

Creating Supply Chain Management in an Operations World

Road School 2018

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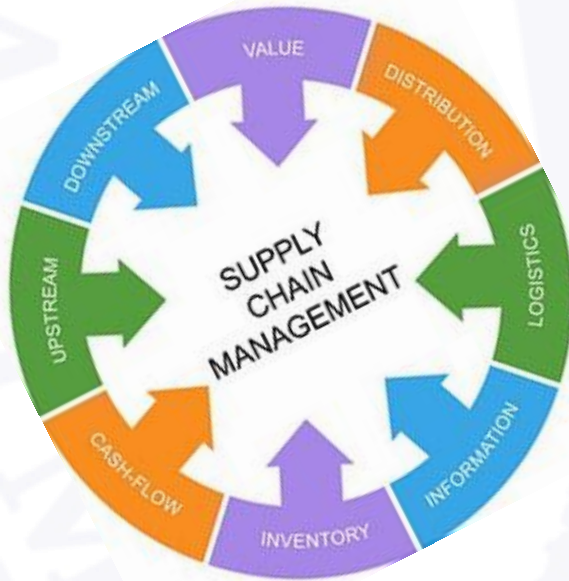
Creating a supply chain

sup·ply chain

/səˈplī CHān/ 

noun

the sequence of processes involved in the production and distribution of a commodity.



Formalizing this required some basic answers within our business:

- **What will we do differently?**
- **Who will this effect?**
- **How will this look?**
- **What is the **benefit**?**

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Starting LEAN...



... the focus areas of supply chain management by our Logistics Division were to reduce overhead, service our customer, and increase cost efficiencies. Essentially, to lean out the waste!

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The supply chain approach that we followed was LEAN based.

- We focused on “**flowing**” resources into the operation.
 - **Less on-hand quantities for “just in-case”.**
 - **Less inventory to administrate.**
 - **More straight to work-site delivery.**
- We identified specific inventory levels to be reduced, which freed cash flow.
 - **Purchase quantities became production need driven.**
 - **Reserve Inventories became general-material based, with shorter turn-rate quantity levels.**
 - **Specialty inventories became centralized and distributed from internal depot.**
- We utilized cost models to prioritize rental capacity of equipment, rather than owning.
 - **Rental lead times were reduced from 2-3 weeks to 2-3 days.**
 - **Capitalization planning was redesigned.**



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How are we doing this?

- Externally
 - Strengthened vendor relations
 - Transparent Equipment Rental Program
 - Material forecasting to shorten lead times
- Internally
 - Clear accountability to organization deliverables and results
 - Operations is committed to a production based delivery of the plan
 - Engineering is committed to developing a technically based plan
 - Logistics is committed to effective and efficient resource management *ahead* of the plan delivery:
 - Flow of materiel
 - Maximize inventory turn
 - Minimize idle-time



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Tying analytics to Supply Chain...

- A critical component of the Logistics Division is an embedded analyst.
- This analyst reviews cost data, materiel data, and plans to provide objective proposals to bundle and schedule materials, equipment, and other resources to the Operational plan.



This level of analytics now creates an outlook of resource management that:

- Leads to tighter financial forecasting
- Supply flow being lead time driven
- Enhanced output per dollar spent

Why a Logistics/Supply Chain Model?

- Maintenance Operations was overly saturated with every aspect of the business from planning, support services, execution, analysis, and results
- All that responsibility at one Director level meant there were aspects of the business that could not be executed at the highest level
 - Resulted in money being left on the table at the end of the fiscal year or not spent in the area of greatest opportunity
 - Support areas – like Fleet and Facilities – often times took a back burner because the end goal was work production
- Logistics/Supply Chain models exist successfully in a variety of businesses

Some of the High Level Benefits We've Experienced

- Allowing business specialists to own and manage their areas of business – Fleet, Facilities, Consumables/Materials, IT, and Analytics
 - Now have multi-year plans for how and when budget is spent
 - Improved asset conditions
 - Consistent preventative maintenance and day-to-day planning of support services
 - Increased emphasis on planning and measurement
 - Greater alignment with our corresponding Central Office business – large scale planning in line with the day-to-day work



Some of the High Level Benefits We've Experienced

- Freeing Operations Managers to focus...
 - Focus on their people
 - Focus on safety
 - Focus on training
 - Focus on the execution/outcomes/best work practices

#OWNIT



Let's Look at a Specific Case Study

Crawfordsville District – Beginning to Results

- Fleet in the Beginning
 - 5 shops acting independently in terms of executable results, budget, purchases, disposition of assets, diagnostic work, etc.
 - Basic day-to-day planning/operation nearly non-existent – working in fire drill scenario
 - No ownership of their annual \$1M capital fleet budget



Crawfordsville District – Beginning to Results

- Fleet in the Beginning
 - No consistency with:
 - Preventative Maintenance
 - Types of tools on hand (handheld and diagnostic)
 - Triage methodology
 - Equipment rental/usage
 - Coordination with Central Office Fleet
 - Snow fleet downtime prevented having full coverage of snowroutes
 - Snow fleet had not had a full inspection in at least 5 years



Crawfordsville District – Beginning to Results

- Fleet Today

- 5 shops that act in unison in everything from executable results, budget, purchases, disposition of assets, diagnostic work, etc.
- There is a process for day-to-day planning/operation
- Complete ownership of annual \$1M capital fleet budget with a 10+ year replacement/right-sizing plan



Crawfordsville District – Beginning to Results

- Fleet Today

- Consistency with:

- Preventative Maintenance planning and “how to” execution
 - Types of tools on hand (handheld and diagnostic)
 - Triage methodology
 - An equipment rental plan with tracked usage/movement/return
 - Central Office Fleet from new initiatives, planning, budget, and execution

- Snow fleet uptime at an all time high with route coverage for each event

- Snow fleet inspections on a bi-annual basis with consistent methodology and decreased “red tag” issues
 - 98% red tagged at initial fall inspection in 2016
 - 24% red tagged at next fall inspection in 2017 – and red tags drastically decreased in severity

That was Just One Case Study...



What's Happened Statewide?

It's All About Results

- Consumables & Materials Management
 - Looking at appropriate stocking levels and turn rates. Use it or move it out
 - Pulling specialized stock into centralized locations vs. stocking at each location to avoid tying up dollars needlessly and extending turn times
 - Measuring and reducing count errors and corrections to inventory
 - Proactively planning and managing spend and release of multimillions of dollars in work program materials. Right material at the right time in the right amount



It's All About Results

- Technology

- Identifying a Cost per User & working to lower that cost while maintaining a consistent level of service
- Forming a more robust relationship with INDOT's Central Office Management Information Systems (MIS) group to help drive technology choices, rollout timelines, and improve level of service



It's All About Results



- Analytics

- Data driven review and recommendations across processes, procurement, usage/unit costs, results, etc.
- Development of a standard catalog of reports that each District needs to be able to plan/execute their business as well as measure themselves
- Data, processes, business acumen vs. “how we’ve always done it”
- Measuring success as well as cataloging lessons learned and ideas for a path forward

It's All About Results

- Logistics offers all this and frees Maintenance to focus on the execution and results
- All this planning and preparation utilizes the same staff as before (with the addition of a Director and Materials Manager)
 - More time can be spent with these support service areas to plan because Logistics is focused strictly on this – not the execution which is Maintenance Operations
 - Managers in these Logistics service areas now focused on data/planning and less on reacting
- Logistics and Maintenance is really a partnership from planning through execution with clear handoffs and responsibilities for successful performance



Questions?



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