

Jon Christensen Preactor International

World Class APS Solutions, Locally Delivered





Jon Christensen



- Global Partner Manager
- Senior consultant
- Expert in Advanced Planning and Scheduling, Lean Manufacturing, Supply chain scheduling
- 11 years working with Preactor International

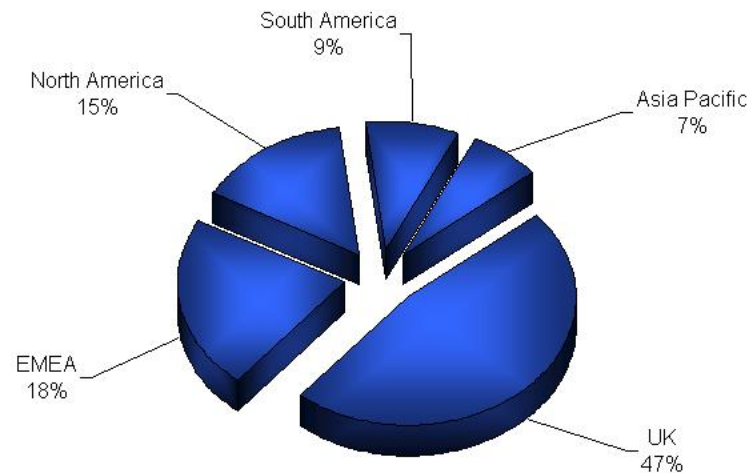
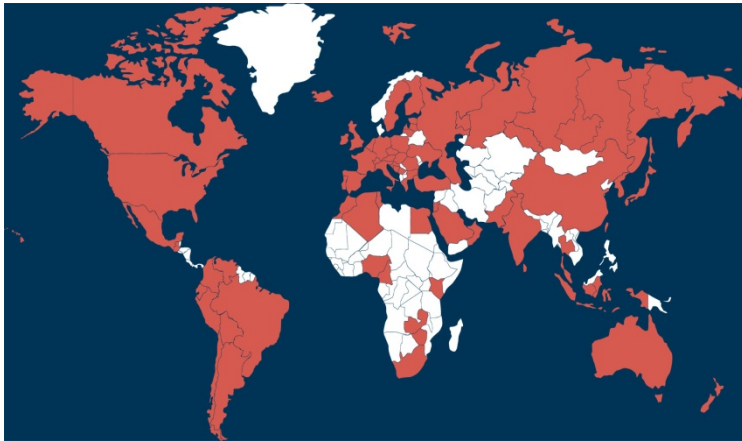


Preactor International

- Provider of planning and scheduling solutions to the manufacturing sector
- Founded in 1993 – 16 years of experience
- Founders and developers still the backbone of the company
- International coverage across 5 continents
- UK HQ, offices in France, India and USA
- Independent



Installed Base



- ~3,000 companies in almost every manufacturing sector
- 80/20 discrete/process
- >10,000 licenses
- Users in 65 countries
- Translated into 30 languages
- Largest installed base of any independent planning & scheduling software company for the manufacturing sector

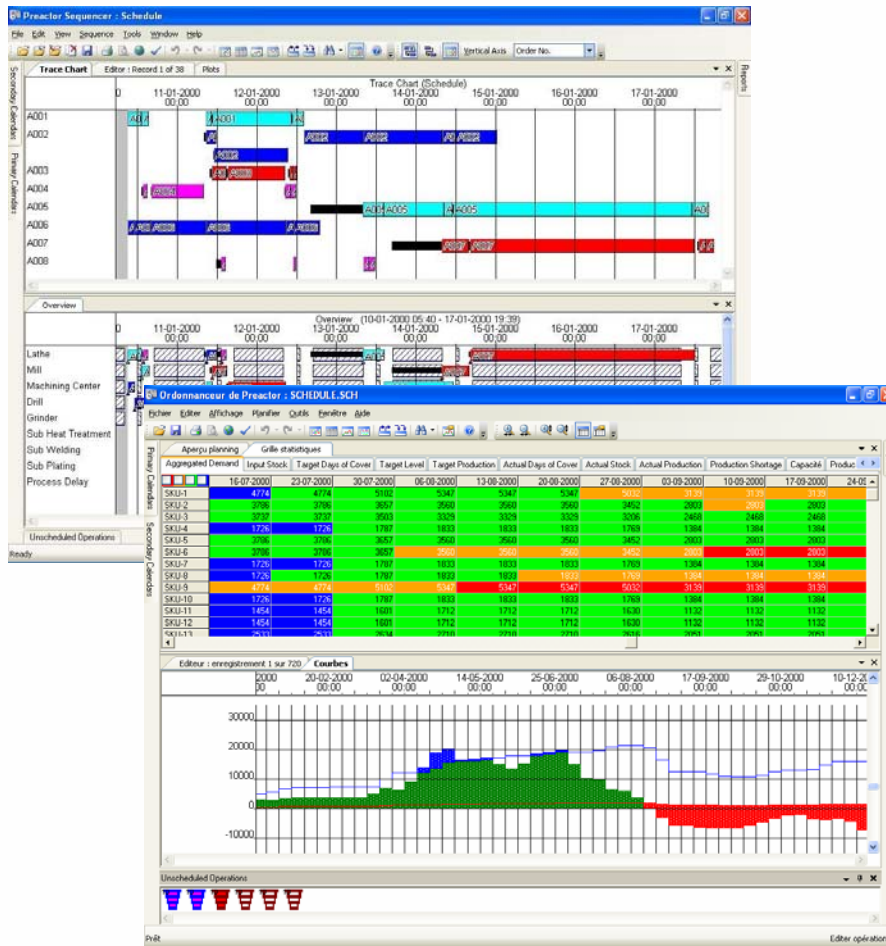


Delivering the Solutions



- Strategy from day one to build a powerful partner network – the Preactor Eco System
 - >400 partners trained and accredited in Preactor implementation, largest in the world
 - Local expertise, local support, local language
-
- A world-class APS solution, locally delivered

A Family of Solutions



- Solutions for long, medium term planning and short term detailed scheduling
- Powerful algorithms, breakthrough technology
- Scalable, flexible and customisable for each application
- Easy integration with other applications such as ERP, MES etc



Benefits

- Interactive decision support tool for companies to become leaner and more agile
- From more than 100 documented case studies
 - 50% reduction in inventories and work in process
 - 90% improvement in on-time delivery performance
 - 25% improvement in production efficiency
- Works well in discrete, process, hybrid and repetitive environments

Demand Driven Manufacturing

Synchronising Production with Demand

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The Pressure in ON to Compete

- Global competition from is forcing companies to re-assess their position in the market
- There is pressure to compete on agility, quick turn round and on-time delivery
- But also to reduce costs and lower inventory levels
- These pressures lead to smaller batch sizes - 'sequencing' becomes increasingly important
- And then to synchronize variable demand with Materials flow & Capacity



Demand Driven Manufacturing

- Recommended by many experts and analysts in the manufacturing sector as the way forward for many companies
 - Move away from large batch (Economic Batch Quantity, EBQ) make to stock
 - Move towards small batch make to order
- The goals are to
 - increase On-Time Delivery (OTD),
 - reduce stock, (Finished Goods Inventory, FGI)
 - reduce throughput time (Lead Time)
- Recent world-wide survey done by AberdeenGroup analysed how well companies are performing in each of these goals

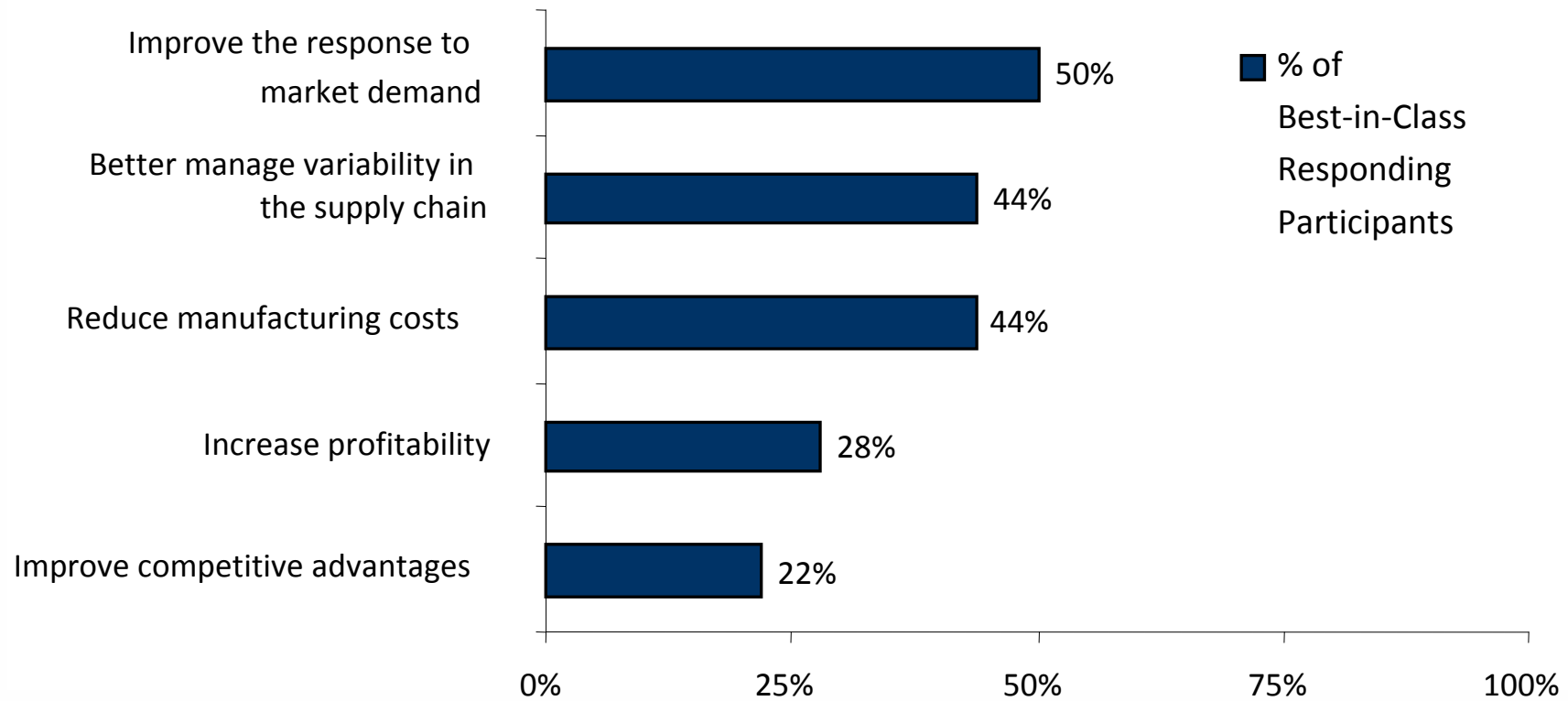


Defining Best-In-Class Performance

Definition of Class	Mean Class Performance
<p>Best-in-Class: Top 20% of aggregate performance score</p>	<ul style="list-style-type: none"> ▪ 97% On Time Delivery (OTD) ▪ 4 Days Finished Goods Inventory (FGI) ▪ 9 Days Lead Time
<p>Industry Average: Middle 50% of aggregate performance scorer</p>	<ul style="list-style-type: none"> ▪ 87% On Time Delivery (OTD) ▪ 14 Days Finished Goods Inventory (FGI) ▪ 33 Days Lead Time
<p>Laggard: Bottom 30% of aggregate performance score</p>	<ul style="list-style-type: none"> ▪ 75% On Time Delivery (OTD) ▪ 32 Days Finished Goods Inventory (FGI) ▪ 75 Days Lead Time

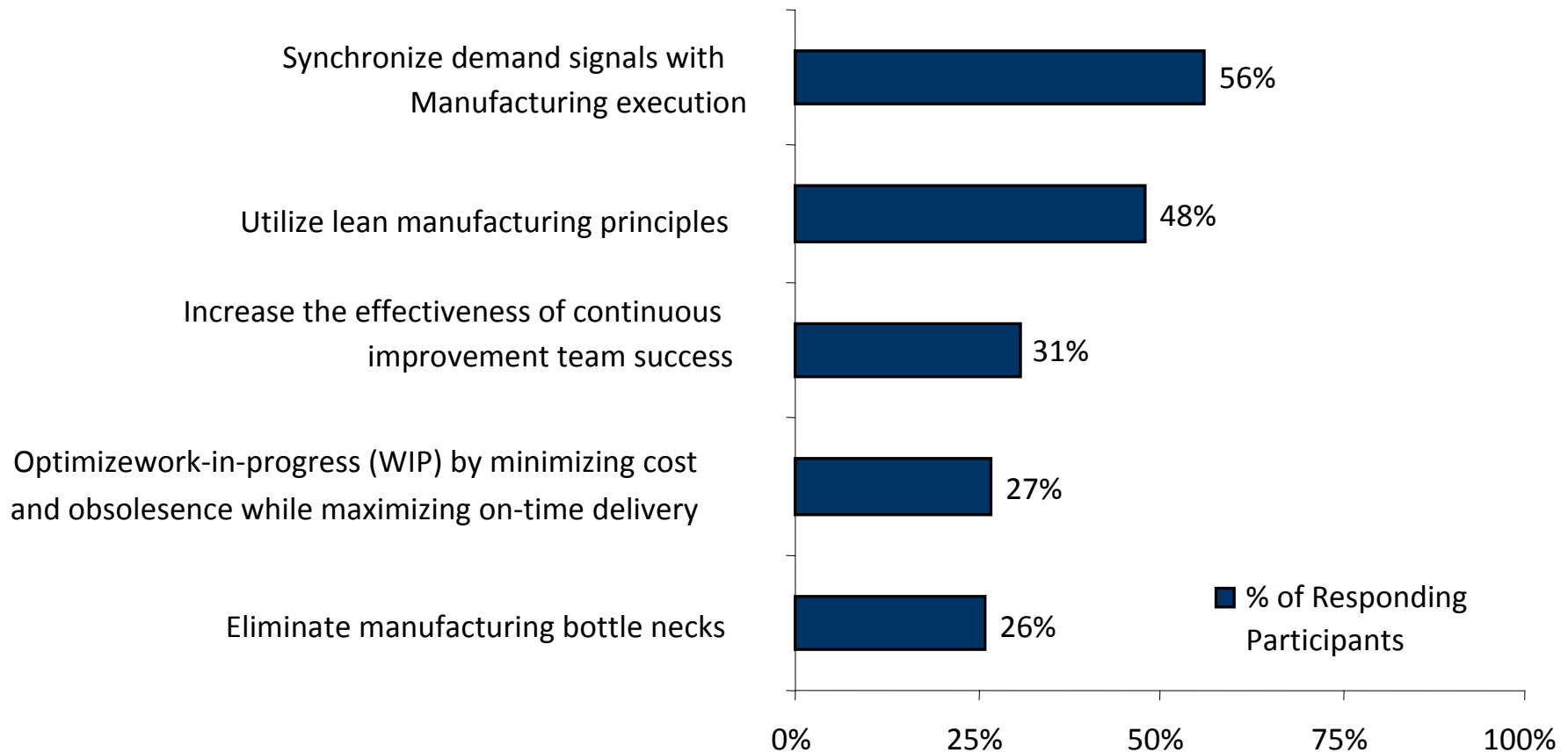


Pressures Driving Focus on Demand Driven Manufacturing





Strategic Actions to Address Market Pressures





ERP Modules

- Purchasing
- Financials
- Accounting
- Distribution
- Maintenance
- Human resources
- Supply Chain **Planning**
- Production **Planning**
- Production Tracking



Planning? Scheduling?

Planning

- Deals with '**Effectiveness**'
- **What** to make
- **When** to make it
- **How much** to make
- **Where** to make it
- Materials Required
- Resources Required

Scheduling

- Deals with '**Efficiency**'
- **How best** to make it (routing)
- Sequencing (minimize setups)
- Synchronization
- Priorities, constraints and conflicts
- Monitoring execution
- Managing change



How do you recognise the difference?

- Planning systems are ‘bucketed’ (monthly, weekly, daily) and cannot preserve operational sequences within the time bucket
- True scheduling systems are bucketless, preserving sequencing and capable of producing work-to or dispatch lists for each resource



Why should I worry?

- Planning systems do not provide the ability to model complex constraints of a real system
- Planning systems do not give you real time control over individual resources and individual orders
- True scheduling systems provide real time control at shop floor level



What is APS?

- Advanced Planning and Scheduling (APICS definition)
- Proven decision support tool for detailed sequencing
- Takes the orders with associated operation steps that require one or more (finite) resources to be carried out
- Resources defined such as machines, process lines, operators, tools, tanks, etc
- Sequences the operations to produce a 'good', achievable schedule and generates work-to lists for each resource
- Provides a 'what if?' environment for the planner to 'see' the impact of the options before decisions are made



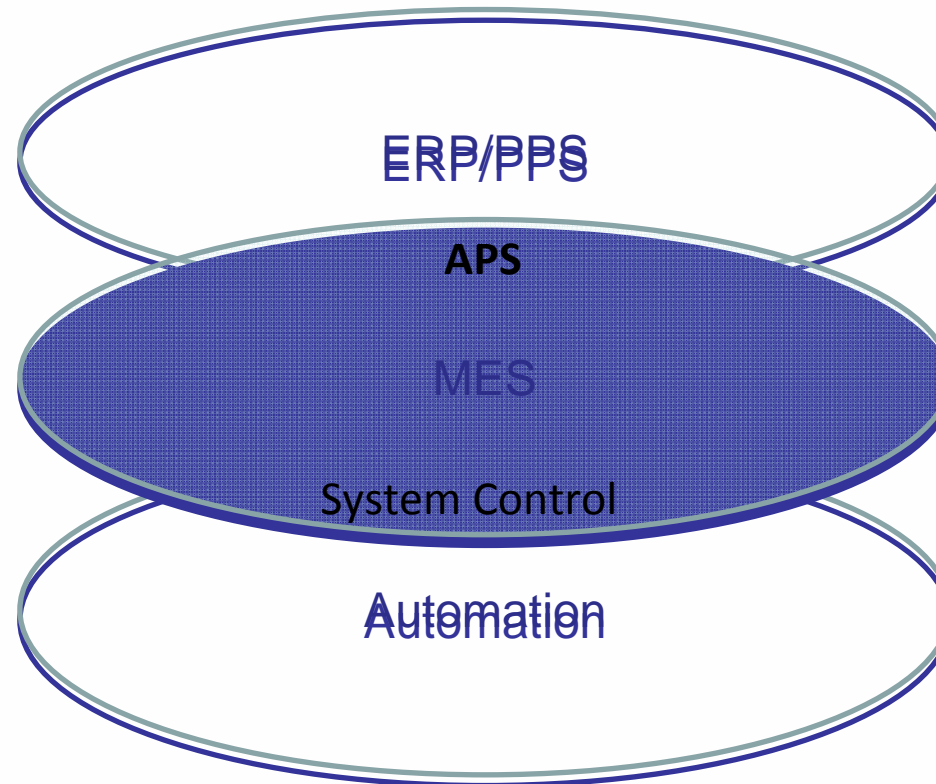
APS Role in MES

Fills the MESA function group for detailed planning:

Sequence and time optimization of the orders finely tuned to the performance of the machines, including their finite capacity and relationship to other resources



Where does APS fit?

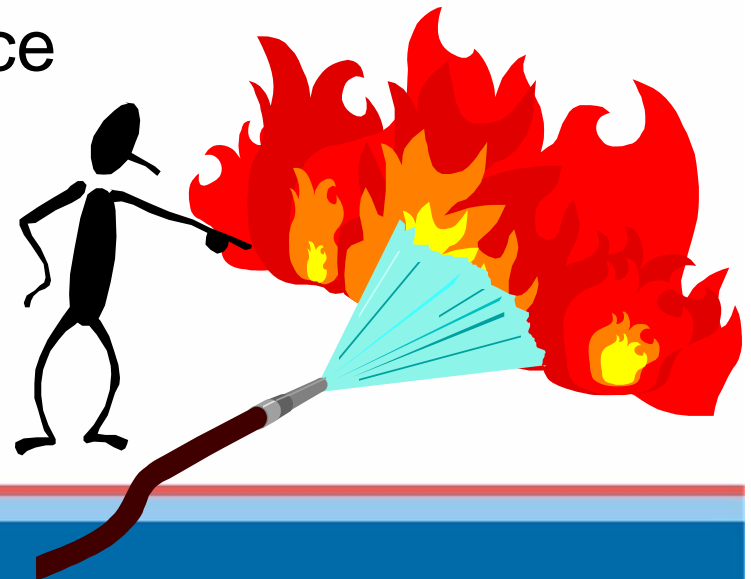




How will APS Help?

- Operations are planned only when resources are available
- Materials are ordered for delivery when operations can start
- Provides visibility - deliveries can be predicted with more confidence

LESS FIRE-FIGHTING !!



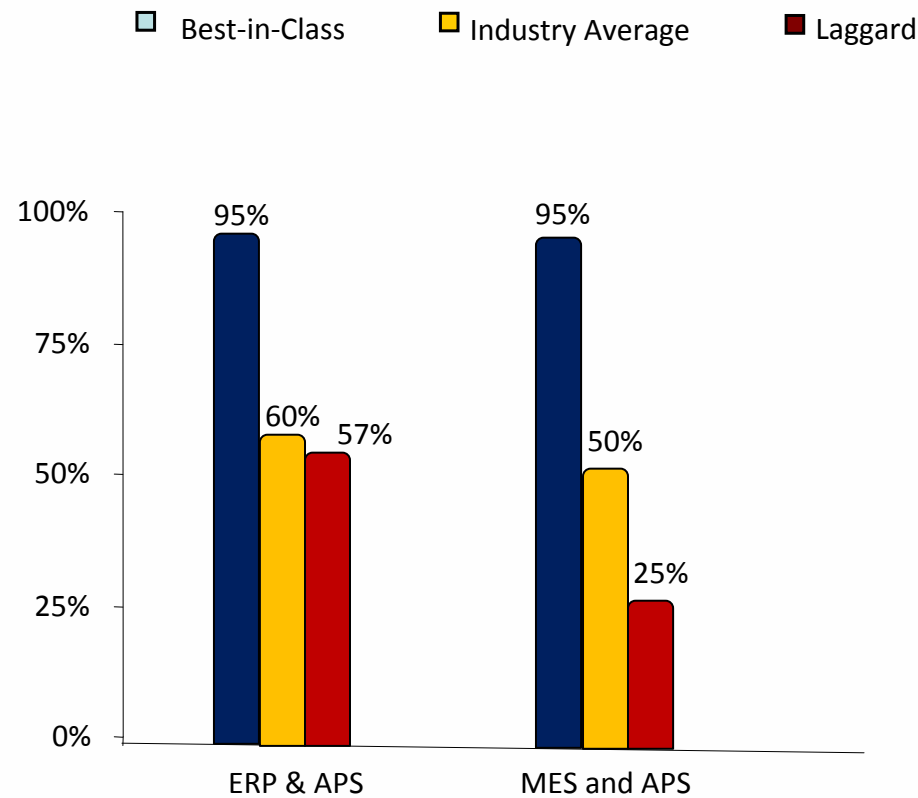


Current Use of Manufacturing IT

	Laggards	Average	Best-in-Class
Technology	Share of manufacturers currently using technology:		
	√MES: 20%	√MES: 22%	√MES: 24%
	√ERP: 69%	√ERP: 69%	√ERP: 65%
	√APS: 17%	√APS: 20%	√APS: 27%
Performance	Share of manufacturers measuring the on time delivery:		
	75%	87%	97%



Best in Class Manufacturers combine IT packages





Recommendations For Action

- Utilize automatically collected data from suppliers, customers, and the shop floor as actionable intelligence.
- Leverage production planning and scheduling solutions that consider real-time constraints, materials, labor, et cetera.
- Integrate ERP, MES, and the Supply Chain to synchronize production with demand while streamlining material flow.

US Paint Case Study

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US Paint





US Paint

- Market leader of coatings for exterior automotive parts, such as mirrors, trim, spoilers, molding, bumpers, grills, and other plastic parts
- Located in St. Louis, Missouri, U.S. Paint has 100 employees with annual sales of \$25M
- The facility is 150,000 square feet under one roof, producing 1.5M gallons of coatings a year with batch sizes ranging from 1 to 2,100 gallons



US Paint Market

- 45% power sports
- 40% automotive
- 15% industrial
- U.S. Paint's customers include
 - Subaru of America
 - Honda Motorcycles of America
 - Yamaha Motor Manufacturing Company
 - Kawasaki Motor Manufacturing
 - Nissan
 - Toyota
 - GM-Suzuki joint venture vehicles.





A Commitment to Quality

- In 2007, U.S. paint had zero color complaints from its entire customer base
- In 2006 and 2007, U.S. Paint had zero customer complaints for dirt or contamination.
- Since 1979 with 2.2M units painted, U.S. Paint has received zero warranty claims from Honda
- Yamaha has filed no warranty claims to U.S. Paint
- Since 1998 Kawasaki has filed no warranty claims against U.S. Paint



A Commitment to Quality

- It should not come as a surprise that U.S. Paint as an automotive supplier is focused on lean manufacturing, constantly improving the processes to be fast while cost effective
- The internal program of constant improvement is what led U.S. Paint to Preactor





Problem Description: The Drivers

- Manual planning board
- Work load too large to manage manually
- No effective method to manage revisions to the schedule
- Schedule generation using 3-6 various tools, reports and internal systems



Problem Description: Consequences

- Few or no methods to evaluate schedule performance
- Poor shop floor discipline, poor sequencing
- Missed due dates and missed commitments
- Inconsistent resource utilization
- Could not locate, and therefore could not properly manage bottlenecks
- Unable to predict customer service issues



Process Improvement

- More visual and accurate means to chart performance and integrate the process into the daily routine.
- The goal was to increase throughput by supplying shop floor with reliable tools for measuring performance.
- Towards that end, U.S. Paint wanted to generate and post cockpit charts, set goals for performance, and identify bottlenecks and make recommendations.
- This process was to be a continuous loop to monitor and correct problems to increase overall the management of the shop floor.



