

Increasing Warehouse Product Flow Efficiency

Team DECC

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Baked Cheetos® Tote filling station



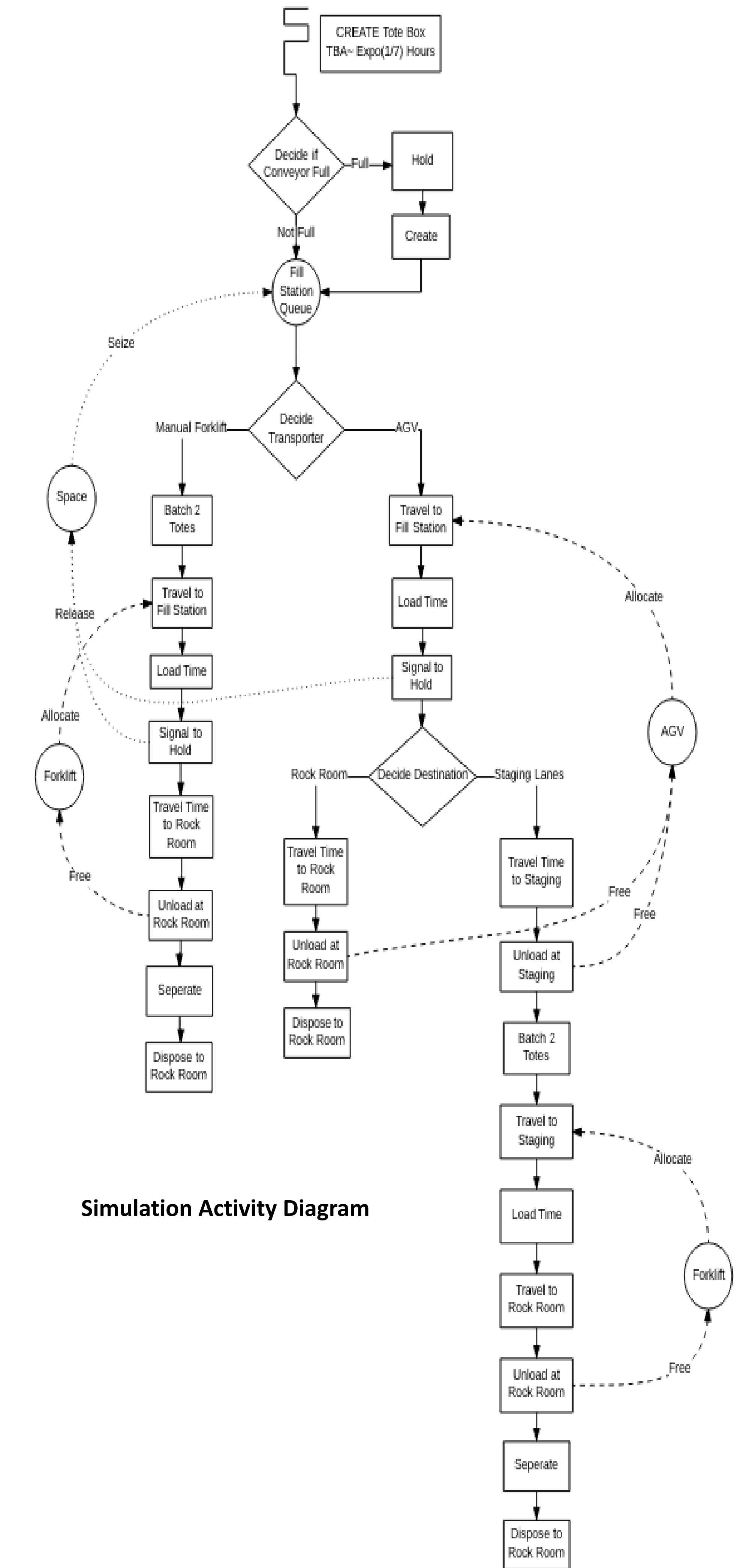
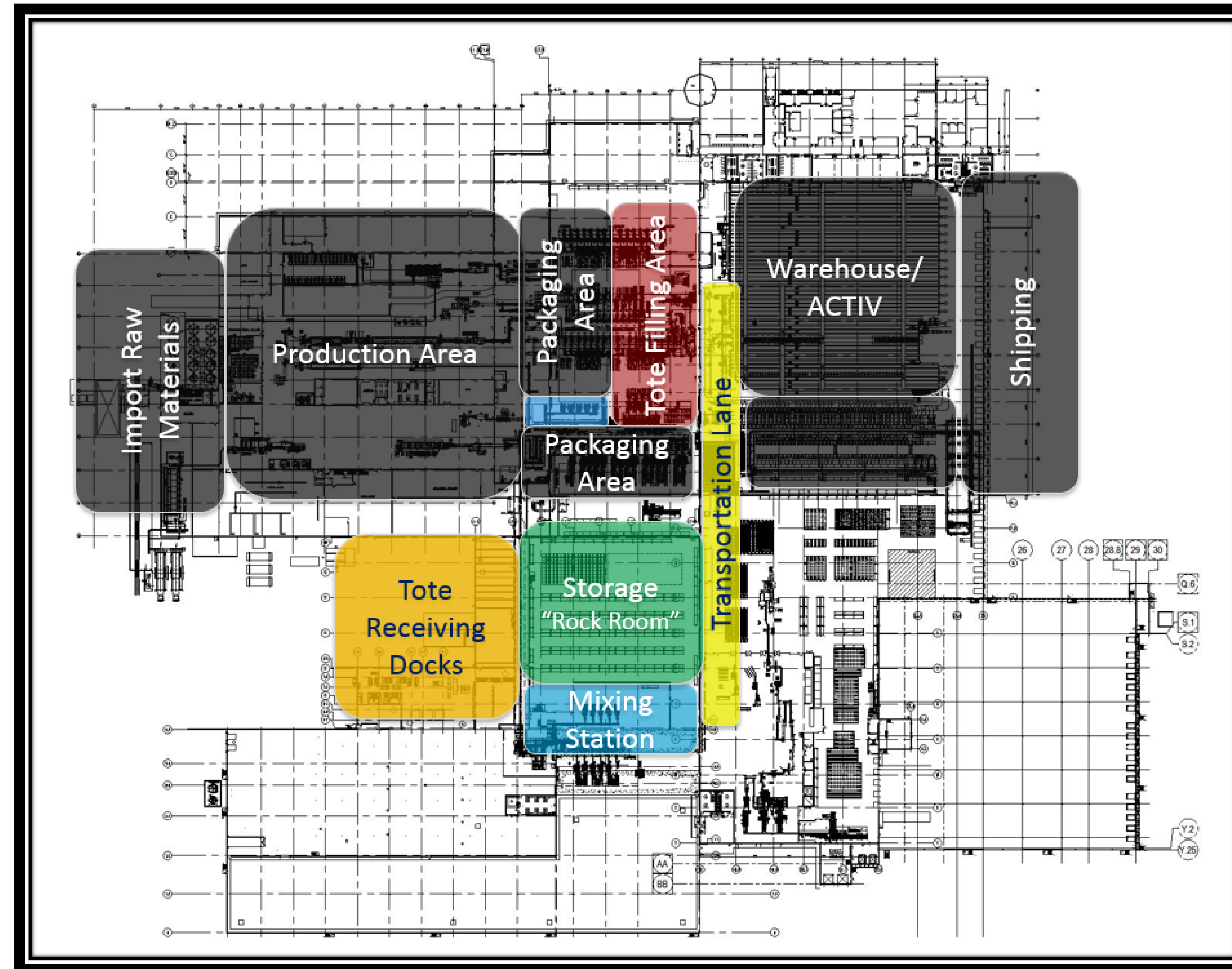
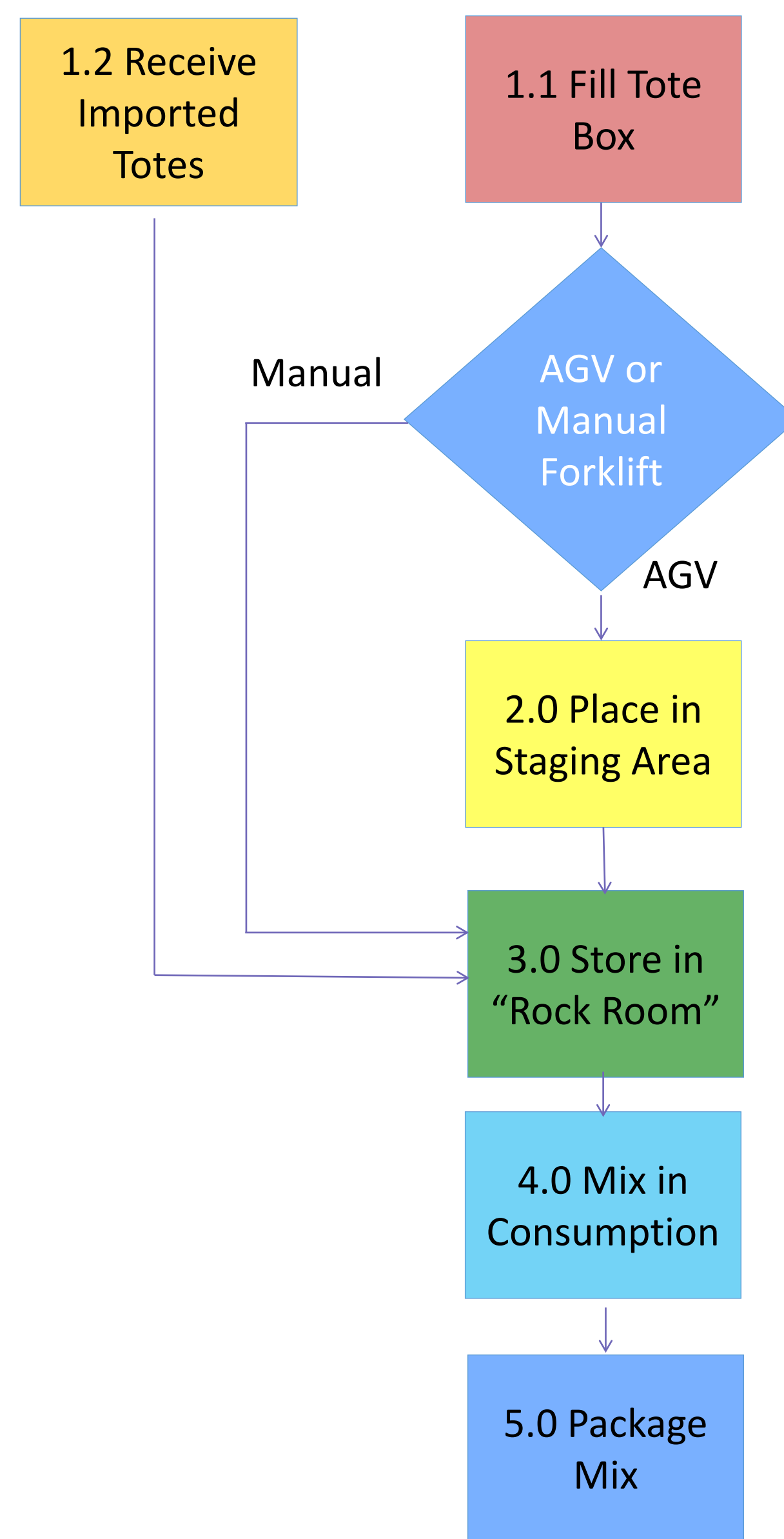
Angle of Tote Filling pickup location



