[IPRO 306] - Improving Global Supply Management
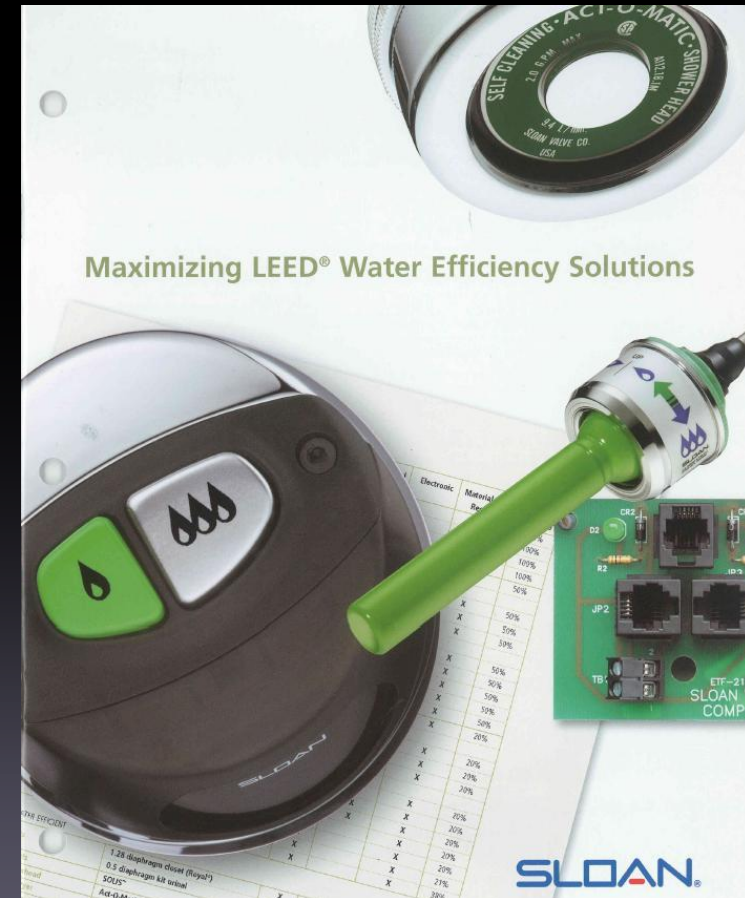
Goals > Progress > Results

Outline

Sloan Valve
- ➤ **World's leading manufacture of water-efficient solutions**
- ➤ **Headquarter: Franklin Park, Illinois**
- ➤ **Founded in 1906**
- ➤ **Facilities in Michigan, Massachusetts, Pennsylvania, California, Arkansas, Mexico, and China**

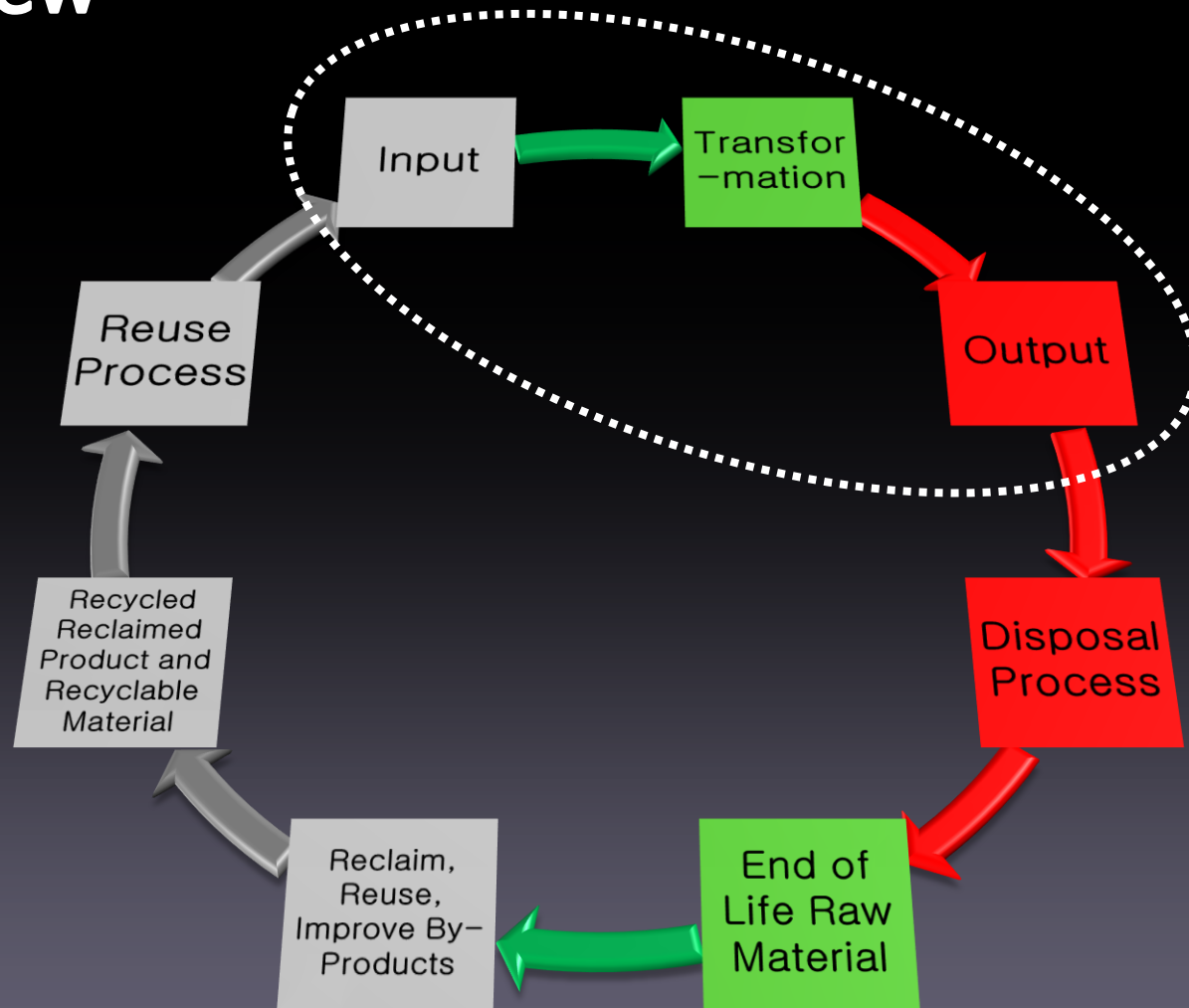Maximizing LEED® Water Efficiency Solutions