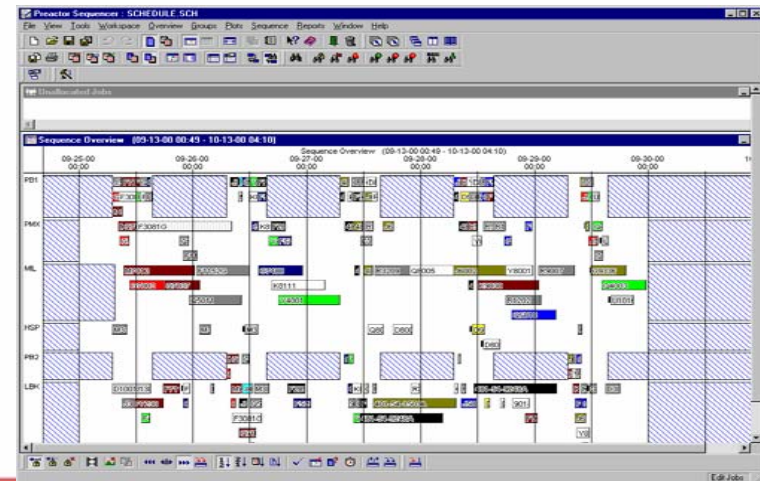
Process Improvement Goals

- Shorter cycle time
- Ability to commit to customer needs quickly
- Increase due date reliability
- Minimize WIP and WIP inventory valuation
- Ability to effectively react to schedule changes



Why Preactor?

- Very flexible and configurable, even by the user
- Low cost installation
- Multiple “what if” scenarios
- Manage changes by prioritization
- “Early warning” ability to communicate what’s going to be late, how late, and effects of expedites
- Ability to capture key data
- Fast commitment capability
- Better utilization of resources





Benefits

- 50% decrease in work-in-process
- 20% decrease in production lead time
- 20% reduction in total finished goods inventory as a direct result of reduction in WIP and lead times
- Since 2007, U.S. Paint has zero customer complaints for late shipments

Customer Quote

“Once the reduction in work-in-progress became the norm on the shop floor, the reaction from the shop floor was interesting. Workers came up to me worrying that business had taken a downturn, and I found myself explaining that work flow was going to be smoother because paint batches were scheduled just-in-time by using Preactor.”



Traincare Scheduling at Alstom

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Who are Alstom?

- Present in 70 Countries
- Sales 18 billion Euros
- More than 80,000 employees
- Main Business Power and Transport
- Transport Sales 5.5 billion euros
- Transport Profit 397 million euros
- Traincare is a division



History

- Initial contact in 2007 by London Underground
- This was escalated to Alstom Traincare head office
- Decided that project would be carried out on West Coast Mainline
- Business Development Manager appointed.
- Concept was demonstrated throughout the Traincare group.
- Pilot project began August 2008



West Coast Mainline Manchester



The Reason

- Better scheduling would dramatically reduce penalties for late departure (£5,000 per minute).
- Creating capacity would enable more work to be carried out at a single visit.
- Ability to react to changing circumstances. Train arrivals can be unpredictable.
- Preparation for increased volumes.

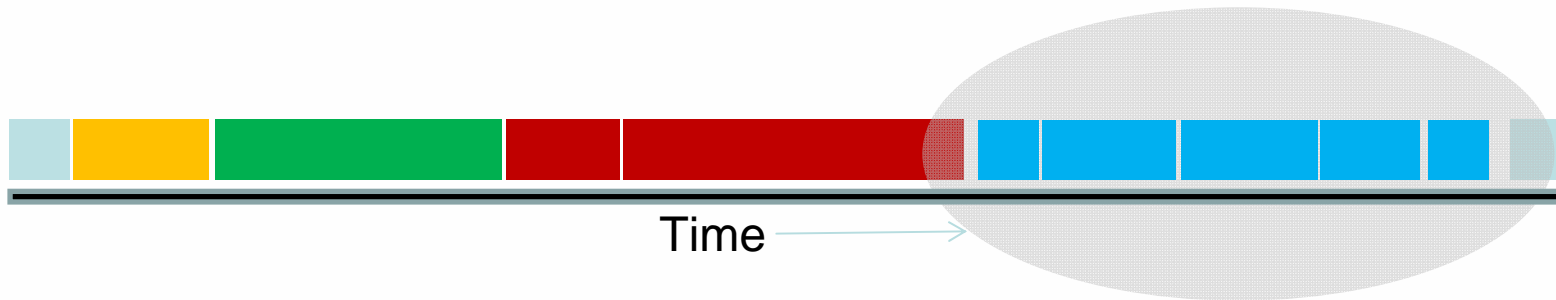


The Task

- Schedule trains based on the arrival/departure timetable (diagram).
- Based on the maintenance requirements place trains on correct line (road).
 - Fuel Point
 - Overhead Crane
 - Pitted
 - Wash
- Once positioned schedule jobs in most effective way based on priorities and labour availability.
- Allocate labour (by skill level)
- If required move train to another line for further work
- Do as many jobs as possible before the departure time.
- NEVER DEPART LATE.



The Vision



- Carry out Arrival and Departure Jobs e.g. Make Safe and Handover.
- Carry Out Critical Work e.g. CET, Services, and Priority 1 jobs
- Create a Window of Opportunity
- Carry out as many jobs as possible before the train leaves, based on Priority
- NEVER DEPART LATE



Solution

- Multi-pass Approach
 - Schedule all the high priority tasks to the lines within the arrive-leave window for all trains at the same time, then add lower priority tasks until no more tasks could be done
 - Then establish when any train moves are required
 - Then assign the staff as a post process to the tasks that can be done (teams of multi-skilled staff – availability linked to the T & A equipment)
- 8 pass rule



Preactor Sequencer : Schedule

File Edit View Sequence Tools Window Help



Overview Bar Tool Editor : Record 1 of 151

	esday -2009 00	Wednesday 13-05-2009 18,00	Thursday 14-05-2009 00,00	Thursday 14-05-2009 06,00	Thursday 14-05-2009 12,00	Thursday 14-05-2009 18,00	Friday 15-05-2009 00,00	Friday 15-05-2009 06,00	Fric 15-05- 12,
1ETD									
2ETD									
1									
2									
2UP									
3									
3UP									
4									
4UP									
5									
6									
7									
8									
9									
11									
12									
16									
17									
18									
22A									
22B									
22C									
22D									
24A									
24B									
26									
27									
28									
29A									
29B									
29C									
31A									
31B									
31C									

Unscheduled Operations - 151 Unscheduled Operations



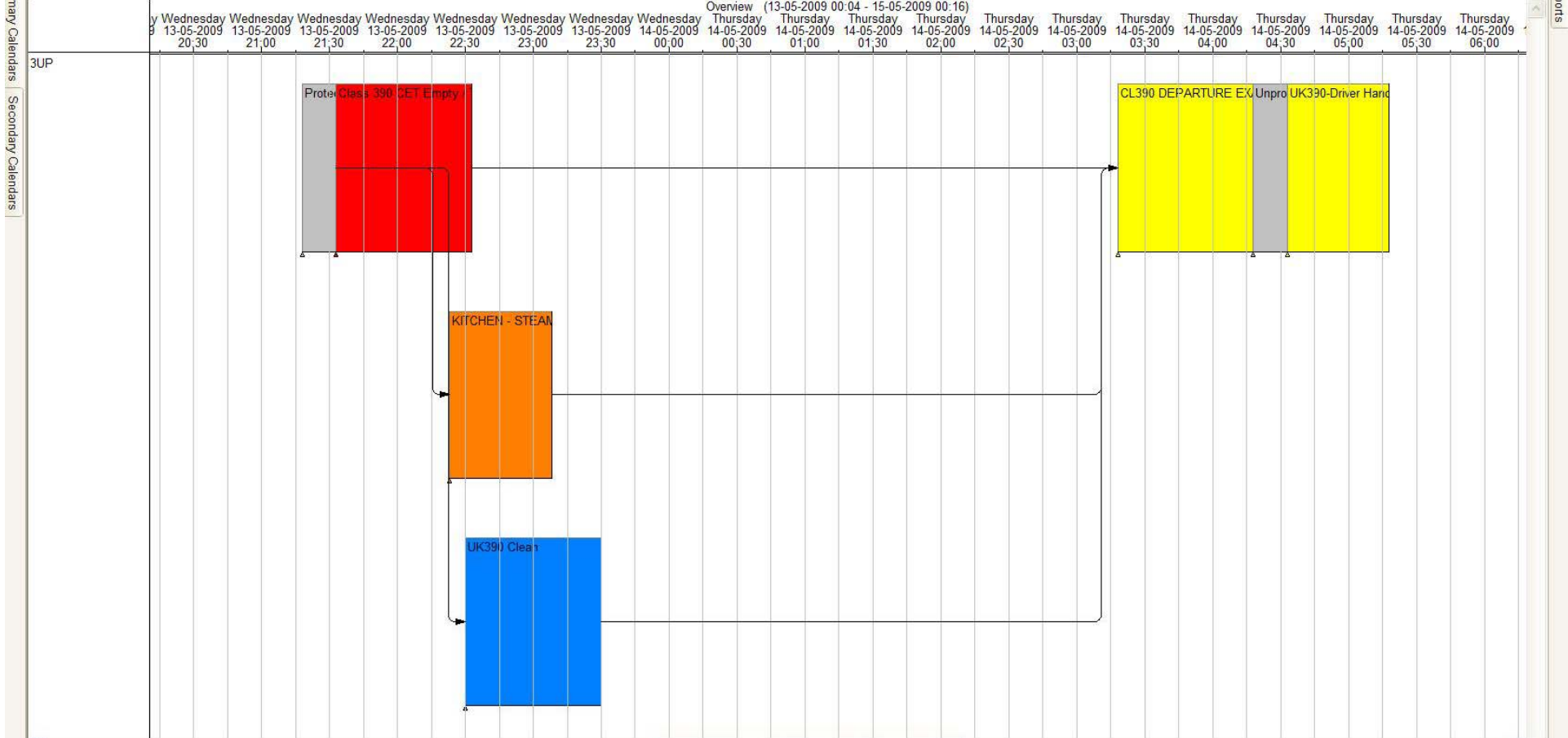


Preactor Sequencer : Schedule

File Edit View Sequence Tools Window Help



Overview Bar Tool Editor : Record 1 of 181



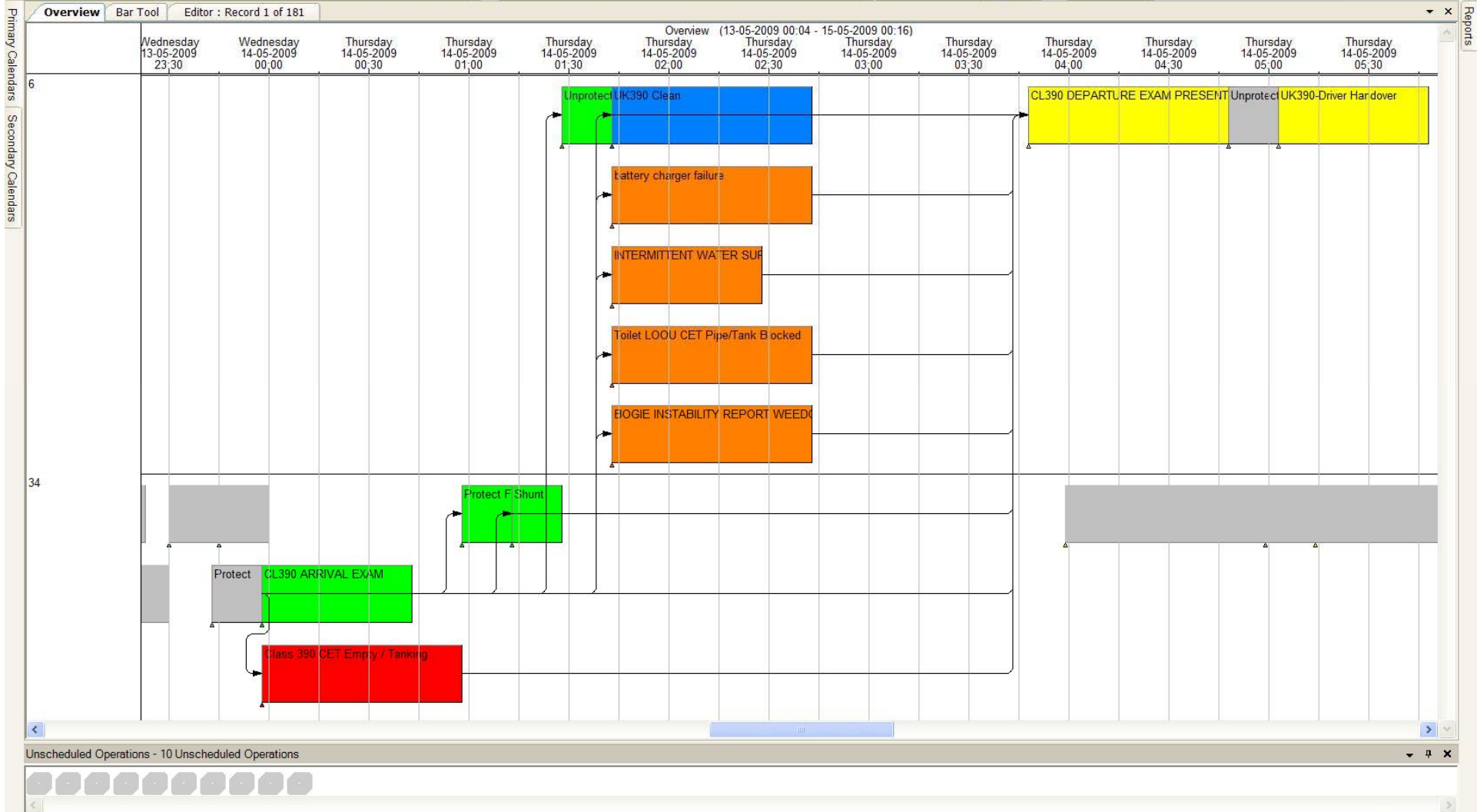
Unscheduled Operations - 10 Unscheduled Operations

Ready Edit Operations



Preactor Sequencer : Schedule

File Edit View Sequence Tools Window Help



Ready Edit Operations



Results so far

- Alstom no longer use their old planning white board
- Increased the number of tasks that can be done for any set of train arrivals and departures
- No late trains

Turbine Repair at Alstom

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Presentation Overview

- Case study:
 - Preactor at Alstom Croatia's Turbine Blades department
- Current/Future work at Alstom Croatia
 - Turbine Repair planning and scheduling
- Preactor in Alstom Corporation
 - Circumstances and possibilities



INEA – Location, Region

- INEA:
 - Based in Ljubljana, Slovenia
(200 miles from Venice, Munich, Vienna, Budapest)
- Region: Slovenia, Croatia, ... ex Yugoslavia





Alstom Corporation

- Alstom: a world leader in transport and energy infrastructure (2 Divisions: Power, Transport)

Power

N° 1... in hydro

N° 1... in conventional islands for nuclear power plants

N° 1... in environmental control systems

Transport

N° 1... in very high speed trains and high speed trains

N° 2... in metros and tramways, suburban and regional trains, signalling, infrastructure equipment and all associated services



- Present in 70 countries (Network of local facilities)

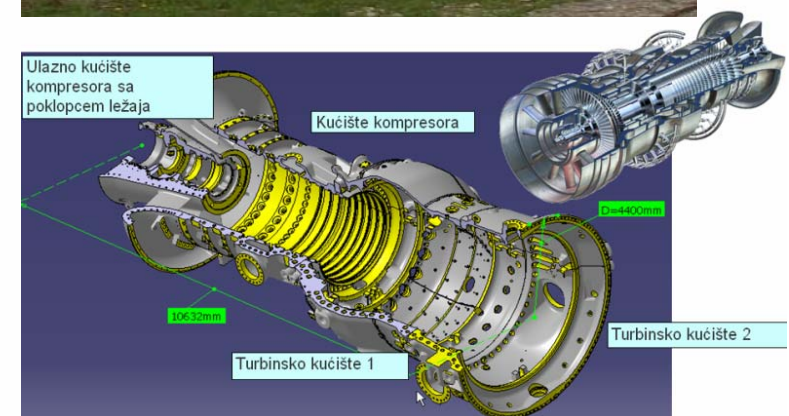


Case Study Company: Alstom Croatia

- Member of Alstom group since 2000
 - Power Division
 - Manufacturing new parts, repairing used machines
 - Technology is the same as for building of new machines
- Location: Croatia, Karlovac
- 60 years of experience on power program
- Engineer To Order, Project Based Manufacturer

Alstom Croatia – 2 Production Units

- Service Manufacturing
 - organised in 3 departments and 5 planning areas
 - Heavy Machining
 - Medium & Light Workshop
 - Assembly
 - (Welding, Reconditioning)
- Blade manufacturing





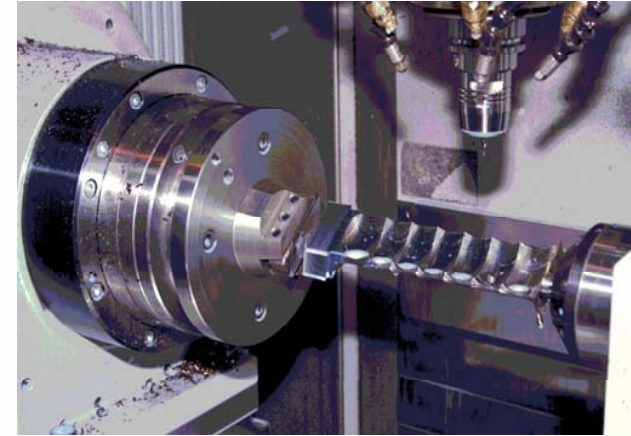
Progress Report

- 2007 Assessment
 - documented as-is planning systems
 - identified opportunities for improvement
 - completed requirements analysis
 - delivered overall proposal for upgrading Alstom Croatia's planning & scheduling systems
- 2008 Initial Project
 - selected **Turbine Blades** production unit for initial project [proof of concept]
 - implemented entry level planning & scheduling project
 - current status [now in maintenance]
- 2009
 - presented proposal for new planning & scheduling system for the Service Manufacturing unit
 - completed new system design phase [May 2009]



Turbine Blades Project

- Overview of existing situation
 - engineer to order
 - long cycle
 - project based
- Business Problems
 - too many systems (Baan, MS Project, Excel)
 - systems poorly integrated
 - no ability to react quickly to change
 - too slow (8 hrs to run capacity loading analyses)
 - no tools to help planner understand the cause and effect of making short term decisions on the shop floor



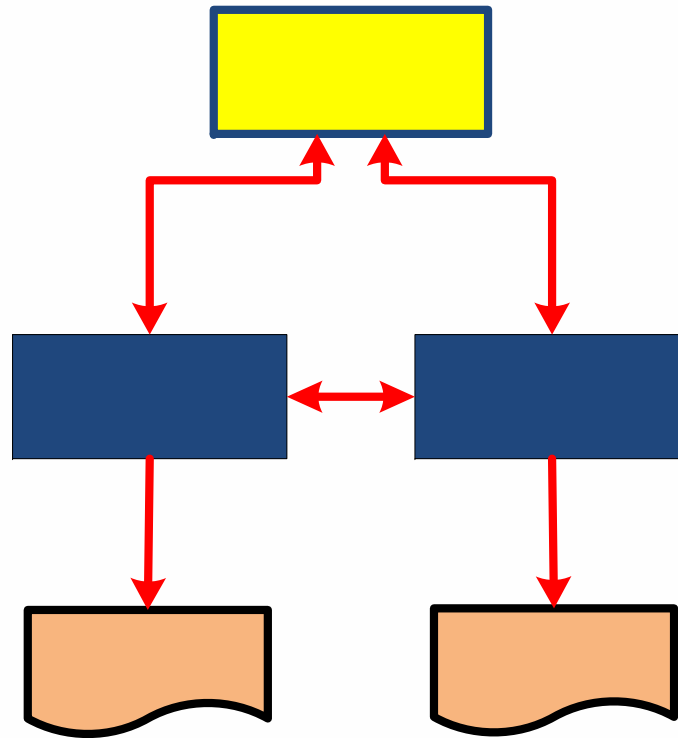


Turbine Blades Project

- Proposed Solution
 - Preactor 300 FCS with synchronized planning & scheduling
 - Planning (long term up to 2 years)
 - order promising
 - basis for materials planning
 - Scheduling (short term 1 week – 3 month)
 - sequencing
 - work-to list
 - shop updates
 - Planning model is equal to scheduling model



Turbine Blades System Design

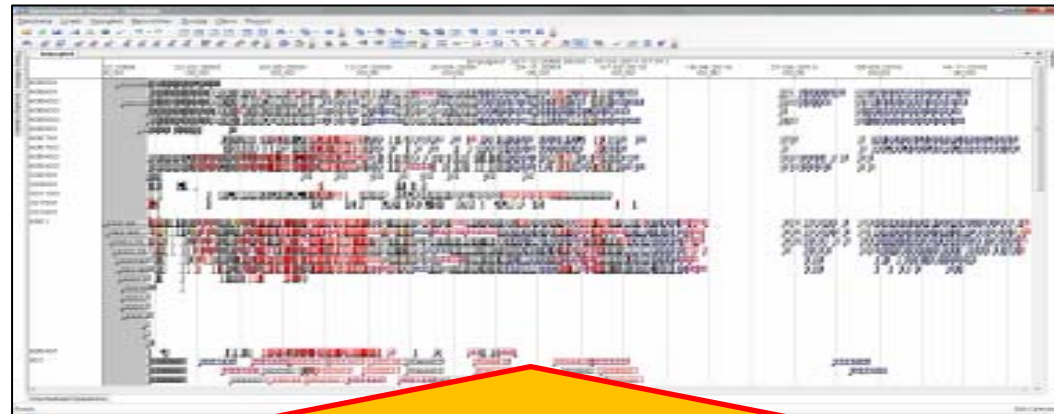


Baa
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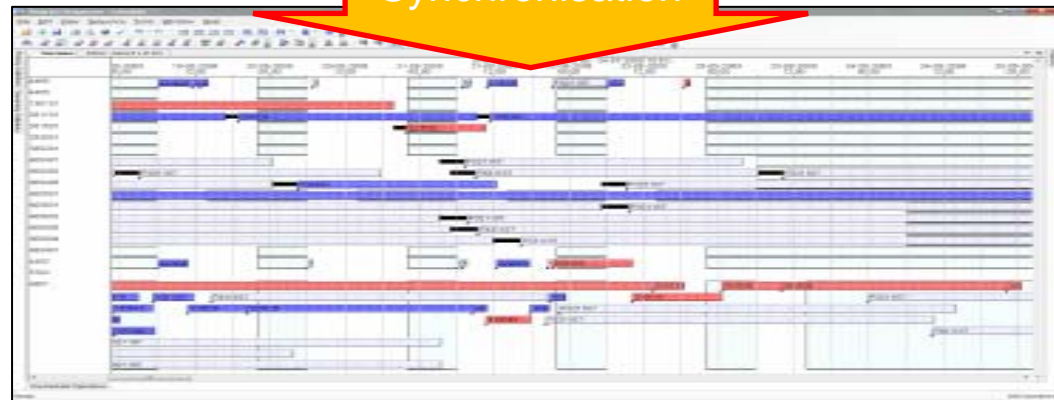


Turbine Blades System Design

- Simple long term – short term synchronisation
 - Downwards: orders to be scheduled, filtered by ESD
 - Upwards: schedule and tracking to be included in planning (update: Resource, Setup Start, Start Time, End Time)



Synchronisation





Report: Capacity Load Total (hours/month)

	Datase...	PrimaryResourceId	ReferenceDate	Utilization	Working	Setup	Unavailable	Idle
39...	10	4460	2009-06-16 00:00:00.000	10,5087500006593	3,50291666691191	0	66,6666666664241	29,830416666664
39...	10	4460	2009-06-17 00:00:00.000	17,014166666071	5,6713888887316	0	66,6666666664241	27,6619444448443

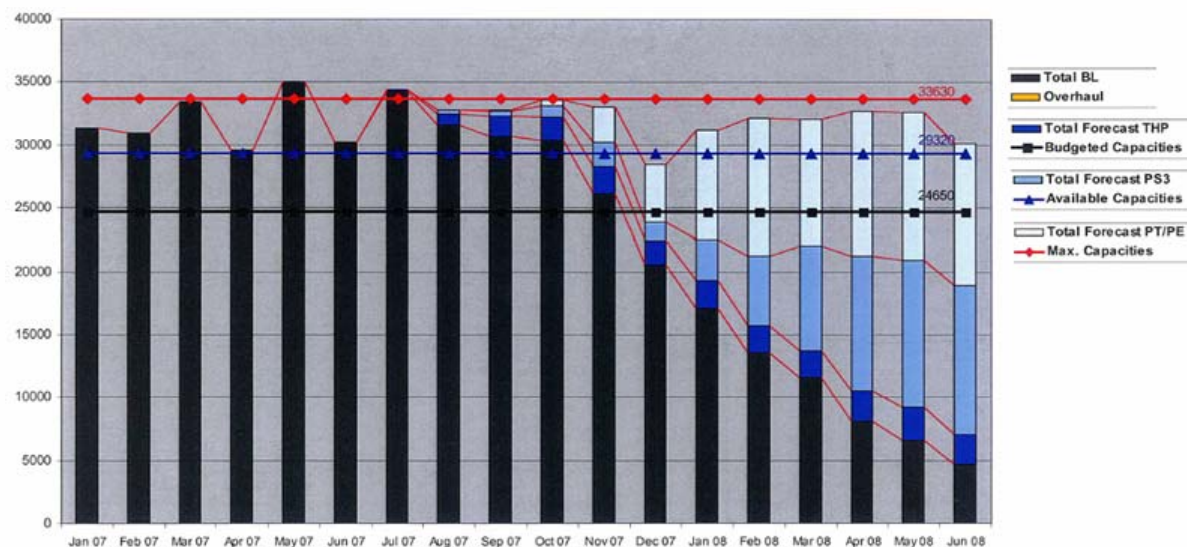
MWC	Stroj	Opis stroja	5/2009	6/2009	7/2009	8/2009	9/2009	10/2009	11/2009	12/2009	1/2010	2/2010	3/2010	4/2010
MB1	4460	SPEKTROSKOP	168	176	184	168	176	176	168	184	168	160	184	176
MB1	6801	POLIRANJE LOPATICA	2256	2304	2352	2304	2304	2256	2304	2400	2256	2112	2400	2256

