



coperion

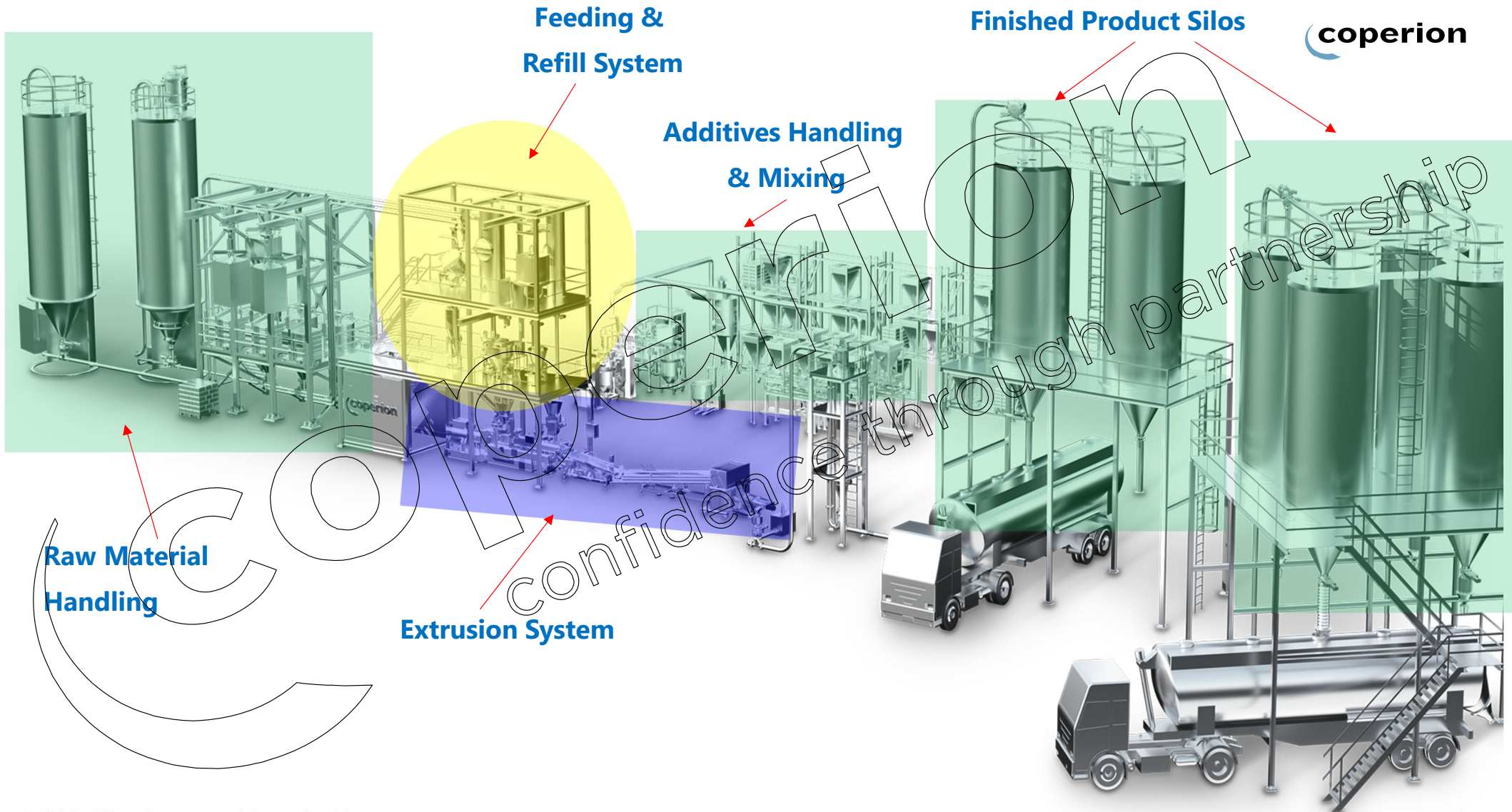
confidence through partnership

Individual Plant Concepts and
Customized Systems:

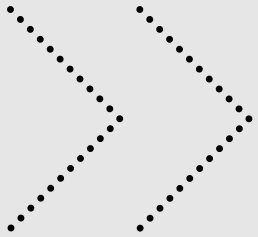
Why an Efficient Plant is More
Than Just the Sum of its Parts