Overall Project Goals

- ➢ **Establish a foundation for a Green supply chain by benchmarks and policies**
- ➢ **Improve production efficiency by identifying machine & operator downtime**
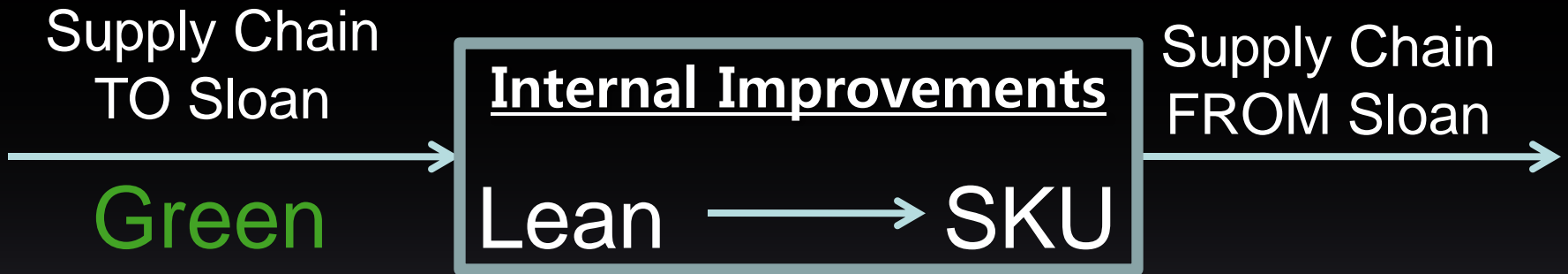- ➢ **Improve product tracking by implementing new part status'**

The Green Supply Chain

Overview

Organizational Structure

SLOAN.

