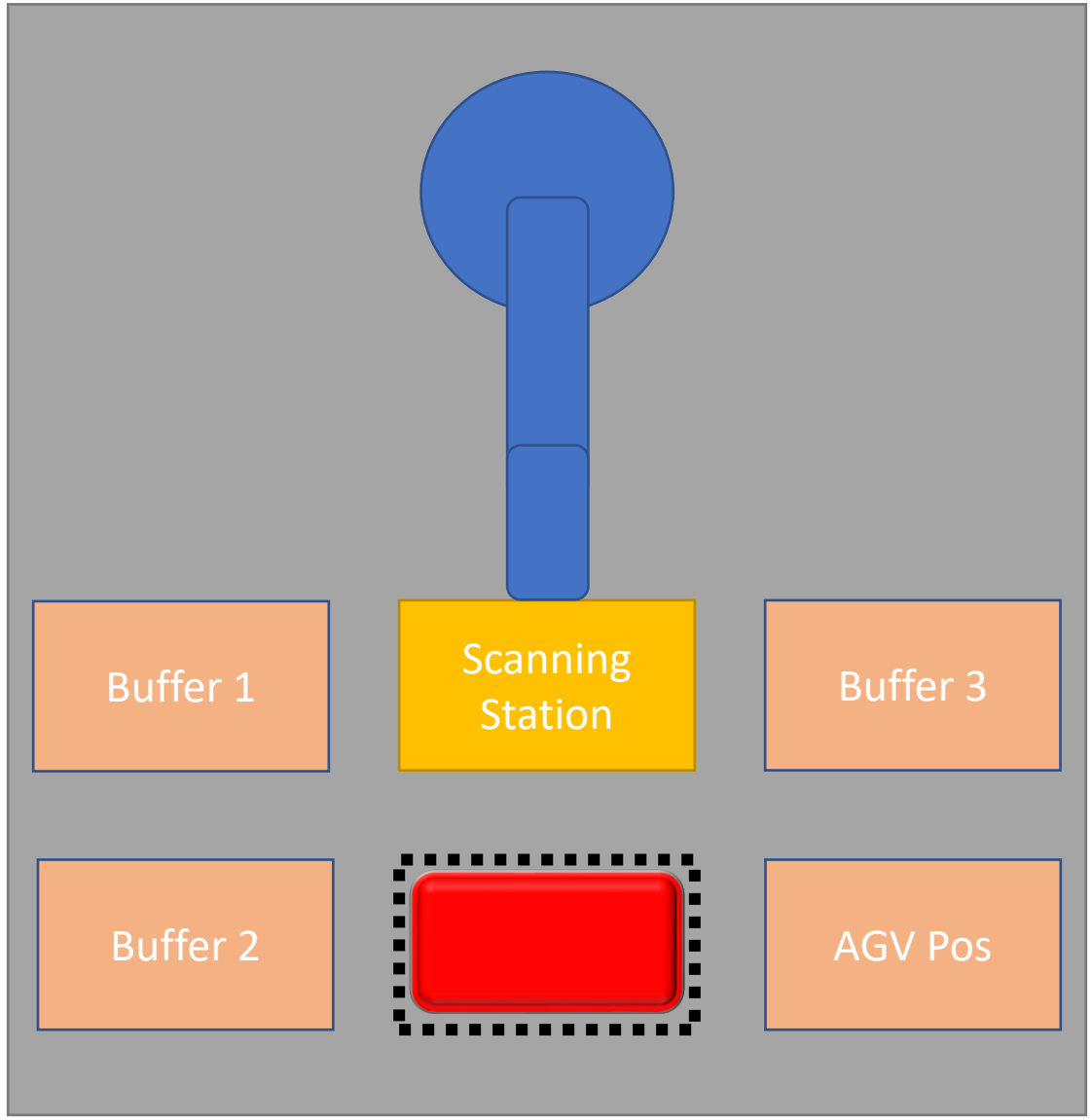
- ixAGVatStation:=FALSE
- Robot Find the color of the container.
  - Example: REDCONTAINER