MWC	Stroj	Opis stroja	5/2009	6/2009	7/2009	8/2009	9/2009	10/2009	11/2009	12/2009	1/2010	2/2010	3/2010	4/2010
MB1	4460	SPEKTROSKOP	10	28	18	36	30	1	19	35	24	19	51	12
MB1	6801	POLIRANJE LOPATICA	1070	1216	1565	920	517	1242	1321	832	1355	855	708	679

From Primary & Secondary Schedule Analysis

Capacity Load Total

Via custom reports (Plan and Available for each resource)

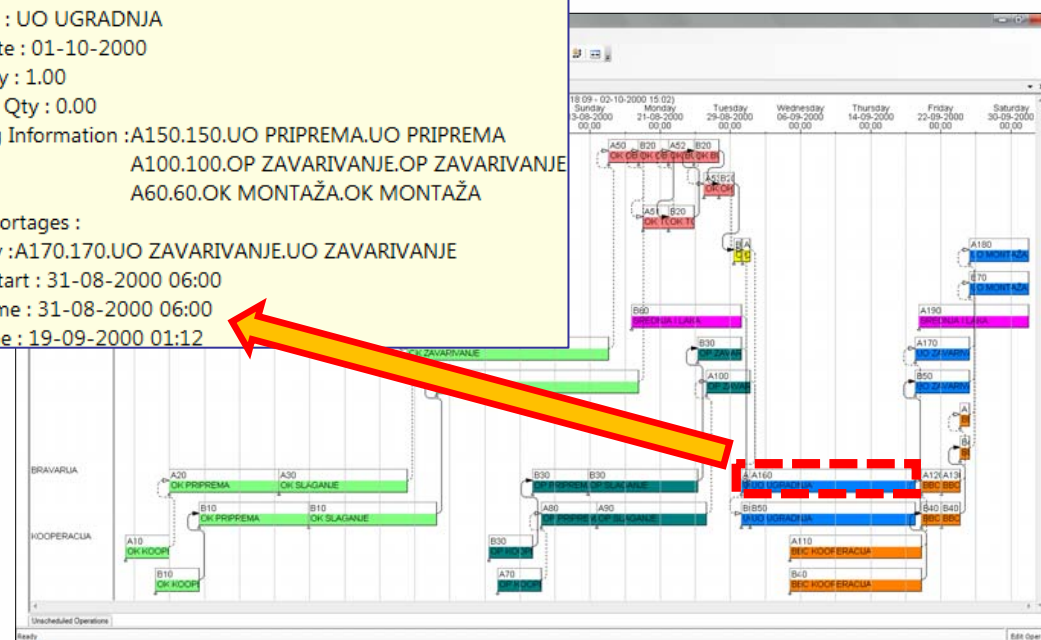




Report: Capacity Load by Attribute

- If operation is extended over >1 time bucket
- Summarize corresponding parts of the operations into time buckets

Order No. : A160
 Part No. : 160
 Product : UO UGRADNJA
 Due Date : 01-10-2000
 Quantity : 1.00
 Unused Qty : 0.00
 Pegging Information : A150.150.UO PRIPREMA.UO PRIPREMA
 A100.100.OP ZAVARIVANJE.OP ZAVARIVANJE
 A60.60.OK MONTAŽA.OK MONTAŽA
 BoM Shortages :
 Used By : A170.170.UO ZAVARIVANJE.UO ZAVARIVANJE
 Setup Start : 31-08-2000 06:00
 Start Time : 31-08-2000 06:00
 End Time : 19-09-2000 01:12



Opis vrste kupca	5/2009	6/2009	7/2009	8/2009	9/2009	10/2009	11/2009	12/2009	1/2010	2/2010	3/2010	4/2010
B/PS	5983	4805	3549	4564	4248	4216	1645	346	124	0	0	0
F/PS	150	1219	1124	185	413	1590	2603	4405	3029	2414	3139	1422
Ukupno:	6645	7197	5931	5867	5787	6488	4989	4982	3256	2553	3246	2212



Project Facts

- Project start: December 2007
- Project end (go live): April 2008
- Project team in Alstom Croatia
 - PM: ERP Manager (very capable, agile, careful)
 - Planner (new, young, open-minded)
 - Other members: production management, technology personnel



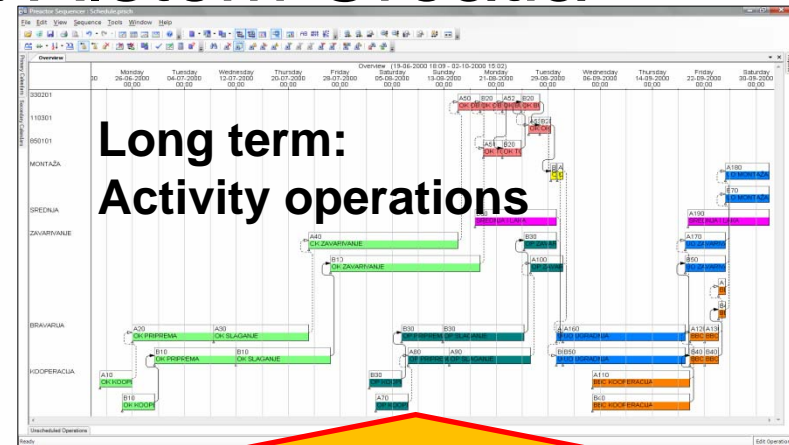
Benefits for Turbine Blades

- Benefits
 - Lean & Flexible
 - Synchronized planning and scheduling
 - Fast
 - Scheduling time reduced
 - Reacts instantly to change (new order & shop floor transactions)
 - Simple
 - Good visibility, Integration is automated, Creates Synchronized action plan
- Conclusion
 - Happy Customer
 - Recommended Preactor for other departments

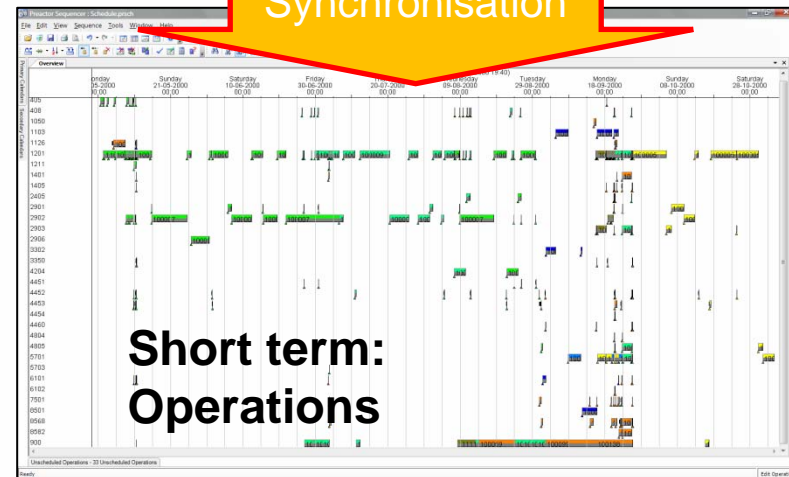


Current/Future work at Alstom Croatia

- Planning & Scheduling for Service Manufacturing
 - 2 Preactor APS
- Planning (Long term)
 - Activities in Project model should take equal position when scheduled Backward or Forward
- One short term Production Order belongs to more than one Long term Activity
 - Complex Synchronisation



Synchronisation



Planning and Scheduling at Goodyear

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Goodyear Profile

- One of the world's largest tire companies
- Net sales of \$19.5 billion (2008)
- Employs about 75,000 people (global)
- Current project is focused in Latin America
 - Colombia (went Live in 2008)
 - 3 Plants in Brazil
 - Peru, Chile, Venezuela

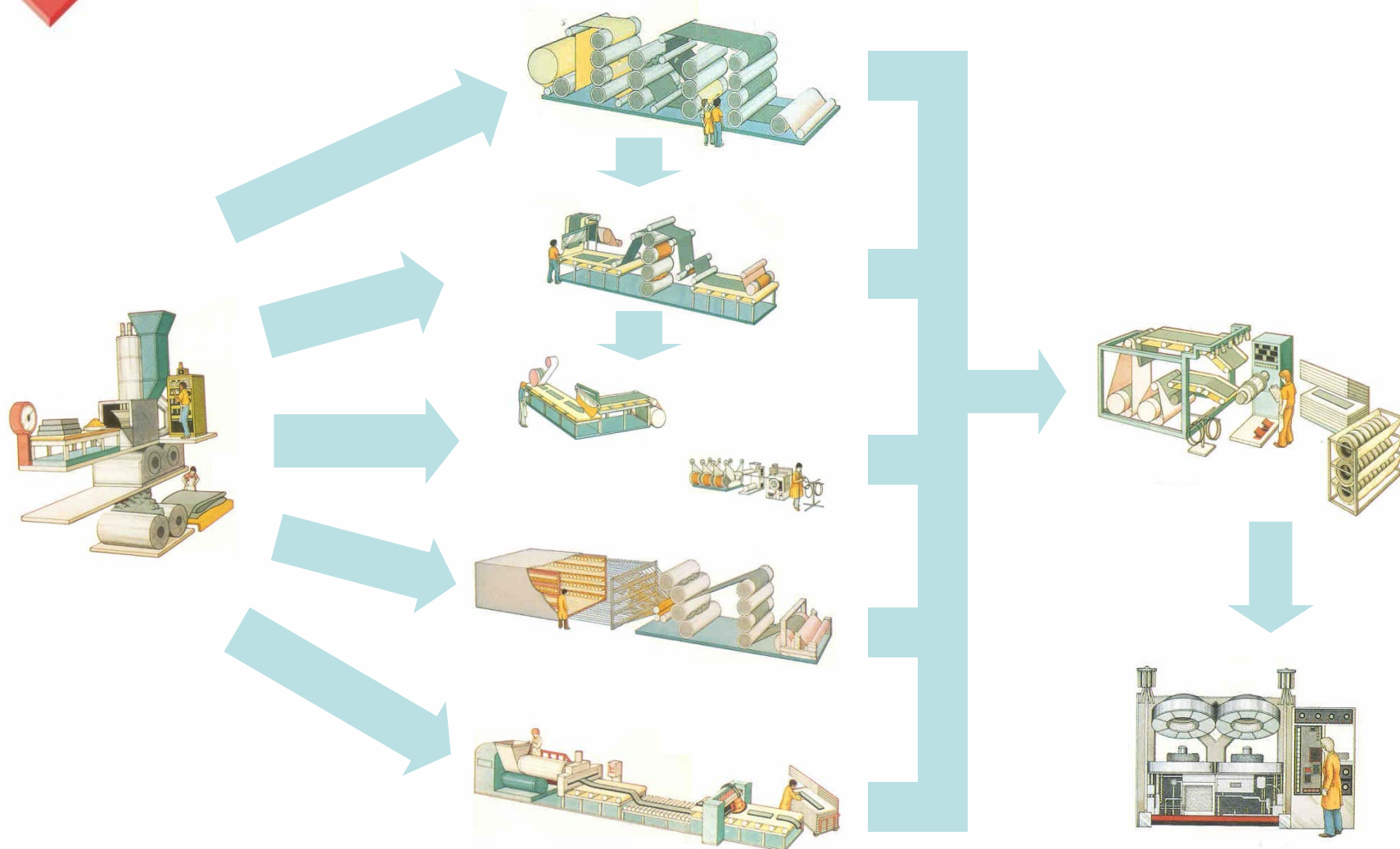




Product and Process Info

- 4 main stages
 - Make Compounds
 - Make Components
 - Assembly Components (Green Tire)
 - Vulcanize (Cured Tire)
- Usually scheduled with spreadsheets
 - One team for each stage
 - Driven by Vulcanization Area





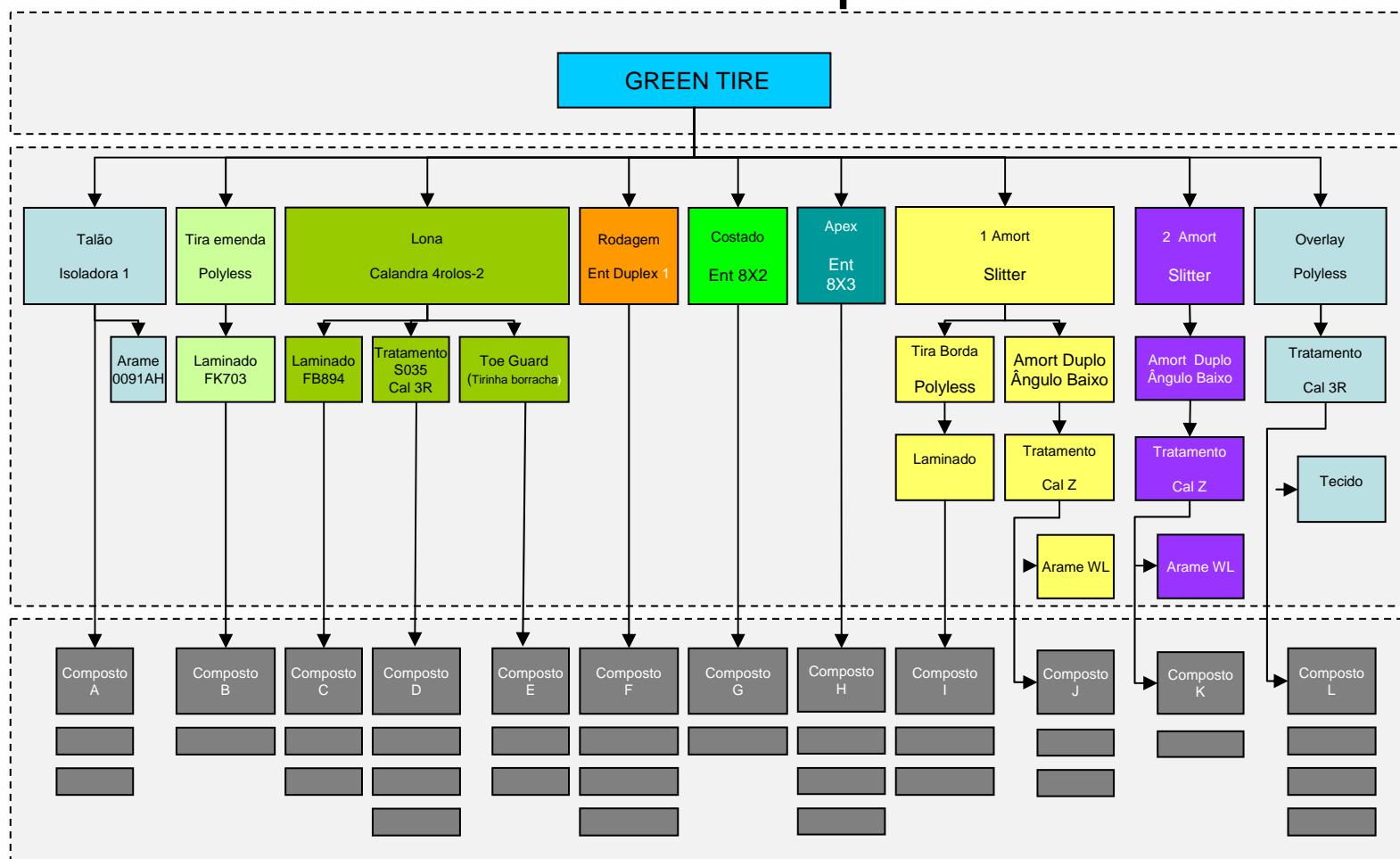


Preactor solution

- Hierarchical Scheduling Solution
 - Building model (Heijunka Rule)
 - Components model (PBX and SMC)
 - Compounds model (Customized Rule)
- Backward vs Forward Scheduling
 - Global view: Backward scheduling
 - Sector view: Forward scheduling
- SAP and MES (PC Factory) Integration

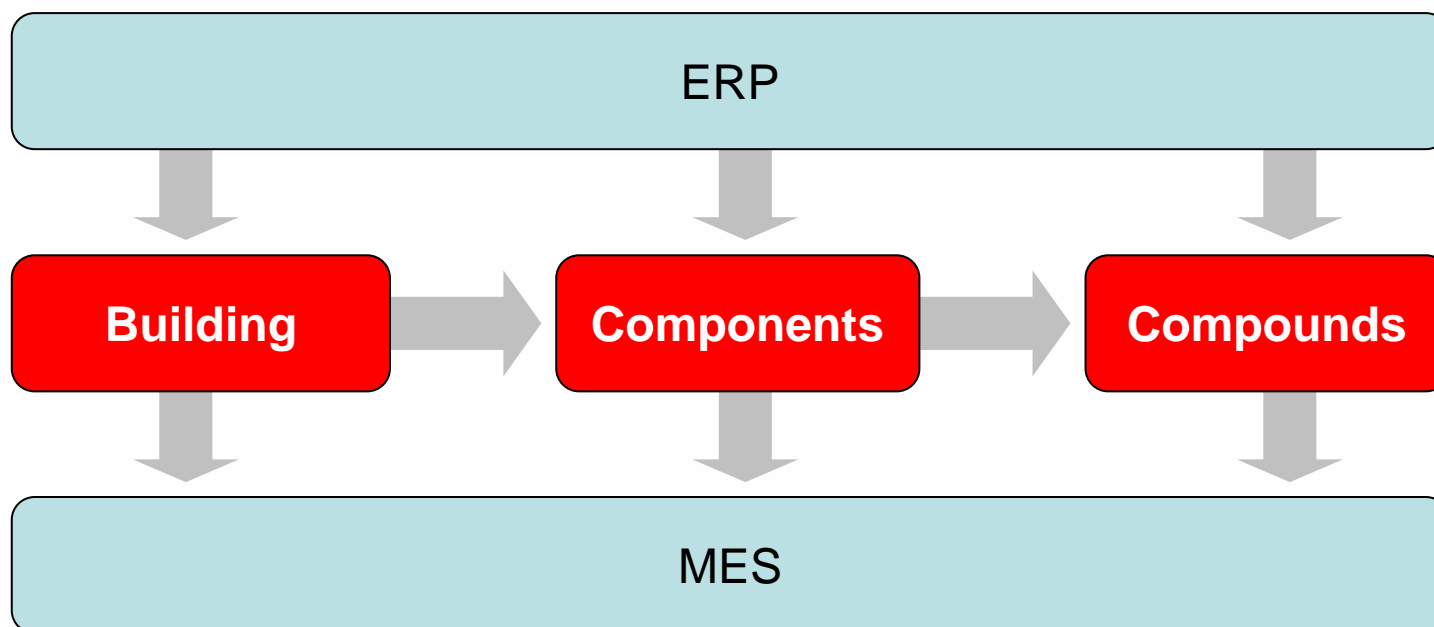


BoM Example



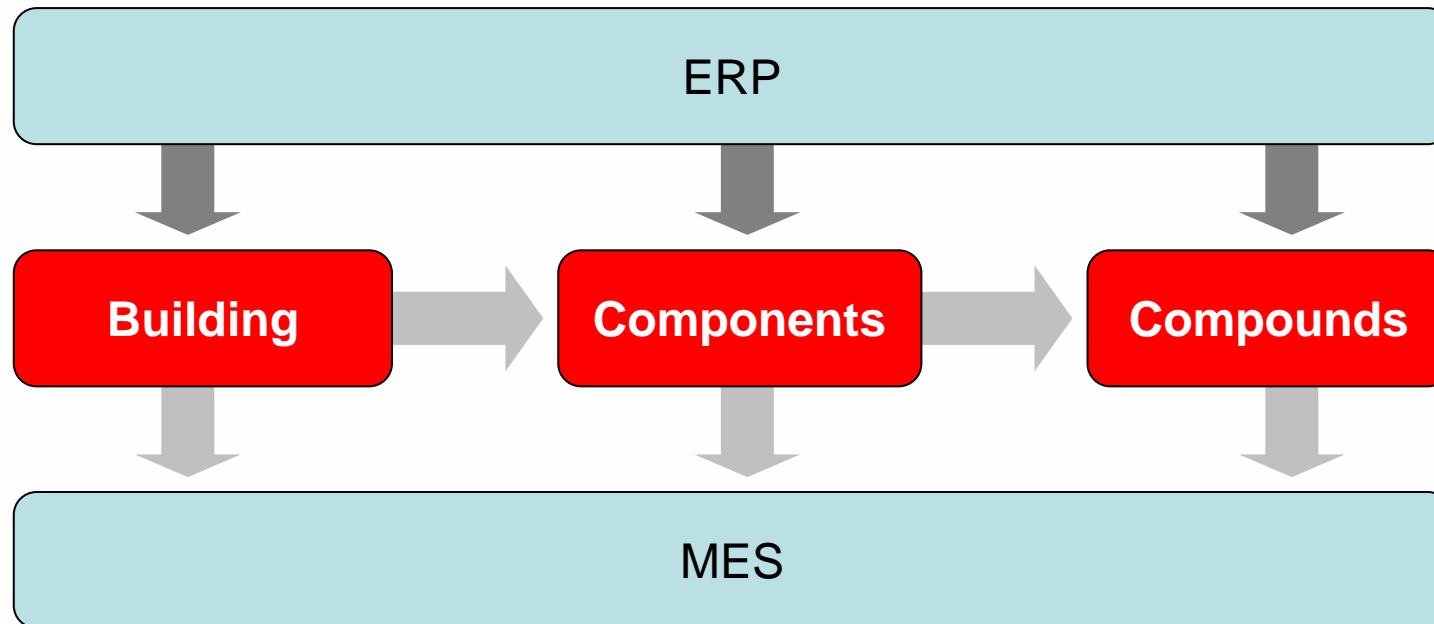


Preactor solution





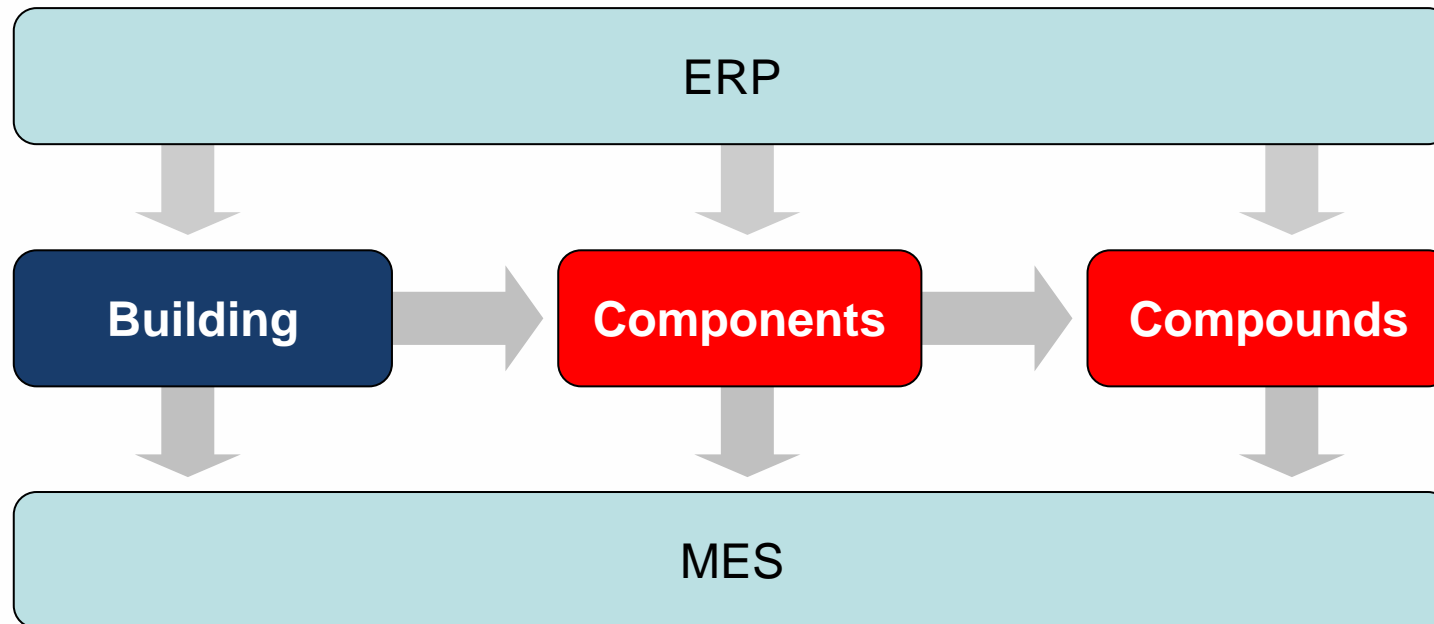
Preactor solution



Preactor downloads products, routes and BoM information from SAP
Preactor downloads all inventory status from SAP



Preactor solution



Preactor Building model imports the monthly Curing Plan (Press Layout).
 A Heijunka rule is used to schedule the Building Orders depending on Curing.
 The rule creates the Orders dynamically depending on the inventory level.

