



eXensys Micro Vertical Solution

Micro-Vertical - Pharmaceuticals

Agenda

Industry Overview

Industry Characteristics

Key Processes 'n' Challenges

eXensys Best Practices

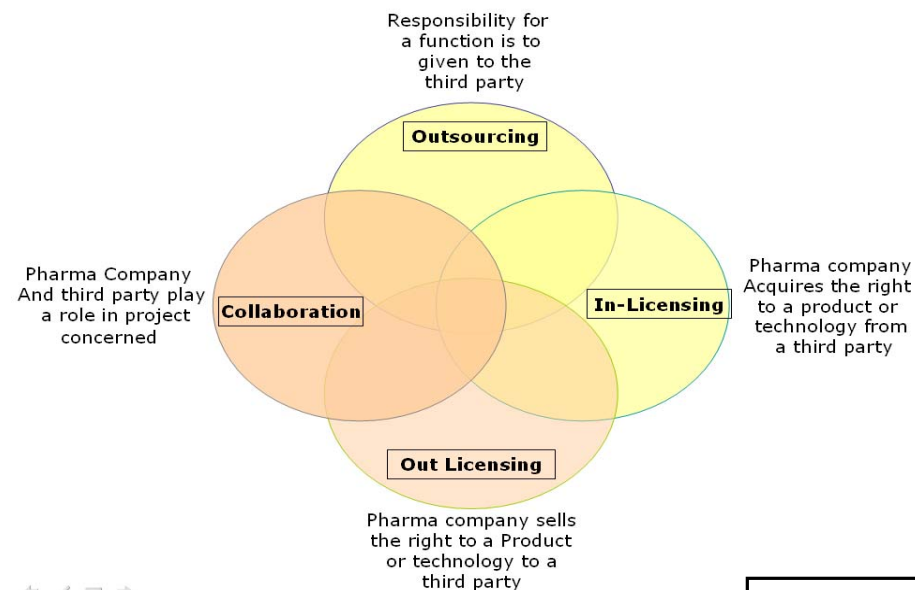


Industry Overview

Micro-Vertical - Pharmaceuticals

Worldwide approval, safety and efficacy of administered drugs are controlled by government agencies similar to the Food and Drug Administration (FDA) in the United States. These agencies also make sure that the manufacturing processes produce products of consistent quality and are independent of the day or the year of manufacture.

Generally known principles of chemistry, physics and engineering have to be applied to the process synthesis and development from the very first experiment. Chemical kinetics determine the rate of reaction and conversion. Reaction rates and stoichiometry have to be such that they give the highest yield in the shortest time. This is necessary and results in consistent and high quality product. Chemistry and process (reaction, separation and purification) in the laboratory. API's are produced using batch processes.



Industry Characteristics

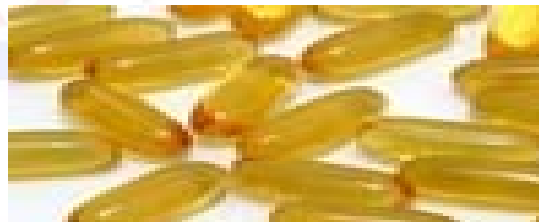
Micro-Vertical - Pharmaceuticals

Technological Process Support

- Well –defined particle size distributions
- Excellent flow and mixing properties
- Ensures high uniformity even in low dosage formulation
- Anti caking properties

Physical Performance

- Low Hygroscopicity Protect APIs
- Different solution support required API release
- High Dilution potential
- Unique morphology



Organooleptical Profile

- Pure and natural taste
- Taste masking potential
- Half the sweetening power of sucrose

Chemical Stability

- Chemical Structure provides excellent stability
- High resistant against enzymatic and acidic degradation
- Non incompatibilities with APIs
- No Reaction with ingredients containing amino group

Physiological Basis

- Sugar free
- Caristatic properties (Does not Promote tooth decay)
- Low glycernic and low insulinemic reponce (Suitable for diabetics)
- Non animal origin-Derived from sucrose
- No GMO technology involved

Key Processes 'n' Challenges

Micro-Vertical - Pharmaceuticals

Key Processes

- API manufacturing
- Recipe Management (Production/Packaging)
- Process Parameter and Control
- Research & Development
- Quality Control
- Inventory and Logistics
- Accounts Management & Legal\Statutory Compliance
- Preventive & Breakdown Maintenance

Challenges\Pain Areas

- Net Sales Requirement for an item
- Closing Stock at different locations
- Finished Goods transfer with multiple packing sizes and hence difficulty in batch tracking
- Handling Customer complaints
- Goods receiving at factory without having a PO number
- Huge volume of invoices, its reconciliation with deliveries

eXensys Best Practices

Micro-Vertical - Pharmaceuticals

S.No	Pain Areas	Why do companies fail?	eXensys Best Practice
1.	<ul style="list-style-type: none"> ➤ Net Sales Requirement for an item ➤ Closing Stock at different locations 	<ul style="list-style-type: none"> ➤ Lack of proper integration between different Sales depot ➤ Data available is in bits & pieces as a result not giving a concrete information 	<ul style="list-style-type: none"> ✓ Available-To-Promise (ATP) and order confirmations ✓ Centralized Planning for different sales depots ✓ Item measure feature to give the exact stock irrespective of pack size
2.	Finished Goods transfer with multiple packing sizes and hence difficulty in batch tracking	<ul style="list-style-type: none"> ➤ Improper administration of item measures at location level ➤ Poor lot/batch recall methods 	<ul style="list-style-type: none"> ✓ Accurate planning & production of finished goods (lot wise) as per packaging recipe ✓ Lot recall report showing the lot of raw material used
3.	<ul style="list-style-type: none"> ➤ Handling Customer complaints ➤ Goods receiving at factory without having a PO number 	<ul style="list-style-type: none"> ➤ Lack of Lot recall system ➤ Lack of integration between Purchase and Inventory department 	<ul style="list-style-type: none"> ✓ Lot Recall report for identification of lots of Raw Materials for a finished good ✓ GRN with respect to PO only
4.	Huge volume of invoices, its reconciliation with deliveries	Lack of integration between Finance and Inventory department	Updation of Accounts payable and receivables in finance as per Material received or sold