S5



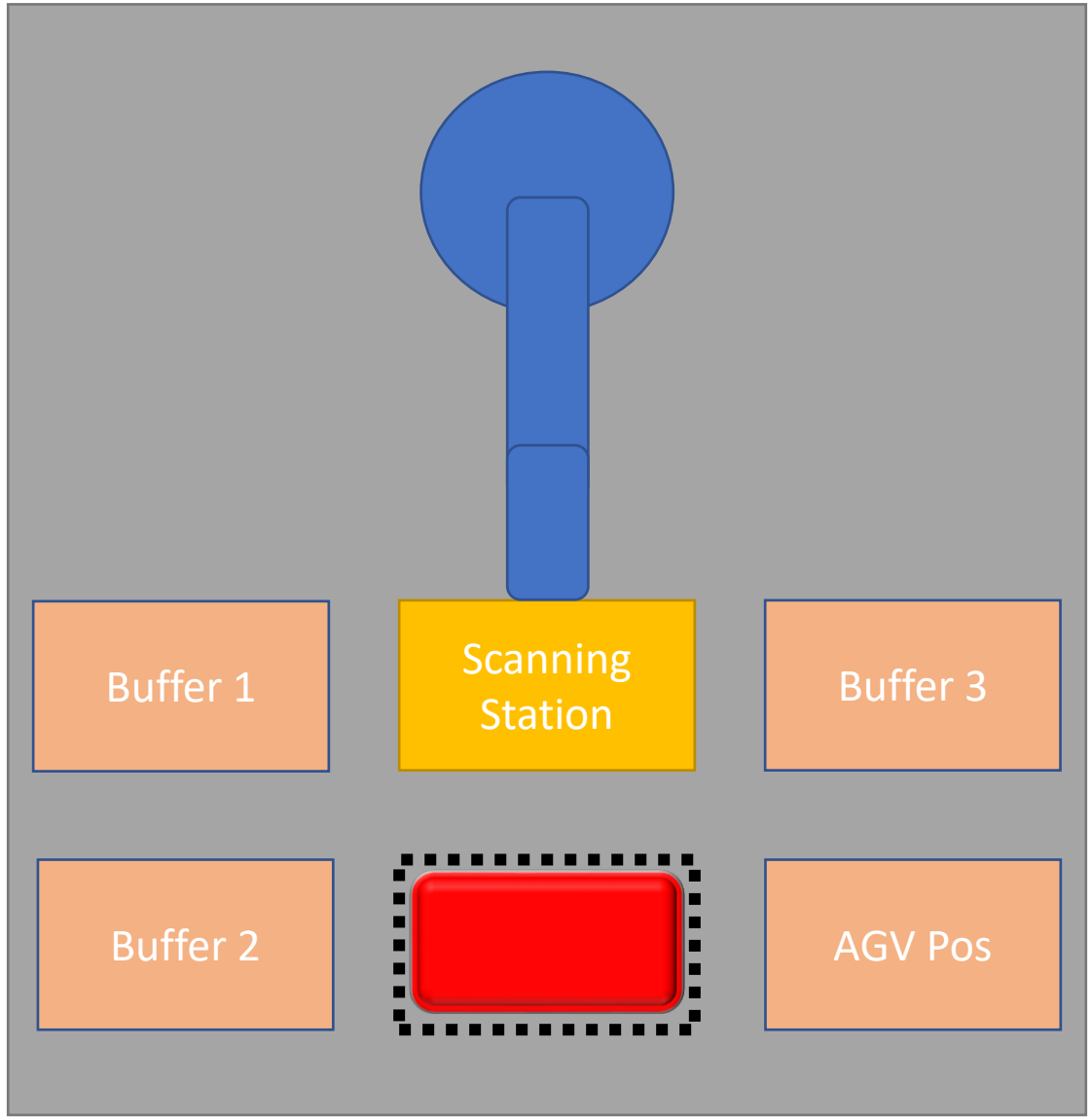
- Robot moves the container to table.

S6



- Program identifies the correct parts needed for the assembly.
  - Example:
  - In this case the parts needed are
    - REDPLATE
    - REDCYLINDER
    - REDOCTAGON

