

11.6 - Minigrip

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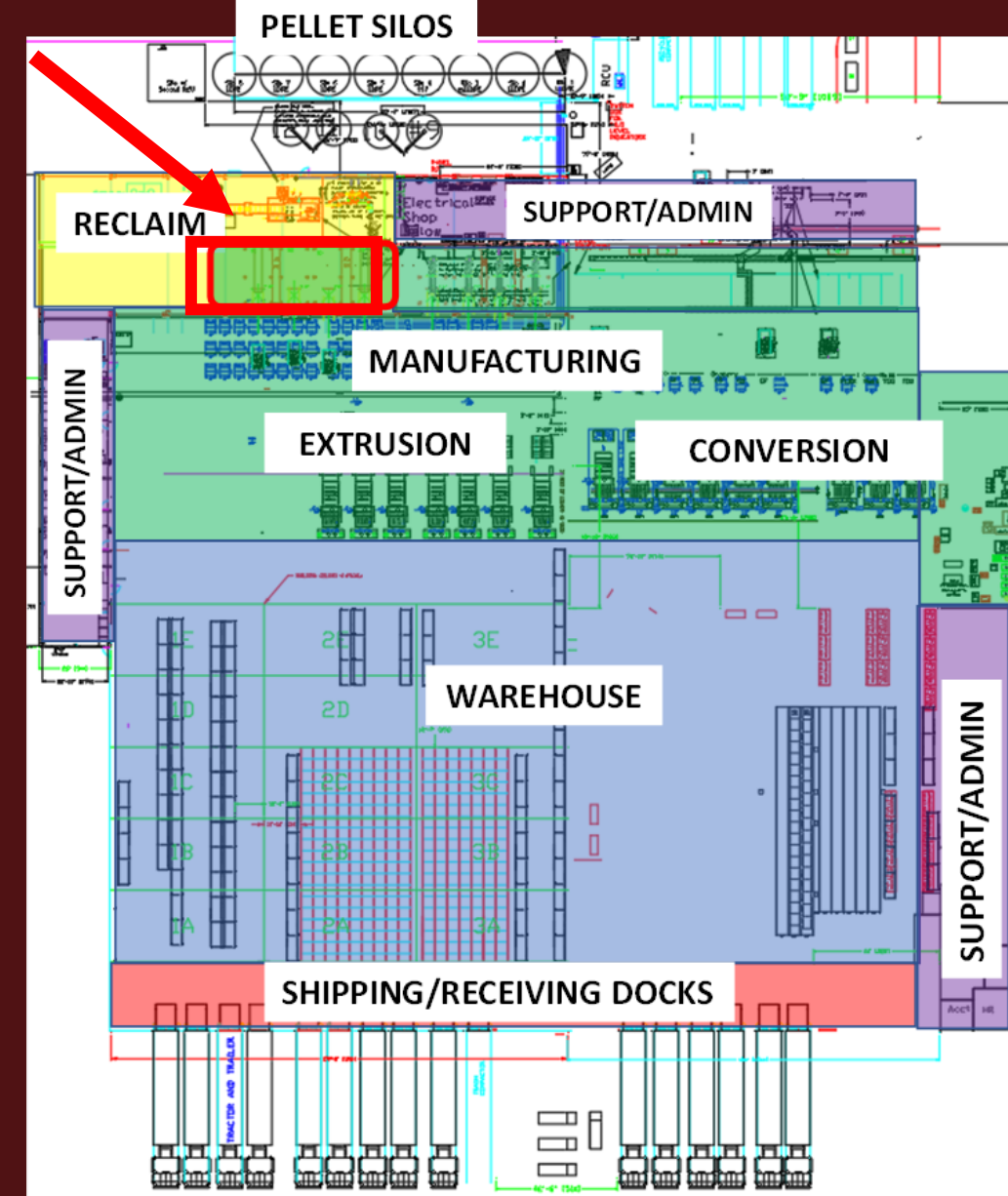
Problem Statement

- Minigrip, a company which produces Ziplock bags for the conglomerate H-E-B, is planning to add four new extrusion machines to its process. The location for the new machines will occupy the current reclaim area, we have been tasked with finding a new location for the reclaim department.