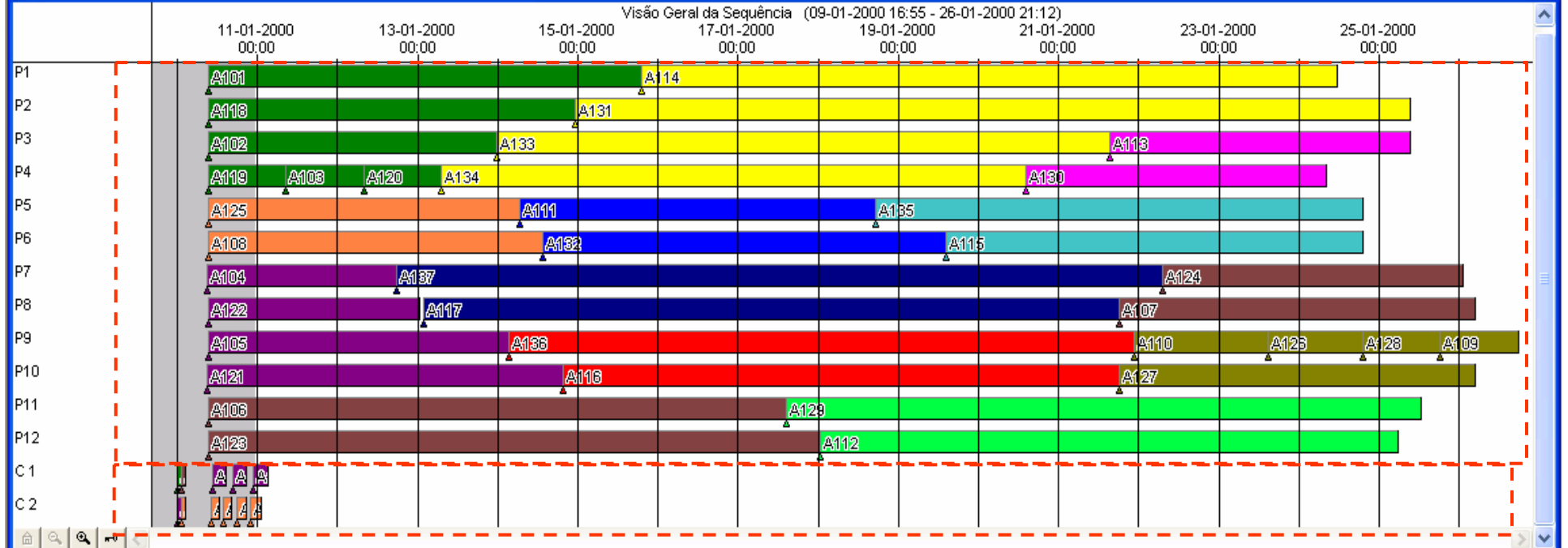


Building Model

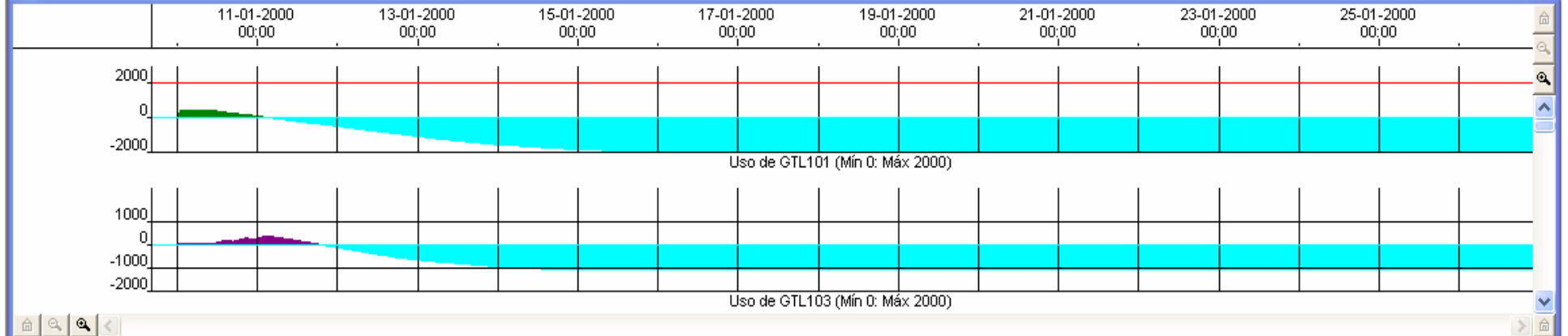
- Starts From Press Layout
 - Objective is to avoid vulcanization interruption due Green Tire shortages.
 - Heijunka rule balances inventory of Green Tire creating and sequencing Orders based on the Curing needs.
 - The rule also Minimizes Setups and try to keep products on the same machine, when possible.



Visão Geral da Sequência (09-01-2000 16:55 - 26-01-2000 21:12)

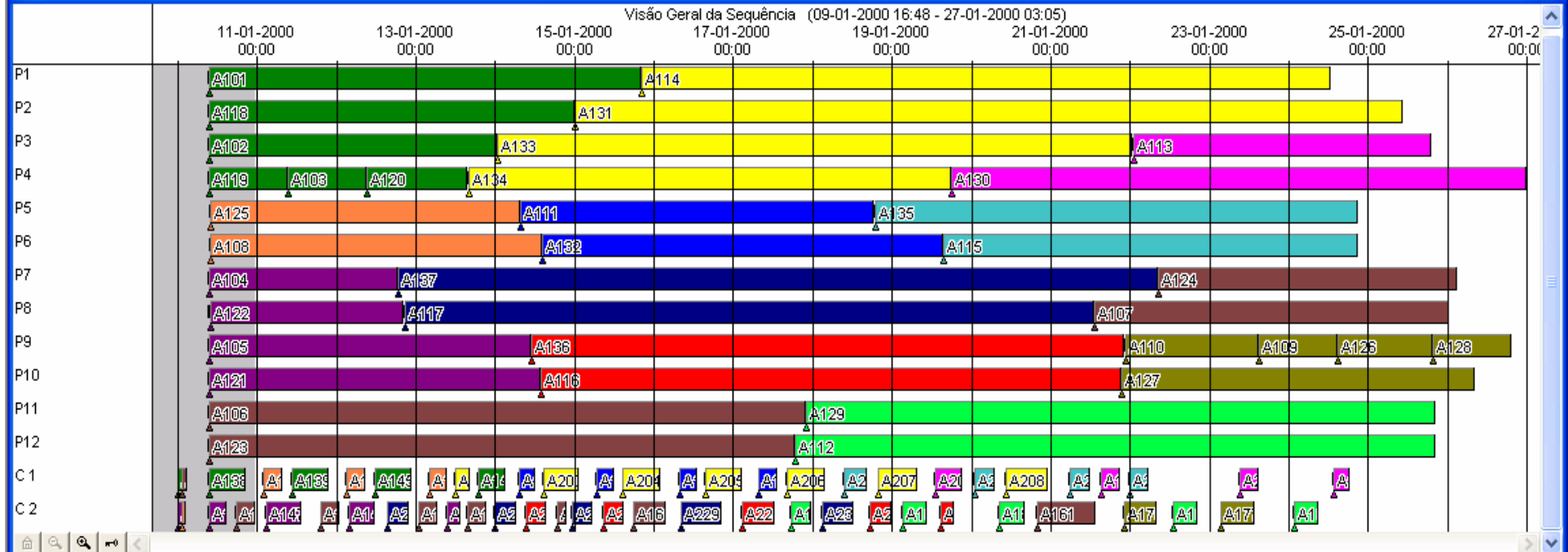


Gráficos

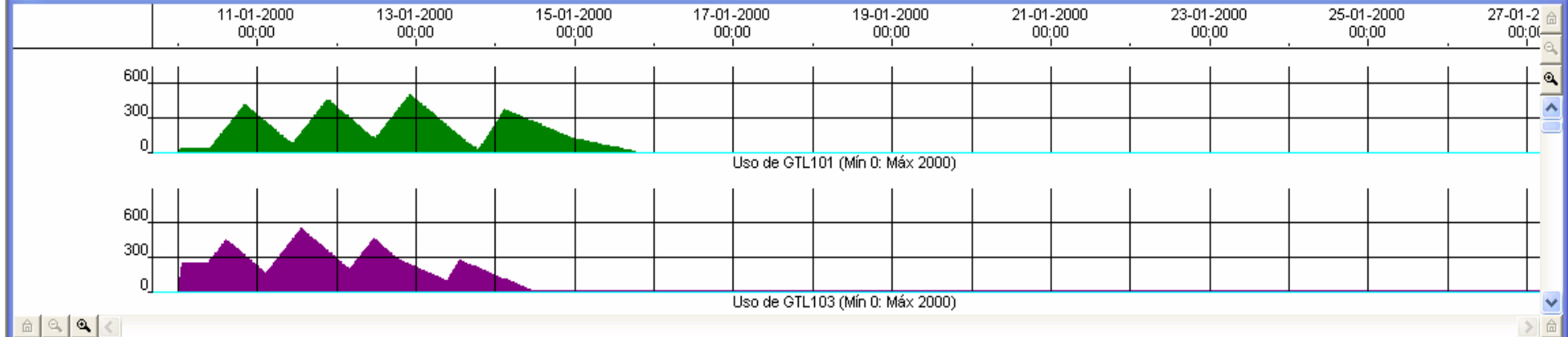


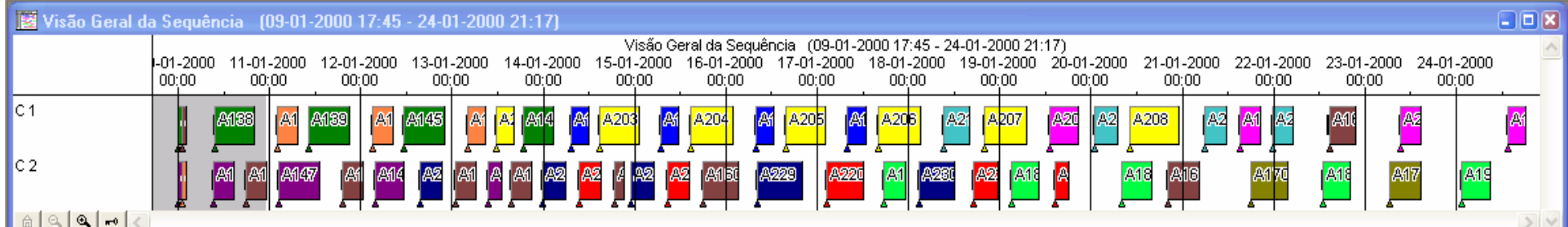
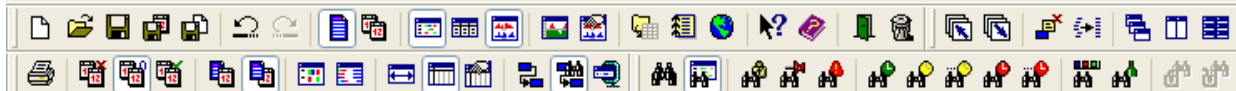


Visão Geral da Sequência (09-01-2000 16:48 - 27-01-2000 03:05)

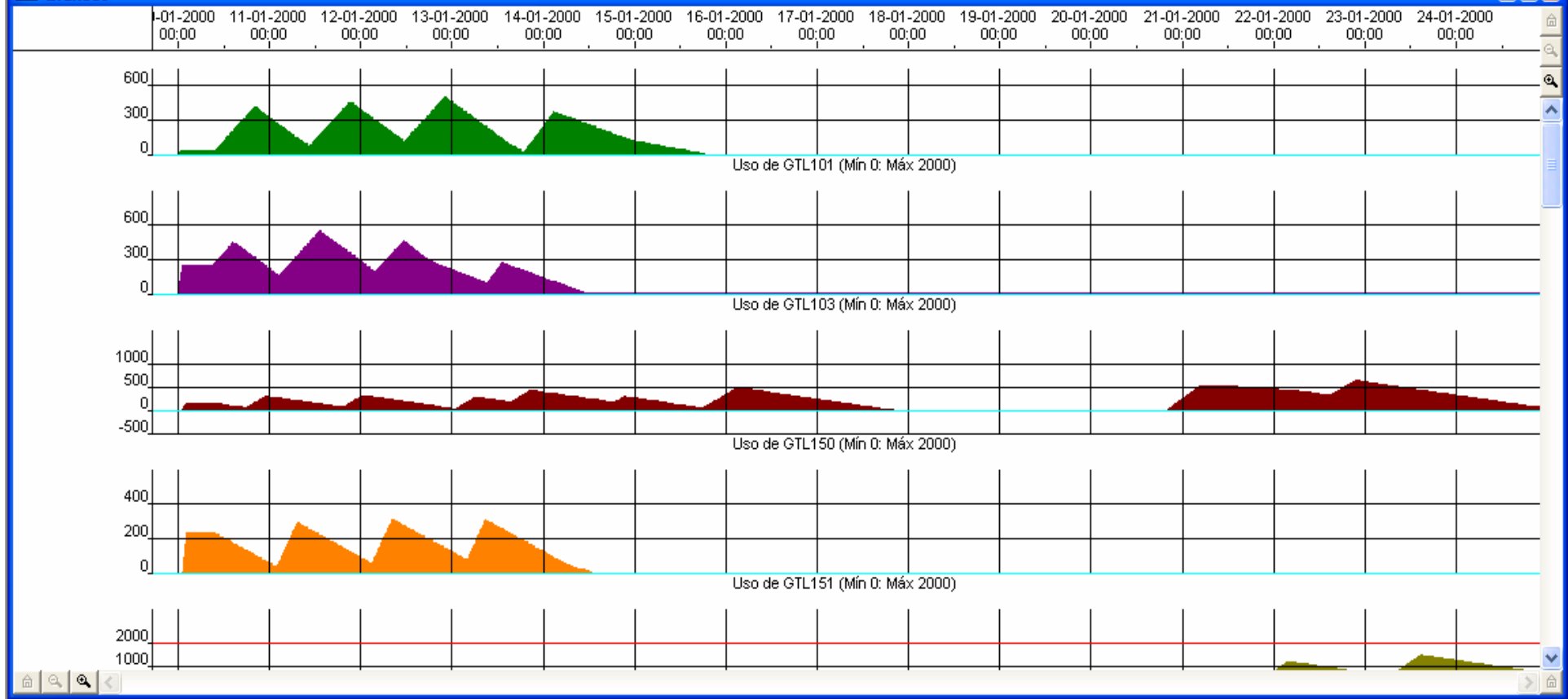


Gráficos



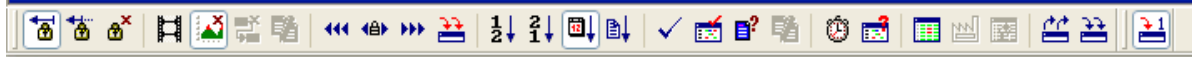
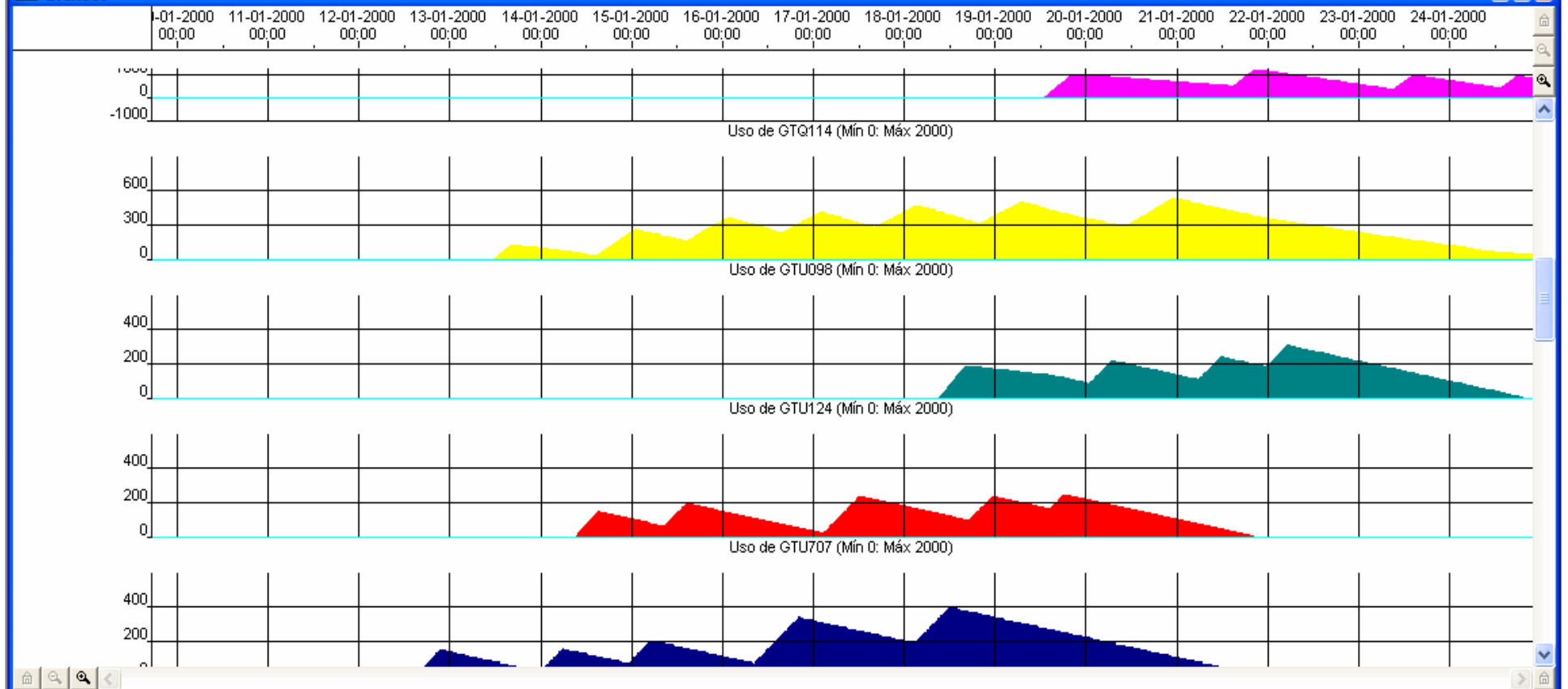


Gráficos





Gráficos



Sequenciador do Preactor : Schedule.prSCH

Arquivo Editar Visualizar Ferramentas Área de Trabalho Visão Geral Grupos Gráficos Sequenciar Relatórios Janela Ajuda

Visão Geral (10-01-2000 03:31 - 23-01-2000 08:44)

Visão Geral (10-01-2000 03:31 - 23-01-2000 08:44)

	10-01-2000 03:31	11-01-2000 00:00	12-01-2000 00:00	13-01-2000 00:00	14-01-2000 00:00	15-01-2000 00:00	16-01-2000 00:00	17-01-2000 00:00	18-01-2000 00:00	19-01-2000 00:00	20-01-2000 00:00	21-01-2000 00:00	22-01-2000 00:00	23-01-2000 00:00
L505-U203		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
L505-U204		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
L505-U205		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
L505-U206		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
L505-U207		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
L505-U208		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
L505-U209		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
L505-U212		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
L505-U213		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
L505-U214		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
L505-U215		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC

Gráficos

Uso de GT28394 (Sem Restrição)

Uso de GT28401 (Sem Restrição)

Editar Operações

Sequenciador do Preactor : Schedule.prsch

Arquivo Editar Visualizar Ferramentas Área de Trabalho Visão Geral Grupos Gráficos Sequenciar Relatórios Janela Ajuda

Visão Geral (10-01-2000 03:31 - 23-01-2000 08:44)

Visão Geral (10-01-2000 03:31 - 23-01-2000 08:44)

L505-U212

L505-PH1516-PH15

L505-PH1516-PH16

CT60160

CT60160

Gráficos

Uso de GT28394 (Sem Restrição)

Uso de GT28401 (Sem Restrição)

Uso de GT28401 (Sem Restrição)

Editar Operações

The screenshot displays the Preactor software interface. The top window, titled 'Sequenciador do Preactor : Schedule.prsch', contains a menu bar and a toolbar. Below it is the 'Visão Geral' (General View) window, which shows a Gantt chart for the period from 10-01-2000 03:31 to 23-01-2000 08:44. The Gantt chart has three main task bars: 'L505-U212' (top), 'L505-PH1516-PH15' (middle), and 'L505-PH1516-PH16' (bottom). The 'L505-U212' bar is composed of many small, stacked bars with orange and green segments. The 'L505-PH1516-PH15' and 'L505-PH1516-PH16' bars are solid green and labeled 'CT60160'. Below the Gantt chart is the 'Gráficos' (Charts) window, which contains three resource usage graphs. The first graph, 'Uso de GT28394 (Sem Restrição)', shows an orange area chart with a yellow arrow pointing to the peak. The second graph, 'Uso de GT28401 (Sem Restrição)', shows a green area chart with a red horizontal line at 100. The third graph, also 'Uso de GT28401 (Sem Restrição)', shows a green area chart with a red horizontal line at 60. The bottom of the interface has a toolbar and the text 'Editar Operações'.

Sequenciador do Preactor : Schedule.prsch

Arquivo Editar Visualizar Ferramentas Área de Trabalho Visão Geral Grupos Gráficos Sequenciar Relatórios Janela Ajuda

Visão Geral (10-01-2000 03:31 - 23-01-2000 08:44)

Visão Geral (10-01-2000 03:31 - 23-01-2000 08:44)

	10-01-2000 00:00	11-01-2000 00:00	12-01-2000 00:00	13-01-2000 00:00	14-01-2000 00:00	15-01-2000 00:00	16-01-2000 00:00	17-01-2000 00:00	18-01-2000 00:00	19-01-2000 00:00	20-01-2000 00:00	21-01-2000 00:00	22-01-2000 00:00	23-01-2000 00:00
L505-U212		GT52124	GT52124	GT52124	GT52124	GT52124	GT52124	GT52124	GT52124	GT52124	GT52124	GT52124	GT52124	GT52124
L505-PF1112-PF11									GT30435	GT30435	GT30435	GT30435	GT30435	GT30435
L505-PF1112-PF12									GT30435	GT30435	GT30435	GT30435	GT30435	GT30435
L505-PG0304-PG03														
L505-PG0304-PG04														

Gráficos

Uso de GT28394 (Sem Restrição)

Uso de GT28401 (Sem Restrição)

Editar Operações

Sequenciador do Preactor : Schedule.prsch

Arquivo Editar Visualizar Ferramentas Área de Trabalho Visão Geral Grupos Gráficos Sequenciar Relatórios Janela Ajuda

Visão Geral (10-01-2000 03:31 - 23-01-2000 08:44)

Visão Geral (10-01-2000 03:31 - 23-01-2000 08:44)

L505-U206

L505-U212

L505-PF1516-PF15

L505-PF1516-PF16

CT562387

CT56853

CT56853

Gráficos

Uso de GT28394 (Sem Restrição)

Uso de GT28401 (Sem Restrição)

60

30

0

-30

100

50

0

60

30

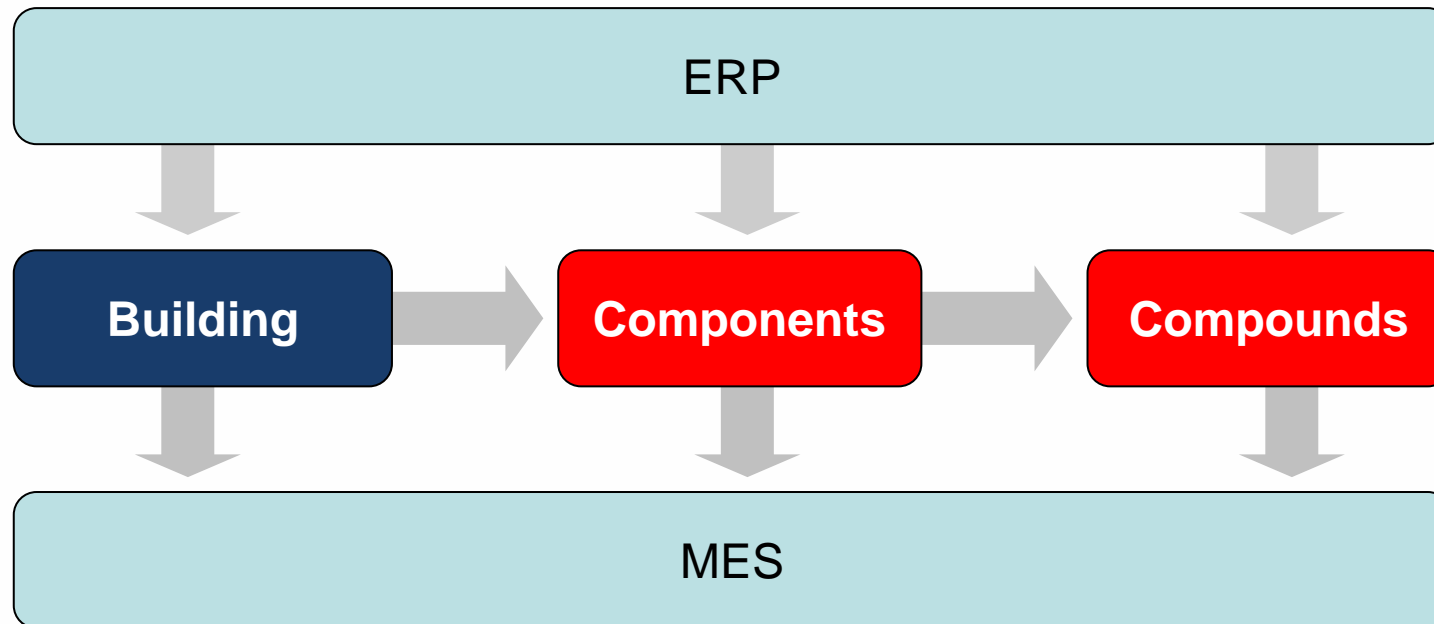
0

10-01-2000 00:00 11-01-2000 00:00 12-01-2000 00:00 13-01-2000 00:00 14-01-2000 00:00 15-01-2000 00:00 16-01-2000 00:00 17-01-2000 00:00 18-01-2000 00:00 19-01-2000 00:00 20-01-2000 00:00 21-01-2000 00:00 22-01-2000 00:00 23-01-2000 00:00

Editar Operações



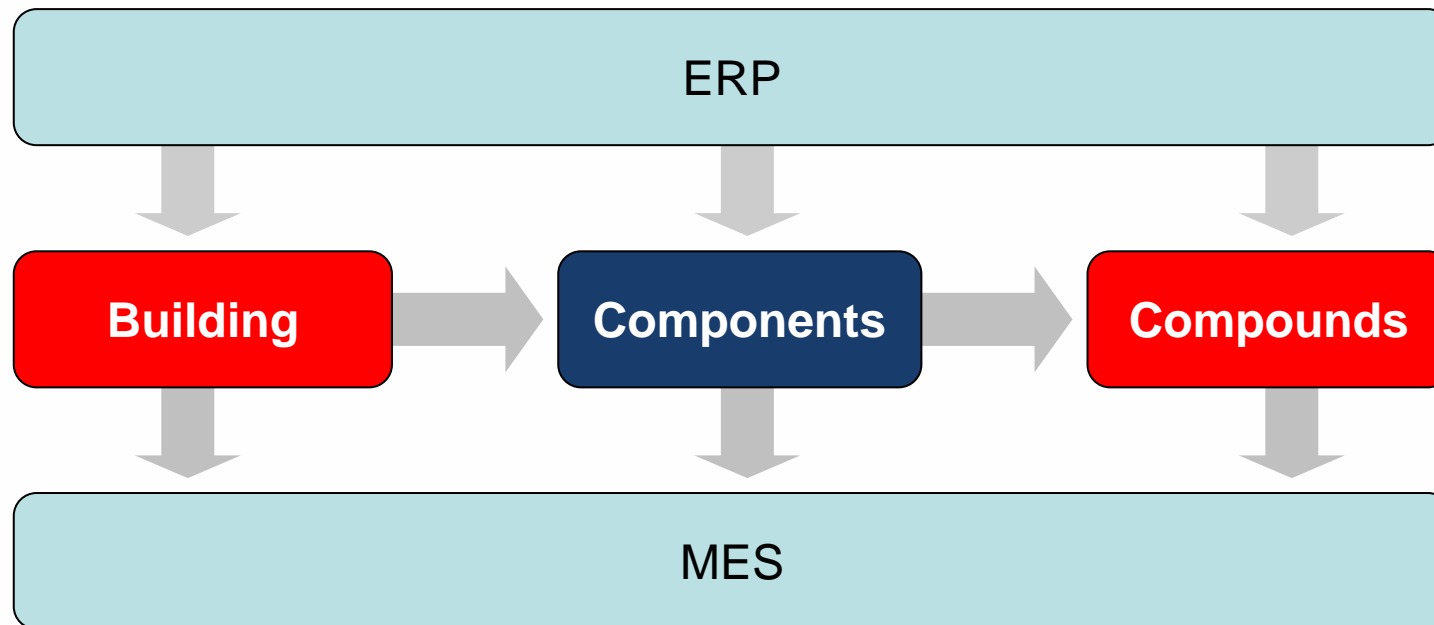
Preactor solution



Building schedule is released for the plant using the MES interface. The scheduled Orders also need to be sent to the Components Model as it will be used to generate the Component Orders and SMC.