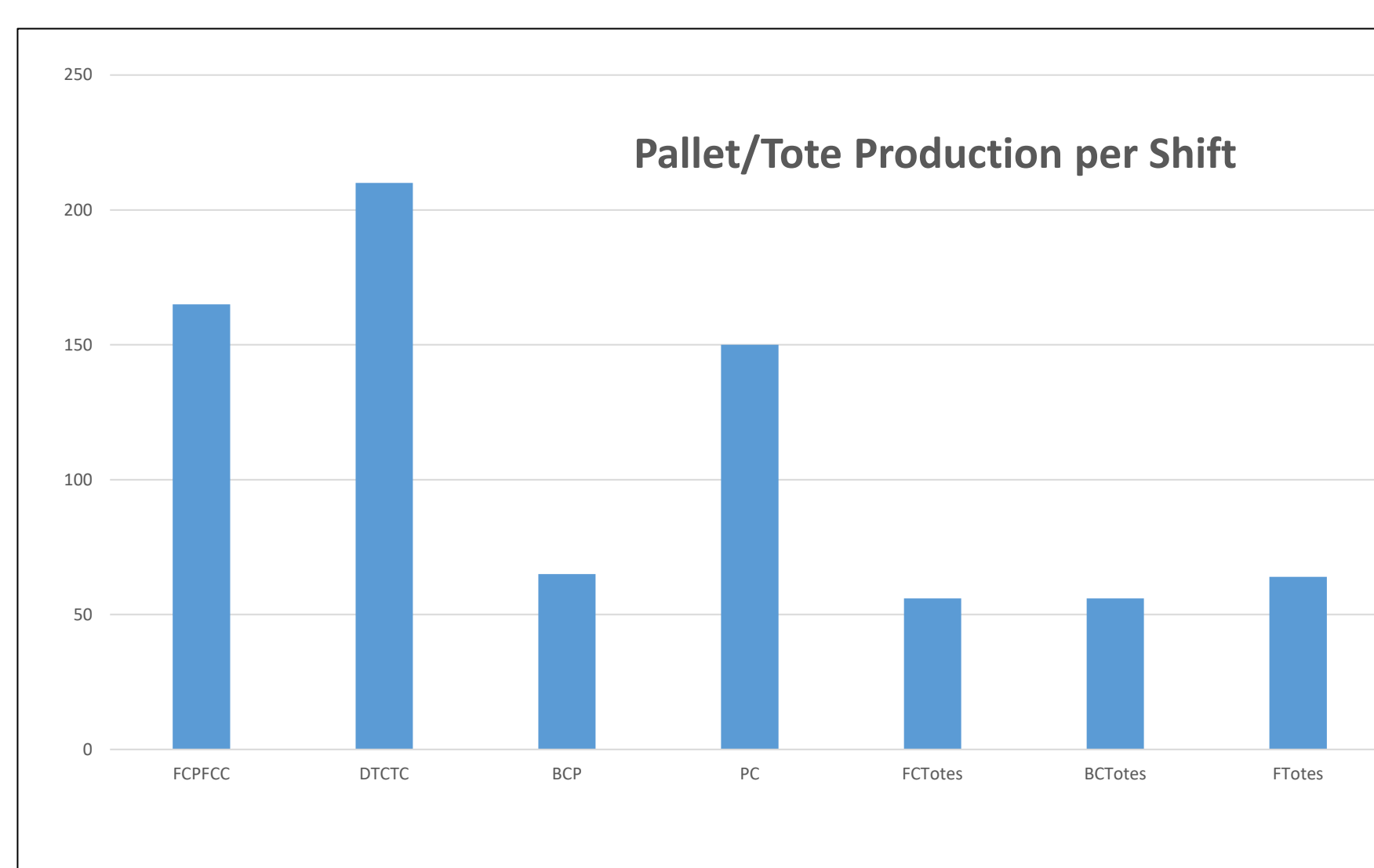
