STANDARDIZATION/MODULARIZATION OF PROCESSES

ASPEN AUTOMATION
WHY COMPANIES DESIRE MODULARIZATIONS

- Increase production/throughput
- Increase process quality and control
- Simplify process or systems functionally
- Simplify troubleshooting or maintenance
- Allow for process flexibility for multiple products with a cell
- Ability to scale a process
Process Advantages of Modularization

- Reduce equipment requirements
- Reduce floor space requirements
- Simplify BOM (Maintenance) crib requirements
- Simplify trouble shooting
HOW DO WE MODULARIZED PROCESS

- Evaluate a customer's process
- Understand their goals
- Determine process capability
- Breakout the process into its simplest functional tasks
- Develop new process flow & system design
What does a modularized process look like:

- Can look like/feel like an automated manufacturing cell
- Various types of conventional machines that are put together in an assembly line or manufacturing cell type arrangement
- Interchangeable equipment/modules within a process to account for the various products and process
- Batch process systems
  - Unit System
  - Equipment
MODULARIZED COMPONENTS

- Design equipment to handle various raw material for batching and process within a manufacturing facility
- Ability to standardize a material type to a process set-up
  - Dry Ingredient
    - Unloading
    - Slurry
    - Batching
  - Liquid Ingredients
- Control/Automation of the process
APPLICATION/EXPERIENCE TODAY

- Fertilizer Industry - Production & Process
- Ag. Supplement Process
- Automotive Manufacturing