Preactor solution



With the Building Orders and updated Inventory, a customized BoM exploder is used to generate the Component Orders within specific parameters. Then the Orders are linked using SMC and scheduled by a custom APS rule in order to minimize setup by machine.

Components Model

- Starts From Building Schedule
 - Objective is to produce all components needed for Building operations within minimum WIP.
 - The key is to generate the Orders with the right quantities.
 - SAP was not able do that (MRP), so a customized BoM Exploder takes the Building Orders and explodes its needs taking in count 'On Hand Horizon', Max, Min and Multiple batches for all production levels.
 - Standard SMC does the pegging (many to many).
 - Due Dates are calculated considering 'Infinite Capacity'
 - The Orders are 'prioritized' by Due Date and an APS rule uses a parallel loading strategy to minimize setup when possible.

Sequenciador do Preactor

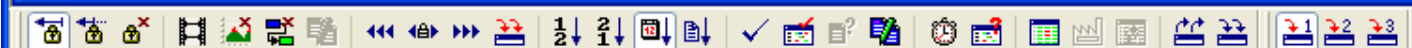
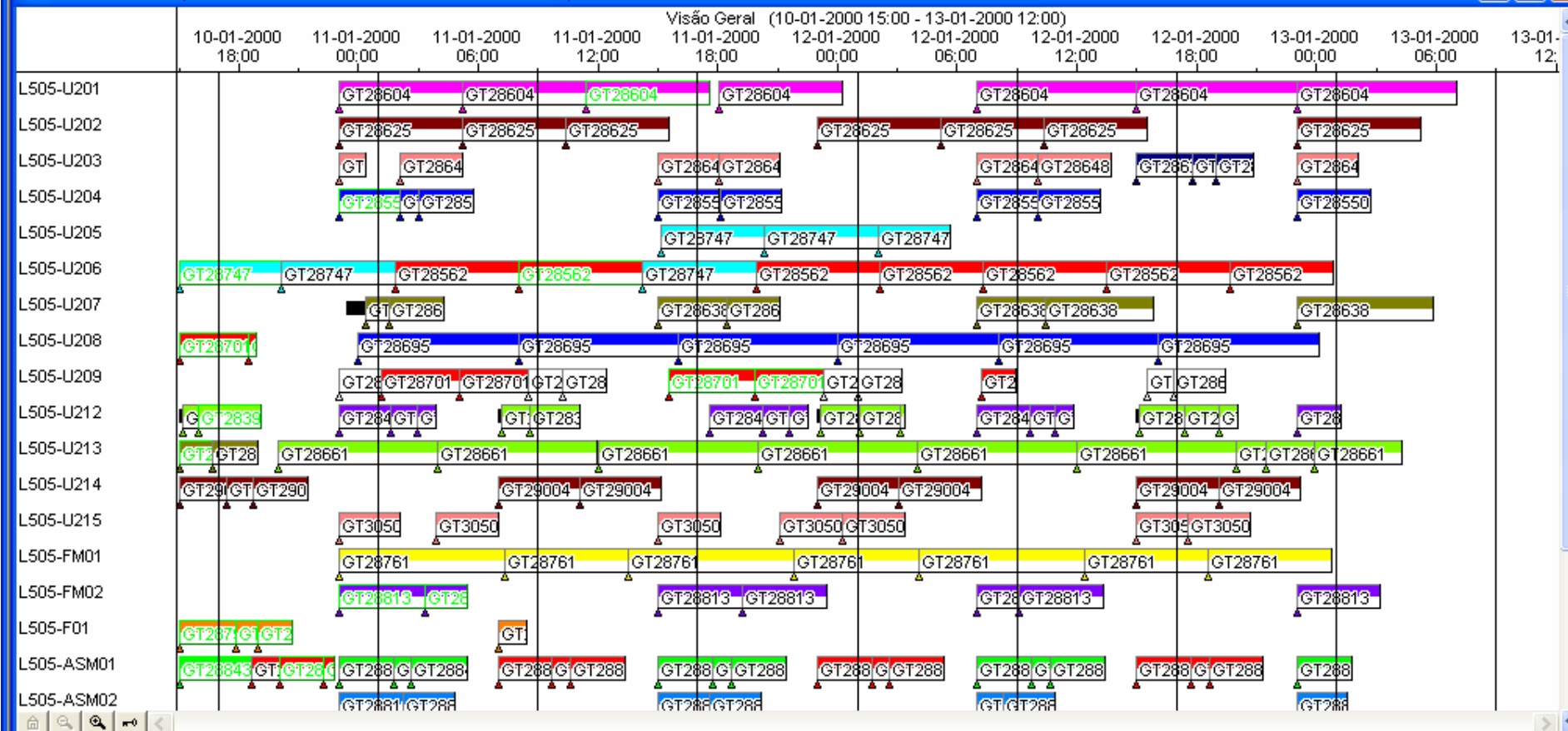
Arquivo Editar Visualizar Ferramentas Área de Trabalho Visão Geral Grupos Gráficos Sequenciar Relatórios Janela Ajuda



Operações Não Programadas - 1302 Operações Não Programadas



Visão Geral (10-01-2000 15:00 - 13-01-2000 12:00)



Editar Operações

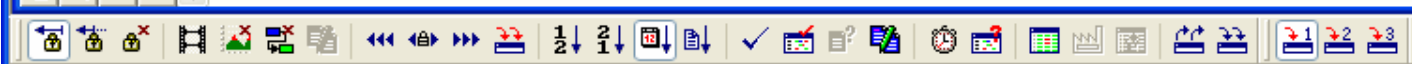
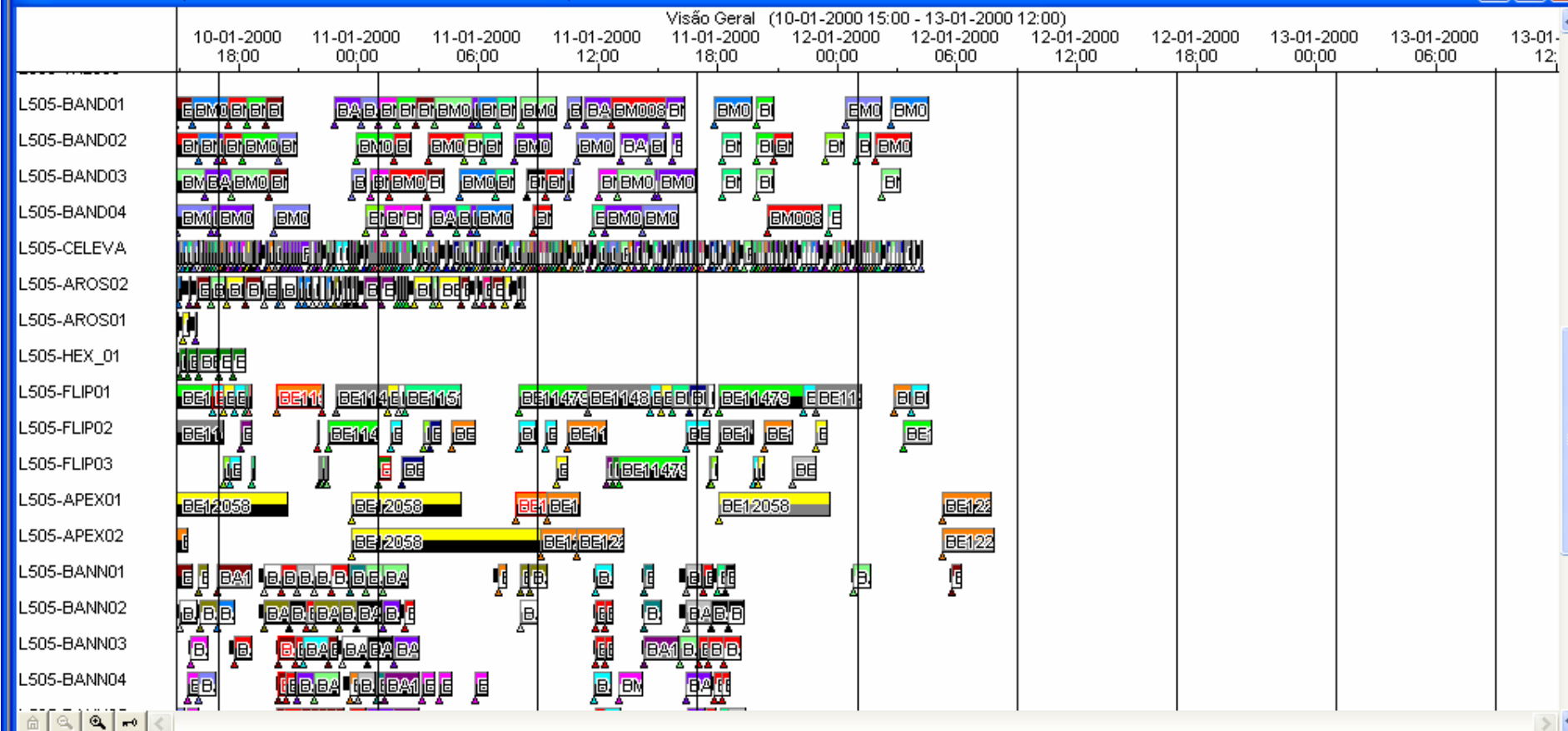
Sequenciador do Preactor

Arquivo Editar Visualizar Ferramentas Área de Trabalho Visão Geral Grupos Gráficos Sequenciar Relatórios Janela Ajuda



Operações Não Programadas

Visão Geral (10-01-2000 15:00 - 13-01-2000 12:00)



Sequenciador do Preactor

Arquivo Editar Visualizar Ferramentas Área de Trabalho Visão Geral Grupos Gráficos Sequenciar Relatórios Janela Ajuda

Operações Não Programadas

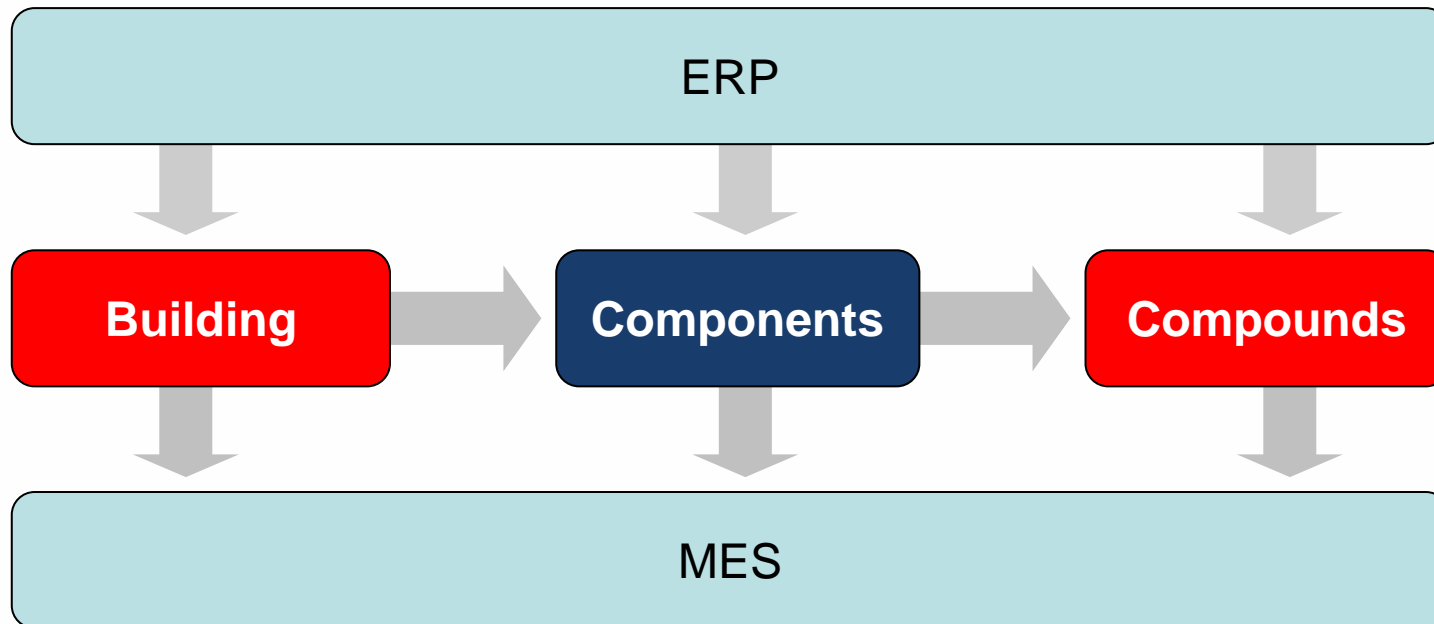
Visão Geral (09-01-2000 23:16 - 13-01-2000 07:48)

Visão Geral (09-01-2000 23:16 - 13-01-2000 07:48)

	1-2000 0:00	10-01-2000 12:00	11-01-2000 00:00	11-01-2000 12:00	12-01-2000 00:00	12-01-2000 12:00	13-01-2000 00:00
L505-U201		CT28604	CT28604	CT28604	CT28604	CT28604	CT28604
L505-BAND02	BEM00	BEM00	BEM00	BEM00	BEM00	BEM00	BEM00
L505-BAND03	BEM00	BEM00	BEM00	BEM00	BEM00	BEM00	BEM00
L505-CELEVA							
L505-AROS02							
L505-FLIP01	BE1147	BE1147	BE1147	BE1147	BE1147	BE1147	BE1147
L505-FLIP02	BE1147	BE1147	BE1147	BE1147	BE1147	BE1147	BE1147
L505-BANN01							
L505-BANN03							
L505-BANN04							
L505-BANN05							
L505-CAL66F							
L505-CAMERO							
L505-TUBER8							
L505-DUPLEX							
L505-CAL54G							
L505-BB01							

12-01-2000 08:30 | Editar Operações

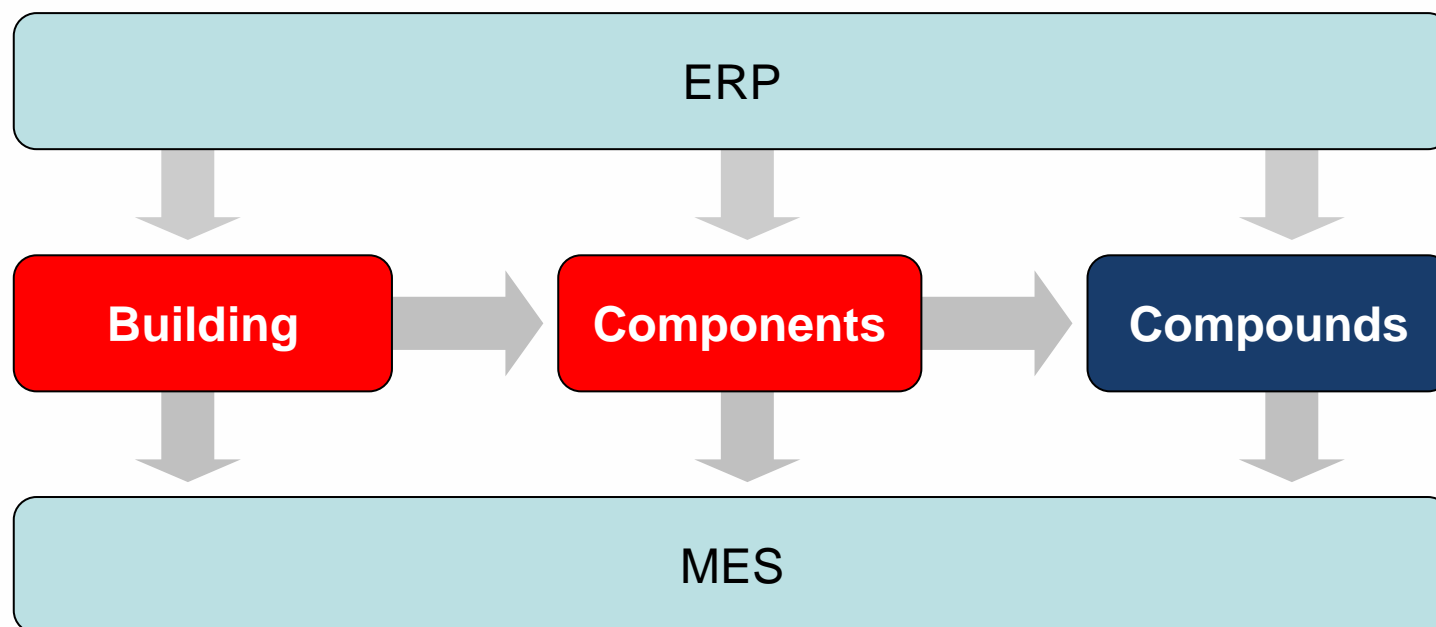
Preactor solution



The Components schedule is released for the plant using the MES interface. After scheduling the Components, the BoM Exploder regenerates the Compound Orders and sends them to the specific model.



Preactor solution

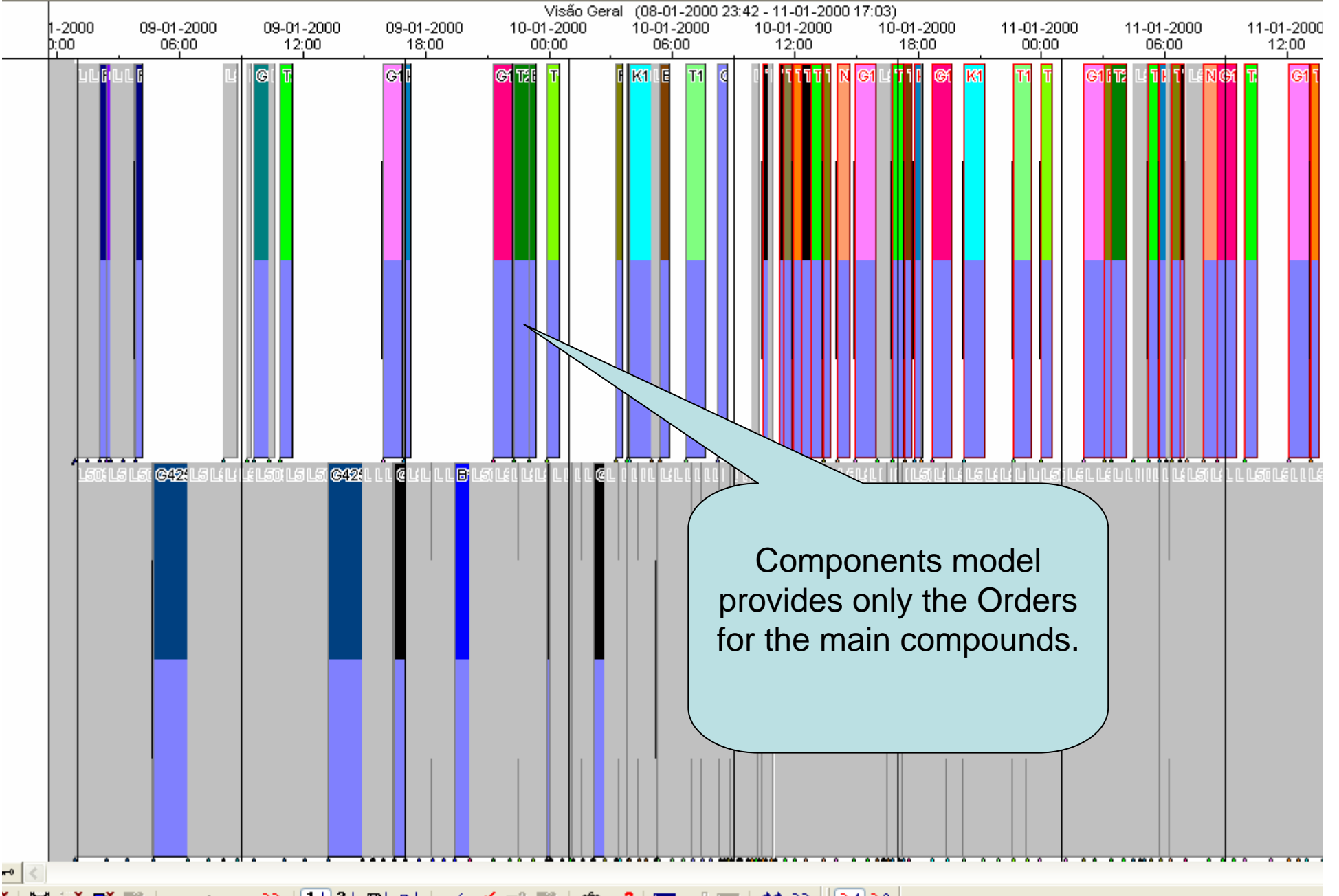


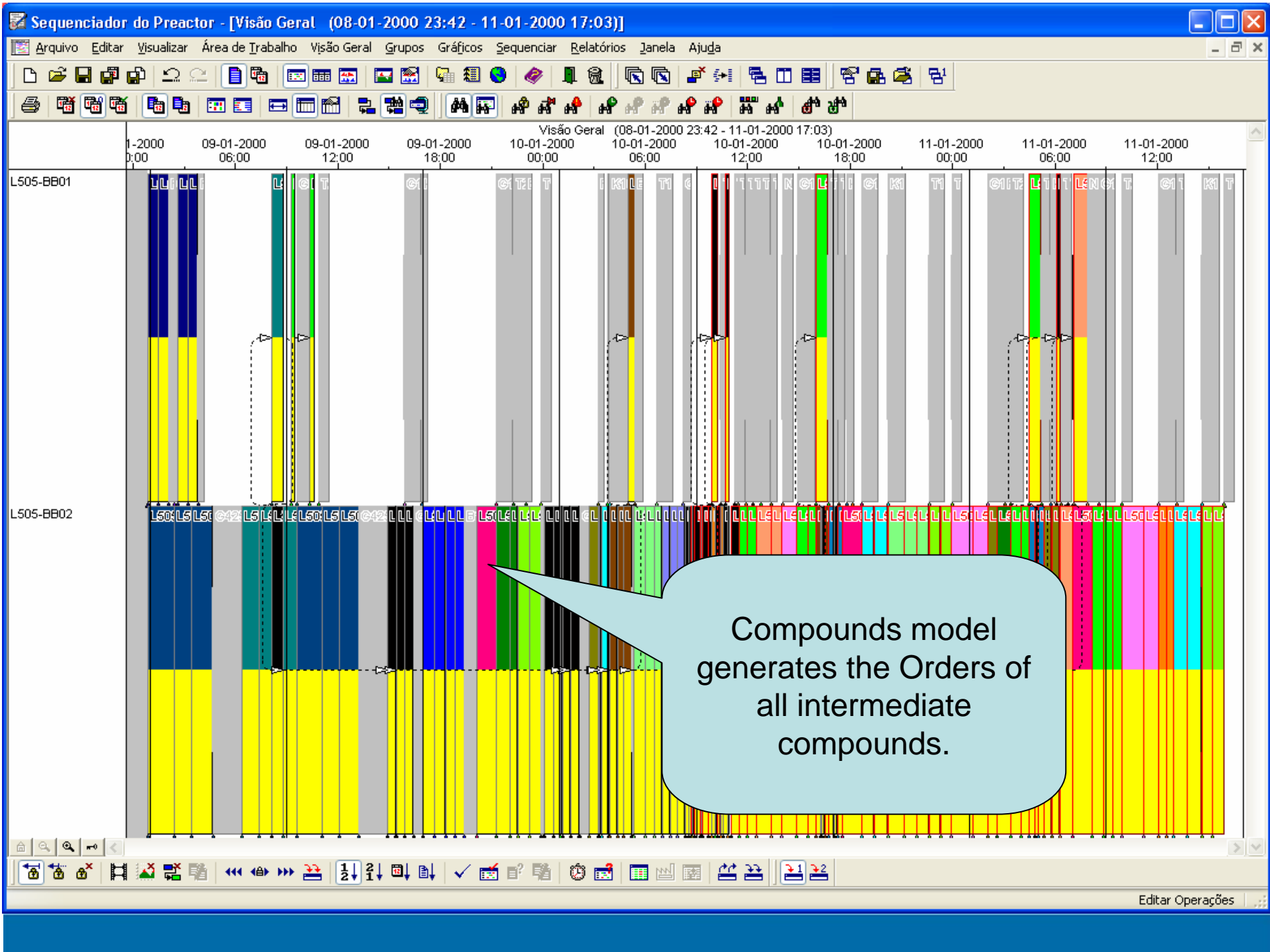
From the Compound Orders and their due dates this model generates the previous Component stages (up to 5 intermediates), schedules and adjusts Order quantities depending on resources. Again the Orders are released to the plant using the MES interface.