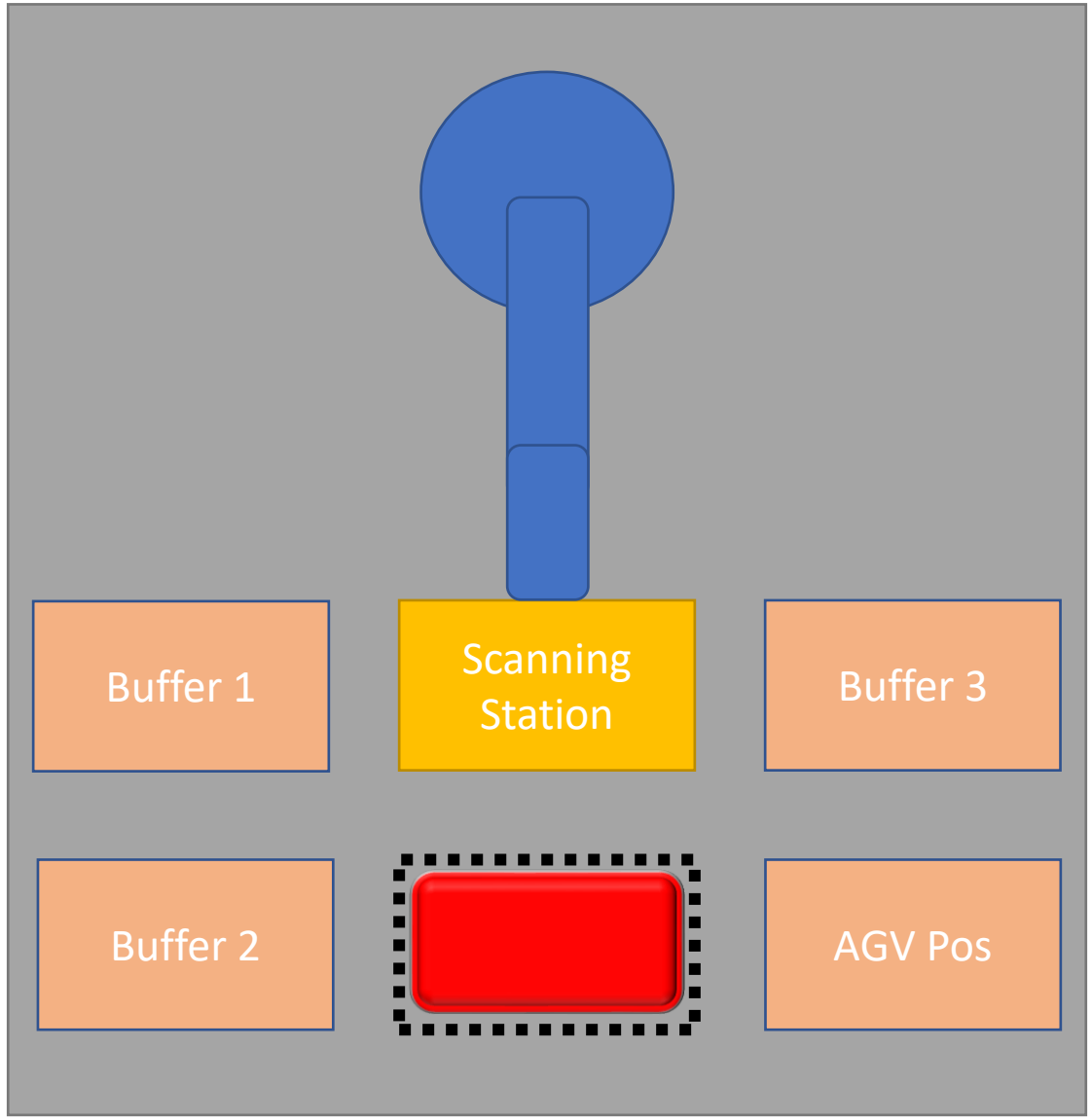
S7



- Program Starts requesting for buffers of parts needed.

- Order 1:
- qsOrderforNextAssembly:=“REDPLATE”

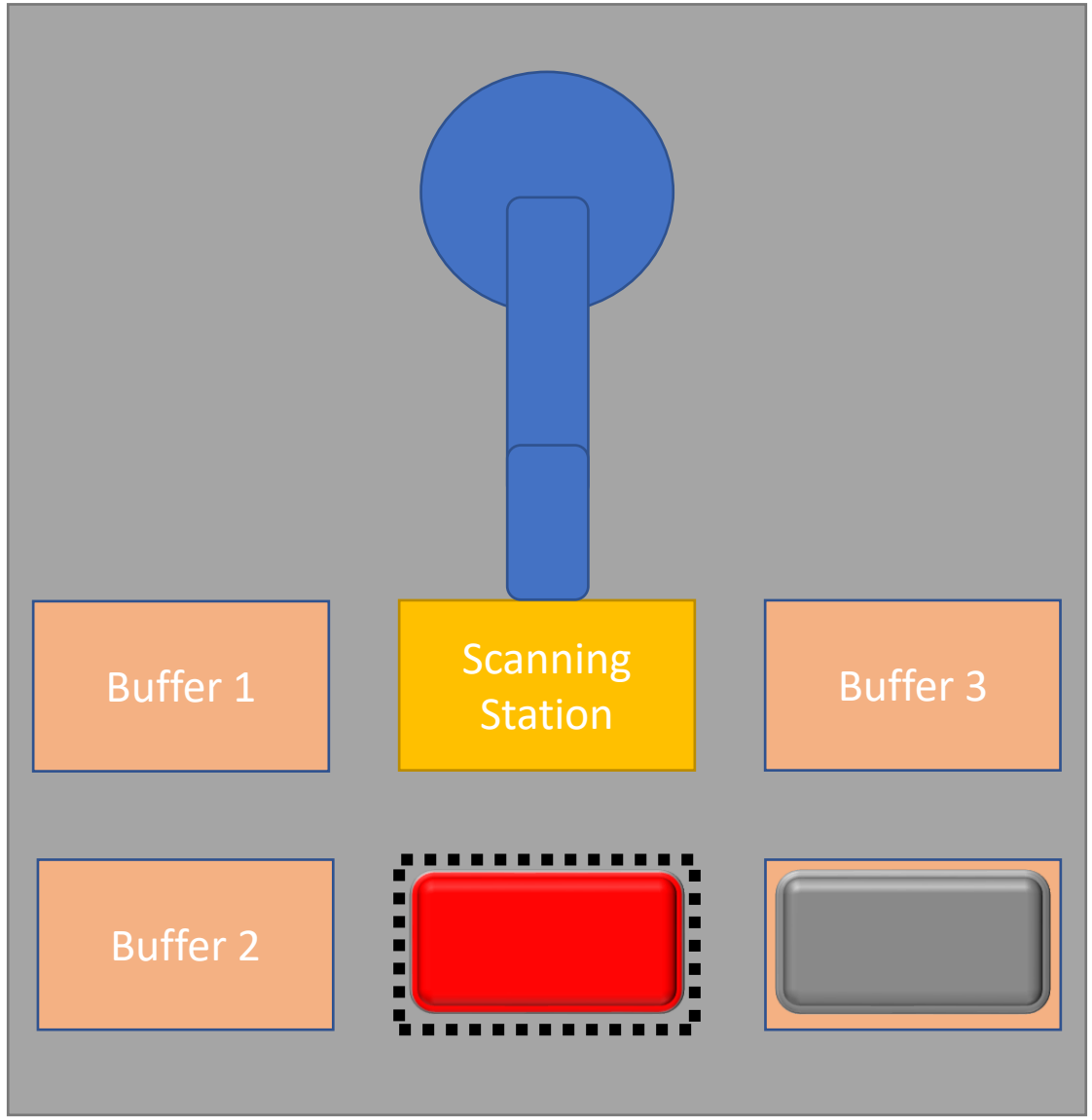
S7



- Program Starts requesting for buffers of parts needed.