Supply Chain
TO Sloan

Internal Improvements

Supply Chain
FROM Sloan

Green

Lean ⟶ SKU

Green Team Project Goals

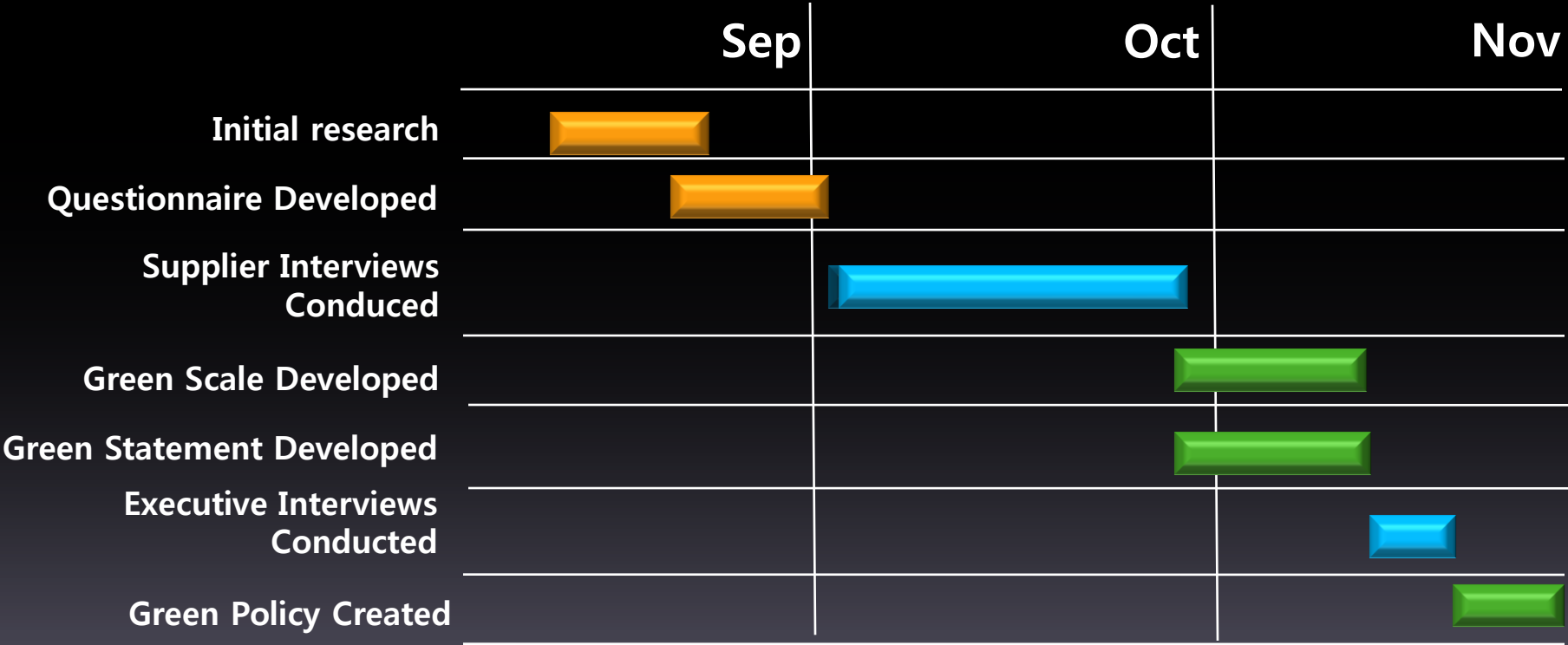## Overview

1. **Define Green**
   a. Internally and externally
2. **Benchmark** corporations
3. Create a **strategy** for a Green supply chain
4. Develop **metrics** for the supply chain
5. Create a **Green policy**

Green Team Progress

Timeline

	Sep	Oct	Nov
Initial research			
Questionnaire Developed			
Supplier Interviews Conduced			
Green Scale Developed			
Green Statement Developed			
Executive Interviews Conducted			
Green Policy Created			

GREEN Team Results

Results

1. Conducted research on interpretations of GREEN

2. Created a GREEN questionnaire to interview suppliers & Sloan management

3. Created a scale to rate suppliers based on their GREEN policies

4. Created a GREEN statement and policy

Green Team Results

What is Green?

1. Green is a very subjective word & concept

2. No set way to rank or implement Green in an organization

3. The Shades of Green

   a) BRIDGE PAPER™: Environment, Ethics, and Business

Green Team Results

What is Green? - The Shades of Green

Light
- **Compliant** with environmental regulations drives strategy
- Discounts value of independent action

Market
- Customer **preference** for Green products drives strategy
- Give up principle that Green costs more

Stake-holder
- **Responding** to and coordinating the needs of stakeholders drives strategy (customers, investors, community, etc.)

Dark
- **Environmental** principles fundamental to business strategy

Above Image from: Freeman, R. Edward, Jeffrey G. York, and Lisa Stewart. Environment, Ethics, and Business. Bridge Paper. Business Roundtable Institute for Corporate Ethics, 2008. Print.

