Deere and Company: Supplier Development Project with Cline Tool and Service

Summer 2000 Internship
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Supplier Development -
What and Why?

➢ Business case
  • 75-80% of parts on Deere equipment come from suppliers

➢ Supplier Development
  • Implements process improvements
  • Achieves cost savings
  • Creates “win-win” relationship for Deere and their suppliers
Project Background

- General information

- Cline supplies about $2 Million/year in cutting tools to Deere:
  - J.D. Waterloo Foundry
  - Davenport Works
  - Engine Works
Examples of Cline Tools

- **Drill**
- **End Mill**
- **Reamer**

[Image of Drill, End Mill, and Reamer]
Project Goals

- Reduce lead time from 8-12 weeks to 4 weeks
- Increase on-time delivery from 30% to 100%

Also...

- Maintain perfect quality for Cline customers
- Do not increase costs!
Challenges!

Lead times are too long!

Poor machine utilization

Time spent to set-up jobs

Several new employees - need training

Too many work orders on shop floor

Need better scheduling
Challenges!

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Improve Scheduling Process

- Existing Situation - no scheduling, piles of orders stacked in front of each machine
- Solution:
  - Hold orders until 4 weeks from due date
- Reduces Work in Process on floor
- Speeds manufacturing cycle time
Improve Operator Training

➢ **Existing situation:** New, inexperienced operators; no time to train due to workload

➢ **Solution:**
   → Educated on benefits of training
   → Created training matrix

➢ **Benefits:** More flexibility in scheduling, increased productivity!
Set-up Reductions

- **Existing Situation:**
  - Constraint machine runs only 38% of shift!!
  - Set-up comprises most of remainder of time

- **Process:**
  - Detailed analysis of set-up tasks
  - Where is most time spent?
  - How can we cut that time?
Set-up Reductions

Solution Strategies:
→ Improve tooling supply; standard tool kits
→ Modify machine layout; team environment
→ Educate and train operators

- Increases productivity!
- Reduces Cycle Time!
Potential Cost Savings

• Current
  – 40% uptime
  – 20 orders/day

• Future (Example)
  – 60% uptime
  – 30 orders/day

Increased output by 50%
Results as of 15-August

- Work in Process reduced by 50%
- Manufacturing cycle time reduced 50%
- On-time delivery currently up from 30% to 50%
- Ongoing project.....
Are there any questions???