Roadshow Japan Oct 2024

Hans-Peter Neuberger
Managing Director Japan



Individual Plant Concepts and Customized Systems



1

Plant Conception - Basic Considerations

2

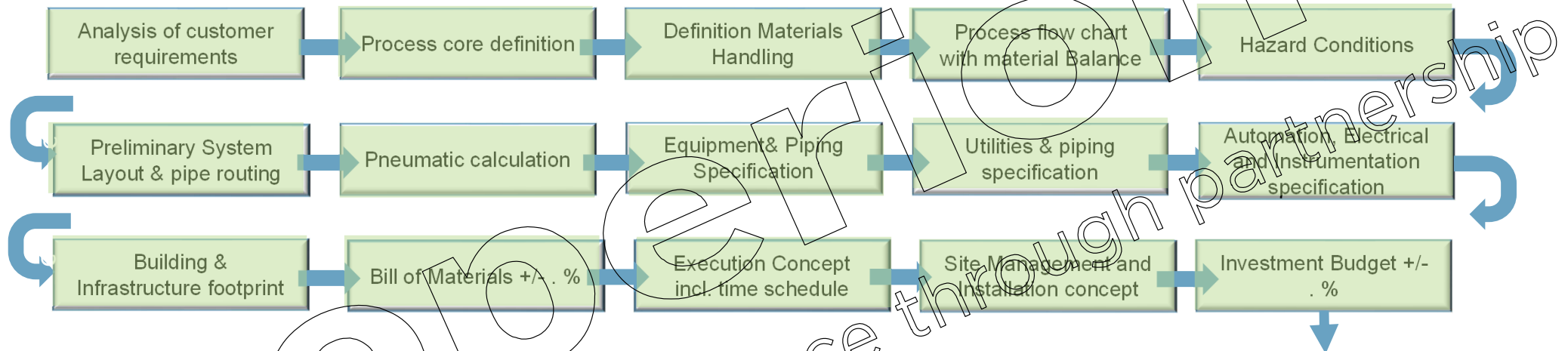
Coperion Plants - Purpose and added value

