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Improved Batch Management and Scalability at C&D Foods

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About NeoDyne

- Industrial Automation & Electrical Engineering Company headquartered in Cork, Ireland
- Three business specialisations:
  - System Integration
  - Power Generation & Utilities
  - Transmission & Distribution
- Global multi-national customers and projects in Food & Beverage and Pharma
- Endorsed AVEVA System Integrator
- Expertise in Batch Management and MES systems

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Agenda

Webinar on the System Integration of AVEVA Batch Management at C&D Foods

1. C&D Foods Overview
2. Plant Requirements and Challenges
3. Plant Comparison
4. Benefits
5. Q&A

About C&D Foods

One of Europe's largest Private Label Pet Food companies

- 8 different manufacturing facilities across 7 different countries
- Cans, Pouch, Alu / Plastic trays and Sausage Wet Petfood > 300,000 tonne per year
- Dry Petfood Division – 3 separate factories with capacity > 200,000 tonne per year
- All plants are licensed by the EU and operate to the highest level of Good Manufacturing Practice (GMP)
- C&D Foods is also an active member of the European Petfood Manufacturers Association (FEDIAF)

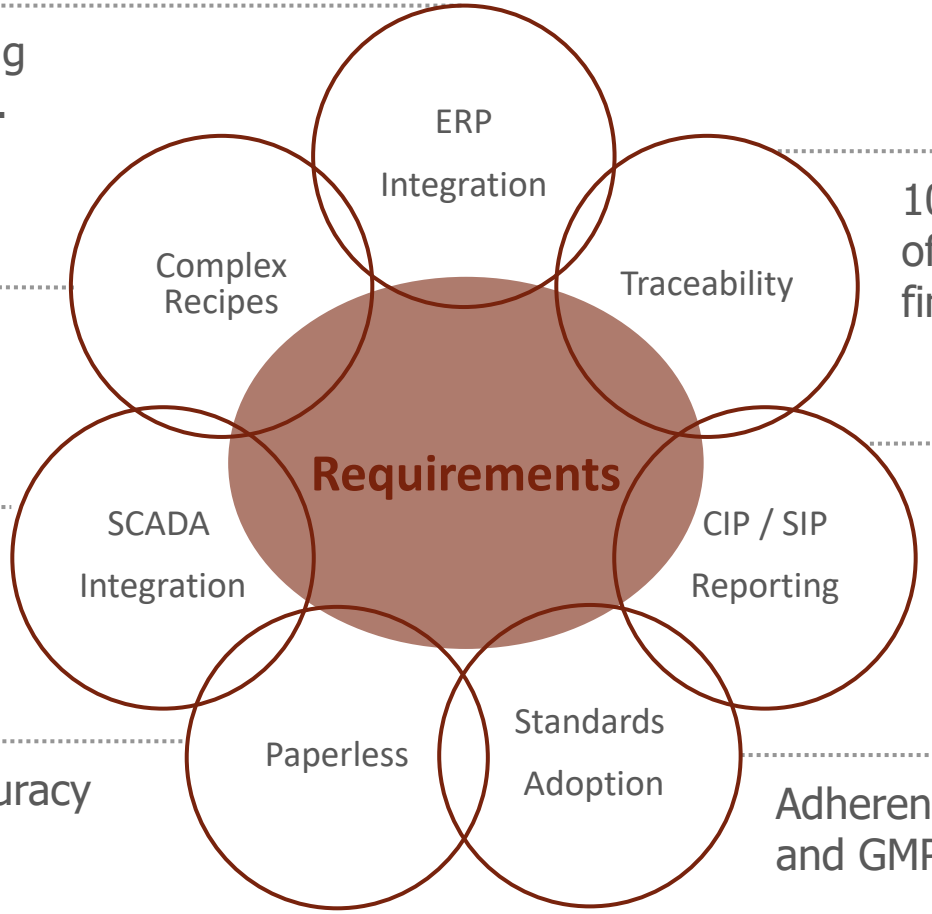
Plant Requirements

Full **ERP integration** from scheduling through to completion and receipting.

Flexibility to handle more **complex recipes**.

Full batch system integration with **SCADA** system.

Paperless records for increased accuracy Digital Factory MES



100% **transparency/ traceability** of product ingredients through to finished goods.

CIP / SIP traceability, including quality, water usage, etc.