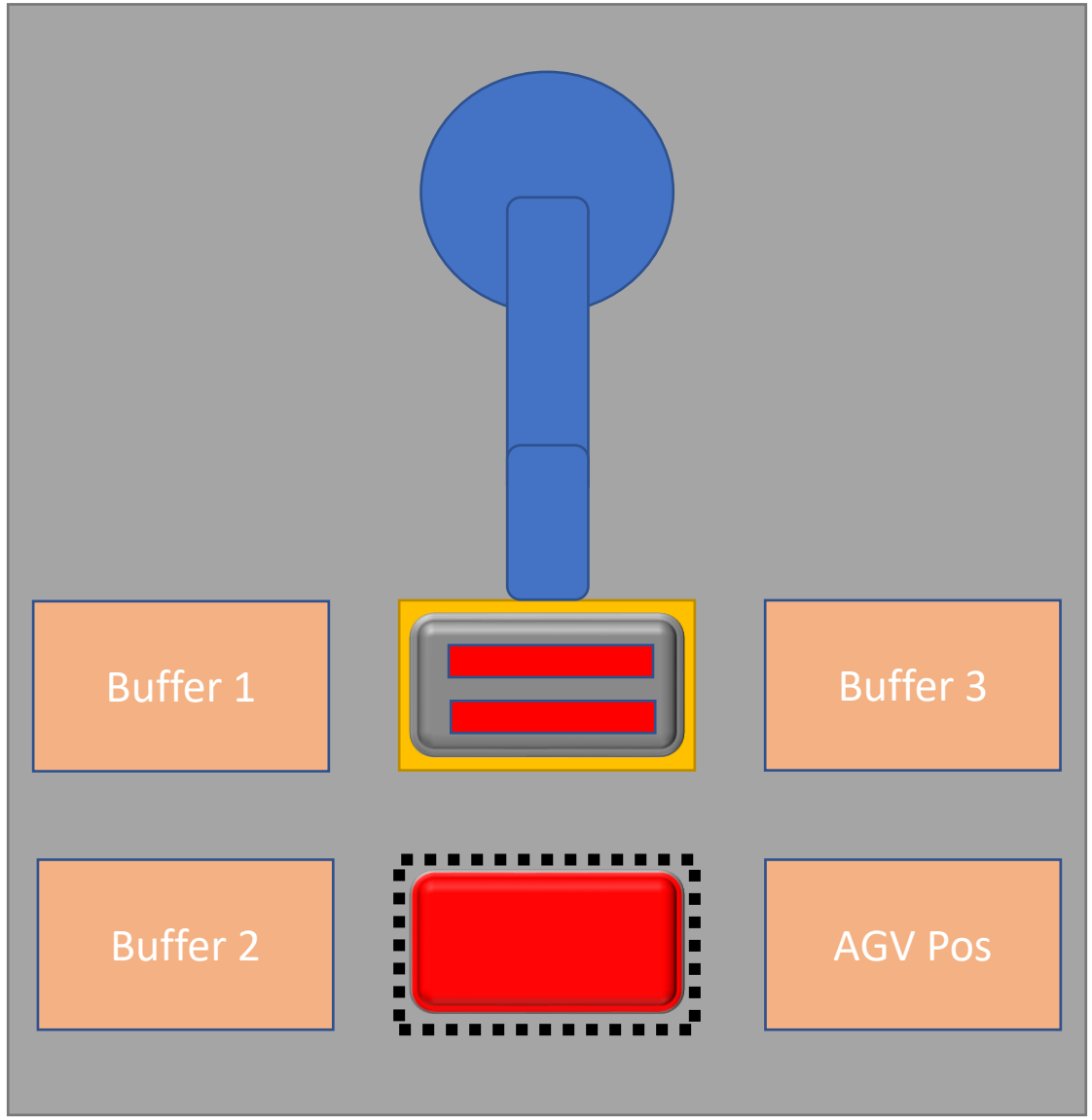
- Order 1:
- qsOrderforNextAssembly:=“REDPLATE”

S8



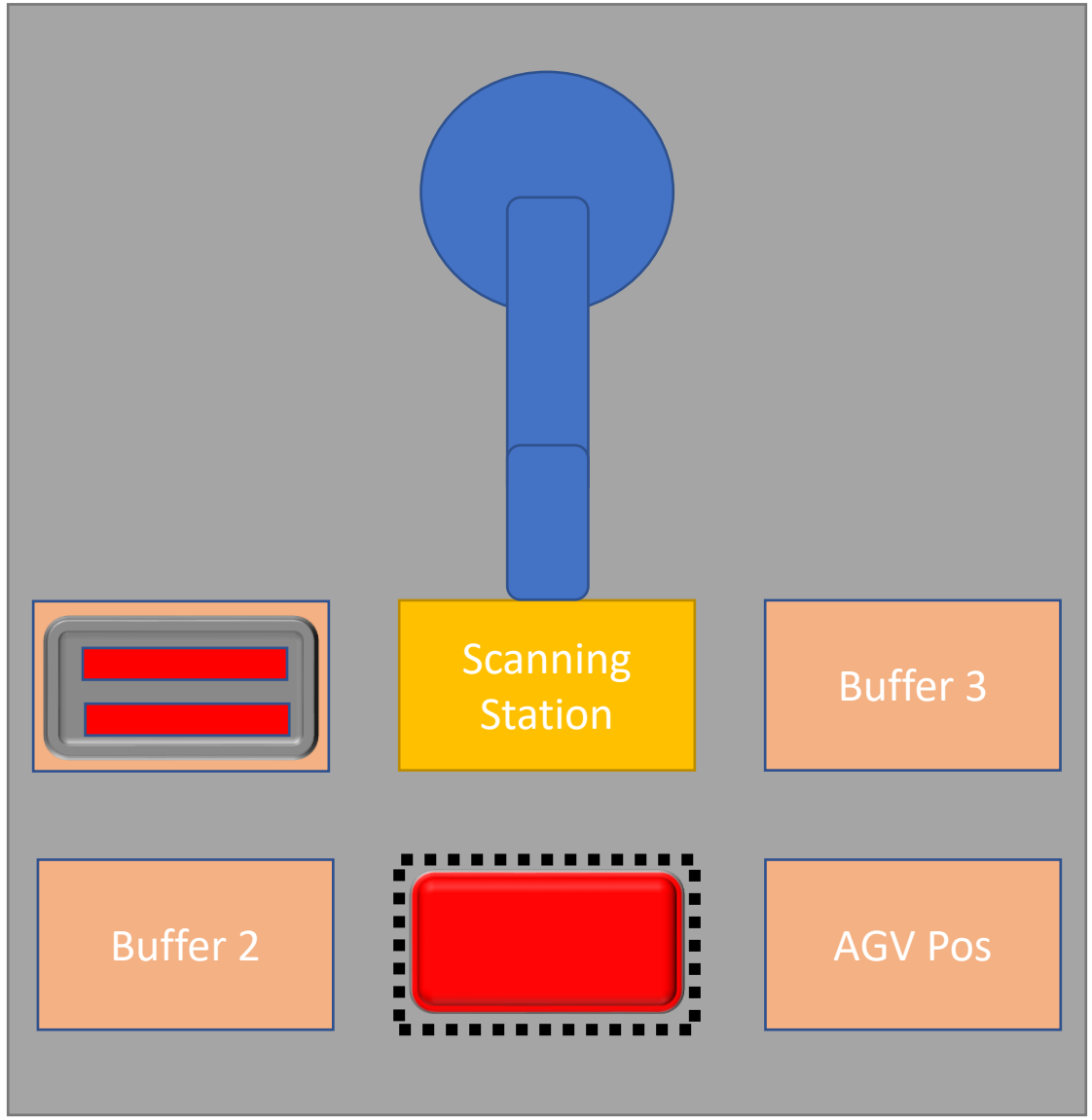
- qsOrderforNextAssembly:=“REDPLATE”
- ixAGVatStation=TRUE
- New container have arrived at the station

