

Ryan Hood, Miles Martin, Michael Shultz

Batch to Single Piece Flow

Client: Donaldson, Waterloo, Iowa

Problem Statement

- Assess the current T1 Snap product line and propose a move from batch production to single piece flow

Objectives

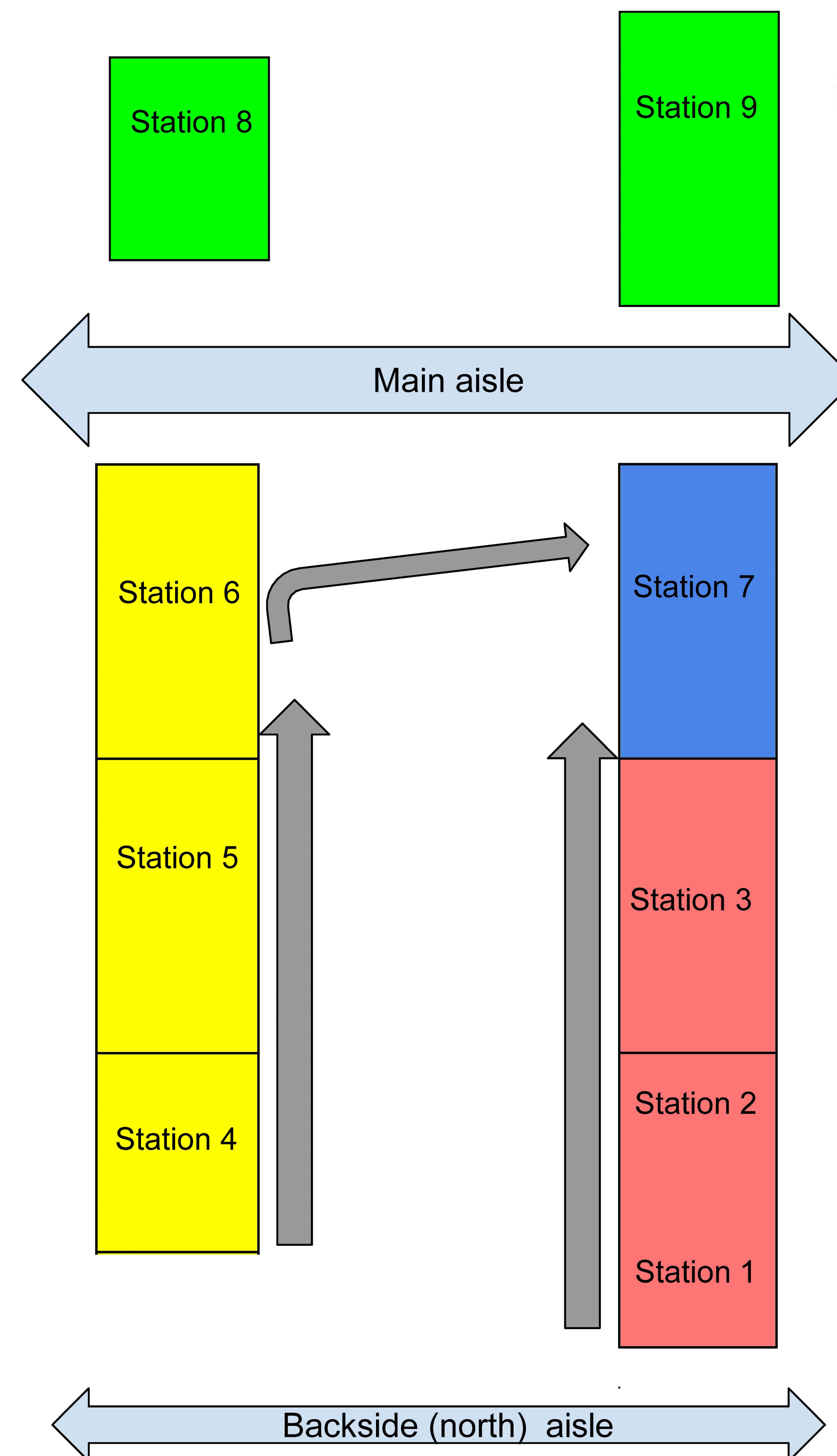
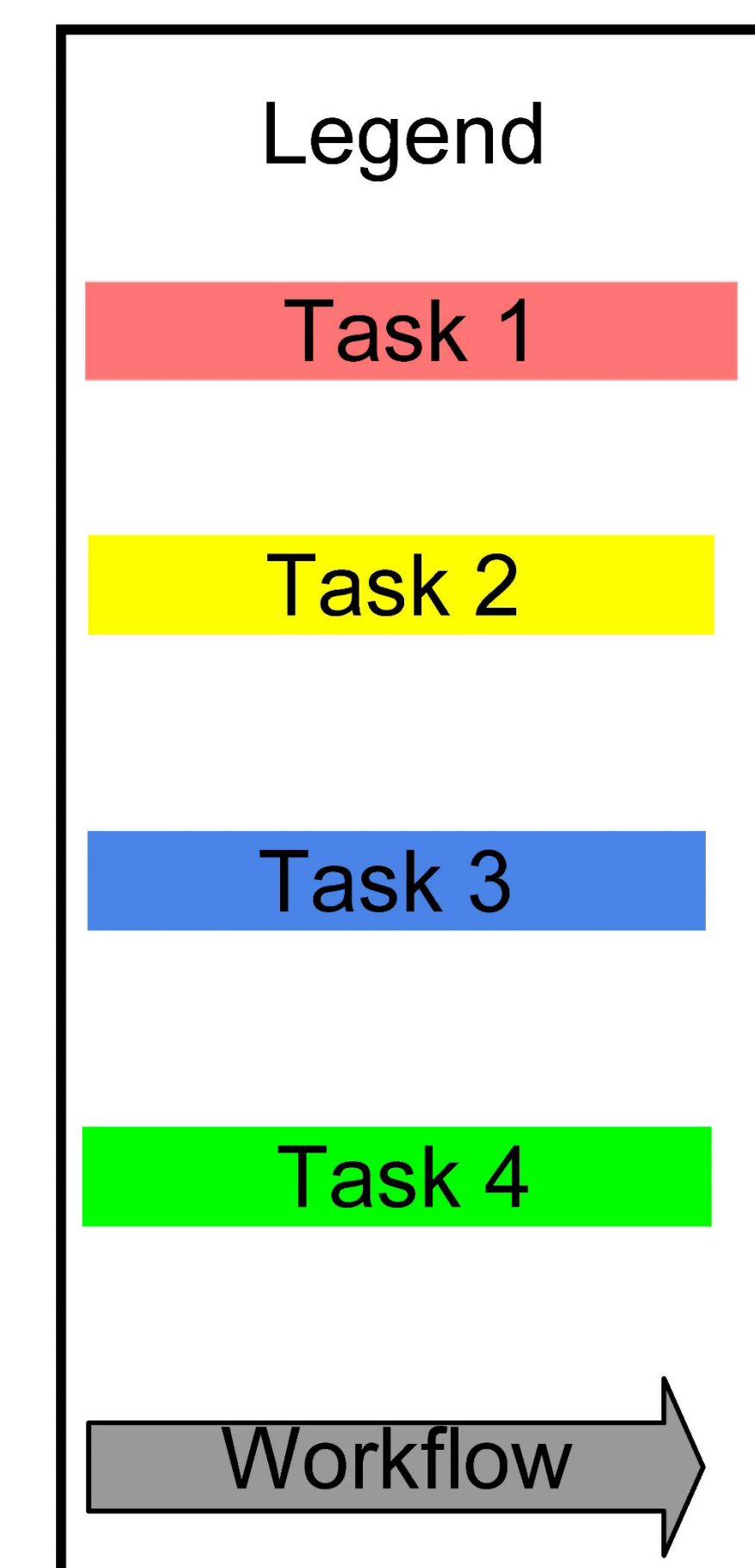
- Create value stream map for the current and future state production line
- Create a Yamazumi chart
- Update standard work documentation
- Create job safety analysis

Constraints

- 6-9 month ROI
- Short time to implement
- Decrease footprint
- Safety (Zero-harm)

Scope

- Create current and future value stream map
- Suggest changes to the process to create single piece flow
- Time observations to create current and future value stream map
- Update standard work paperwork
- Up to and after the oven process



Donaldson
Filtration Solutions

Methods

- Time studies
- Value stream mapping
- 5S

Proposed Solutions

- Condense current work stations
- Reorganize stations to reduce movement waste
- Potential use of conveyors from one station to another

Major Outcomes

- Final report documenting proposed changes
- Product line is single piece flow
- Decrease cycle times or non-value-added times on value stream map

Benefit to Client

- Higher production rate
- Less movement for line workers by increasing ergonomics
- Reapplication of our outcome to other lines for further increased production rates