Green Team Results

Suppliers & Green

1. Green policy varied by supplier depending on the product and raw material

2. General trend observed:

   a. Green practices are good for the environment

   b. Green has the potential to reduce costs

   c. Green is good for business

   d. Community obligation to be environmentally conscious

Green Team Results

Sloan & Green

1. **Green is a driving force of the business strategy at Sloan since 1906**

   a) **Recognized industry leader for Green retrofits**

2. **Sustainable practices are key to protecting the environment**

Green Team Results

Benchmarking Green

1. Challenge was *quantifying* a *subjective* topic

2. Based on interviews conducted with suppliers

3. Looked at:

    a. Company's vision applied to Green

    b. Internal company improvements (Green specific)

    c. Value Impact to Sloan

    d. Manufacturing improvements

Green Team Results

Benchmarking Green

Company Vision Applied to Green	
Topic	Points Awarded
Social Responsibilities	0
5-year Green Objective	0
Opportunity Cost Scale Points	0
Total Vision Score:	0

Internal Company Improvements (Green Specific)	
Topic	Points Awarded
Past Improvements	0
In-progress Improvements	0
Future Improvements	0
Total Internal Score:	0

Value Impact	
Topic	Points Awarded
Amount Spent yearly	0
Total Value Impact Score:	0

Manufacturing Improvements	
Topic	Points Awarded
"Greenness" of raw material	0
Waste Material Produced	0
Waste Material Reused	0
"Greenness" of finished good	0
Total Manufactin. Score:	0

All categories are on a 1 - 5 Point system (1 = worst; 5 = best)

Overall Total:	0

Overall Total Green Color Scale Range	
0-14	Light
15-29	Market
30-42	Stakeholder
43-55	**Dark**

Green Team Results

Creating a Green Statement/Policy

1. Green statement had to reflect Sloan and its current mission & vision

2. Had to be something to inspire internal & external Green policy going forward
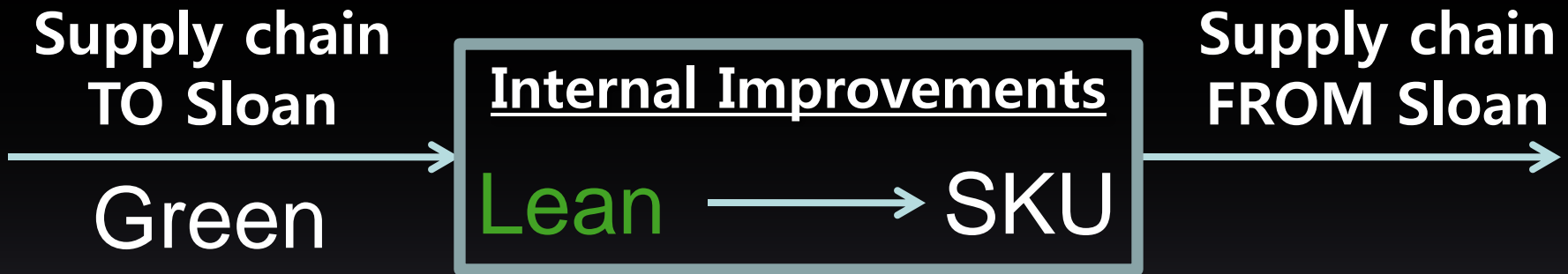
Green Team Results

Green Statement:

Green means preserving the environment in everything we do *daily*.

Organizational Structure

SLOAN.