3

Examples & References Coperion's experience with modular and turn-key systems

Plant Conception – Basic Considerations

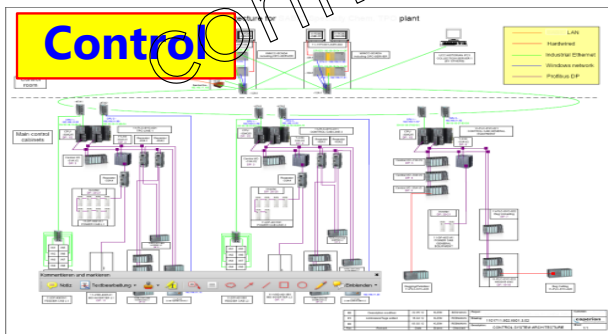
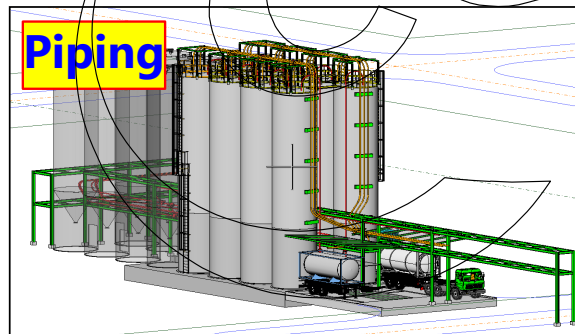
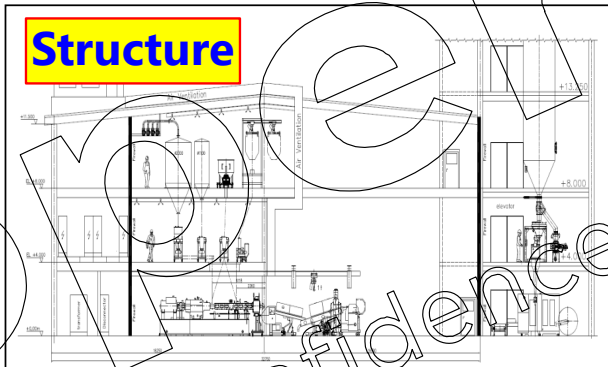
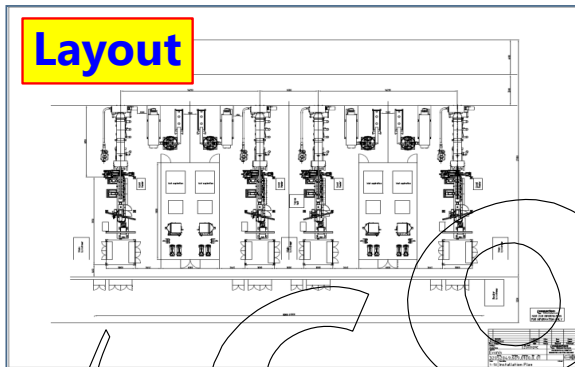
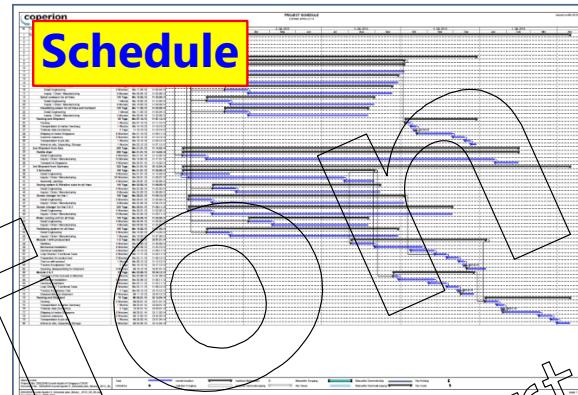
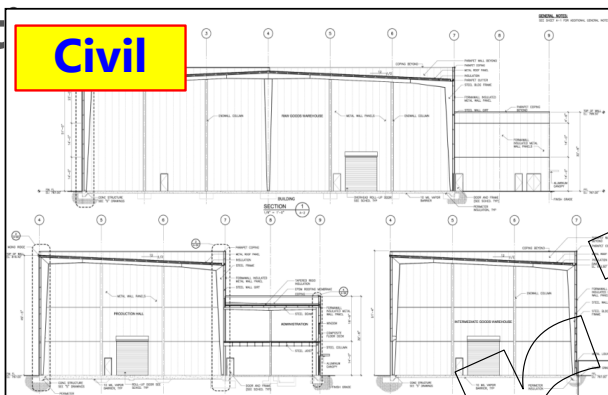
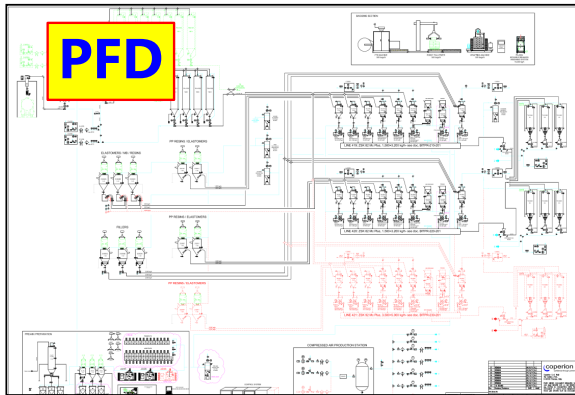
Rough description of the conceptual process



For the **Complete Plant Concept**, our **own experts** work together with **design partners** for the infrastructure / civil section. But we are also open to partner up with our customers or their consultants / contractors and share the scope of the **conceptual study**.

Conceptual Study with documents package

- Process Flow chart
- Plant layout
- Equipment, piping & utilities specification
- Automation concept
- Technical description
- Execution concept & time schedule
- Budgetary assumption of the investment volume



coperrion
confidence through partnership

Stuttgart, March 01, 2024

Budget offer:

Dear Sir or Madam,

Thank you very much for your interest in our products and your request for quotation.

Within the next chapters we have described our solution for your requested compounding plant, consisting of two extrusion lines each one producing 1300 – 2800 kg/h of **PE** on two a ZSK 92 Mc18 in detail.