Project Purpose

- The purpose of this project is to optimize the relocation of the reclaim department, all while creating minimal interruption in factory throughput.



Objectives

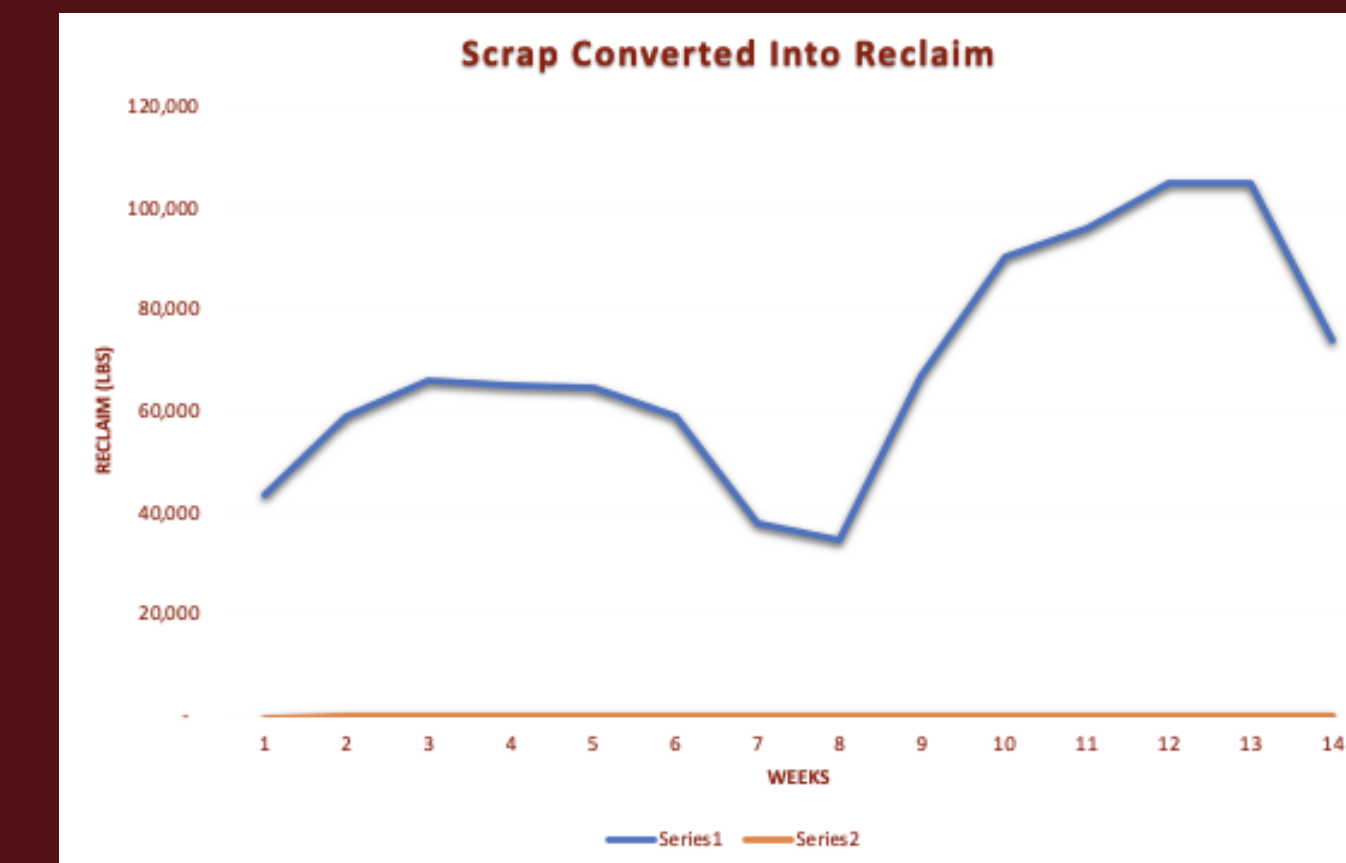
- Complete layout design and evaluation of the Reclaim area for each alternative.
- Identify and make recommendations that will improve site operations.