Supply chain TO Sloan

Green

Internal Improvements

Lean ⟶ SKU

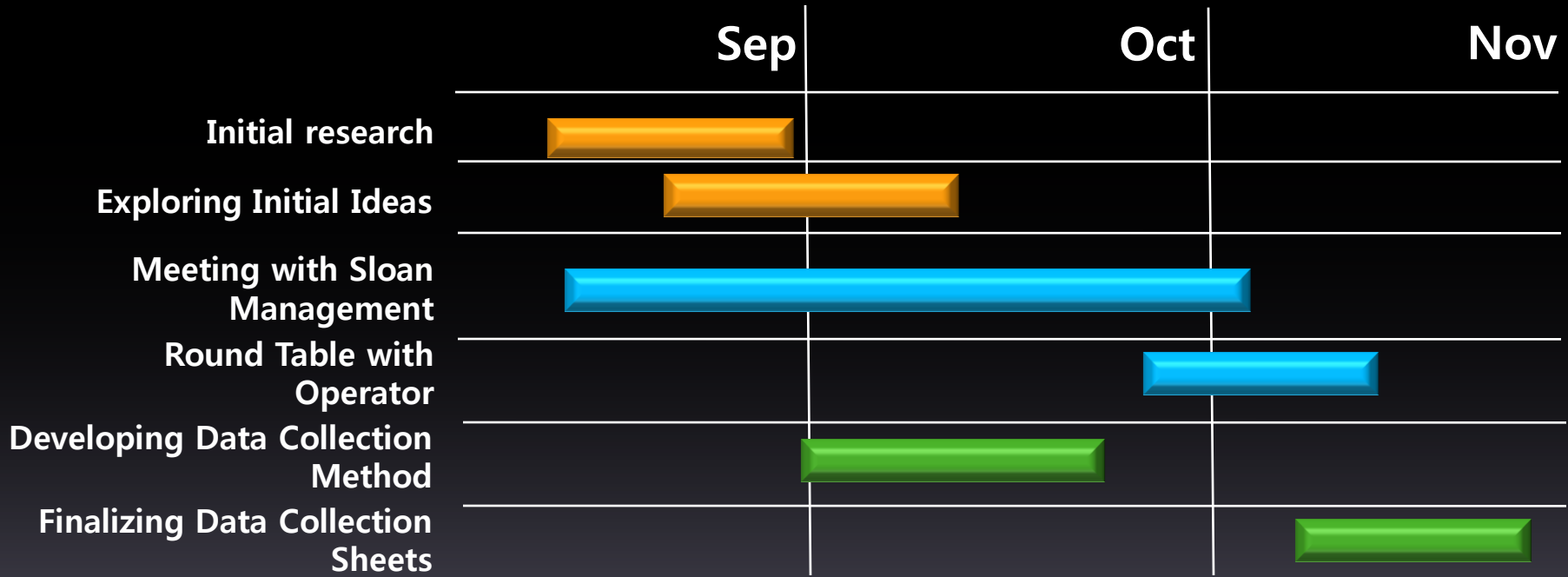**Supply chain FROM Sloan**

OEE

- **Overall Equipment Effectiveness (OEE)**

- **A measure of the effectiveness of machinery being used.**

Lean Team Project Goals

- To **develop** a method to document data pertaining to the performance of the specific machinery.

- To **generalize** the methods developed so they can be applied to all machinery.

- To **identify** the relevant people on the floor to be in charge of data collection

Lean Team Progress

Timeline

	Sep	Oct	Nov
Initial research			
Exploring Initial Ideas			
Meeting with Sloan Management			
Round Table with Operator			
Developing Data Collection Method			
Finalizing Data Collection Sheets			

Lean Team Results

1. **Researched** OEE

2. **Analyzed** Sloan Valve's OEE program

3. **Developed** New Ideas

4. **Combined** Findings to generate method that is both user friendly and effective.

Lean Team Results

- •Data Collection sheet to be used by operator.

- •The data collected is to be entered into an excel worksheet.

OEE OBSERVATION

Equipment #:		Machine Description:
Department:		Observer
Date:		Hours Scheduled
		Shift

| COUNT |
| SCRAP COUNT |

TIME		TOTAL TIME	TOOL BREAKAGE	DELAY	BREAKDOWN	PLANNED DOWNTIME	OTHER	Comments
DOWN	RUN							

TOTAL DOWNTIME:

Lean Team Results

- Impact
  - When implemented OEE can be used to:
    1. Determine causes of downtime
    2. Devise Preventative Maintenance plans
    3. In future purchases of equipment

Organizational Structure

Supply chain
TO Sloan

Green

Internal Improvements

Lean ⟶ SKU

Supply chain
FROM Sloan

Project Goals

Current Issues

1. **Errors occur** because on hold inventory is controlled manually

2. Orders are booked at the **Incorrect plant**

3. Inventory exists at locations where it will **not be utilized or be identified easily**

4. No easy way to **determine inventory** in wrong location or SKU stocking plan by plant

5. **No reports or procedure** to manage inventory outside of standard cycle counting reports

6. **No way to allow for different stages in new product development**

Progress

Timeline

	Sep	Oct	Nov
Meeting with Sloan	■		
Developing Logic Sheet	■		
Pulling Data from SAP	■		
Bulk Assigned Statuses	■		
Individually Assigned Statuses		■	
Loading New Data into SAP			■
Create Reporting Procedure			■

EDC > WDC >FKP > CDC (CN01/ MX01)