S9



- Robot Scans the buffer pallet to confirm the pallet is as per the order.
- The AGV can bring wrong plates also. Wrong plates should be handled well.

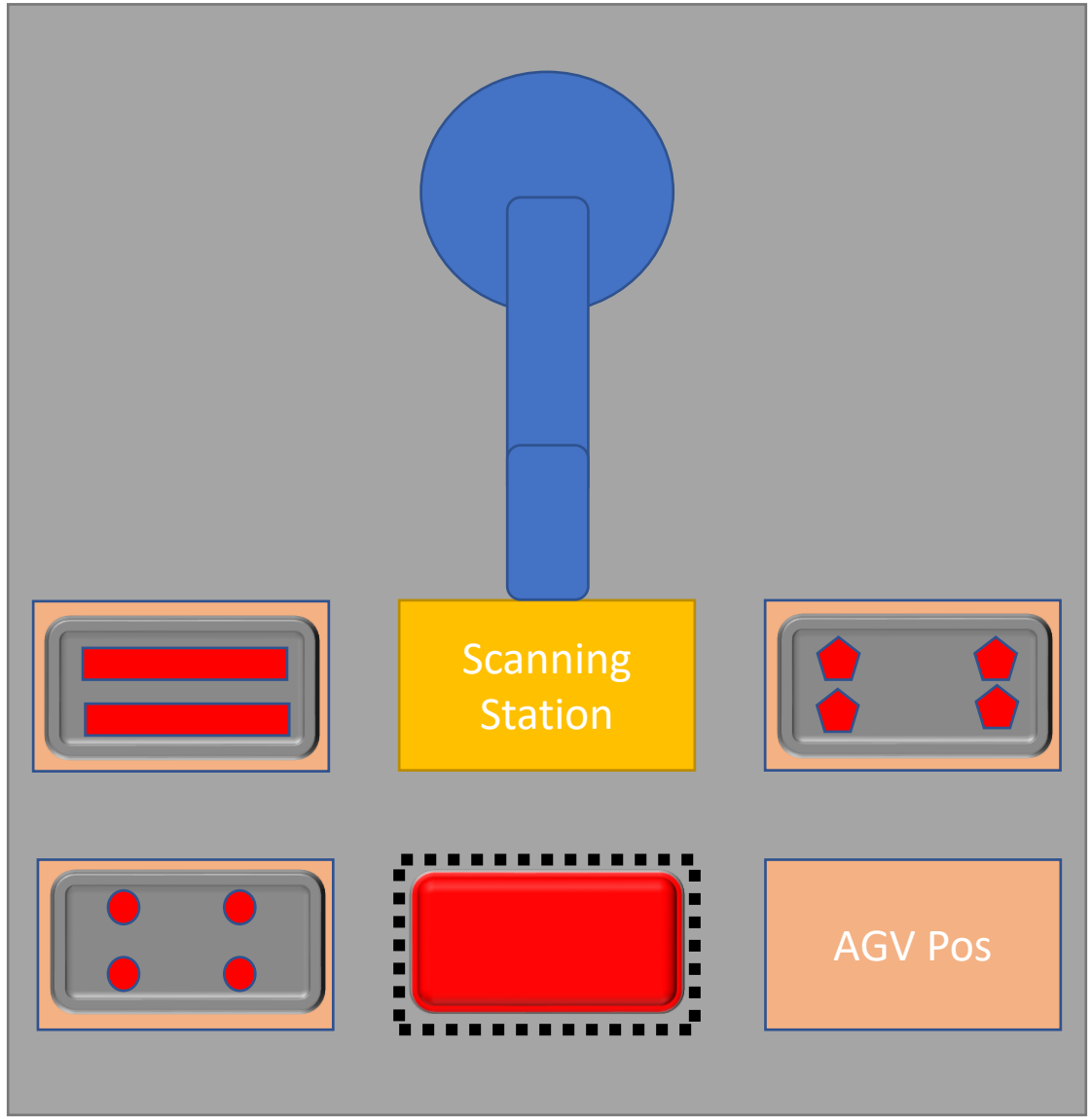