Following decisive advantages Coperrion is offering:

- a comprehensive, seamless technical concept
- one contact and project responsibility
- process know how in the entire process chain
- efficiency in project management and engineering
- flexibility to fulfill customer's requirements
- efficient and integrated installation, commissioning & start-up services
- worldwide service support

coperrion
confidence through partnership

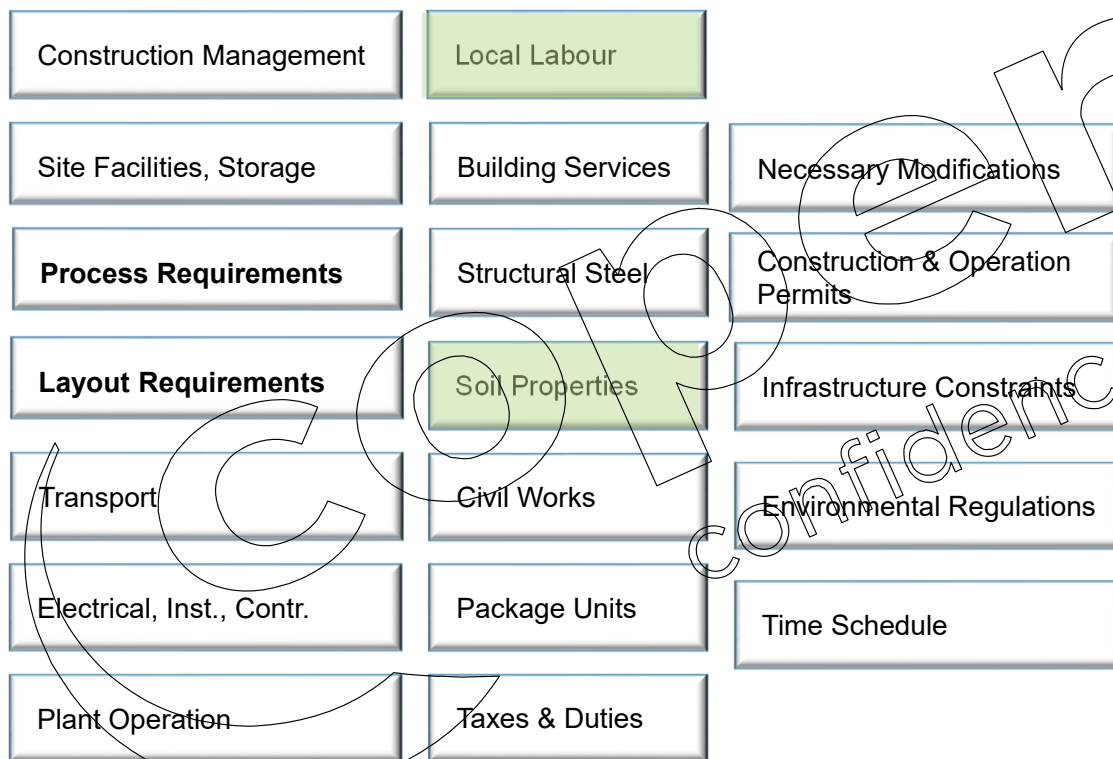
March 01, 2024

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System Integration - Basics

The Perfect Plant Concept – requirements to be brought in balance

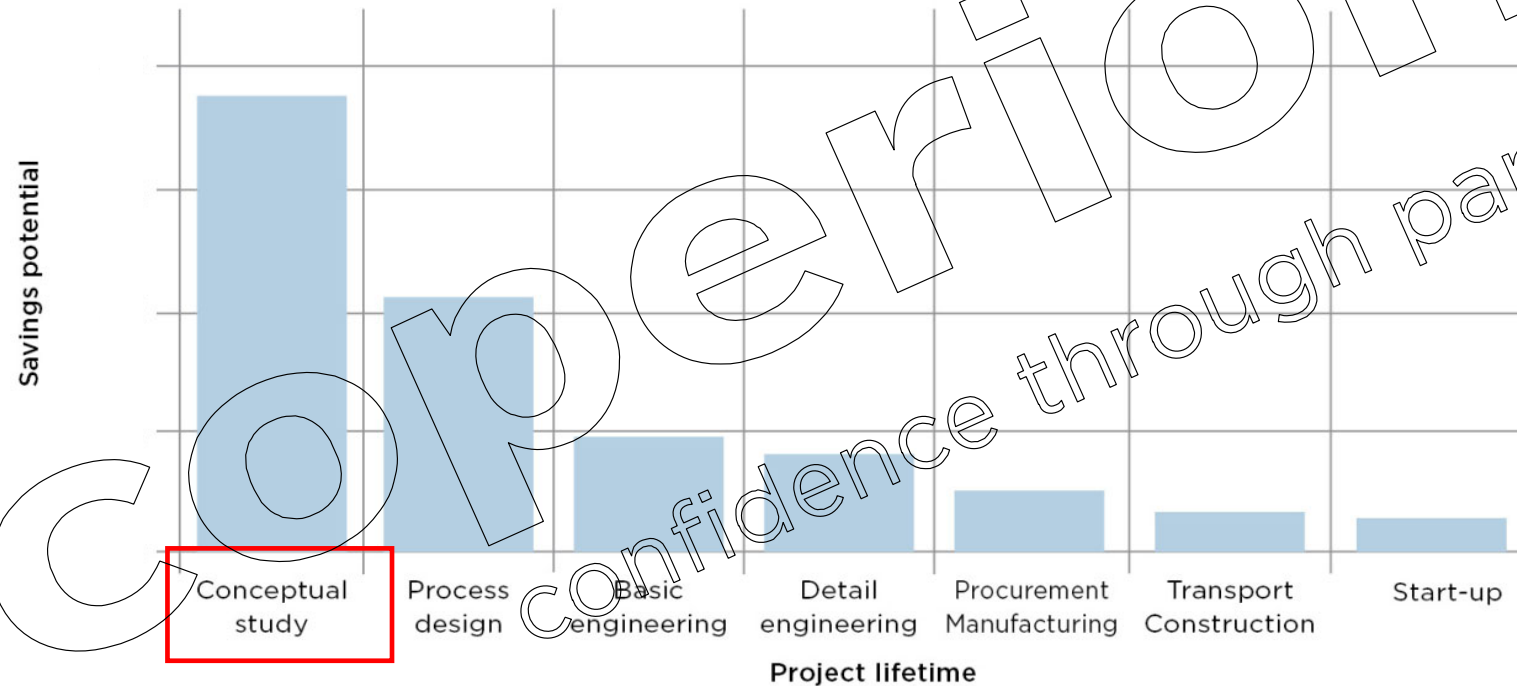


Optimum Plant & Realization Concept

Comprehensive knowledge of the **process** and all **other project aspects** builds the basis for the **optimum plant** concept and the best realization strategy for the project.

System Integration - Basics

Decreasing Cost Saving potential during Project Lifetime



The potential for savings in all other phases is considerably smaller, **Conceptual Study** is the key for lowest CAPEX and OPEX.

System Integration

Living proof for savings potential in CAPEX and OPEX

Customer's Initial Solution by an international Engineering Company

COPERION's solution

Sound process know-how and deep understanding of various disciplines form the basis of Coperion's expertise in designing economic processing plants

- ✓ Building Floor Area reduced by 25%
- ✓ Included Building Volume reduced by 40%
- ✓ Equipment Cost reduced by 20%
- ✓ Conveying distance reduced by 15%, less fines generated
- ✓ Steel structures for piping & equipment reduced by 20%
- ✓ Soil loads from building & equipment reduced by 30%