Acknowledgements

- Our Senior Design team would like to thank:
 - Mr. Alan Mosley – Minigrip Sponsor
 - Dr. Michelle Londa – Texas State, Senior Design Instructor (2nd Semester)
 - Mr. Jerel Walters – Texas State, Senior Design Instructor (1st Semester)
 - Dr. Patrick Thomas – Project Mentor

Scrap Analysis

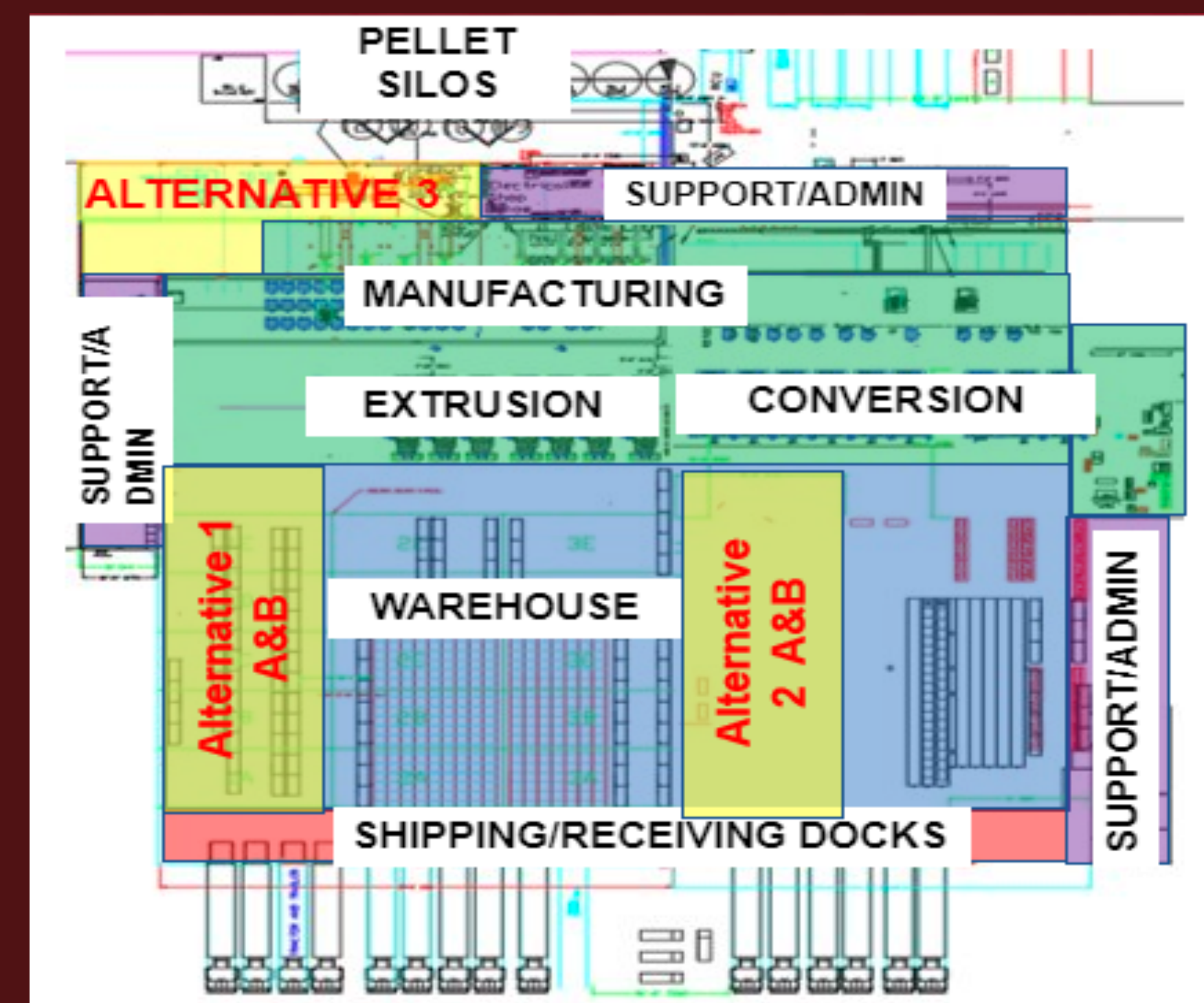
- Management desired to reduce scrap inventory by approximately 50%.
- Altered Reclaim area work schedule.
 - one 12-hour shift 5 days/week
 - Two 12-hour shifts 4 days/week
- Learning curve employed to forecast increased output quantity.
- The target inventory will be reached in **17 to 22 weeks**.