Compounds Model

- Starts From Components Scheduling
 - Objective is to produce all compounds needed for Components.
 - After scheduling all Components, the BoM Exploder recalculates the Compound Orders based on schedule and exports.
 - From the Main Compounds the model explodes the intermediate Compounds and links the Orders (one to one)
 - The Orders are 'prioritized' by Due Date and an APS rule using a parallel loading strategy to minimize setup when possible.
 - The Batch quantities need to be adjusted depending on the scheduled resource (cascade update).
 - The model also creates Clean Up Orders depending on specific rules.





Preactor International Case Studies Automotive & Aerospace

World Class APS Solutions, Locally Delivered





Chasco Machine, USA: Aerospace Precision Parts



- Aircraft control and fuel system parts
- Small batch runs, fast turn round
- Home grown MRP system
- Increasing demand required a move from manual planning through Excel and finally to Preactor

Benefits

- Smaller setup times
- Accurate delivery dates

Customer says:

“Preactor gives me a level of control that was previously missing, allowing me to take my business to the next level without getting overloaded and without compromising the level of service that my customers have now come to expect”.





Contour Seating, UK: Premium Aircraft Seating



- 800 staff, 2 sites
- 200 seats per month, >3,000 parts per seat, 70% manufactured in house, 2 weeks delivery turnaround
- 40 CNC machine centres plus a range of further metal working cells, 6 vacuum forming areas, 10 fabrication related centres, and further departments dedicated to composites and electrics.



Benefits

- Reduction in costs of £8,000 per week
- 40% reduction in WIP
- 10% increase in output
- Accurate Capable to Promise dates



Cosworth Racing, UK: Ultra High Performance Engines



- 2000-3000 orders a week
- Classical machine 'jobbing shop'
- Separate Assembly Cells
- SSA Manman ERP
- 'Customers want what they want when they want it'



Customer says... "Importance of the plan is part of the culture ...predicting with facts possible with Preactor ... have moved from 'guestimates' to definites... become the heart of Manufacturing data and initiatives for agile environment across the whole enterprise".



GKN Walterscheid, Germany: Gearboxes & Couplings



- Two Preactor 400 APS Master Scheduling systems (Machining & Assembly) integrated with SoftBrands Fourth Shift ERP -11,500 operations, went live in June 2005
- Preactor provides a clear graphical view of the load, the forward plan, and the ability of the plant to adhere to due dates being set by ERP system
- “The dynamic scheduling software will provide GKN with the flexibility to change and optimise production plans at short notice, re-route orders to machines that are available and make best use of CNC machine tool resources.”

Harmon Manufacturing, UK: Aerospace Parts



- Make a range of precision parts for the aerospace industry
- Previously relied on a T card system
- Complex routing
- Had problems in estimating realistic delivery dates



- Now has better use of machinery and labour
- Has an accurate view of shop loading and available capacity
- Has helped their lean initiatives

Customer says : ‘...Preactor has given us a competitive edge – our customers tell us that many of their other suppliers don’t have such a system’



Metaldyne, USA: Forged Parts and Assemblies



- Make high quality parts and assemblies for the automotive industry
- Problems synchronising different processes within the factory
- Linked with QAD MFG/Pro



- Versatility of Preactor reduced costly and time consuming core code change
- 6hrs scheduling once a week reduced to a few minutes a day
- Sequencing errors reduced to nil

Customer says : ‘...on top of the benefits, the fact that it was very price competitive seems like a bonus.’



Silflex, UK: Automotive Silicone Hoses



- 100 staff, huge product range
- Hoses for coolant, heater system, turbocharger, lined fuel and oil, wire reinforced, convoluted, castellated and special shapes hoses
- Need to consolidate orders to make larger batches
- SYSPRO ERP



Benefits

- Better management of production
- Better utilisation of resources
- Lower stock levels



Spec-Temp, USA: Tempered Glass Products



- 75 to 100 orders a day, 7 days a week, 52 weeks a year
- Relatively simple process but the hundreds of routing permutations so knowing what the 'best' job to load next is difficult
- Requirement to improve customer service in a difficult, competitive market
- Eased the burden on Spec-Temp scheduling staff
- Greater understanding of the Requirement to improve customer service in a difficult, competitive market
- Ability to see the effects of schedule changes, planned and unplanned
- Improved Customer Service

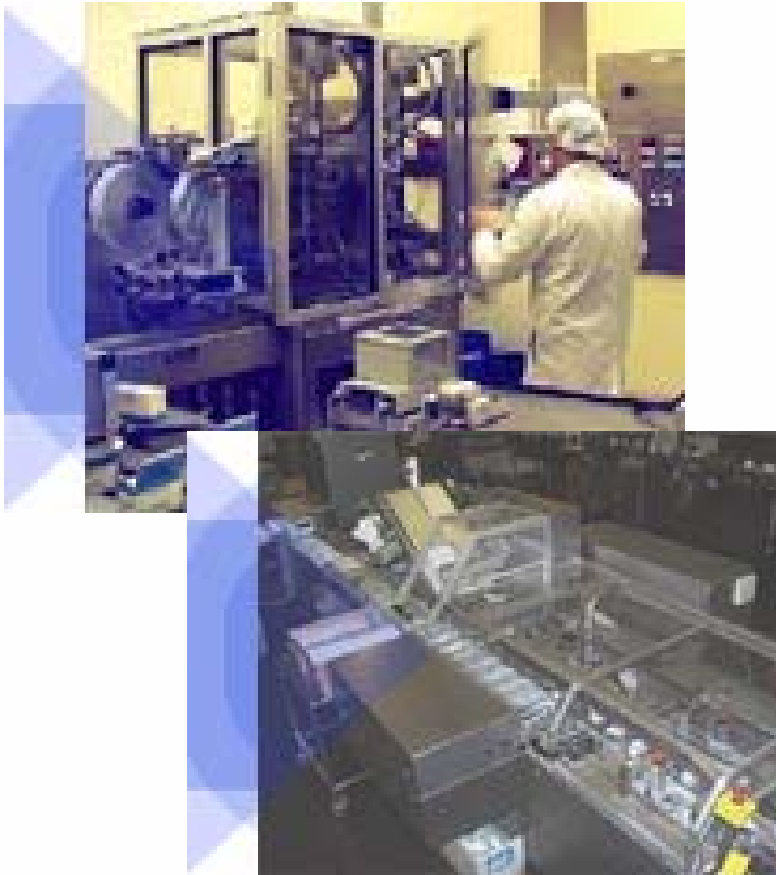
Preactor International Case Studies Chemicals & Pharmaceuticals

World Class APS Solutions, Locally Delivered





Boots Contract Manufacturing, UK: Cosmetics & Medicines



- High Street Chemist making their own products as well as suppliers to other companies
- Preactor implemented in more than 10 sites
- Linked to QAD MFG/Pro
- Schedules production taking into account equipment and labour

Customer says 'Preactor is helping us achieve maximum productivity as well as better customer service and improved profitability.'



Delta Biotechnology, UK: Pharmaceuticals

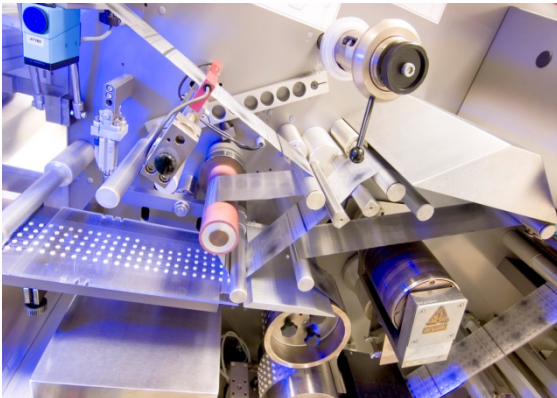


- Make biopharmaceutical products
- Tried to use project management software to manage the operations
- Could not manage the complexity of all operating groups and their shift rotas
- Can visualise what will happen and what if options to test effectiveness without changing the real schedule
- Can use equipment and labour as constraints
- Easy back-up of data

Customer says : ‘...the difference between our PM software and Preactor is that it can ‘think’ and work out the best way to get the jobs done’



Enestia, Netherlands: Healthcare Products



- Production and packaging of pharmaceutical and healthcare products
- Needed to replace existing scheduling tool
- Needed to integrate with MS Dynamics NAV ERP



Benefits

- Improved visibility of stock and WIP
- Improved visibility of costs
- Ability to 'what if' to see the consequences of plant disturbances and unanticipated demand



HCA Colours, Holland: Concentrates



- Global supplier of colour & additive concentrates for building & construction, plastics and elastomers
- 3000+ products, custom make to order
- Long lead time material supplier, shorter and shorter delivery lead times demanded by customers
- Use Ross Renaissance ERP
- Sequence dependent changeovers and raw material quality were issues to be taken into account when scheduling production
- Two plants, in Holland and Hungary are scheduled
- Preactor runs on Citrix Server so both plants have access to it
- Live updates on progress reported back so visibility of each plant's status is now available

Customer says : “Our CTP dates are much more accurate due to our better planning and scheduling”.



NPIL, UK: Pharmaceuticals



- Global custom pharmaceutical manufacturer
- Morpeth site produces tablet dosage form pharmaceuticals for arthritis, heart disease and female healthcare - 400 products
- 6 Packaging lines, correct sequencing a critical problem to manage
- Integrated with SAP

Benefits

- Ability to automatically group orders together in campaigns
- 2 hours saving in planning time every time it has to be adjusted
- Planning horizon extended to whatever is required



Pfizer: UK & USA: Pharmaceutical Sciences



- Global Supply Chain solution for Pfizer Pharmaceutical Sciences
 - Started in Sandwich, UK, subsequently expanded to all similar units in USA
 - Each 'company' had separate units for
 - Manufacture & Testing of Drug Substance
 - Transformation of substance into dosage form
 - Packaging
- Preactor is used to synchronise processes through the clinical trials process and provide visibility across all units while offering a tool to obtain better utilisation of resources

Customer Says:- “Each of the individual areas using Preactor benefits from the usual advantages of FCS, optimised workflow with minimum bottlenecks, and massively increased flexibility to quickly re-schedule if order requirements change at short notice”.



PPG, France: Fine Chemicals



- Make custom fine chemicals products for pharmaceutical and agricultural industries
- Reaction, Crystallization, Filtration, Crushing, Drying, Evaporation & Distillation
- Key requirement was to get better utilization of equipment and personnel

- Better routing
- Better stock control
- Better utilization of equipment
- Fast schedule generation
- Excellent view of PPG's workload over longer periods



Procter & Gamble, Brazil: Consumer Packaged Goods



- BabyCare, FemeCare and HairCare products
 - Packing Lines – different pack sizes, labels etc
 - Make to stock supplying distribution centres
 - SAP R/3 ERP
- Key requirement was to minimize changeover times across all lines taking into account inventory levels and forecast demand for each product and enable rather than replace SAP's forecasting, DRP, MPS and MRP modules

Results - In 2004, after a global audit, the Louvera plant was awarded the best performance for planning and scheduling from all similar P&G plants around the world and became the benchmark for others to follow.



US Paint, USA: Paints and Lacquers

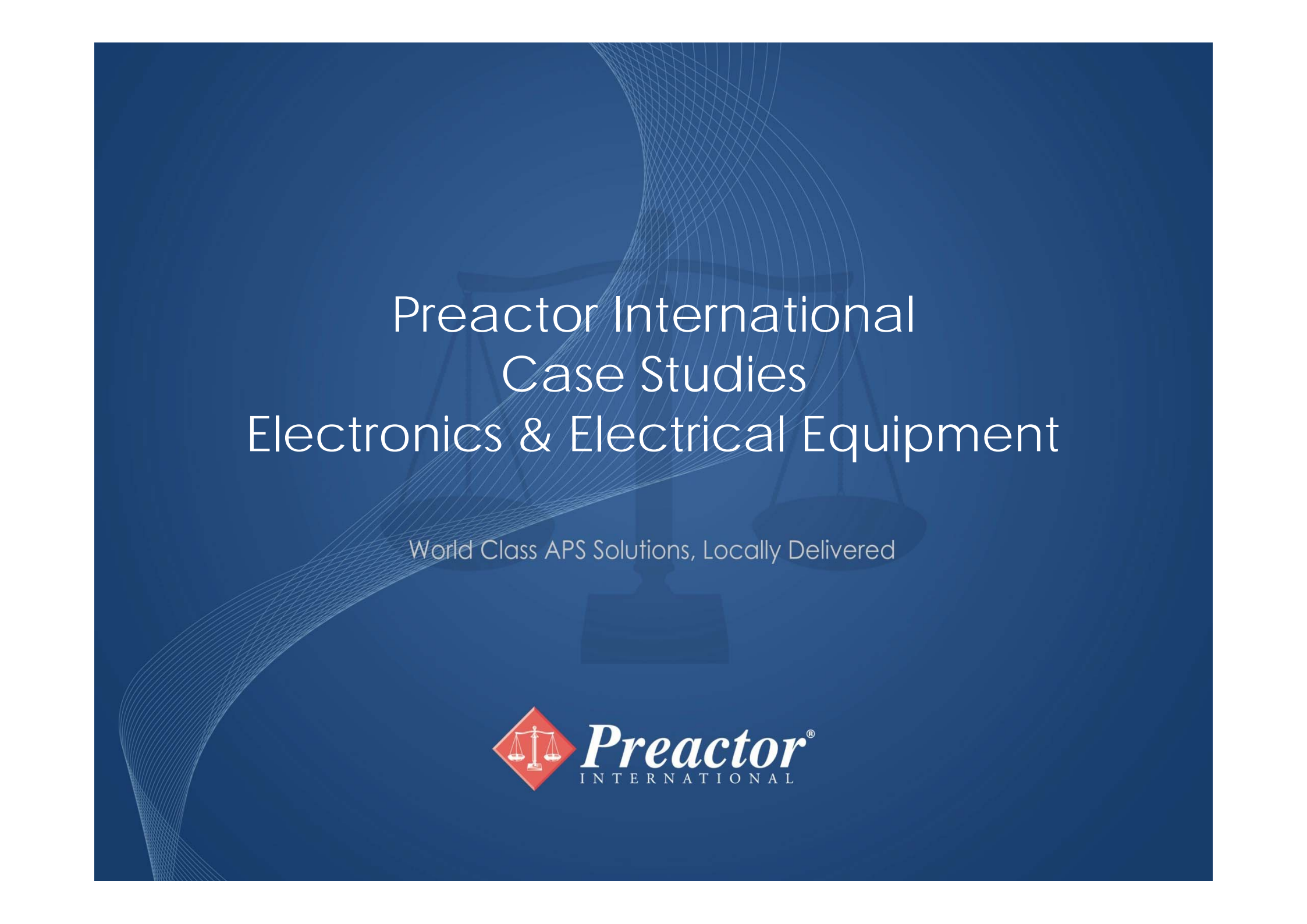


- Manufacturer of paints and lacquers for the power sports, automotive and other industrial markets
- High reputation for quality and customer service
- Needed more control at shop floor level to move to the next level



Benefits

- Clearer visibility of capacity
- Just in Time production through Preactor
- 50% reduction in WIP
- 20% reduction in production lead time
- 20% reduction of finished goods inventory



Preactor International Case Studies Electronics & Electrical Equipment

World Class APS Solutions, Locally Delivered





Cleveland/Price, USA: High Voltage Switches



- 130 people, 80 machines, 600 parts
- Fabrication, machining, punching, and finishing.
- Assembly contains 6 main assembly lines organized into two groups for automation equipment and switches.
- Integrated with SYSPRO ERP and shop floor data collection
- Two models with synchronisation

Customer says... “Preactor has assisted us in moving to the next level of our business growth cycle”.



MarGirus, Brazil: High Tension Switches



- 35m switches, and other electrical products a year, 16,000 batches a month
- 8,000 products, manufacturing plastics and metal parts then assembly
- 50 assembly tables arranged in 7 assembly cells
- Poor visibility of production, high stock & WIP, poor delivery performance
- Short term and long term planning models



Benefits

- Drastic reduction in WIP
- Increased Capacity through better workflow
- Improved Cash Flow and profits

Marisio, Chile: Domestic Electrical Products

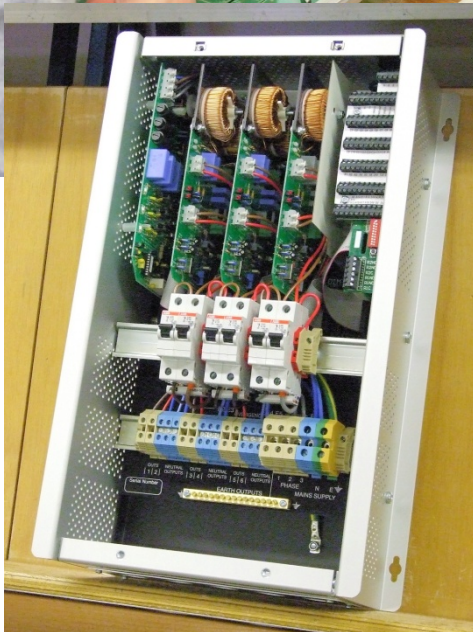
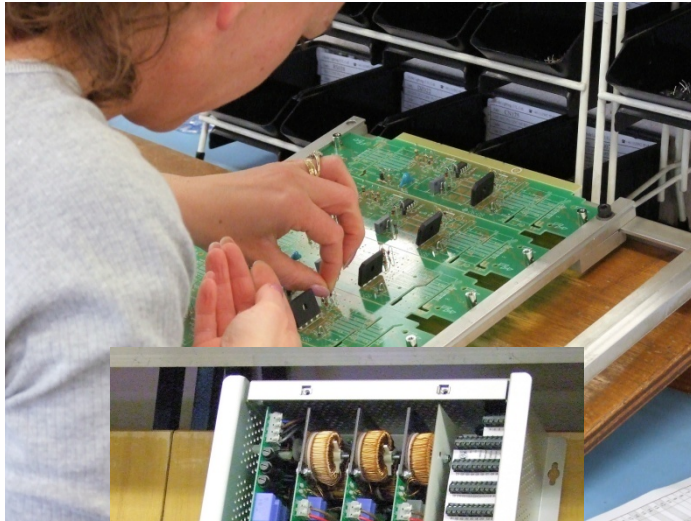


- Design, develop and manufacture domestic electrical products
- 3,500 products made against stock
- 200 employees
- Macola ERP



- OTD up to 99%, Raw materials reduced by 20%, ROI in 8 months
- Planning staff required reduced from 3 to 1

Mode Lighting, UK: Control Systems for Lighting



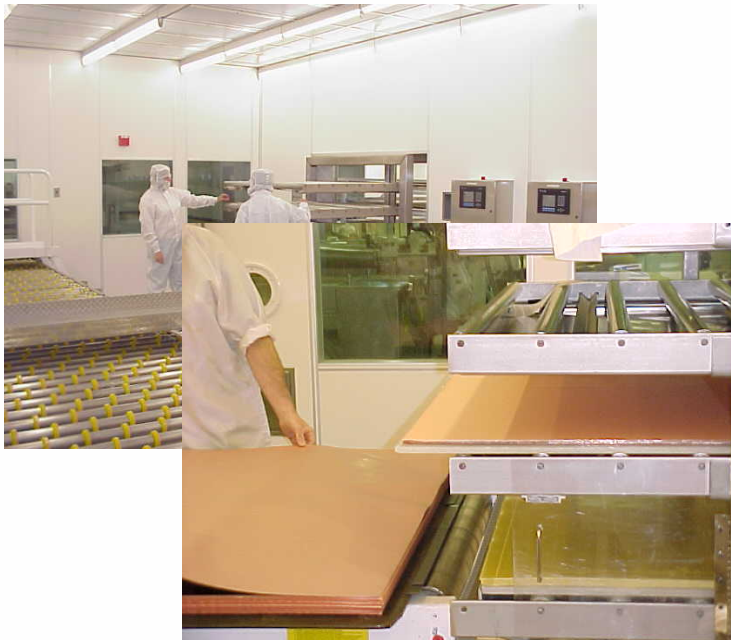
- Design, develop and manufacture control systems for lighting
- 400 product variants, make to stock and make to order
- Batches as small as 20 and up to 2000
- 120 employees
- Fourth Shift ERP

Benefits

- Staff utilization up by more than 35%
- On-time delivery performance doubled
- Can provide delivery promises with confidence



Polyclad, USA: Laminates for PCB Industry



- Change in the laminates business meant lead times which were once measured in weeks had to come down to 1 or 2 days
 - Order promises needed to be given within minutes rather than hours
 - Relatively simple process, cutting the materials, loading the sheets into a press, finishing, testing and shipping
 - Large number of variables and products makes the scheduling quite difficult
-
- Substantial improvement in the speed and accuracy of providing the customer with a promise date (4hrs to less than 1 minute)
 - Raw material shortages quickly identified
 - Systemizing schedulers knowledge
 - Mechanism for reserving capacity

Stocko, France: Electro-mechanical Components



- Make multi-way connectors for domestic appliance industry etc
- Pressing, plating, packaging process
- Problems were the effective balancing of the production load between presses and plating lines leading to bottlenecks and delivery delays
- Since going live in 2000 Stocko has improved its service rate by up to 95%
- Delivery time down from 16 days in 2000 to 5 days in 2004

Customer says : ' We are very satisfied with Preactor and Segula's quality service ... '



Vector LLC, Poland: Telecoms Equipment



- 400 people
- Amplifiers and optical nodes for cable and radio networks, telemetry devices as well as a wide range of services like design, implementation, training and maintenance of systems.
- MFGPro ERP

Benefits

- Can generate real and feasible schedules
- Reduced lead times by 50%
- OTD up from 40% to 80%

Customer says.. “The numbers speak for themselves. I cannot imagine getting such results without having implemented Preactor,”

Preactor International Case Studies Food & Beverages

World Class APS Solutions, Locally Delivered





Ardo UK, Ashford: Food Packing



- Supplies packaged frozen fruit & vegetables for the retail sector
- 2 day turn-round between order & delivery
- Used a combination and manual T card system and spreadsheets for planning
- Preactor implemented by Kudos Solutions



Benefits

- Flexibility in using resources efficiently
- Visibility making the planning job much simpler
- Strategic tool for the company in its expansion plans



Bourne Salads, UK: Salads and fresh foods



- 300 staff, 1,500 tons of prepared product a week
- Variable demand, variable input materials, shelf life issues
- SSA Protean ERP
- *“Preactor has helped us implement a complete culture change ... and has reduced stock and throughput time by 50%”*
- *“Ideally suited to food industry where product is perishable”*

Customer says ... “Preactor has now being rolled out to across the entire Geest PLC group ... it achieves quantifiable results”



Hall & Woodhouse, UK: Bottling, canning and contract packing



- Flavoured waters, spirits, spirit mixers, soft drinks, alcopops, beers, and ciders
- Key issues were Changeover Times between pack size, and Cleaning regimes required for vessels
- Linked to QAD MFG/Pro



Key Benefits:-

- No longer dependent on manual system
- Sequence dependent production hold-ups highlighted
- Deals with shelf-life issues



Highland Spring, UK: Bottled Water



- #1 UK produced supplier of bottled water, 90,000 bottles per hour
- 65 different case configurations which in turn are dependent on the bottle size, shape, colour, and material plus labelling differences
- 4 filling lines, highly variable demand – 50/60% change from one day to another, 1-2 day delivery lead time for large customers
- MAX ERP



Benefits

- Increased visibility, planning horizon increased from 10 days to 4 weeks
- Reduced changeover time
- Reduction in temporary staff
- ROI in less than one year

Hitchen Foods, UK: Fresh Vegetables & Salads



- Process value added vegetables and salad based products as well as bulk materials for other plants
- Previously relied on Excel spreadsheets
- Poor communication across units
- Lack of visibility of the real priorities
- All units now have visibility of the packing lines and can plan accordingly
- Common shared data rather than individual spreadsheets
- Has helped their lean initiatives

Customer says : ‘...Preactor has become an integral part of our business – it will bring us major benefits in terms of production efficiency and seamless visibility of data and overall cost and time effectiveness’



LSG Skychefs, UK: Airline meals



- Manchester Airport
- 400 staff, caters for 20 airlines
- 100,000 meals prepared every week
- Tight deadlines, 24 hours before a passenger list available
- Aim is to prepare meals as efficiently as possible

Customer says .. “After 6 months operation in the assembly area we have seen a 10-15% improvement in productivity.”