Results
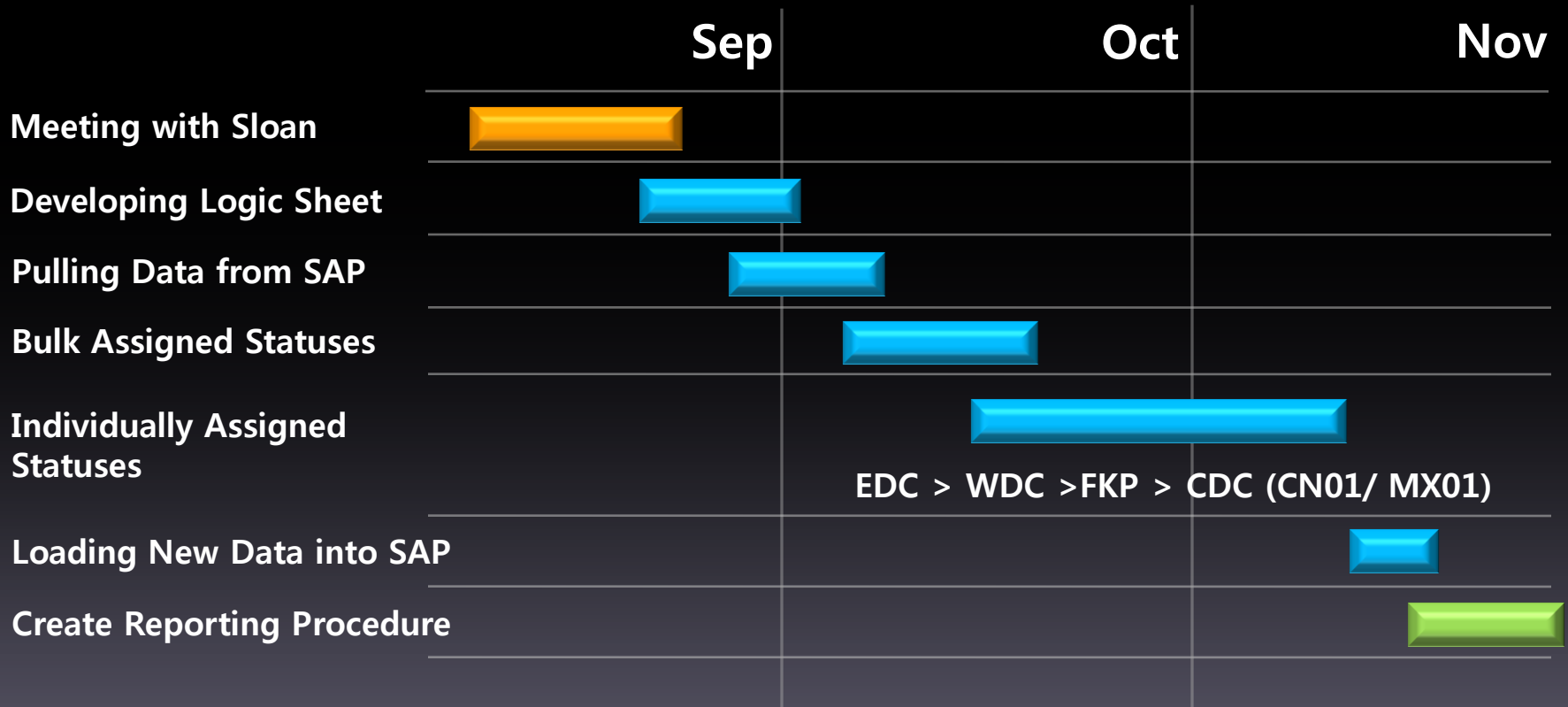
Outcome

1. Develop **new part statuses**

2. All domestic part statuses ~50,000 updated to the **correct new status in SAP**

3. Reports are created and owner buy in is achieved to maintain and **control inventory based on new SKU statuses**

4. **Presentation** to stakeholders showing accomplishments

Reports

Manual Inventory Quality Hold
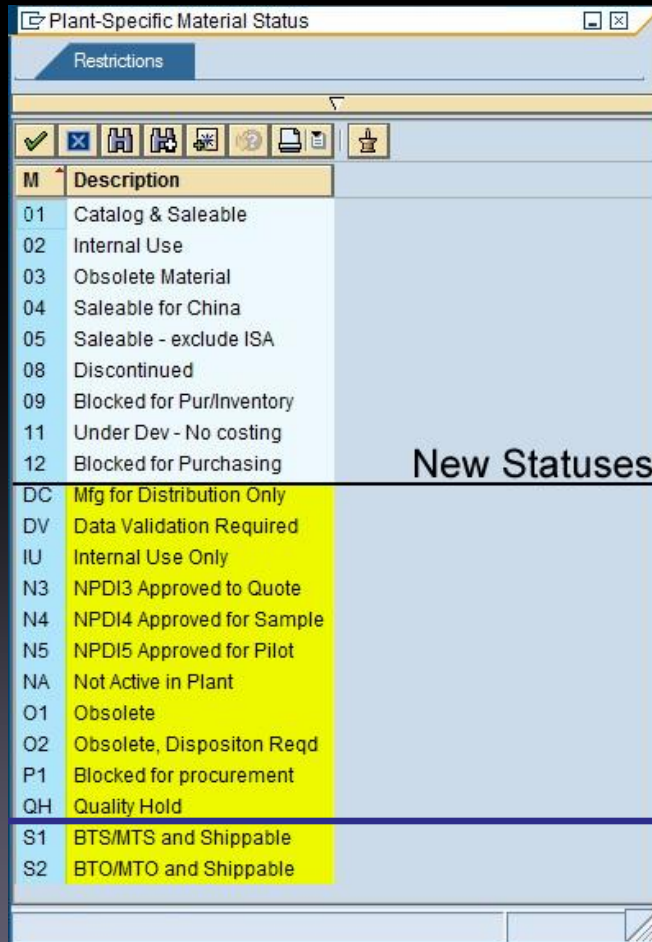
Inventory on hold manually (margin for error)

