Agenda

- Introducing Preactor
  - Our company
  - Our partner network
  - Our customers
- Why Use APS?
- Preactor Standard Demo
- Case Study - Preactor implementation at Limagrain
Introducing Preactor
World Class APS Solutions, Locally Delivered
About Preactor

Preactor is the world leading provider of advanced planning and scheduling (APS) solutions to the manufacturing industry.
Leading player in Advanced Planning and Scheduling Software

HQ in Chippenham, UK, 3 subsidiaries: USA (Dallas), EUROPE (Lyon) and ASIA (Bangalore), 3 offices: Spain, Brazil and China for local sales and support, 14 Gold Partners...
Leading player in Advanced Planning and Scheduling Software

Large partner network worldwide with more than 1000 people accredited for Preactor solutions.

The Preactor ecosystem includes more than 400 resellers and partners mostly in supply chain management activity: APS, ERP, MES, CMMS, …
Customer Base

Preactor’s global, multi-sector footprint.

- Large installed base serving the manufacturing sector
- Over 10,000 licenses supplied to more than 4,500 companies in 88 countries across 5 continents
- Customer base ranges from mid-size to some of the largest multi-national blue chip companies in the world
- Operates across multiple sectors, this shows the flexibility to solve any scheduling requirement.

Installed Base by Region

Installed Base by Industry

- Metals & metal fabricated products
- Machinery & equipment
- Plastics & rubber
- Electronics & electrical machinery
- Paper, printing & publishing
- Automotive & aerospace
- Chemicals & pharmaceuticals
- Precision engineering
- Food & drink
- Glass & ceramics
- Furniture & wood
- Textiles & apparel
- Transport, logistics & services
- Medical & precision instruments
Customer Base Includes Many Global Blue Chip Names

<table>
<thead>
<tr>
<th>Category</th>
<th>Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metals</td>
<td>ArcelorMittal, AGC, Yum!Tech, Carpenter, BorgWarner, Microturbo, Schering-Plough</td>
</tr>
<tr>
<td>Automotive</td>
<td>Toyota, Williams, Mercedes-Benz</td>
</tr>
<tr>
<td>Aerospace</td>
<td>Lockheed Martin, Eurocopter, Itp Aerospace, Missile Systems, Reaction Engines</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>GSK, Merck, Pfizer, GlaxoSmithKline, Johnson &amp; Johnson</td>
</tr>
<tr>
<td>Engineering</td>
<td>Siemens, Technip, Areva, Tyco, Robert Bosch, LSG Sky Chefs</td>
</tr>
<tr>
<td>Food</td>
<td>Müller, British Sugar, Mars, Mars Chocolate, LSG Sky Chefs</td>
</tr>
<tr>
<td>Beverage</td>
<td>PepsiCo, Diageo, Twinings, Nestle, Juicy Juice</td>
</tr>
<tr>
<td>FMCG</td>
<td>Imperial Tobacco, Heineken, Coca-Cola, Unilever, Nestle</td>
</tr>
<tr>
<td>Consumer</td>
<td>Adidas, Panasonic, Goodyear, Disney, Nike</td>
</tr>
</tbody>
</table>
Why Use APS?
Attempts to Improve Production Planning

Almost every manufacturing company needs to improve their production planning.

But what actions can they take?

- More labour
- ERP Reinvestment
- Lean measures
Attempts to Improve Production Planning

Dedicated people working manually with spreadsheets.

- Heavily depends on status of planners
- Risks of planner’s resign or change
- Low efficiency
- High TPC (Total Project Cost) of labour
- Difficulty with collaboration
Attempts to Improve Production Planning

Trying to capacitate EPR.

- Generate plans based on resources with infinite capacity.
- Breaks down orders into parts using a BOM then issues works orders to start based on the lead time for each part.
- The same lead time is used by the MRP system no matter if the factory is busy or not.
- Resources become overloaded – work in process increases.
- Materials are ordered before they are needed.
- Orders take longer than expected to complete.
Attempts to Improve Production Planning

Expecting Lean

[Diagram showing production planning concepts with terms like Scheduling Points, Pull Production, Customer demand, Factory Schedule, Supply Chain, Heijunka, Pull System, Kanbans, Bullwhip, High Stocks, and Low OEE]
Attempts to Improve Production Planning

The best way should be integrating with APS
Preactor’s Place in the Supply Chain
The Benefits

Faster and smarter, with an ROI measured in weeks.

Faster
- Creates plans that synchronizes 100s of orders in seconds or minutes.

Smarter
- Management can identify potential problems (cause & effect) and fix them before they actually happen.

