10 Years Learning Demand Driven Lessons

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Demand Driven World
transforming push and promote into position and pull

WHERE WE CAME FROM - Scientific Approach To Management

- 150 years ago Taylor introduced productivity as:

Parts/hour

- The concept of efficiency applies to all workplaces.
- Resources optimization to obtain Local efficiencies.

HOW THE WORLD WAS…
…And How It Has Changed

- There was much more demand than supply.
- This scenario persisted for over than 100 years.
- With globalization and the internet, the world has changed.
- Today there is over-supply in almost all markets.
- Uncertainty has become the norm.

PARTS / HOUR -
The Productivity KPI Source Of Many Problems

- Producing wrong parts does not increase the return on investment…It does:
  - Generate activity in the plant.
  - Absorb fixed costs.
  - Reduces unit costs.
  - Increases Finished Product inventory.

  ….But it does not increase the return on investment!!!

THE KEY WORD IN OPERATIONS
CASH-FLOW

CASH is an output

FLOW is in the process

We need **FLOW** to get **CASH**

THE KEY TO MANAGEMENT SUCCESS – **FOCUS** On What Is Important

- The main indicator has to be CASH FLOW.
- Demand Driven is a process to generate FLOW.
- It is very important to know what to do…

…But is more important to know what never to do.

After Many Years, We Need To Go Back To The Basics

- THE KEY IS HOW MUCH TIME we need to deliver the customer's order.
- Part# + fixed due date + quantity = Actual Order

THE NEW OPERATIONS INDICATOR
TIME Must Be In The Numerator

From: $\frac{PARTS}{Time}$ To: $\frac{TIME}{part}$

When **supply** is scarce:

- Our bottom line improves if the output of ANY part increases.
- It does not matter how short our lead time is...

THE MARKET IS WAITING FOR US!

When **demand** is scarce:

- Our bottom line improves if we are FAST delivering what is required.
- It does not matter how good we are doing other things...

THE MARKET WILL NEVER WAIT FOR US!

KEYS TO IMPLEMENT DEMAND DRIVEN

It is very important to know what Demand is, but yet again…

…it is more important to know what it is not demand.

- Short-term forecasts are not demand.
- In Automotive Industry normally the only real demand is less than 5 days EVEN IF WE HAVE FORECASTS of 90, 30, 15 days …
- Part Number + Due date + quantity = Actual Demand
- No parameter must change (Part Number + Due date + quantity).

POSITIONING Can Alter The Concept Of WHAT IS Demand And WHAT IS NOT

- If only RM buffers are managed, DEMAND should be the **manufacturing plan requirements.**
- If END ITEMS demand is used as Raw Materials´ demand and the manufacturing batches are not able to match those exact quantities:

  there will be material shortages and over stock.

- The Raw Materials´ CUSTOMER is the manufacturing line.
- Now we are able to see manufacturing batches (or shipping batches) as QUALIFIED DEMAND spikes.

POSITIONING Can Alter The Concept Of WHAT IS Demand And WHAT IS NOT

- If END ITEM buffers are managed in a factory and there is a stock position downstream, DEMAND should be the **shipping plan.**
- If we use the END CUSTOMER´s demand and the shipping batches are not able to match those exact quantities:

  there will be material shortages and over stock.

- The customer of the factory is the dowstream stock position.
- If shipping plan is ignored, it is impossible to analyze shipping batches as QUALIFIED DEMAND SPIKES.

Concatenating Operations To Reduce Costs May Hinders Demand Driven

- A SEMI-FINISHED item buffer may be needed, but the production line was designed to carry out coupled and automated operations very fast according to efficiency criteria and unit costs.
- The concept of integrating and automating operations can be an obstacle to manufacturing the right thing.
- We are able to make wrong stuff "*cheaper & faster*"….

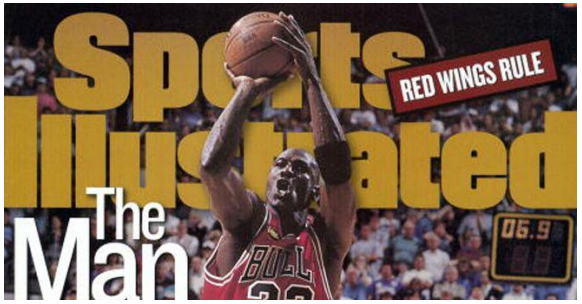
….REALLY??? Is that Industry 4.0?