1

System Integration - The Basics

2

Coperion Plants - Purpose and added value

3

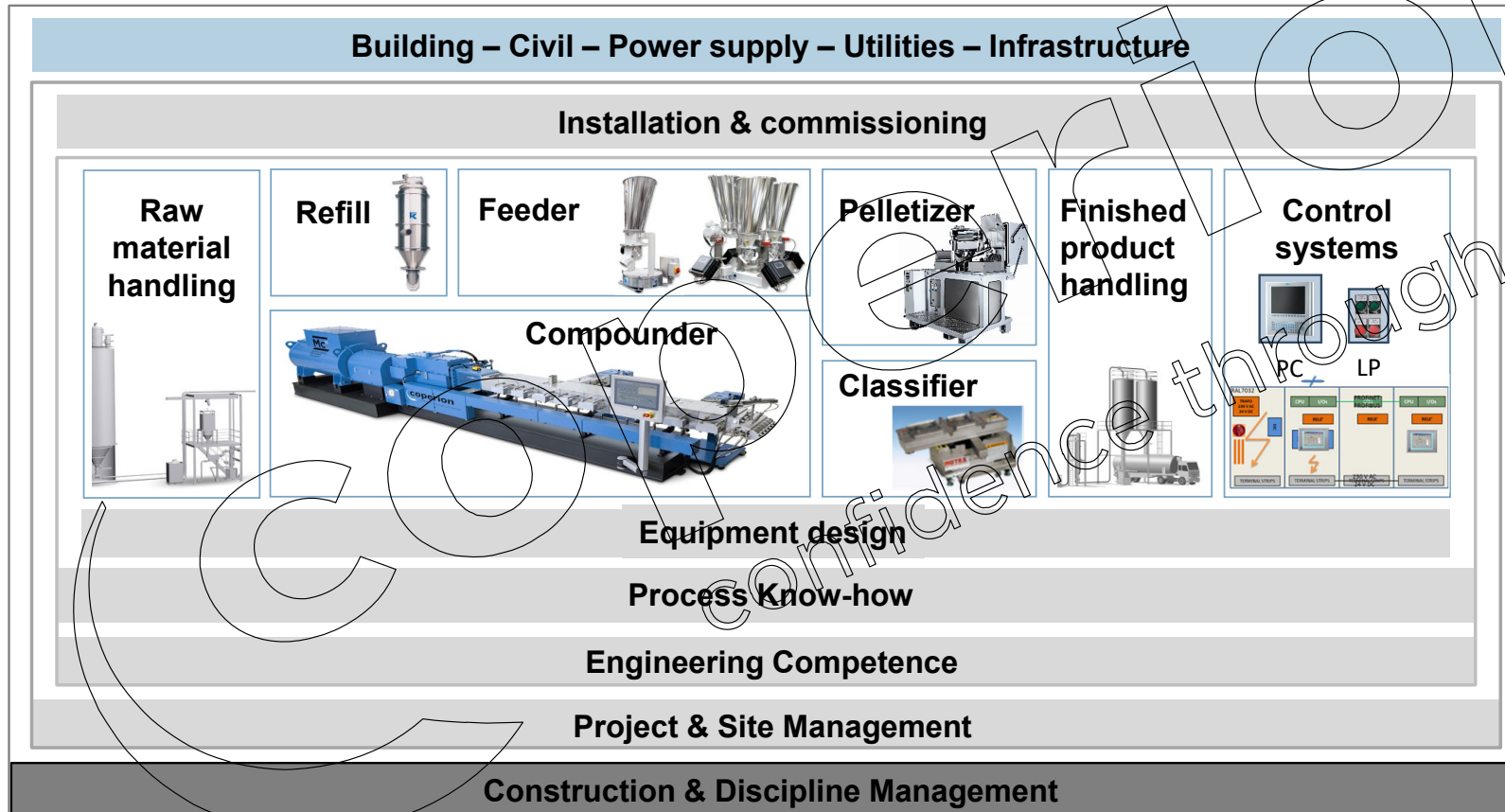
Examples & References Coperion's experience with modular and turn-key systems