Systematic Results
- Improved Customer Service - +90%
- Inventory Reduction - -50%
- Cycle Time Reduction - -25%
- Productivity Increases - +25%
Preactor Features
What makes Preactor different?

- Family of Products, competitively priced
- Technically top of range, available in multiple languages
- Customizable for any type of planning and scheduling requirement
- Track record, installed base, availability of case studies and reference sites
- Local support – implementation, training, post go-live
Case Study - Limagrain
## Limagrain - Company Overview

Limagrain, an international agricultural cooperative group, is specialized in Field Seeds, Vegetable Seeds and Cereal Products.

<table>
<thead>
<tr>
<th>Employees</th>
<th>Sales</th>
<th>Like for like</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,800</td>
<td>1,784 M€</td>
<td>+ 9%</td>
</tr>
<tr>
<td>39 countries</td>
<td>156 M€</td>
<td>88 M€</td>
</tr>
<tr>
<td>Working capital needs</td>
<td>Equity stood</td>
<td>Net financial indebtedness</td>
</tr>
<tr>
<td>439 M€</td>
<td>1,010 M€</td>
<td>699 M€</td>
</tr>
</tbody>
</table>
Limagrain - Focus on LCI

For Limagrain, the Cereal Products activity, including Bakery Products and Cereal Ingredients, is a fundamental outlet for the valorisation of the agricultural production of its members.

With Limagrain Céréales Ingrédients (LCI), the Group continues to affirm the importance of controlling germplasm and industrial transformation processes to valorise cereal qualities.

LCI is the European leader for functional flours.

The activity of the Cereal Ingredients Division represents 4% of Limagrain’s sales. The sales reaching 74 million Euros.

FACTS AND FIGURES

• 1 Business Unit: Limagrain Céréales Ingrédients
• €74 million sales
• 194 employees
• European leader for functional flours
Limagrain - Focus on LCI

- Limagrain Céréales Ingrédients adds value to more than 120,000 tones of cereals every year.

- In close relationship with marketing teams, researchers and technicians coordinate the programs of selection and improvement for maize and wheat millers.

- At the heart of the analytical laboratory, basic and applied research are closely linked (chemical analysis, study of texture, infra-red evaluation).
Limagrain - Testing Process Overview

**Macro Operations**
- Samples Sending
- Reception
- Samples Preparation
- DNA Extraction
- Pre-PCR
- PCR
- Post-PCR / Analysis
- Data Processing
- Results Delivery

**Sub Operations**
- Samples sending
  - Samples reception (based on orders)
    - Cutting
    - Grinding
    - Alcottage
- Lyse purification
  - Taqman / SSR / SNP line
  - Taqman / SSR / SNP line
  - Taqman / SSR / SNP line
- Data processing
  - Results delivery

Scope of solution
Limagrain - Project Context

Scope for Preactor schedule is the testing process indicated in the previous slide.

Main requirements:
- Manage different type of testing process & resources
- Manage staff & machine
- Manage skills for the staff
- Manage non linear routings
- Manage specific quantity calculations depending of the type of test to proceed
- Manage specific operation rate calculations depending on the quantity to test
- Manage split of orders during work order integration

Main problems faced by LCI before Preactor implementation:
- No ERP used so lack of reliable technical data (especially routings and production time estimation)
- Basic schedule made on Excel only for short term (2-3 days), no visibility for planners
- Not all equipment were managed with finite capacity
- Difficulty to achieve a good schedule to require sample sendings in advance
- Reliability of estimated delivery date to customer was very poor
- No simulation capabilities
- No possibility to react to lab unexplained event
- ....
Gantt Chart view available

Resources to schedule

Bar in red area are late operations

Customizable label for information display
Display links between operation of a specific order

Use of overlap between operations

Link between different orders steps
Graphical indicators for lateness analysis

Gantt view per operation type, relative to due date

Bar in red area are late operations
Following usage of secondary constraints such as staff availability, staff skills, power, tools…

Usage plots for staff utilization
Automatic generation of mails for sample sending based on released schedule
Limagrain - Main Benefits

Main benefits after Preactor implementation:

- Reliability of delivery date up of 20%
- Better management of samples sending via an automatic mail system to request sample sending based on Preactor schedule
- Schedule volatility reduced drastically, more stable schedule, less movement of material
- Visibility on mid term basis to allow decision anticipation
- Reduction of time to build schedule thanks to Preactor automatic sequencing rule (from 4 hours to build a 2 days schedule via Excel to less than 1 hour to build a 6 weeks schedule via Preactor)
- Better staff allocation to tasks via skill management and overtime reduction
Thanks For Your Attention
Any questions?