In A Production-Distribution Environment The Key Word Is **SYNCHRONIZATION**

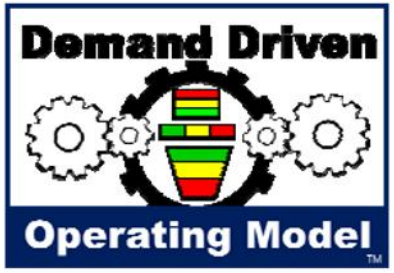
- Integrating purchasing, manufacturing and distribution in the same tool (standard rules for improving flow), improves the synchronization.
- Purchasing may use monthly batches, manufacturing weekly batches and demand daily batches.
- Daily planning of distribution first, manufacturing after and then purchasing. This creates a synchronization between the three scenarios that will result in better customer service and less expedites and inventories.

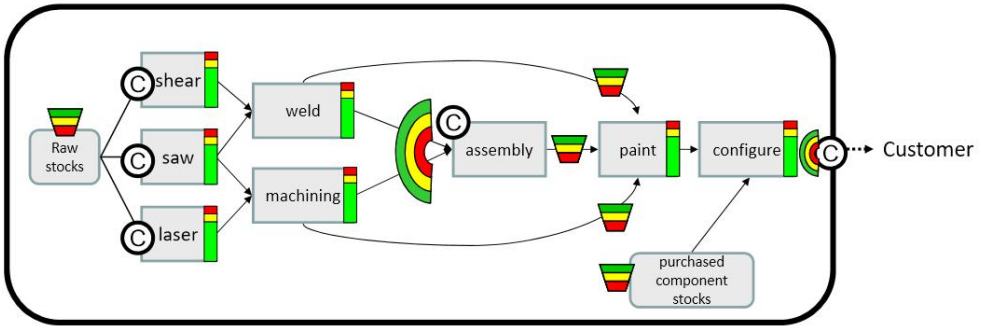
CAN WE IMPROVE BEYOND DDMRP?

- DDMRP Buffers have reduced nervousness in the factory
- Bi-directional communication factory-customer is enabled
- Inventory is under control
- Service Levels are under control
- **Should I quit my job now I´m in the summit?**



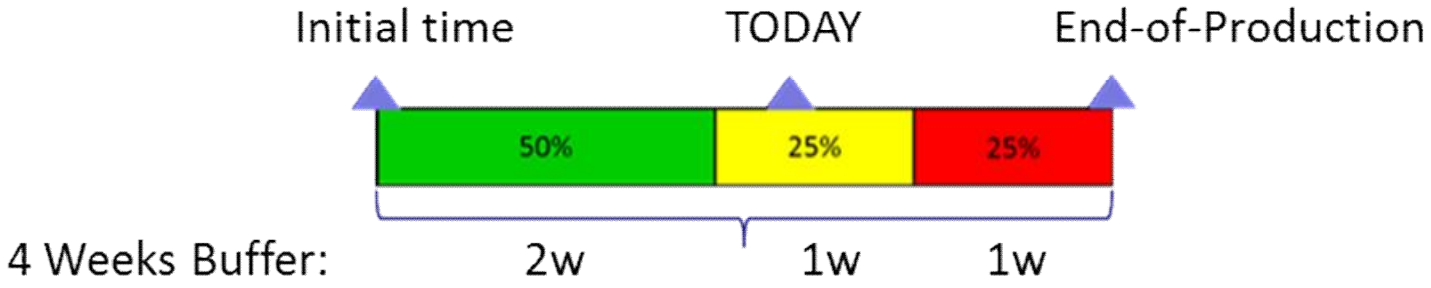
…we have just started DDOM!!





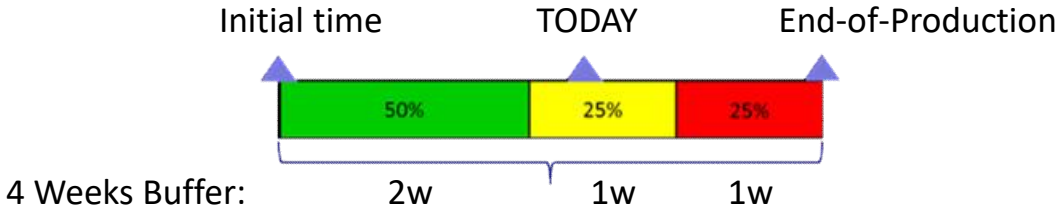
HOW TO IMPROVE BEYOND DDMRP
Focus On **EXECUTION**

- Prioritization, Preparation & Location of RED
- Prioritization System: Buffer Consumption
- They need not be 3 equal thirds