Oberto Sausage, USA: Meat Snacks



- Meat snacks (such as jerky and sausage sticks), refrigerated sausage and deli products
- 400 products, variety of raw material sources that require different processing to get the same quality
- MFGPro ERP



Benefits

- Integrated with QAD
- Reduction in work load for planner
- 40% reduction in work in process
- Better visualisation of forward priorities



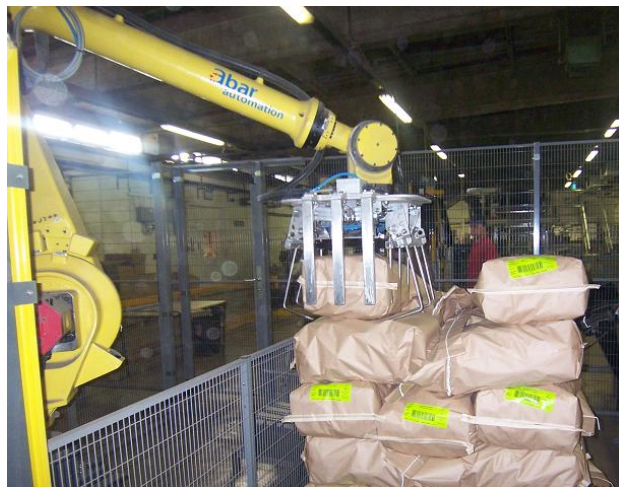
Solanum, UK: Potato Packing



- 57,000 tons delivered to retail outlets every year
- 140 SKUs made up of 27 types of potato in different packages and labels
- 8 packing lines with different capabilities
- Moving to MS Dynamics NAV

Benefits

- Better line utilisation, less reliance on temporary staff
- 95% of plan reached every day
- Special deliveries now almost unnecessary



Customer Says: *“Preactor has helped transform not only the way the company operates but also its entire approach, moving us much more to a genuine demand driven business. If you took it away, we simply wouldn’t know what to do without it.”*



Yorkshire Fresh Salads, UK: Packed Salads & Vegetable Products



- Raw Material Preparation
- Washing
- Packing Lines
- Linked to Protean MRP
- Key constraints & problems
 - Variable demand
 - Raw material availability
 - Operators



Benefits

- Easy to visualise capacity and bottlenecks
- Synchronisation of BoMs with schedule
- Drag and drop schedule adjustment
- Ability to add routine maintenance and hygiene needs

Preactor International Case Studies Furniture & Wood

World Class APS Solutions, Locally Delivered





Ligne Roset, France: Furniture



- Manufacture sofas, chairs, mattresses and carpets
- Cutting machines, woodworking equipment, pegging, sewing, tapestry
- Baan ERP system
- Up to 20,000 urgent operations to plan at any one time
- Implemented by Segula



Benefits

- Improvement in materials flow
- Better synchronisation of departments
- Substantial increase in OTD



LIPBled, Slovenia: Interior Doors & Frames



- 300,000 doors and 200,000 frames per year
- 75 orders per day
- i4PROS production management system, KOPA ERP and shop floor data collection
- Need to minimise changeover times based on 15 product attributes
- Schedule generated helps to calculate safety stock and semi-finished assemblies

Benefits

- Better efficiency
- Lower WIP and stocks



Nevamar, USA: Decorative Surfaces



- Wide range of decorative surface laminates
- New management needed to improve customer service and consolidate operations
- Old press scheduling system was manually time intensive and inflexible which needed the planner to work long hours to keep up
- Complex problem that needed to take into account sheet size, finish, construction, grade, product type, press constraints and customer-specific requirements
- 90 days after implementation, late orders reduced by 97% and scrap rates are also down
- Planner now works the same hours as everybody else

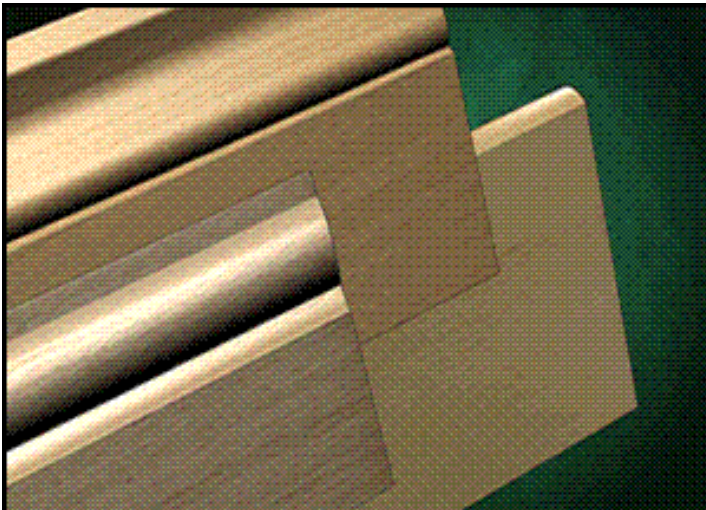
Customer says : “The new system has significantly reduced the routine part of scheduling, enabling our schedulers to concentrate on customer service and the handful of problems that occur each day.”



SAM Mouldings, UK: MDF Wood Profiles



- 1,400 products - Make to Order business
- Cutting, Moulding/Shaping, Painting
- Saws, moulding machines, painting lines
- EXEL E/8 ERP system
- Old system took 8 hours a day to develop schedules



Benefits

- Generates a schedule fast and enables efficient reaction to sudden arrival of unexpected orders
- Has enabled company to push forward with its growth plans



Steinhoff, South Africa: Bedding



- Manufacture a wide range of beds across multiple sites on a MTO basis
- Need for synchronisation of manufacture and delivery to minimize costs
- Need to minimize changeover time based on 5 key variables



Benefits

- Increased customer service
- Increased market share
- Became 'Supplier of the Year'

Preactor International Case Studies General Engineering & Toolmaking

World Class APS Solutions, Locally Delivered





Kenco Techniques, UK: Precision Engineers



- 15 Staff, Design & Manufacture
- Specialise in Titanium Alloy parts into the aerospace, F1 and Micro-Surgical appliances



Benefits

- Improved customer service
- Real-time tracking of progress
- Reduced management time required to run the business

Customer says "It comfortably satisfied our requirements including cost effectiveness, ease of use, real-time visibility and overall flexibility."



Metaltech, UK: Precision Engineers



- Light to Medium Precision Engineers
- Automotive, aerospace, pumps and hydraulics
- Benefits include improved delivery performance and profitability

Customer says.. “Everything is now much more organised, with a vast increase in resource management and optimisation”



NTTFIL, India: General Manufacturing



- Three divisions, Component Manufacturing, Product Assembly, Tool-room
- Injection moulding, presswork, machining, assembly, tool design and manufacture
- Wide range of products each with variable demand
- No visibility of WIP or individual shop performance
- Each division needed a different scheduling approach

- Minimized non value-add processes
- Can accurately monitor and trace WIP
- Better control of materials and cut inventory levels
- Substantially improved productivity

Customer says : "Preactor is a very versatile, flexible, very user friendly and robust software system which can yield the desired results if used properly with periodical monitoring."



Solent Mould Tooling, UK: Rubber & Plastic Tooling



- Small £3.3m, precision engineering company, 45 people
- Variety of machine tools for the manufacture of tooling for rubber and plastics industries

Benefits

- Improved efficiency
- Improved quotations
- Improved delivery times



Customer says “With the old method of planning using a board and cards rescheduling was rendered impossible.”



Talleres Sceicon, Spain: Precision Engineers



- 30 person design and manufacturing company
- Used CAD system with spreadsheets and manual feedback for production planning & control
- Needed better visibility of capacity to provide customers with reliable delivery dates and reduce stock



Benefits – within 3 months

- OTD delivery up to 95%
- WIP down 60%
- Real savings of €120K per year
- Project cost €5K



Waymouth, UK: CNC Machining Services



- Produces non-standard components and sub-assemblies for a range of industries including fluid power equipment, petrochemical and offshore oil, automotive and capital plant
- MTO, 400 orders per month, 10,000 components
- 25 machines, 30 staff, sub-contracting
- Problem of slipping delivery dates



Benefits

- Planning horizon extended from 3 to 40 days
- 10% increased efficiency
- Reduced costs
- Can accurately provide delivery dates



Preactor International Case Studies Glass, Ceramics & Miscellaneous Materials

World Class APS Solutions, Locally Delivered





Eliane, Brazil: Ceramic Products



- 2,400 staff employed across 12 plants
- 1,600 products
- 100,000 orders per month
- Single Preactor APS Master Scheduling system integrated with Eliane's ERP combined with 14 Preactor Viewers, one at each location



- Inventory savings alone amount to US\$16m per annum
- On-time delivery performance now 95.5% for domestic orders and 90% for overseas business

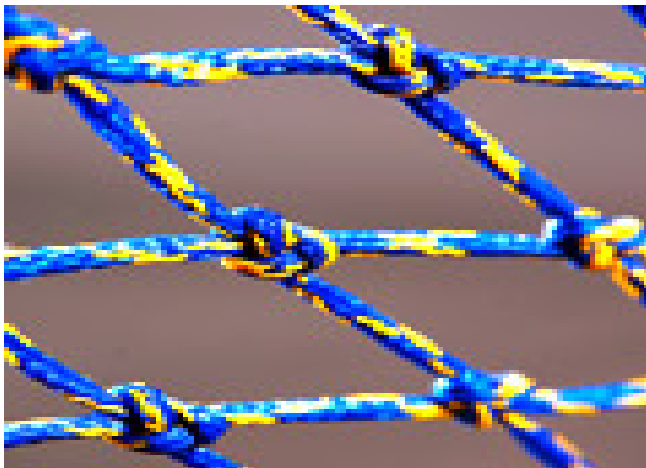
Customer says ... These spectacular results were based on decisions made on the basis of the output from Preactor as well as other logistics enhancements that became possible with the visibility provided by Preactor."



Garware Ropes, India: Rope, Fishing Nets



- One of the largest manufacturers and exporters of Synthetic Cordages, Fishnets and Sports Nets in the world, \$100m T/O
- 3 Manufacturing units in Pune and Wai, India
- Huge range of products
- Problems with visibility of current load and communication between departments and plants
- Difficult to give accurate delivery dates

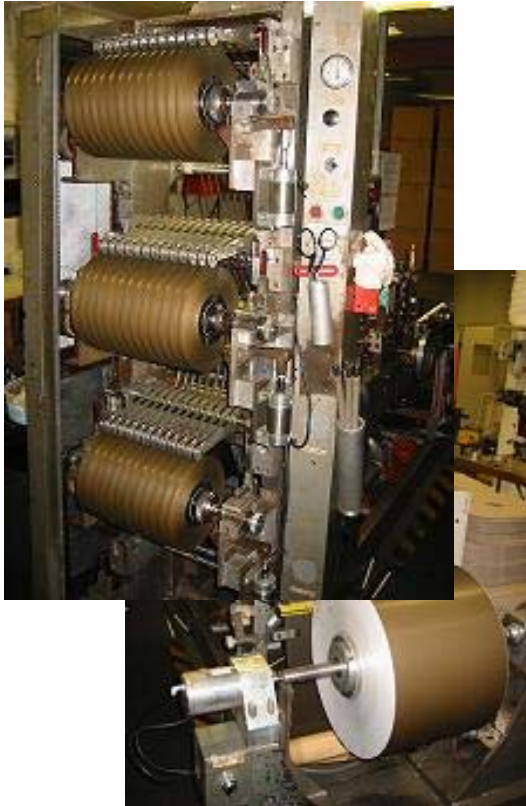


Benefits

- Met all the requirements of the project
- Now expanding the application to other plants



Greencorp Magnetics, Australia: Magnetic Stripe



- Specialist producer of magnetic stripe materials for data storage applications
- Lacquer mixing, coating, dry, curing, slitting, packing
- Although comparatively simple process the calculations required to estimate production time was very complex
- Sales staff tended to 'under commit' to ensure delivery which resulted in high inventory levels
- Preactor 200 FCS automatically calculates the run times based on order attributes
- On-time delivery performance doubled, efficiency gains of 5%, WIP reduced by more than 30%

Customer says : "We are now able to accurately predict delivery dates, we are more flexible and can react to sudden and unexpected changes to customer requirements or reduced capacity caused by breakdowns".



Goonvean, UK: China Clay extraction & processing



- 200,000 tons of china clay processed per year
- Applications for paper fillers, paper coating, tableware, porcelain and pharmaceuticals
- Key requirement was to increase the efficiency of the drying process and schedule maintenance period more effectively
- Sales force can now give realistic and achievable delivery dates
- This has enabled them to increase their market share



Grinding Techniques, South Africa: Abrasive Products



- Make grinding wheels, papers and other abrasive products, mix of make-to-stock and make-to-order
- Mixing, pressing, drying and finishing operations, complex routing
- Use MS Dynamics NAV and manual production planning
- Implemented by Scheduling Solutions



Benefits

- Increased customer service
- Improved coordination between departments
- Increased productivity by providing the visibility to allow reduced setup time



Pilkington Special Glass, UK: Optical Glass Products



- Continuous production of speciality glass
- Stock-holding costs high, variable demand
- Linked to UNIX based stock management system

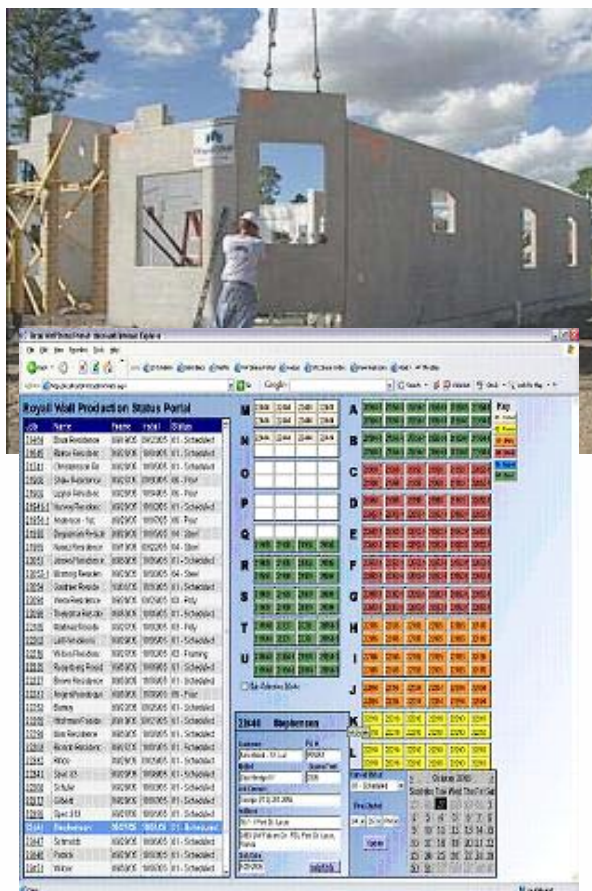


Key benefits:-

- Sudden changes in demand can be catered for
- Improved stock control
- Better fulfilment of delivery promises



Royall Wall, USA: Concrete Buildings



- Have patented method of making hurricane resistant buildings in sections which are added on site
- Cast in moulds located across a huge outside area
- Rapid increase in demand made planning production a complex problem
- New system automates the download of new orders and changes from Microsoft CRM into the Planning Control Center which prioritises orders and schedules them using Preactor
- Production Status Portal developed and updated by supervisors using their PDAs. Production Foremen can then see at a glance what is happening and enter day to day activities while moving around the outdoor facility
- These updates are then passed back to CRM

Customer says : “The system allows rescheduling in seconds and the real time update provides us with a facility that we have never had before”.



ZAO SOKK, Russia: Optical Cable



- Leading Optical Cable manufacturer in Russia
- Requirement for improved production planning integrated with Lotsman PLM system
- 3 month project
- Company can now take advantage of modern production control technologies



Benefits

- Better visibility of production
- Better forecast of order completion
- Better on-time delivery performance

Preactor International Case Studies Machinery & Equipment

World Class APS Solutions, Locally Delivered





Bry-Air, India: Air Control Equipment



- Manufacture moisture & humidity control equipment
- Pressing, Bending Punching, Painting and Assembly
- Deep BOMs, long lead time bought out parts
- Needed to plan effectively for materials and labour needs



Benefits

- Lower WIP and inventories
- Less Overtime required
- Can now plan effectively and has enabled Baan LN



B & S Oil Tools, Brazil: Oil Extraction Equipment

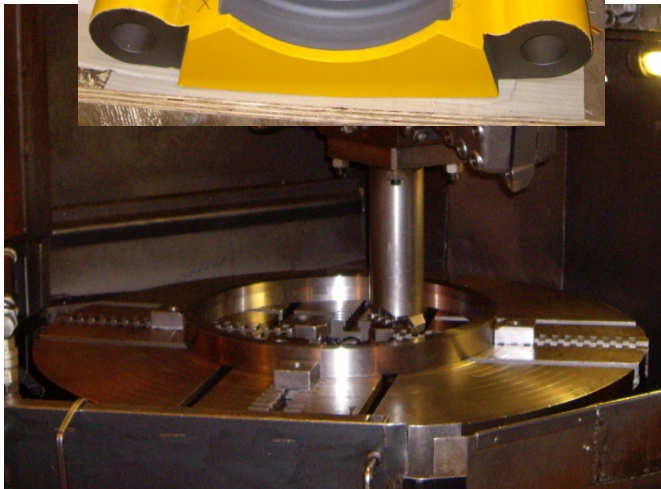


- 27 employees
- Up to 30 components in each assembly
- 1,300 operations to complete every month
- Mixture of machines and operators as constraints
- Preactor 200 FCS up and running within 2 weeks

Customer says “I love to use Preactor. Every day it takes just a few minutes to update it and identify any problems we might have. We have increased production with our existing resources and make our deliveries on time. We have increased our revenues by 150% but we are no longer under pressure”.



Destec, UK: High Pressure Pipe Connectors



- Equipment & Services for oil, gas, petro-chem and power generation industries
- Manufacture, sub-contract and assembly - mixture of make-to-stock and make-to-order
- Variable demand – problem of variable managing capacity across the whole operation

Benefits

- Able to fine tune production and weekend working based on delays in material supply, holiday periods or machine problems
- Now able to offer customers 100% on-time delivery



FMC Foodtech, Brazil: Fruit Juice Extraction Equipment



- Make Juice Extraction equipment
- 40 product types, up to 800 operations for each
- More than 100 resources to schedule (machines & staff)
- Schedule up to 6 months ahead
- Material constraints a key issue



Customer Says: “Better forward view of capacity, can react more quickly to problems, have better control of production resulting in improved customer service”.



Profroid, France: Refrigeration Equipment



- Make a wide range of refrigeration equipment
- MAPICS ERP
- Parts, sub-assemblies and final assembly done in different department of areas
- Requirement to synchronise activities across departments and control the shop floor more effectively enabling more reliable delivery times



Benefits

- Customer service improved
- Sock levels have fallen
- Delivery lead times reduced



Sandvic, USA: Mining Equipment



- Manufacture Drill Rigs for Surface Mining
- Complex assembly, customer spec. changes close to delivery common
- Late deliveries a problem
- Managing skilled staff for maximum efficiency was the key challenge
- Use JBA System 21 running on AS400
- Preactor installed and configured by RMS



Benefits

- Enabled changed processes that makes for better efficiency and effectiveness
- Can now react better to customer changes
- Better utilization of key staff
- Happier workforce



Sklostroj Turnov, Czech Republic: Glass Processing Equipment



- Make to specification of container glass moulding machines, moulds, packaging lines, bench-top hydraulic presses, stirrers for molten glass, annealing ovens, cold-end handling and inspection systems, and mould pre-heat chamber ovens
- Complex manufacturing and assembly across multiple shops or departments
- QAD Enterprise Applications ERP system

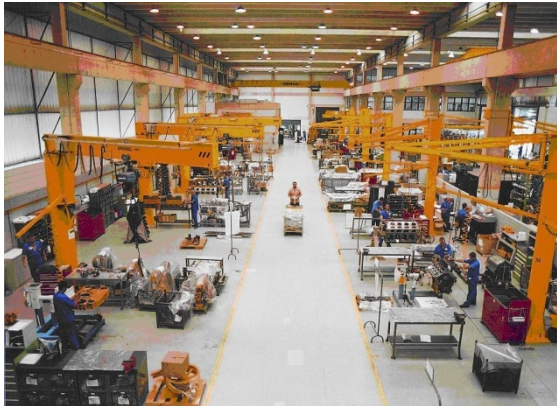
Benefits

- Planning time cut from days to minutes
- Can see the scheduled completion time of assemblies and entire order

Customer Says: "Preactor has provided us a tool to work quickly with the capacities of individual resources and also enables us to detect deficiencies in the input data, mainly in the technological procedures and design bills of material."



Sotreq, Brazil: Caterpillar Component Rebuild Centre



- Component Rebuild Center (CRC) repair engines, transmissions, final drives, differentials, torque converters, pumps and cylinders
- Standard operations but routing and sequencing can be different for each job depending on requirements and state of strip down
- No visibility of job progress or the impact of a new rush job



Benefits Achieved since Preactor went live

- 50% reduction in lead times
- 40% reduction on overtime required
- 10% increase in efficiency
- 20% increase in service revenues

Customer says : Our people are more productive and confident and our annual service revenues have increased by 20%. This is fantastic, we are very pleased with the progress we have made using Preactor”.



Willerby Holiday Homes, UK: Caravans



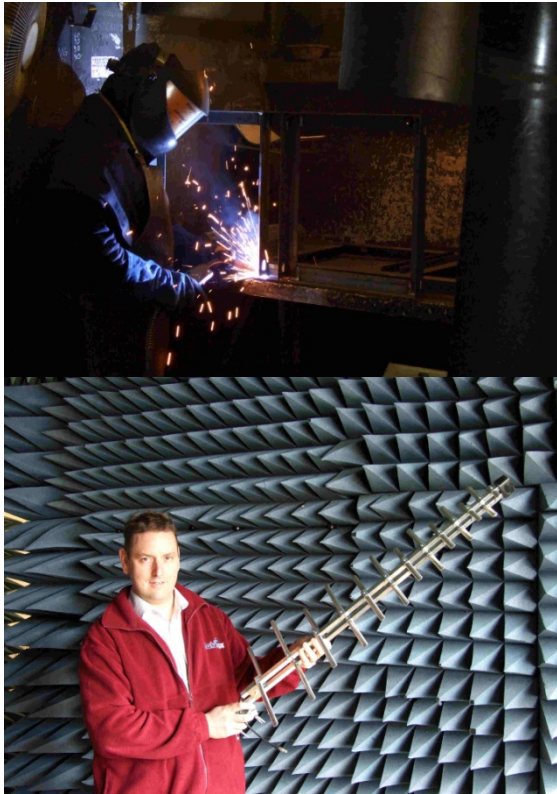
- Market Leader in constructing Holiday Homes
- One produced every 30 mins off one of three Kanban assembly lines, 3 shift system, 150,000 parts
- Bottlenecks hard to identify, last minute sub-contracting to fill missing items common
- No visibility of the whole picture, high inventory levels
- Started by Preactor sequencing of assembly lines, then the machines parts areas, then jig shops
- Better scheduling accuracy has reduced WIP by 85% which has provided visibility of the real problems and missing or damaged parts dropped to a handful
- Lead time down from 6 weeks to 5 days

Customer says : “.... WIP was reduced to sensible levels and efficiency was maximised. Subcontracting, once a common occurrence, ceased and the 3-tier shift pattern in some areas has been reduced to 2.”

Preactor International Case Studies Metals & Metal Fabrications

World Class APS Solutions, Locally Delivered





Blake UK: Antenna

- 55 staff, design, manufacture and distribute 500 types of own brand antenna
- Cutting raw materials to size, pressing, drilling, notching, welding and subcontracting before final assembly and test
- CS3 ERP system
- Increasing complexity of the business and need to satisfy unexpected demand led them to Preactor
- Better scheduling of machines and staff has brought forward visibility and on time delivery improvements

Customer says ... “Preactor has allowed to us to sizeably reduce our stock levels and improve our Just in Time capabilities which is why our lead time has been reduced from a number of weeks to just 7 days.”



Brunton Shaw, UK: Wire Rope



Strength
in
Wire Ropes



- Manufacture Wire Rope
- 40,000 different types each with a complex process route and equipment required (e.g allowable bobbin size)
- Process times and bobbin changes were based on 'guestimates'

Customer says ... 'it has revolutionised us and brought us into the 21st century, we can now deliver consistently on time'



Cash Bases, UK: Cash Handling Equipment



- Leading supplier of cash handling solutions
- Metal bending, spinning, welding, fitting, assembly and test
- Used in conjunction with EFACS ERP system

Since 'go-live' in 2004

- WIP dropped from 30 days to less than 10 (£200,000 saving)
- On-time delivery from 34% to 94% (backlog down to 1 day production)
- Productivity improvement of 20% (man hours per assembly)
- No longer require 14 temporary staff





CST-Arcelor, Brazil: Continuous Cast Steel Slabs



- CST- Arcelor, Brazil one of the largest steel companies in the world – produces 12% of the total world volume of steel slabs
- New investment in steel converters and continuous casting machines made planning, scheduling and control very complex
- The solution was to use Preactor 400 APS with add-ons to provide the 24x7 tool required
- Automatically generates multiple schedules with different strategies every 20 minutes with real time updates from the plant

Benefits

- Increased efficiency – savings equivalent to US\$70m per year
- Visibility of when planned maintenance can be carried out

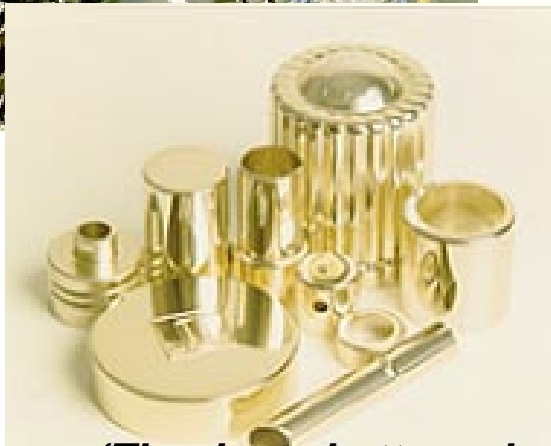
Customer says : “We believe we have implemented a unique, state-of-the-art scheduling system here. It has resulted in an extra US\$ 70 million per year on our annual revenue”.