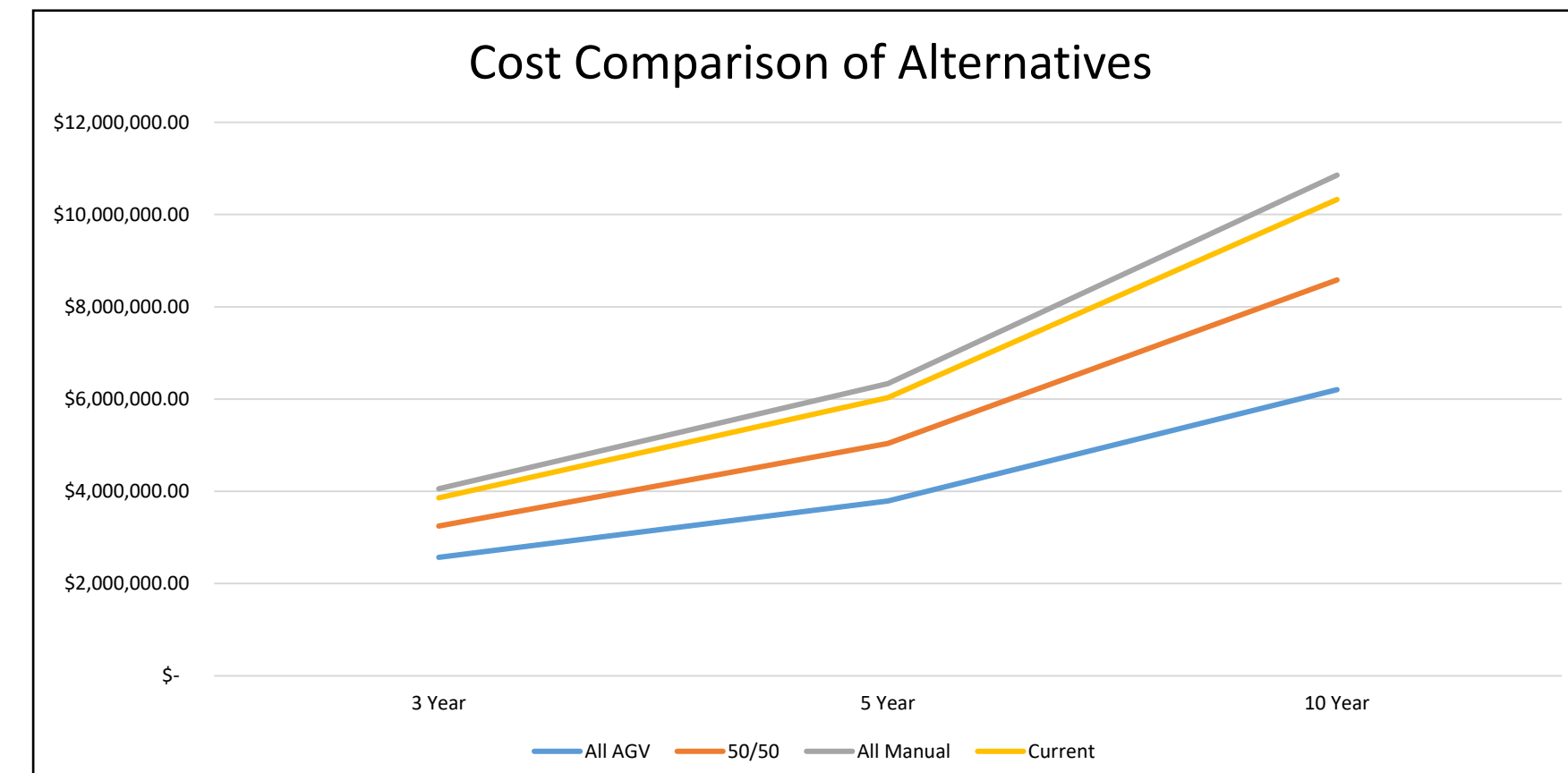
Fork entry bar to lift pallets