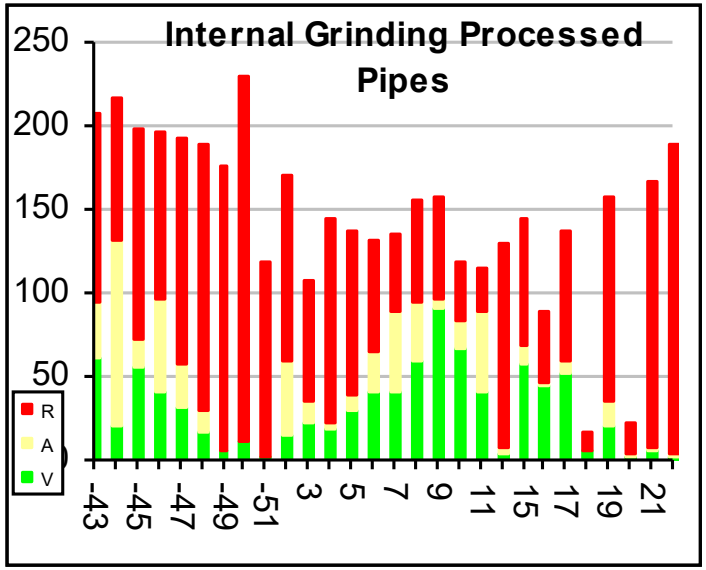
HOW TO IMPROVE BEYOND DDMRP
Focus On **EXECUTION**

- Green Zone: No action required.
- Yellow Zone: Preparation & Locating items.
- Red Zone: Expedite

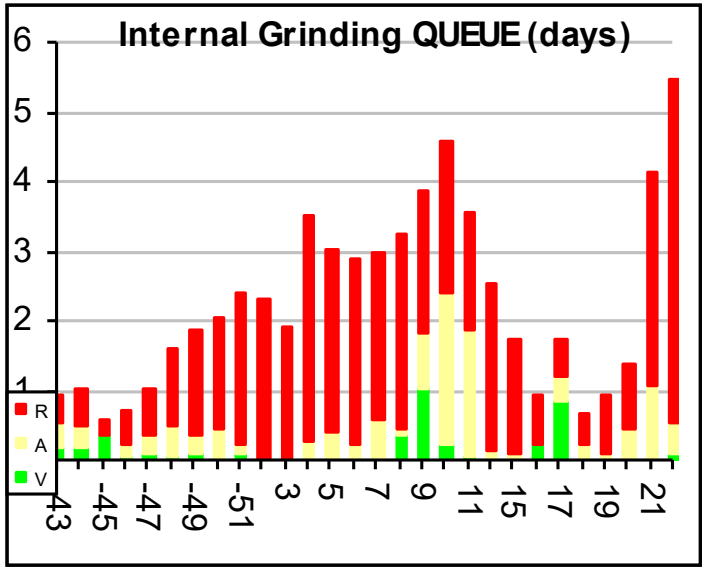


HOW TO IMPROVE BEYOND DDMRP Process Control

- Daily Production Control Points



- Critical Resource Queue Trend.



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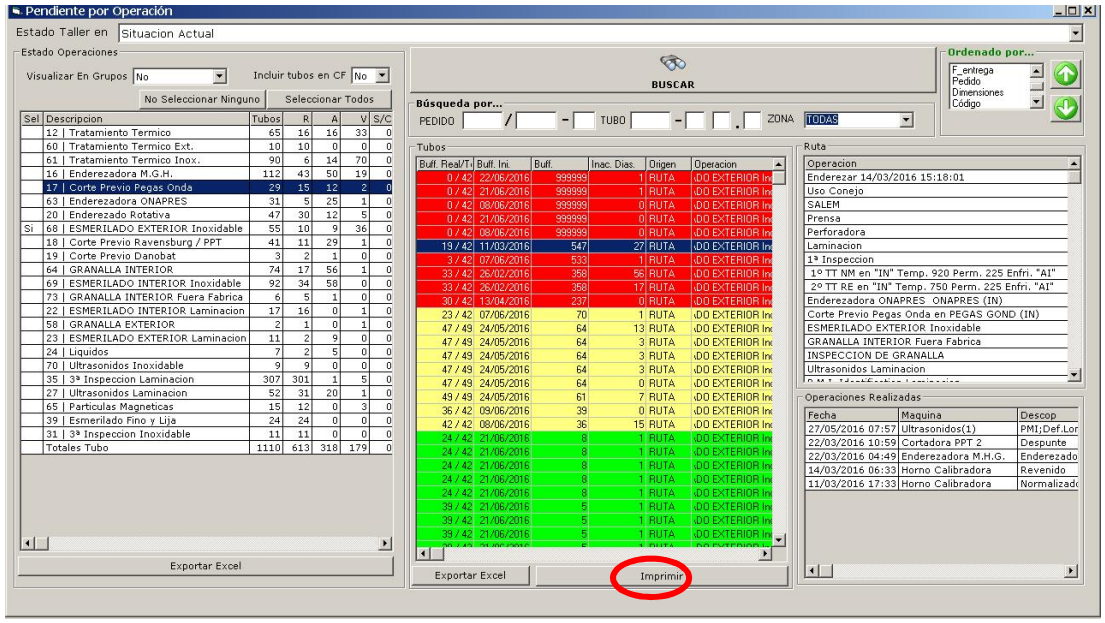
HOW TO IMPROVE BEYOND DDMRP
Technology Applied To Internal Logistics

