

TPM & Lean / CI in Action Forum

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Collaborate. Innovate. Multigate.

Established since 1986

Stabilising the Production Plan at Multigate

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Who is Multigate?

- Medical product supply company started in 1986 with one single product – one simple Dressing Pack
- 29 years later, it is the largest manufacturer of procedure packs (General and Custom) in Australia with an annual turnover greater than \$80 million
- One manufacturing plant in Australia located in Villawood, Sydney employing 260 people
- Joint manufacturing ventures in China and Singapore





Where do we make the stuff?

- ISO Class and Clean Room facility (based on particles per m³)
- Two Sections
 - Preparation Room (small sub-assemblies)
 - Final Assembly Room
- 100 staff assembling product
- Completely labour driven process



Collaborate. Innovate. **Multigate.**



Basic Workflow



Picking



Preparation



Final Assembly



Collaborate. Innovate. Multigate.



What are we Planning?

- Over 1200 different products
- Range in complexity from 3 components to 40 components
- Ranging in volume from 1 cartoon to 400 cartoons per month
- Combination of “off-the shelf” packs and “Customised”

For example

34 different types of Hip packs (2 packs per month to 120 packs per month)

43 different types of Knee packs (4 packs per month to 240 packs per month)





How do we Plan?

WE DON'T!
(well, not formally anyway)



- Inventory Controller schedules work purely on cover basis
- No formal Planning Systems (MRP is used as simple purchase order tool)
- No formal production schedules
- No capacity routings / planning
- Production Order system generated in monthly buckets



Consequences

- Too much inventory
- Disconnect between purchasing and consumption
- Too many urgent jobs
- No labour planning based on future projections



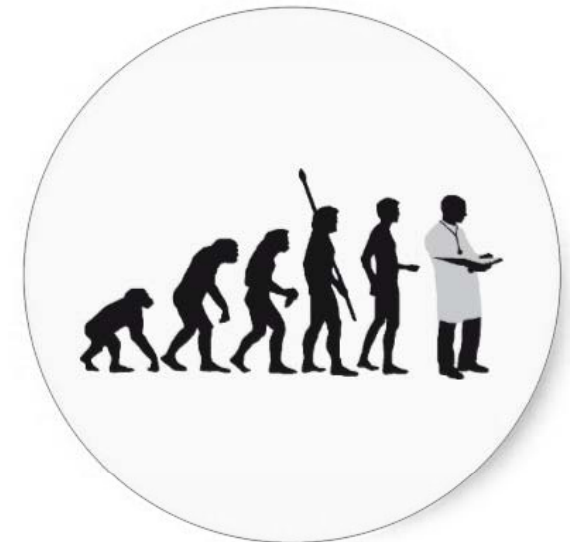
How does it Happen?

*Years of **Experience** and **Hard Work** and an
unrelenting **desire** and **passion** to meet the
customer's needs*



Why do we need better planning?

- Business Imperative – Control
- Business more complex
- Our competitors are forcing us to evolve





What's the vision?

- A formal Planning Methodology based on capacity capabilities and reflecting how things are done on the shop floor.

“Was there a simpler way of introducing a predictable routine that could have an immediate impact on the perceived chaos?”



What did we do?

- Establish a Lean / CI team involving key people from the shop floor
- We chose the “Glenday Sieve” methodology

“An approach which states that a small percentage of an organisation’s item range accounts for a large portion of sales and which can be used to move towards a fixed volume/ fixed sequence production plan”

“A Set & Forget Approach”



Glenday Sieve & Green Stream

Cumulative Percent of Sales	Cumulative Percent of Item Range	Colour Code
50 percent	6 percent	Green
95 percent	50 percent	Yellow
99 percent	70 percent	Blue
last 1 percent	30 percent	Red