- Factoring into account the weekly scrap created from production.
 - After 14 weeks the inventory decreased between 180,907 & 264,907 lbs.

Selected Layout

- Alternative 3 provides the shortest distance from daybins to cyclone at 82' orthogonally drawn.
- Alt. 3 would also provide for the shortest down time and is the most cost efficient.
- All three alternatives are shown in the graphic below
- Evaluation criteria were established in order to consider factors important to Minigrip each factor was weighted. The total scores are as follows:
 - 1(A) - 292
 - 1(B) - 295
 - 2(A) - 255
 - 2(B) - 258
 - 3 - 311
- Total square footage: 4,420 square feet

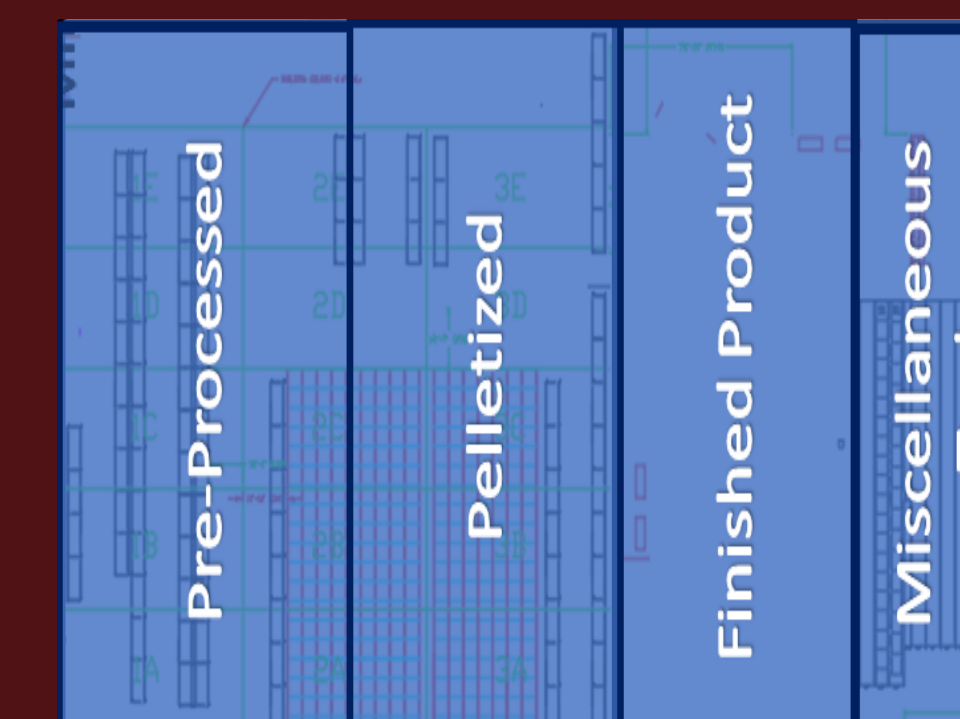


Recommendations



- Markoff the Staggering area with tape to differentiate sections.

- Management desired to reduce scrap inventory by approximately 50%.
- After 14 weeks the inventory decreased between 180,907 & 264,907 lbs.