- The system has to generate daily priority list at each resource



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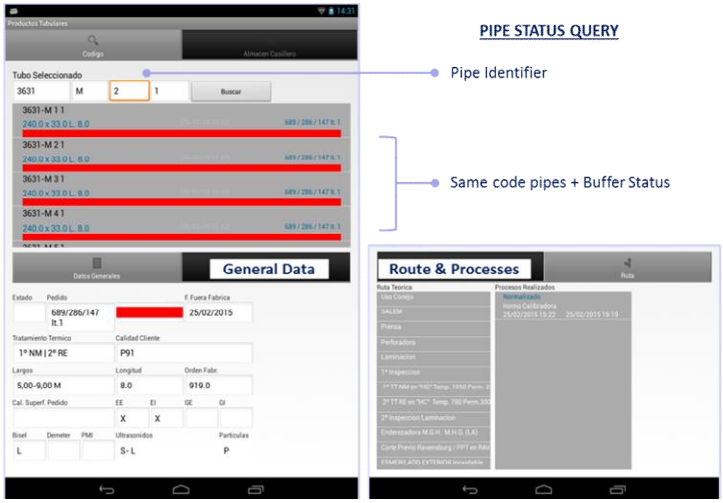
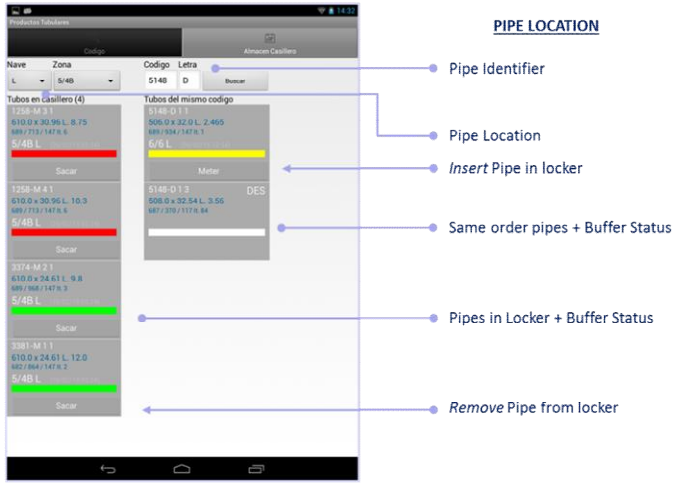
HOW TO IMPROVE BEYOND DDMRP Technology Applied To Create **FLOW**

- ✓ One of the most important challenges in terms of Execution Control was the lack of technology applied to internal flow.





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PRODUCTOS TUBULARES S.L.U.
Implementation Results