S10



- Confirmed red plates are moved to Buffer 1

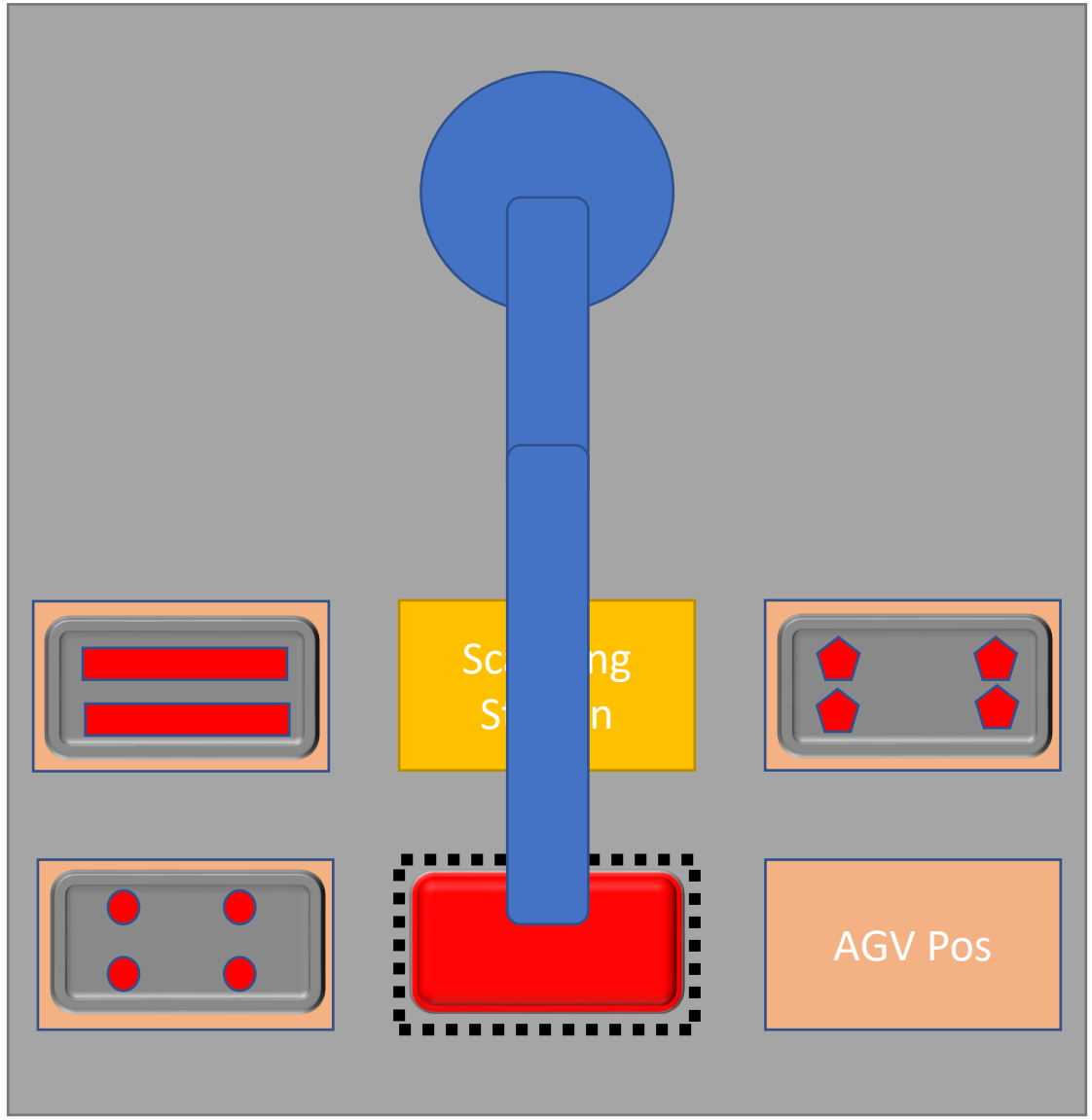
- Bufferproduct.Storage1.Combonents:= “REDPLATE”
- Bufferproduct.Storage1.Quantity:=2