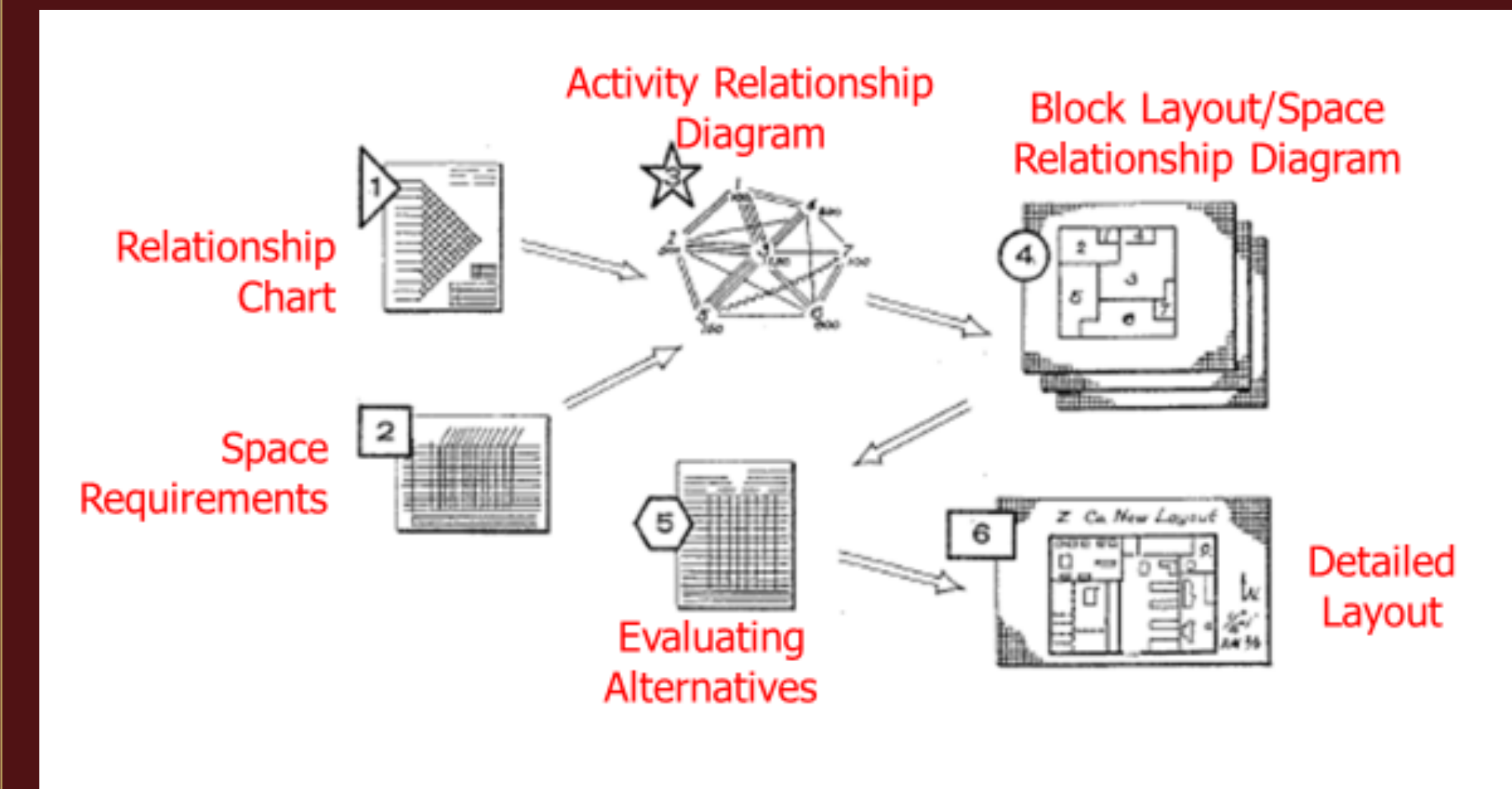
- To help with organization, we recommend that Minigrip separate its warehouse into 4 sections.



- The 6s method will help maintain a clean warehouse.

Methodology

Muther's Systematic Layout Planning



Team

- Team Members :
- (From left to right)
 - Ana Lazaro
 - Zachary Munoz
 - Grant James



Schedule