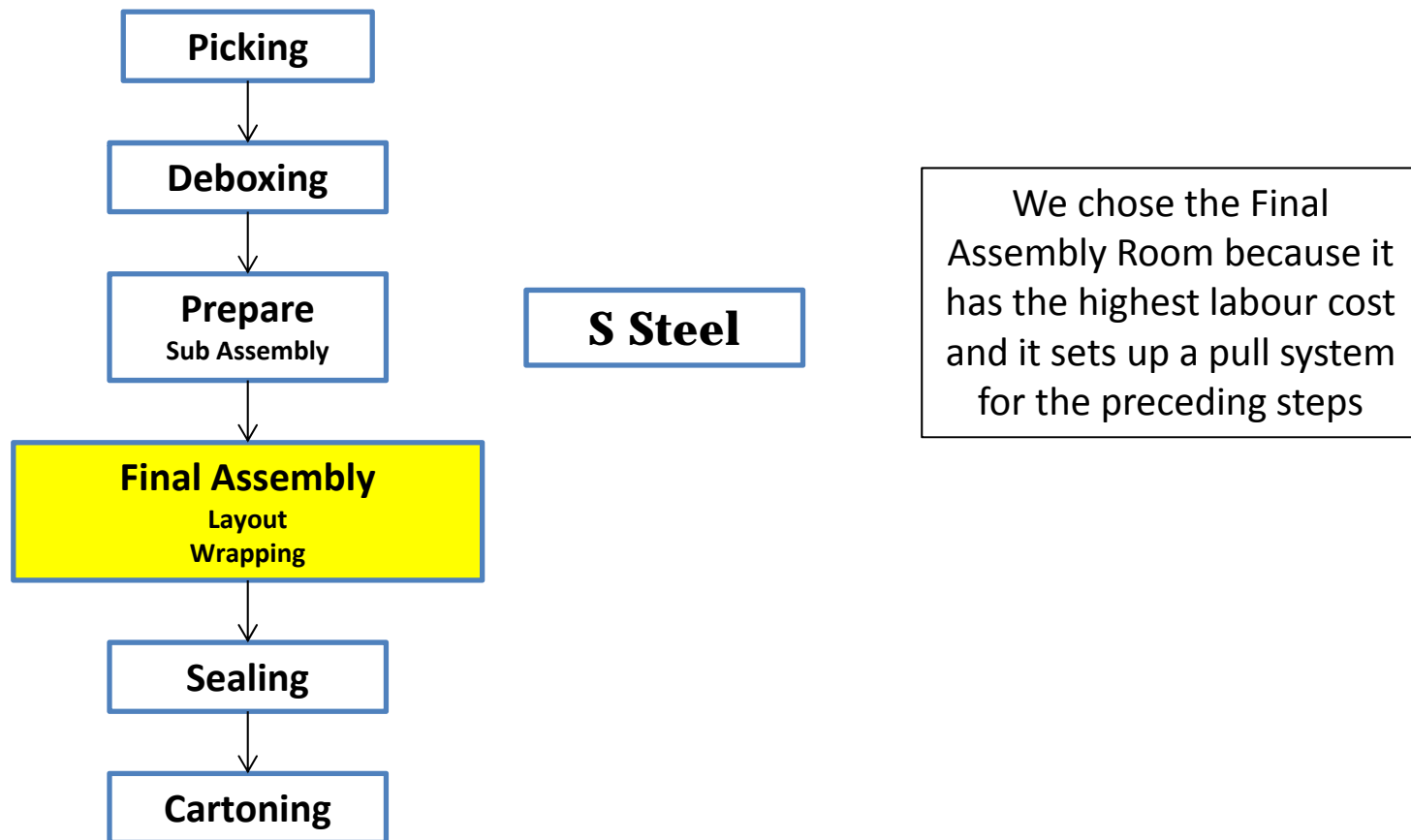
Note: Items making up the top 50% of sales are the Green Stream Products

Multigate – 118 (9.8%) products equal 50% Sales value / volume



Scheduling Model

Our focus was the Final Assembly Room (layout and wrapping)





Scheduling Model

- Every “Green Stream” Product, every fortnight
- 1st cycle – 14 weeks
- Fixed quantities
- Fixed sequence at each work centre
- Standard crew for each job
- Must finish all “Green Stream” items each week
- Work orders raised 1 week in advance



What Happened?

Did we control the Chaos?

- Limited success with the major items – 66% Schedule adherence
- Scheduling the Green Stream products was compromised in order to fully utilise labour
- Sometimes non-Green Stream jobs compromised

WHY?

Key driver determining our behaviour

- Labour Balancing and Productivity for the “Here & Now” – No visibility



Learnings

- Too many items in the “Green Stream” – What is the right number?
- Impact to Upstream, Downstream and support Processes
 - Picking Warehouse
 - Finished Goods Warehouse
 - Production Administration
 - QA Checking
- Scheduling needs to be a “One In All In activity
- Lacking foundation data – Production Routings
- There is some order to the perceived chaos – Work Centres
- Our people supported the whole process and are receptive to Improvement



Where to from Here

- Collect Foundation data – Routings
- Introduce Formal Schedules based on the Foundation data

“The Real Challenge”

- Align the ERP system to support the formal Planning system
- Restructure the Planning Department to support future vision
- Challenge our current Production processes and Conventions
 - Work Cells
 - Conveyors



Thank you, any Questions