S11



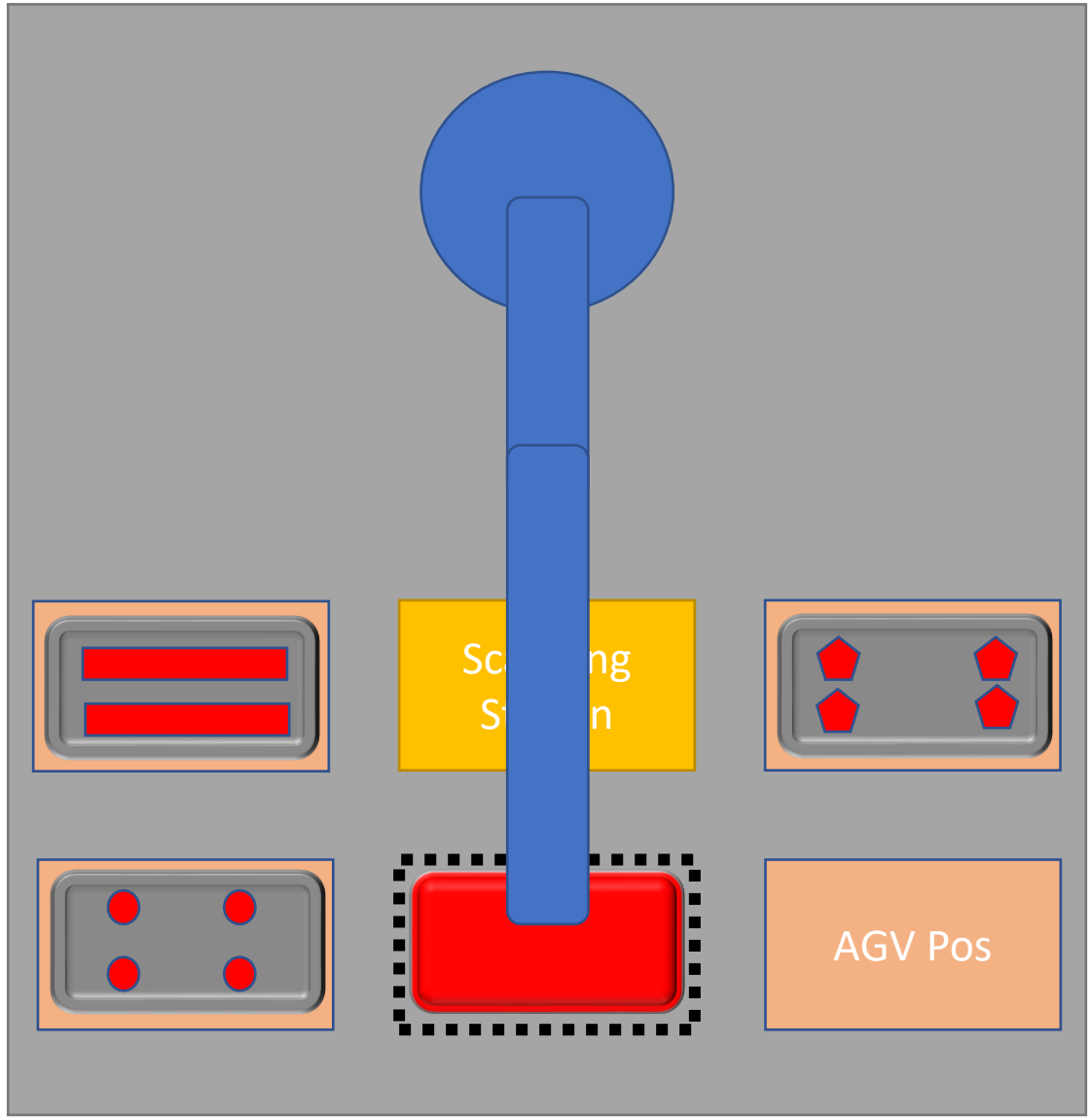
- Next Order
- Order 2:
- qsOrderforNextAssembly:=“REDOCTAGON”
- Step 7 to 10 are repeated for all buffers

S12



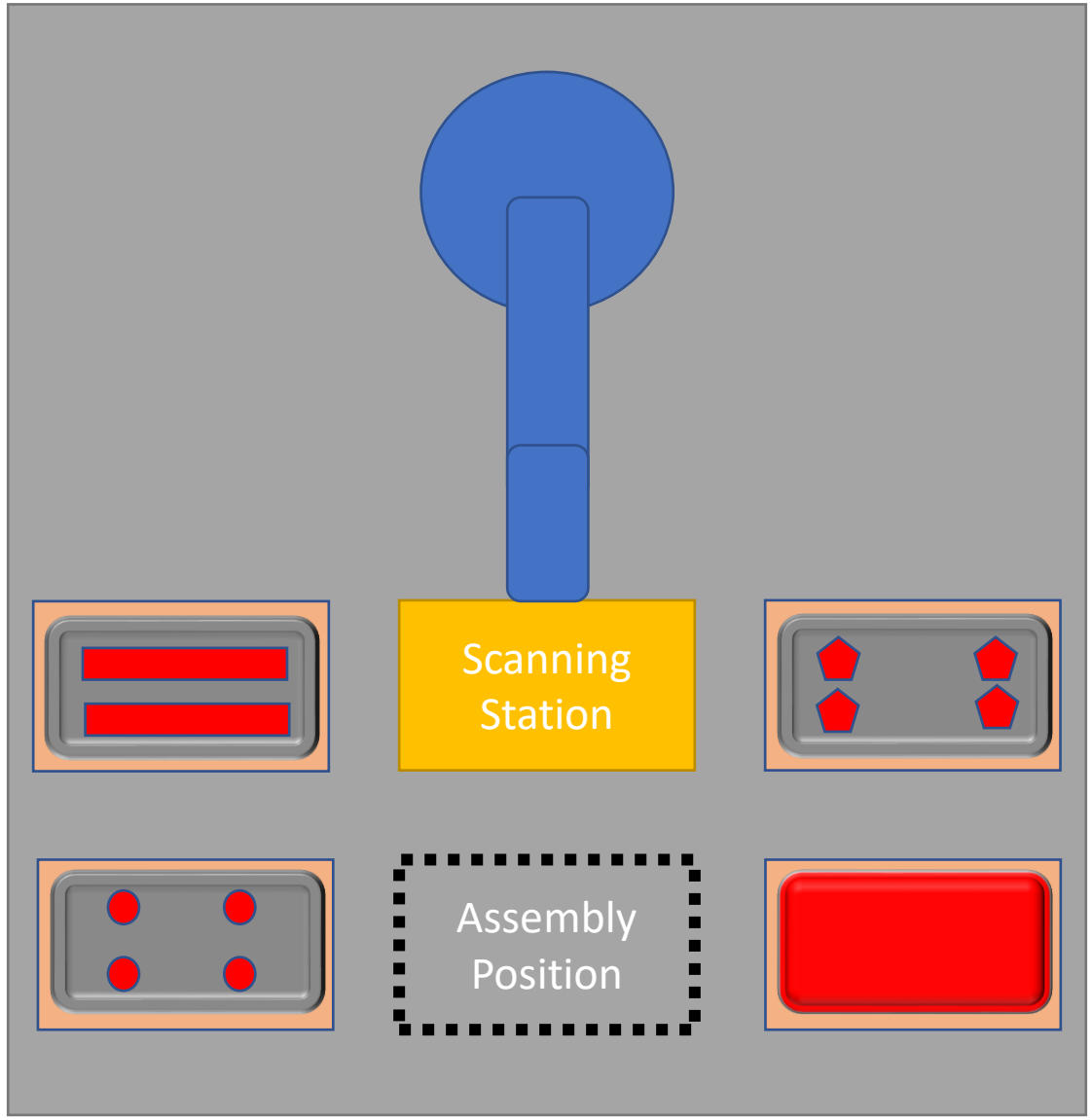
- Now all the buffers are filled.
- Robot Scans for already assembly on the container.
- Example:
  - PLATE: missing
  - OCTAGON: missing
  - CYLINDER: missing