AFTER IMPLEMENTATION

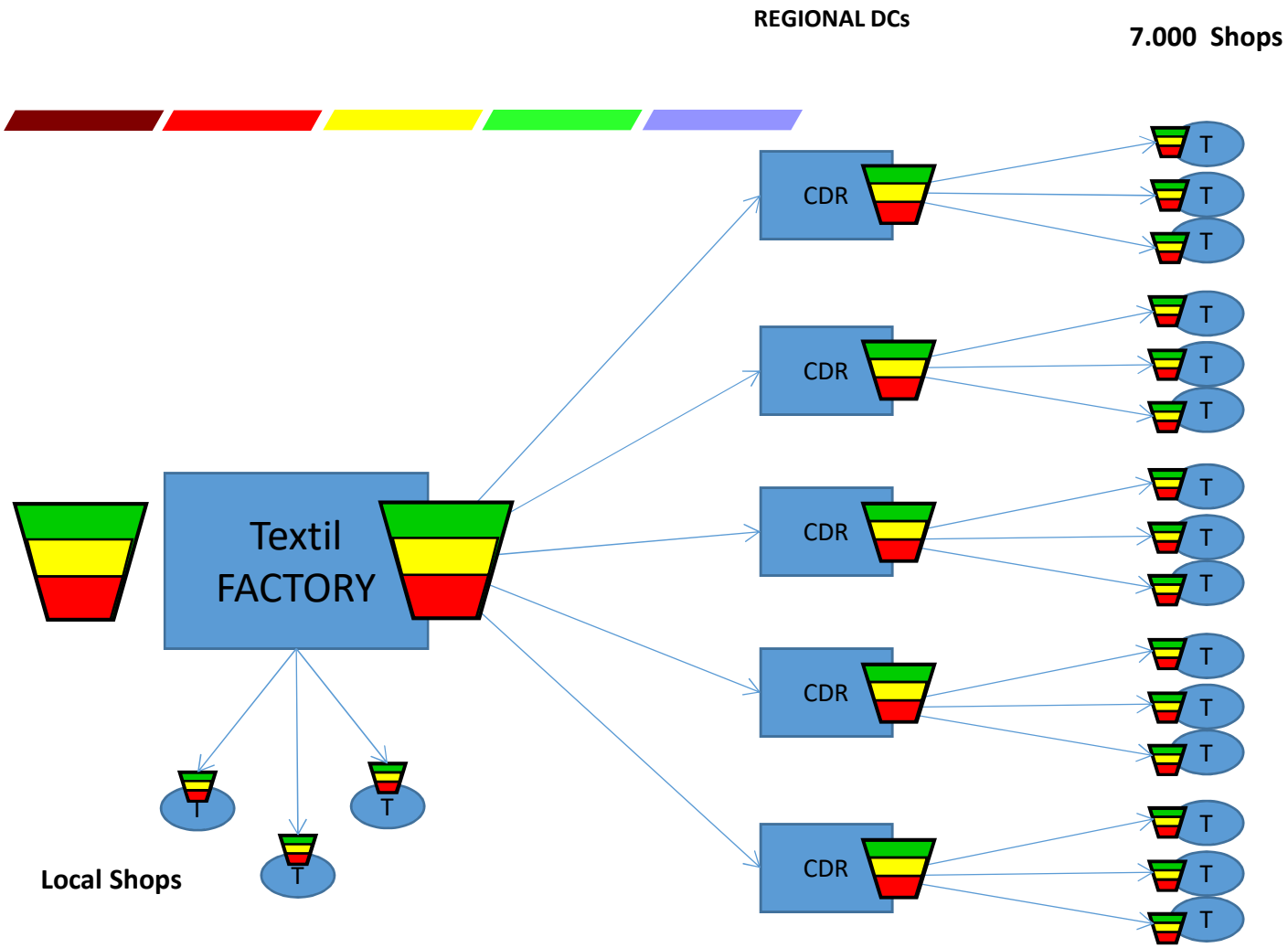
IS THERE ANOTHER ALTERNATIVE?

- In an uncertain environment, predicting what is going to happen is a chimera.
- Our only alternative is to focus on **speed of execution.**
- **The future lies in EXECUTION MANAGEMENT**.

SPEED IS THE KEY TO SUCCESS

- Excellent companies have opted for this model.
- Its differential is the **SPEED** of execution
- What sets them apart is not what they do, it's **HOW** they do it.

INDITEX / ZARA Model



CRITERIA TO PICK A GOOD CONSTRAINT

- Where is the KNOW-HOW of the company.
- One of the most important investment.
- Easy to Quantify and Control Metrics
- Shared for many products
- Stable with Changes in the mix
- Can Senior Management pick what should the constraint be?

HOW TO ALIGN TACTICAL DECISIONS WITH STRATEGY

- **Tactical Constraint** is the weakest link in the generation of CASH-FLOW, it is a quantitative

- The tactical constraint is capacity´s weakest **spot/resource**

HOW TO ALIGN TACTICAL DECISIONS WITH STRATEGY

- **Stratregic Constraint** is the strength of the company, it is SKILL

- The Strategic constraint must be the company´s main **SKILL**

HOW TO ALIGN TACTICAL DECISIONS WITH STRATEGY

- A good strategy has to align the weak spot in capacity with the strong point in skills.

- A good strategy is to **subordinate** the **strongest skill**, strategic contraint of the company, **to the weakest link in capacity,** the limit to the generation of Cash-Flow

THERE IS SOLUTION FOR THIS NEW SCENARIO

- **Demand Driven Operating Model.**
- A Process to generate FLOW.
- Improve return of Investment.
- Proven solution.