Decorpart, UK: Anodised Aluminium Parts



- 1000 products in 142 colours
- 13m parts per week
- Scheduling of presses and anodising plant
- 250 staff



- High levels of aluminium stock
- Poor on-time delivery performance
- No synchronisation between presses and anodising plant

Customer says 'Thanks to better scheduling we have improved our service levels from 30% to 80%+ ... we have reduced our aluminium stock by 100 tons, that's a saving of 300,000 pounds !'



FloForm, UK: Cold Formed Parts



- Cold formed parts and assemblies for the automotive and electronics sectors
- MTO, multiple steps such as cropping, cold forming, annealing and finishing
- Machines and operators constraints to capacity
- MAX ERP system
- Long lead times for expensive raw materials



Benefits

- Reduced cost of stock of raw materials
- Better coordination between planning and production
- Better customer service



Grotto Defranceschi, South Africa: Stainless Steel Tanks



- Make stainless steel tanks for wine, beer and dairy industries
- Previous attempts at introducing scheduling software had been frustrating
- Linked to SYSPRO ERP



Customer says : “At long last we have a program that delivered from day one; our production scheduling is now accurate and reliable, thus ensuring that we can deliver to our customers on the promised day”.



Kingspan, UK: Steel Frames



- Make architectural faced systems, wall framing and sections from cold rolled stainless & galvanised mild steel
- No standard products, make to order environment, short lead time required, but low inventory levels needed
- Rolls of steel processed on programmable roll and punching machines.
- Additional components then added to form the finished assembly
- Integrated with Pantek's Nexus and Wonderware's InTouch for shop floor feedback



Customer says : "The system delivers the solution to our lean manufacturing requirements".



Lakshmi Precision Screw, India: Fasteners



- Make a wide range of industrial fasteners, bolts and screws
- Mix of Make-to-Order and Make-to-Stock
- Cold-heading in transfer machines, threading, grinding, then heat treatment and finishing
- Tight delivery times
- Problem of synchronisation between metal processing and heat treatment

- Runs with SAP R/3
- Scheduling can now be carried out 'on the fly'
- Considerable reduction in work-in-process
- On-time delivery substantially improved



MIS Engineering, South Africa: Hard Wearing Parts



- Leading manufacturers of wear-resistant alloys used in crushing, grinding, pumping & materials handling equipment
- Foundry and Machine shop
- 2,500 orders, 25,000 parts, SYSPRO ERP
- Constraints in the foundry included floor space, manpower, moulding boxes and patterns and the importance of select customers and the prioritisation of part orders to cater for scrap discovered during a later process

Benefits

- Planning now takes minutes not days
- Visibility of load and bottlenecks
- Better on time delivery performance



Pechiney Aviatube, UK: Aluminium Extrusion

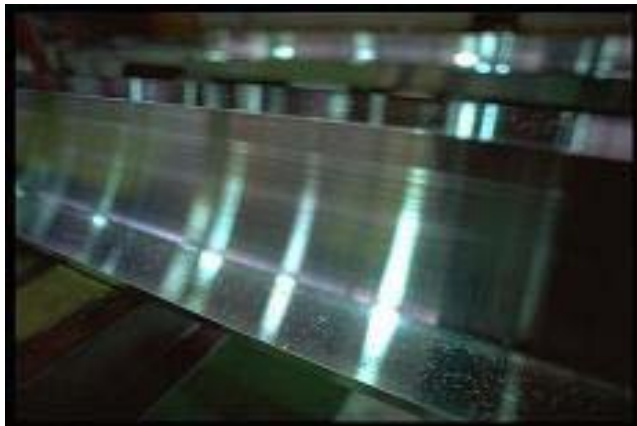


Processing

- Processes include casting, extrusion, heat-treatment, inspection, packing
- Uses alloy attributes to optimize the loading of batches into ovens within a complex process route
- Machine and labour constraints
- Linked to EFACS ERP system

Benefits

- More effective and reliable planning and scheduling backbone
- Maximize load capacity
- Can now use labour constraints as part of the scheduling process





Silkmead Tubular, UK: Tube Fabrications



- Jobbing and batch to volume orders, wide variety of process routes
- Some as simple as two operations, other very complex assemblies consisting of 20 operations or more
- Equipment to schedule included operated machines as well as special purpose machines and dedicated equipment



Specific Benefits

- Production bottlenecks a thing of the past
- Accurate information readily to hand when customers progress their orders
- Saving in time taken to schedule, monitor and run the shop floor



Vallourec, France: Steel Tubes

Make Ni/Cr/Mo products mainly for the automotive industry



SAP User, have now installed on 3 sites after successful pilot project

Company says

Modest investment yet we have vastly improved delivery performance and cut raw and finished stocks in half



Wall Colmonoy, UK: Wear Resistant Components



- Leading manufacturer of Cobalt and Nickel based alloy castings, atomised powder and rod
- Powder production, casting and machining areas, 8,000 parts per month through 98 machining centres
- Sequence dependent changeovers
- Staff have a wide range of skills

Benefits

- OTD up from 80% to 95%
- Efficiency up from 75% to 92%
- 86% reduction in WIP
- Increased revenues



Walroflex, South Africa: Cable Manufacture



- Leading manufacturer of automotive cables in Southern Africa
- 4,000 orders to schedule, wire drawing, PVC encapsulation
- Decreasing customer service and unacceptable changeover scrap rates.
- The planner was taking up to two days to develop a schedule for the next week.
- The scheduling rule developed consists of three key features viz. a campaign period, a look ahead period and colour sequencing.

Benefits

- 40% reduction in stock
- 30% reduction in scrap
- Planning time cut to a few minutes

Preactor International Case Studies Paper, Printing & Packaging

World Class APS Solutions, Locally Delivered





EDV, Barcelona, Spain: Food Packaging



- Co-extrusion and thermoforming processes
- Planned using ERP system FAS5 and a spreadsheet
- Demand exceeded capacity, sudden changes in orders, late materials, machine breakdowns together meant poor delivery performance

Benefits

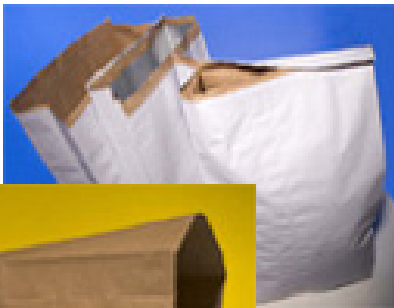
- Tool that allows them to show their customers the impact on delivery of late changes in their orders
- Stock reduction of 20%
- Planning time reduced from 2 hours to 20 minutes
- OTD performance doubled



Klabin, Brazil: Industrial Paper Sacks



- Industry leader in multi-wall industrial paper sacks
- Pre-press, sack production, (tuber) finishing
- 1,600 orders per month, 70 different routes
- 25 variables determined choice of machine
- Had tried to use SAP APO with R/3 without success, resorted to Excel with 4 planners required



Benefits

- Fully integrated with SAP
- Within weeks a important reduction in work-in-progress due to better synchronization between resources
- The system also allowed the company to see the utilization, identify bottlenecks in advance, and try 'what if' scenarios to smooth production flow.



Mega Embalagens, Brazil: Packaging



- Flexible plastic packaging for food, pet food, cosmetics and beverage industries.
- Extrusion, printing, lamination, refilling and, finally, welding & cut.
- Make to Order



- On-time delivery up from 70% to 100%
- Production lead time reduced by 21%
- WIP reduced



Opolgraf, Poland: Book Printing & Binding



- Specialises in printing full-colour books and monochrome printouts on a wide range of paper
- At any time 100 book production cycles to be run simultaneously, each being in one of approximately 60 various fabrication phases, taking into account the number of 30 machines used, with up to 30 people per shift, 24 hour, 6 days a week operation
- In 2007 a poll conducted by “Wydawca” – a prominent industry publication – among Polish publishers voted Opolgraf Poland’s best printing house. This was possible thanks to using advanced tools for calculating and production scheduling by Preactor.

Customer says ...“Preactor offers unrivalled functionalities, flexibility and user friendly interface while enabling planning capabilities that can handle very complex scheduling tasks. “



Plastform, South Africa: Rigid Packaging



- Rigid thermoformed packaging for food, dairy and fresh food sector
- Need to move from long runs to shorter runs each week for each product (green streaming)
- Need to calculate the required batch size as well as schedule them across the equipment available
- Need for capacity planning and detailed scheduling
- SYSPRO ERP



Benefits

- Reduced stock by 40%
- Increased on-time deliveries by 45%



PP Payne, UK: Packaging Materials



- Printing - Coating - Slitting - Pack
- Comparatively simple process but with some quite complex scheduling problems
- Used in conjunction with Fourth Shift ERP system



Benefits

- Forward look on demand throughout the plant
- Tighter Delivery times
- Control of Overtime

Now being rolled out throughout Filtrona Group (part of Bunzl)

Sharp Corporation, USA: Healthcare Packaging



- Leading designer and supplier of healthcare packaging products
- Complex make to order environment, with no standard products, each order can be completely different
- Compliance requirements means that every product must be validated against each machine or class of machine – FDA approval delays can cause unexpected changes to a schedule
- Labour, machines and material the major constraints
- Previously relied on a 25 foot wall and magnetic bars for planning
- Now use Preactor and MFGPro

Customer says : “We were impressed by Preactor’s commitment to its solution, the technology roadmap for the future, and the sheer versatility of the product”.



Smurfit Ward, UK: Packaging



- Make corrugated products and sacks
- Problems synchronising different processes within the factory
- Poor delivery performance
- Long and regular production meetings due to 'rush' orders arriving
- Have reduced setup times, and delivery performance
- Can see where the bottlenecks will be before they occur
- Less time in production meetings
- Linked with Sage 200

Customer says : '...the most trouble free IT project I have been involved with.'



SCA Nicollet, France: Packaging



- Global consumer goods and paper company
- 320 plants in 30 countries
- Guillotine, Printing, Corrugation, Counter gluing, Constitution, Cut out, Decortication, Gluing, Shipping
- Sharing of capacity across 4 sites
- Integrated with their specific ERP



Benefits

- Better visibility of forward load
- Better synchronisation between sites
- Increased speed of Planning



Supravis Group, Poland: Packaging



- Provide Packaging to the cured meat market
- Many tens of resources across three departments
- Processing, printing and confectioning
- IFS Applications ERP
- Problems of synchronisation of production across departments

Benefits

- Shorter time to answer a customer enquiry
- Shorter changeover times due to better sequencing
- Clear view of capacity utilisation
- Synchronisation of departments using a Master Planner





Thermopac, South Africa: Packaging



- Supplier of packaging to the food sector, part of the Astrapak group
- 700 products, 24/7 operation, MTO
- Extrusion and Thermoforming
- SYSPRO MRP



Benefits

- Better visibility of forward load, capacity and constraints
- Reduction in changeover time from better sequencing
- Increased customer service levels in peak demand periods



Trebortex, Spain: Fabrics



- Make fabric for the automotive industry
- Warping, weaving, dyeing, rewinding
- Poor delivery performance, high costs
- Needed a complete culture change
- Needed better quality data in its ERP system



- Global stock reduction more than 45%
- Planning time reduced from 5 hours to 30 minutes
- Penalties for late deliveries down by 94%
- Urgent transport costs, down by 95%
- Increase in productivity, circular knitting section, 10.3%
- Increase in productivity, finishing section, 16.25%

Customer says : “Thanks to Preactor we have been able to improve the productivity of the main sections, mainly due to the reduction of the changeover time”.



Whatman International, UK: Paper Making



- Manufacture various grades of science grade papers and slit to customers requirements
- Existing planning software could not provide the detail required to manage the plant and staff requirements in the short and long term
- Linked to QAD's MFG Pro ERP system

Benefits

- Improved customer service
- More efficient production
- Can now plan months ahead



Customer says : When the Preactor 300 systems were linked to MFG Pro we finally had a seamless production software system in place”

Preactor International Case Studies Rubber & Plastics

World Class APS Solutions, Locally Delivered





Armstrong Flooring, UK, Vinyl Flooring



- 18m sq.m Cushioned Vinyl Flooring per year
- Continuous process, Mix of Make to Stock and Make to Order
- Many hundreds of SKUs, extensive changeover times reduce efficiency
- No visibility of production plan



Benefits

- 35% reduction in WIP
- Real visibility of the process
- Reduced changeover times



Contico, UK: Injection and blow moulded products



- 150 staff, 24hrs a day production, 1000 SKUs
- 14 machines, typical batch size from 200 to 10s of thousands
- In house ERP system



Benefits

- Reduction in raw materials stocks
- Reliable and achievable schedule
- Synchronisation with purchasing
- Sales people can give realistic delivery dates so customer service has improved



DSI, Sri Lanka: Tyres and Tubes



- Tyres and tubes Bicycle, Motorcycles, Agricultural & Industrial use
- 1.5m tyres and 650 thousand tubes per month and have around 1,400 staff across multiple production sites.
- Legacy home-grown ERP system

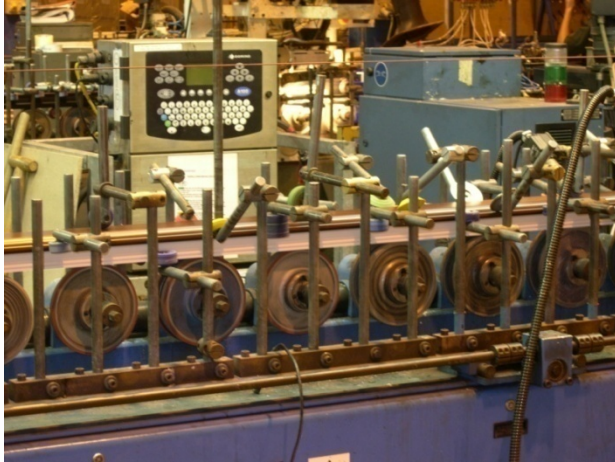


Benefits

- Reduced planning time and paperwork
- Reduced WIP
- Better utilisation of equipment and reduced labour costs
- Better on time delivery



Foilex, UK, Profile Laminators



- Apply film to plastic, foam plastic and aluminium profiles for doors, windows and other products, seven lamination lines, orders vary from 500m to 25,000, short lead times
- Long and complex setup of machines
- MS Dynamics NAV ERP and Excel used for planning – took 5 hours a day to manage production
- Preactor implemented in 3 months by The Scheduling Business

Benefits

- Greater forward visibility of demand and impact on deliveries
- 50% reduction in setup time allowing doubling of throughput
- 3 fold reduction in planning time





Global EPP, UK: Engineering Plastics



- Casting, extrusion and semi-finishing of monomer plastics
- Drying of raw materials, annealing of finished product
- Make to Order, XKO ERP
- Complex constraints and batching requirements
- Replacement of T-card and Excel spreadsheets

Benefits

- Greater visibility, greater flexibility
- Doubling OTD performance
- Can now plan maintenance more effectively and see the impact on deliveries



GRP Structures, UK: Hand Made Mouldings



- Make-to-order, hand-made dormer and canopy GRP mouldings for the building sector
- Predominantly production is dependent on skilled staff
- Lack of visibility of load and capacity so delivery dates were 'guestimates'
- Preactor is only computer programme used

Benefits

- Now able to see eight times further into the future than before
- Staff can see the workload
- Now have the best reputation in their business for on-time delivery



LIV Plastika, Slovenia: Plastic Mouldings



- Moulding and assembly process
- Injection moulding presses have different capabilities – multiple tools can reside on the press at the same time
- Baan ERP system
- Preactor APS for moulding department and three Preactor 200 FCS, one for each assembly area
- Improvements in KPIs
- Lower inventories

Customer says : 'Before the project had started, we set high expectations on measurable benefits within one year period after the system became operative. So far I can say that the planners, the key users, have accepted Preactor and things are going well.'



Plastique Micron, Canada: Blow Moulded Containers



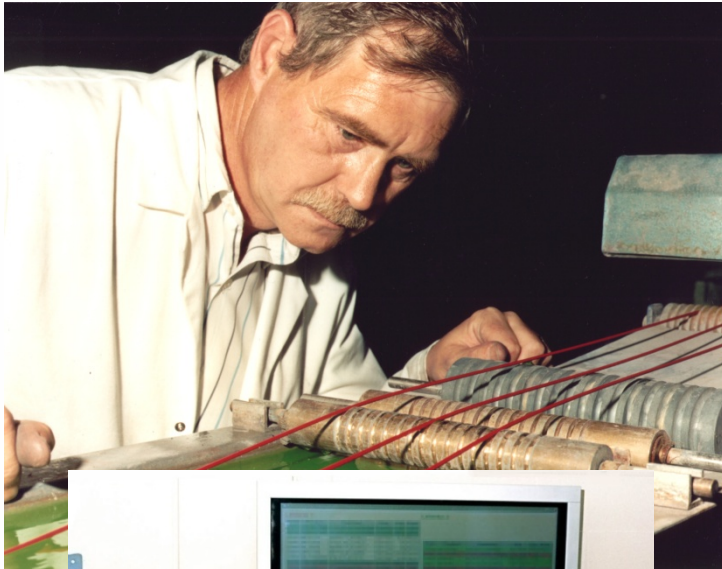
- Plastic containers for the pharmaceutical and cosmetic industries
- Also design and manufacture moulds
- Used a manual magnetic planning board
- Needed finite scheduling with shop floor activity feedback



Benefits

- Faster and more efficient generation of a schedule taking into account all constraints
- Planning and customer service merged into one function resulting in increased customer service

Silvergate Plastics, UK: Colour Concentrates



- Plastic colour concentrates, MTO, short lead times, 1000 orders per month
- Constant changes in demand, keeping track of what was happening was a continuing challenge
- Manual system of planning production – inefficient and out of date within 5 mins
- Fully automated system installed by RMS

Benefits

- Could see the orders and how they were progressing in real time
- Moved from 79% to 99% OTD
- Reduced planners from 3 to 1

Customer Says: “We felt a huge weight lift from our shoulders.”





TRP Sealing Systems, UK: Rubber Gaskets



- Manufacturing of rubber gaskets
- 4 Extruders, 12 presses and 700 tools
- Operators also a constraint
- Mix of MTO and MTS, variable demand
- Need to respond effectively to customer requirements without large safety stocks



Benefits

- Streamlined planning process
- On-time delivery performance improved
- Optimised combination of tools, presses and raw materials while minimising costly changeovers.

Customer Says: “The beauty of Preactor is you can rearrange the schedule in a matter of seconds to take into account the reality of what you have to deal with.”



Vesta, USA: Healthcare Plastic Assemblies



- 275 staff, based in Franklin, Wisconsin
- Manufacture silicone medical tubing
- 300 products, mainly repeat orders, batch sizes 100,000+
- Extrusion, Molding, Assembly
- FDA regulations, compliance with CFR 21 part 11 required
- Preactor linked with FACTIVITY and MFGPro

Benefits

- 25% increased productivity
- 30% reduction in raw materials stock
- 25% reduction in WIP



Preactor International Case Studies Textiles & Apparel

World Class APS Solutions, Locally Delivered





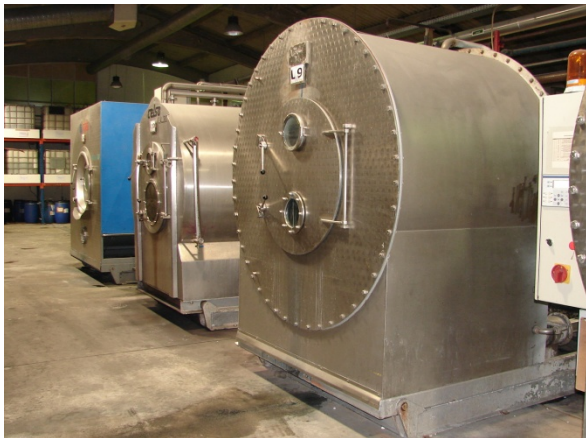
Aquacolor, Portugal: Textile Finishing



- Portuguese textile service company specialising in an innovative range of finishing tasks including dyeing, washing, laser, spray, brushing, sand projection and cutting
- MTO business, every order may be different
- Integrated with ERP and Wonderware Factelligence MES

Benefits

- Operational improvement at recipe management, operations information and traceability levels, with a direct impact on costs.
- 50% reduction in the time spent to build a new work order.
- Saves 70% time required to give a delivery date





Fred J. Miller, USA: Uniforms



- Produce a wide range of uniforms
- Cutting, sewing, finishing, shipping processes
- Very much a labor intensive process

Benefits

- Helped the company to 'work smarter'
- Highlighted where bottlenecks were occurring and where efficiency improvements were needed
- Overtime reduced by 50% in the first year
- Can easily establish the ROI of adding staff and equipment
- Substantial improvement in Customer Service levels



Haco, Brazil: Labels and Ribbons



- 1,200 employees, 4 factories, 24m metres made every year
- MTO, 55,000 products
- 400 orders added per day
- Design – thread-making – tinting, weaving, finishing – packing



Key Benefits

- Reduced Costs
- Increased Capacity
- Better on-time delivery performance

Customer says ... “Nowadays it would be impossible to work without Preactor”.



Julius Zorn (Juzo), USA, Compression Garments



- Knitting, sewing, laundry, QC and packing
- 9,000 different stock codes
- Key issue was scheduling of knitting processes - minimizing setups while maximising batch sizes and meeting customer delivery dates
- Integrated by FACTIVITY with their SFDC product and SYSPRO ERP

Benefits

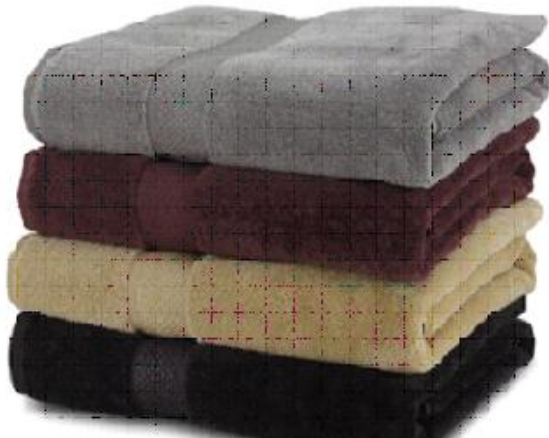
- Elimination of back orders
- Minimized stock on hand
- Leaner and more efficient

Customer says ... 'everything is now so efficient that we are able to forecast our scheduling further out and maximize the efficiency of the machines'





Sharada Terry Products, India: Terry Towels



- Terry towel production under the brand name of “Micro cotton”
- Warping, weaving, dyeing, drying, stitching/hemming, packing
- Preactor linked to Oracle MRP and WIP control module
- Key issues were the scheduling of looms and the dyeing department

Goals Achieved

- Scheduling visibility over many isolated departments now possible
- Fabric inventory in weaving and dyeing reduced
- Enhanced costing data now available to Oracle ERP
- Increased efficiency by reducing changeovers



Preactor International Case Studies Transport, Logistics & Services

World Class APS Solutions, Locally Delivered





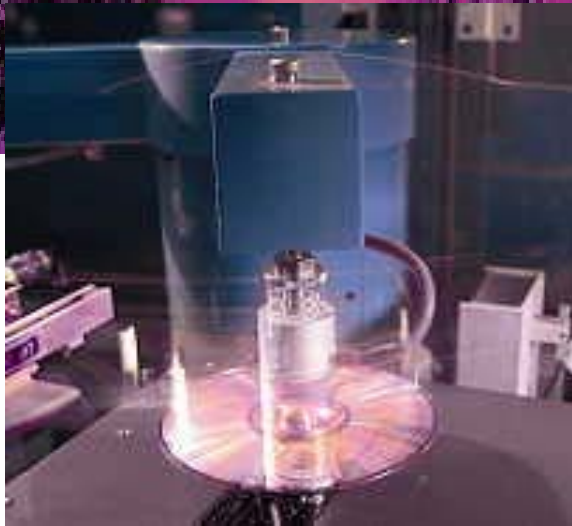
Port of Tauranga, New Zealand: Train/Container Scheduling



- Container Port south of Auckland
- Key part of competitiveness is the efficiency by which containers are transported to Auckland Metro Port
- Increasing business but poor customer service meant that the port could no longer expand
- ShuttleSelect solution has Preactor at its heart – schedules containers onto wagons in each train taking into account container type and weight, wagon type, ship arrival time, customer required by date and date and publishes to a customer web portal where changes can be requested up to 6 hours before train leaves – Preactor then reruns its scheduling algorithm
- Results – better customer service and increased business for the port



Tecnicolor Video Services, UK: Video & CD Copying



- 250,000 Video Duplications per day, 300 titles
- 10 source machines, 20 copying bays
- 1,500 machines each with a different process rate
- 24x7 working, machines and operative constraints
- Cannot process certain titles at the same time, for example 18 rated and U rated, different language versions

Benefits

- Improved response time
- Improved efficiency of resources in Short, medium and long term



Total Raffinaderij, Belgium: Vessel Scheduling



- Schedules vessels to use jetties for loading/unloading taking into account space, oil type, equipment, capacity, weather and priority into account.
- Linked to Yokogawa OMS (batch execution system)
- Requirement to reduce demurrage cost by optimizing the usage of resources based on unique and common business rules (e.g. prioritize SGVs, then Bunkering, then Barges)
- Two schedules generated, one deals with longer term requirements (days), the other a real-time schedule with more complex constraints (minutes, hours)
- Schedule details published on web pages for commercial managers and staff – provides visibility and a common picture of demand and plan



Vienna Airport, Austria: Gate Scheduling



Optimises the allocation of gates to incoming aircraft and bus gates for outgoing aircraft based on time, country of origin, and destination taking into account airline, aircraft type, number of passengers, staff availability etc



- Pier usage improved - number of flight movements at the 20 pier positions was increased by 7.6 % compared to the 5.4 % in the total aircraft movements.
- The number of passengers handled at the piers was increased by 14.9 %.

Customer says ... “This result is better than what we could expect and was based on the daily work of the people of movement control and the use of the Preactor software”.