S13



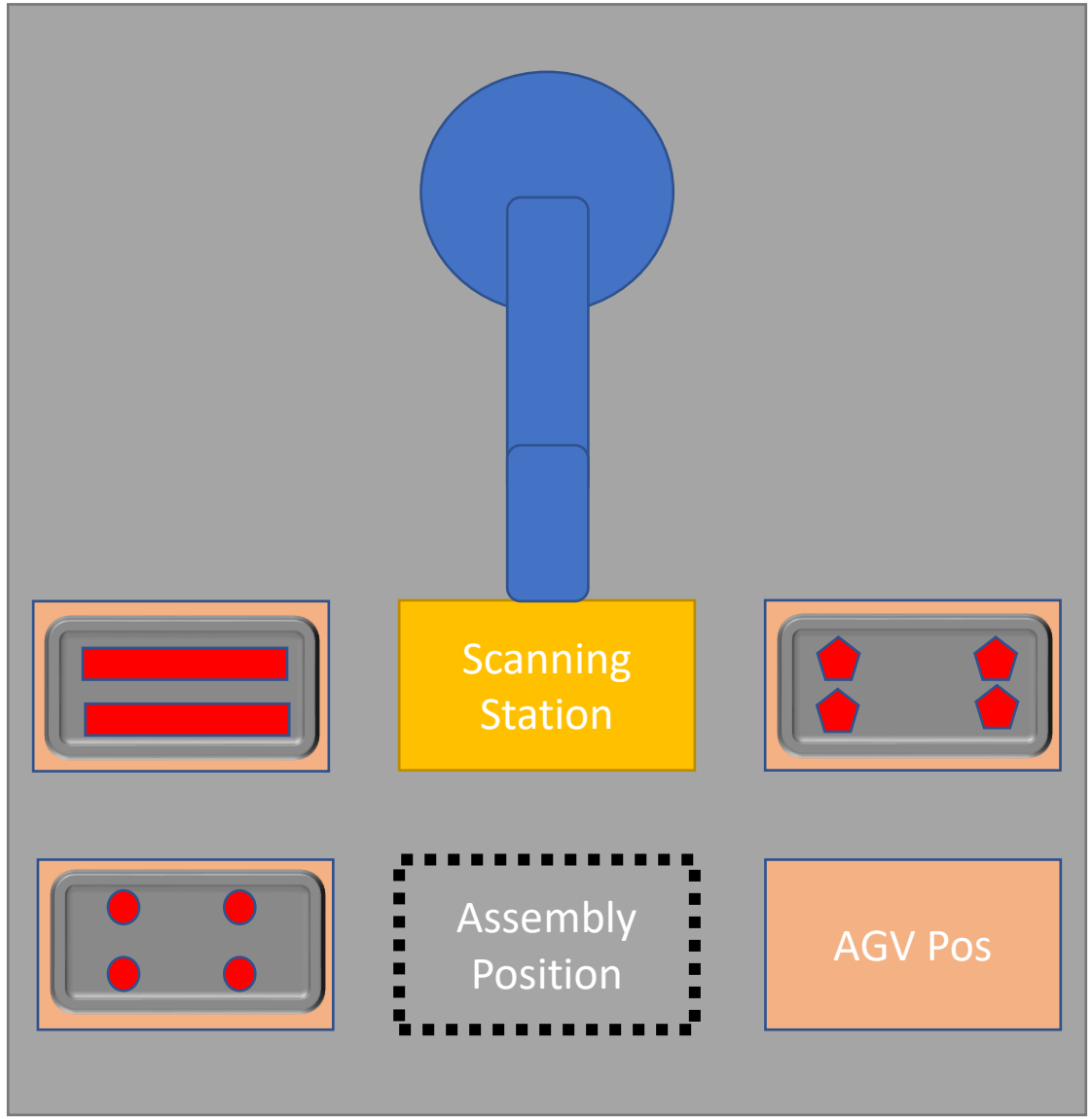
- Performs the possible assembly

S14



- Sent assembled container back to the AGV.

S15



- Waits for another container from AGV

Instructions

- Station should be able to handle different if the AGV bring a different color container.
- Station should be able to handle partially filled containers. Only do the assembly that is possible by you.
- It should be possible to request for a new buffers.
  - In this case the robot should take one buffer at a time to the AGV.
  - When the all the buffers are given to the AGV, new container will arrive, and S1 to S11 will continue.