Created Quality Hold status

systematically prevent suspect product from build/ship

Reports

Manual Inventory Quality Hold

M	Description
01	Catalog & Saleable
02	Internal Use
03	Obsolete Material
04	Saleable for China
05	Saleable - exclude ISA
08	Discontinued
09	Blocked for Pur/Inventory
11	Under Dev - No costing
12	Blocked for Purchasing
DC	Mfg for Distribution Only
DV	Data Validation Required
IU	Internal Use Only
N3	NPDI3 Approved to Quote
N4	NPDI4 Approved for Sample
N5	NPDI5 Approved for Pilot
NA	Not Active in Plant
O1	Obsolete
O2	Obsolete, Dispositon Reqd
P1	Blocked for procurement
QH	Quality Hold
S1	BTS/MTS and Shippable
S2	BTO/MTO and Shippable

New Statuses

Old and New Statuses in SAP
* Quality Hold

Results

Orders at Incorrect Plant

Orders entered at incorrect plant

Create S1, S2 and Not Active, statuses to determine if order can be entered at each plant, returning error message when switching order to non S1 and S2 plant

Prevent Delays in Order processing/Extra Processing
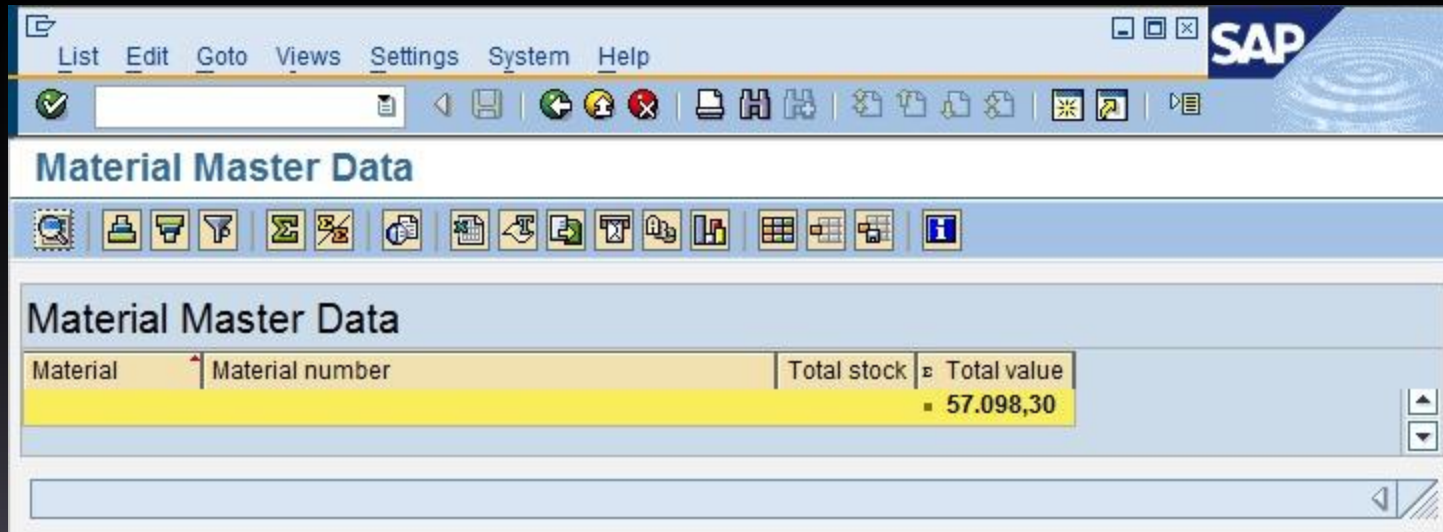
Results

Inventory at location not used

Inventory at location not used

Created obsolete, not-active and obsolete with dispositions statuses. *Report ran regular basis on non active SKU's to determine why disposition is not occurring.