“The Jonesboro facility is currently inefficiently handling produced and imported bulk totes of finished product. An optimized solution set involving manual and automated forklifts and an improved allocation is required.”

– Frito-Lay Management



Simulation Activity Diagram



Description

We are working within a Frito-Lay production facility in Jonesboro, Arkansas to increase the efficiency of the movement of their “toted” products, products temporarily stored in sizeable cardboard tote boxes. These products are transferred within the plant using either Automated Guided Vehicles (AGVs), manual forklifts or a combination of both from the production line or receiving dock to their designated storage area and finally to the mixing stations.

Frito-Lay’s toted products such as Cheetos® are mixed with other toted products such as Fritos® to make “mixed” products such as Munchies® and Cheetos® Mix Ups™. The AGVs and the manual forklifts are both used to move finished products to the shipping dock in addition to moving around what we are concerned with, toted products. The facility has one main corridor for all machinery to move products from the production side to the storage and shipping side of the facility.

The primary issues we are facing include creating a better traffic flow within the main corridor as well as finding a way to work with the forklifts most efficiently while minimizing costs. The AGVs in current use have been there for ten years but only recently in this capacity. As the Jonesboro facility has recently renovated and increased the size of their facility by 25%, the newly designed parts of the building are not mapped out for AGV use. We decided that creating a simulation of the facility would best assist us in understanding the concerns and deciding how to handle them.