Adherence to ISA S88 and S95 **standards** and GMP principles

C&D Foods – Plant Challenges

Comparison between Plant A and Plant B

Automation strategy for Plant B

Plant Challenges

- Plant A – heavily automated with full product transparency/ traceability, reduced ingredient waste, increased throughput and shorter time to market
- Plant B – reliant on manual processes with potential for expensive ingredient waste, delayed production starts and increased changeover time

C&D Foods Goal – make Plant B more efficient

NeoDyne engaged to devise an automation strategy for Plant B

Benefits – Product Transparency/ Traceability

Plant A

Full Product Transparency/ Traceability

- Electronic Batch Reporting (EBR)
- Batch execution and equipment history associated with full product genealogy and material traceability
- On-demand digital reports available for every phase and its critical parameters
- Fast, low-effort, reliable traceability
- Plant A gains sales that Plant B can't win

+ Time savings: 100's manhours due to automation

Plant B

Cross Correlation of Multiple Datasets

- Manually-triggered batch reporting
- Manual traceability processes, requires analysis of historically-gathered I/O against ERP system records
- Slow, labour-intensive effort, costing many hours per week
- Risk of human error
- Lost opportunities

– Lost time: manual processes

Benefits – Reduced Ingredient Waste

Plant A

Precise Ingredient Addition

- Automated control of ingredient addition
- Expensive ingredients are added in exact quantities only, ensuring high product quality
- No waste of expensive ingredients

+ Cost savings: reduced ingredient waste

Plant B

Manual Ingredient Addition

- Manual configuration of ingredient addition
- Expensive ingredients are added manually, ensuring "enough" is added to meet customer requirements
- Potential for expensive ingredient waste

– Increased costs: expensive ingredient waste

Benefits – Increased Throughput

Plant A

Fully Automated Scheduling

Plant B

Manual Scheduling

- Batches run consecutively
- No waste of equipment time
- Automated Equipment Arbitration
- Batch system and ERP integrated

+ Increased Throughput: 10's batches

- Manual start and stop of equipment
- Equipment can be idle for minutes
- Manual Equipment Arbitration
- No automatic adherence with Production Schedule

– Reduced Throughput: Delayed Production Starts

Benefits – Shorter Time to Market

Plant A

Flexible Recipe Configuration

- Recipe can be modified quickly to suit customer requirements
- Machine setpoints automatically sent according to recipe parameters
- No reliance on operator to fine-tune the equipment to suit the new recipe

+ Time savings: 100's manhours due to automation

Plant B

Manual Recipe Configuration

- Manual equipment settings to suit the batch
- Equipment can be idle during configuration
- Reliance on manual, paper-based processes

– Lost Time: Increased changeover time

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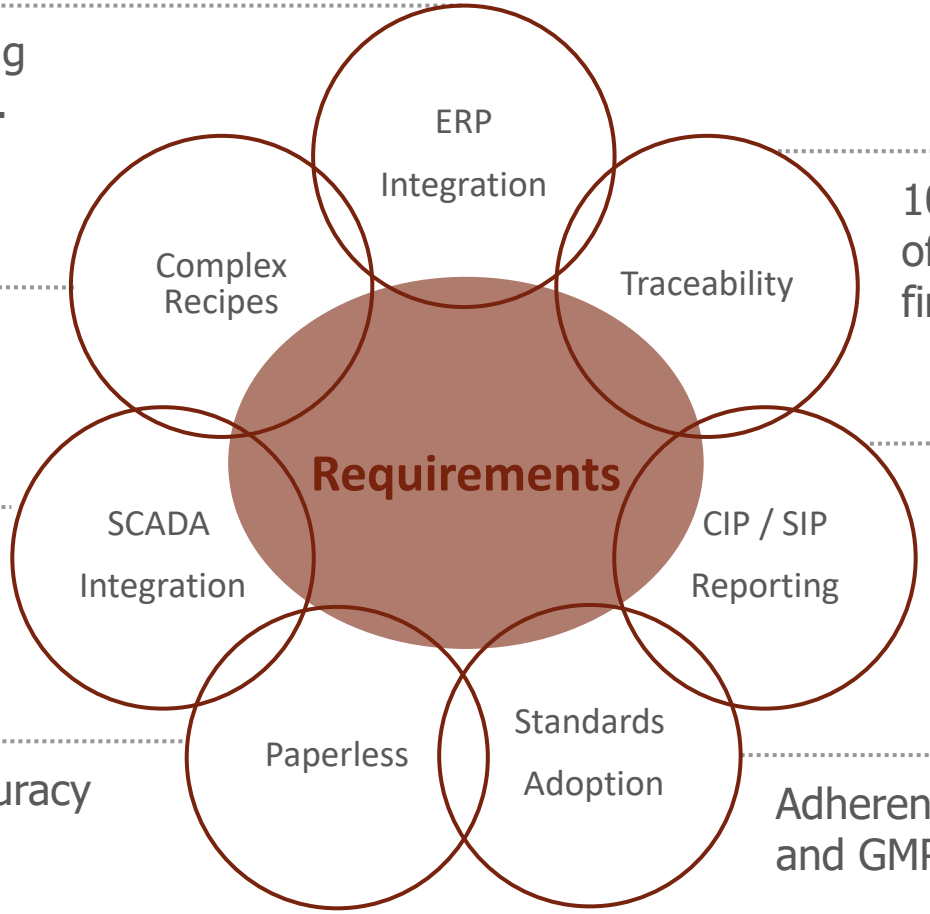

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