$57,000 > Ability to identify and correct issues

Results

Inventory at location not used

Dollar Value of Inventory at Improper Distribution Center

Results

SKU Stocking-plan by plant

No way to identify SKU Stocking-plan by plant

Statuses created that define stocking-plan (S1, S2, NA, IU)

Sales and customer service rep has knowledge of Long Lead time items versus stocked items

Results

New Product Development

Only one NPD status that does not allow all stages of process

Made 3 statuses to allow functionalities – no movement, prototype, buy

No longer have to move to "production" status, while in NPD functionality now available

Results

## New Product Development

Plant-Specific Material Status

M	Description
01	Catalog & Saleable
02	Internal Use
03	Obsolete Material
04	Saleable for China
05	Saleable - exclude ISA
08	Discontinued
09	Blocked for Pur/Inventory
11	Under Dev - No costing
12	Blocked for Purchasing
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New Statuses

New Statuses for New Product Development

The Green Supply Chain

Overview
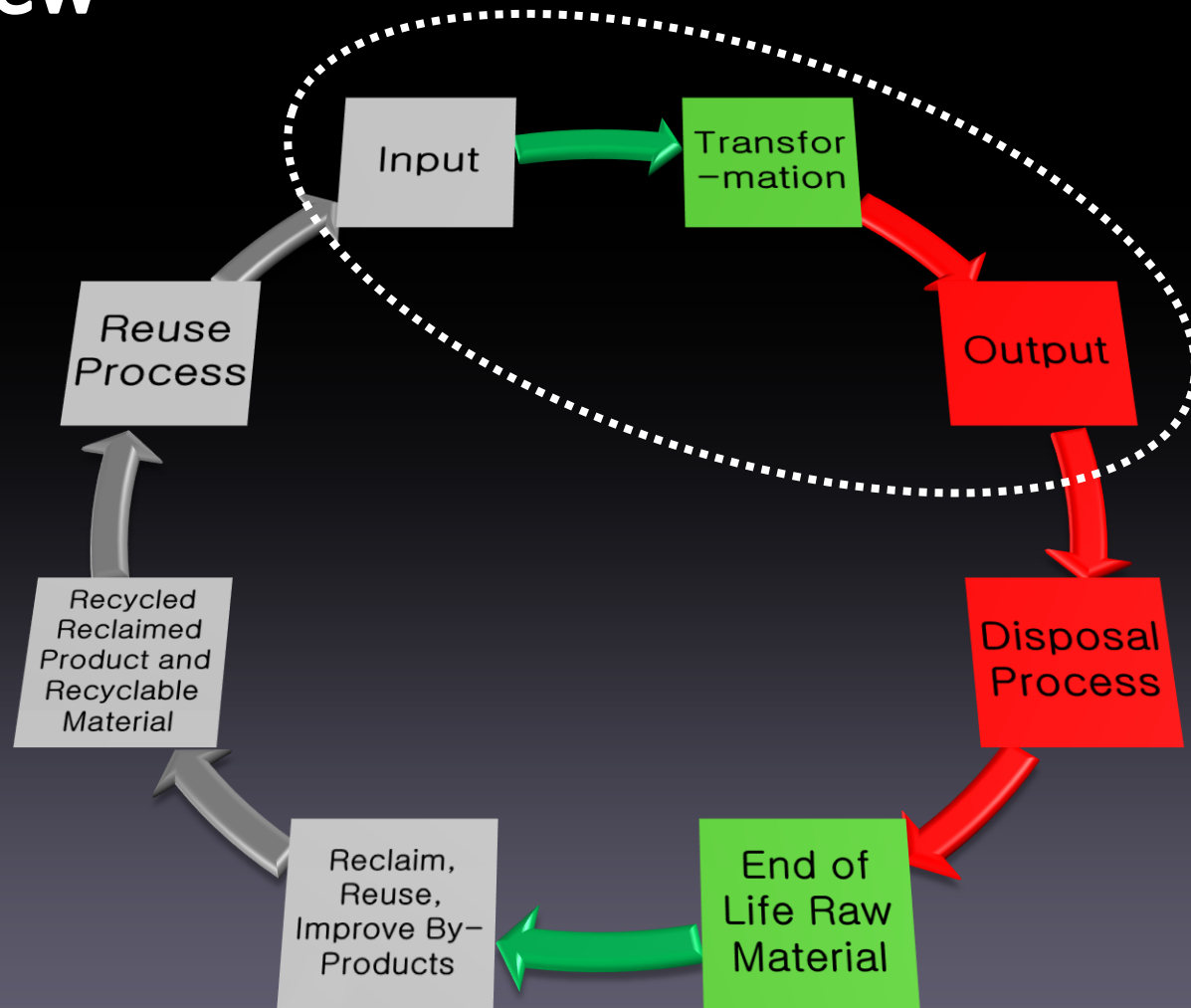
Key Takeaways

➢ **A Green supply chain reduces costs and benefits the environment**

➢ **Maximizing OEE does stuff**

➢ **Updated inventory management and implementation in SAP reduce costs and be more responsive to the customers**

Acknowledgements

SLOAN.

- ➤ **Mr. John Caltagirone, Faculty Advisor**

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- ➤ **Everyone present today**