Individual Plant Concepts and Customized Systems

Coperion Plants



Own products portfolio - One Envelope for the Key Elements of the Process Scope



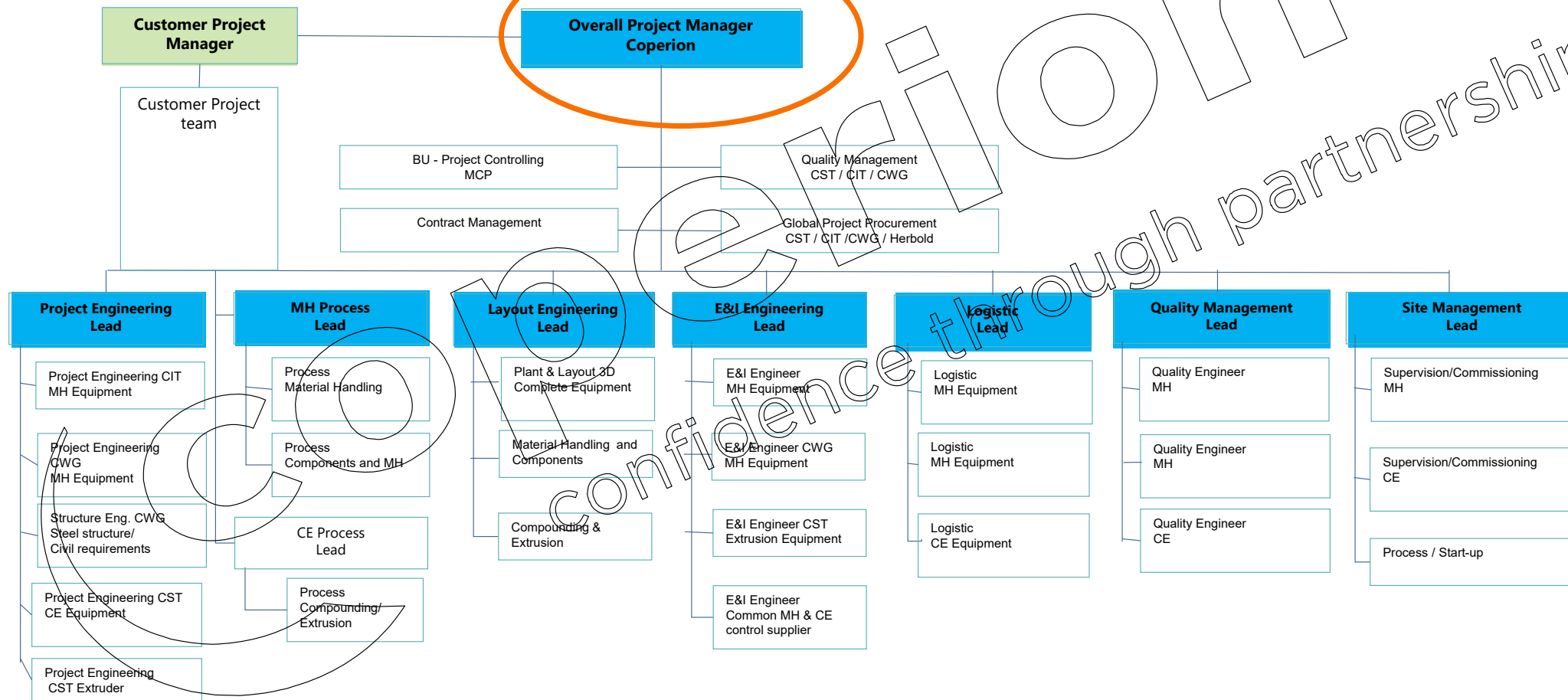
Benefits to customer:

- ✓ Reduction in total project cost
- ✓ ensure reliable time schedule
- ✓ have one point contact partner
- ✓ get worldwide service support

Coperion Plants



Typical Project Organization for complete plants



1

System Integration - The Basics

2

Coperion Plants - Purpose and added value

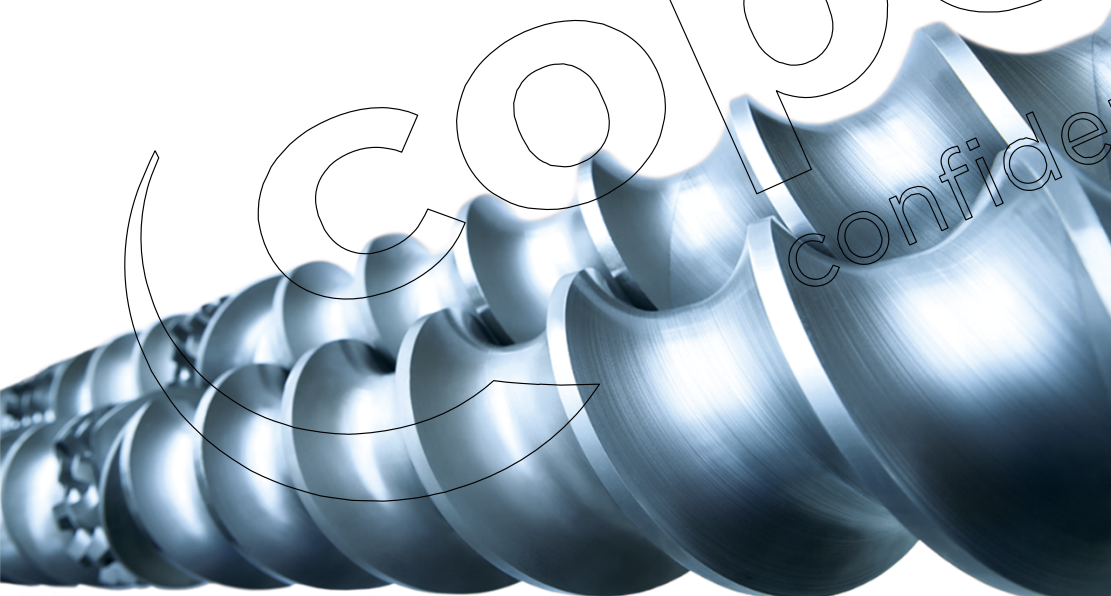
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Examples & References Coperion's experience with modular and turn-key systems

20,000 feeding systems installed

15,000 compounding systems installed

10,000 bulk material handling plants installed



Engineering

10

Locations

7

Countries

493+ FTE

Workforces globally

66 FTE

Global Engineering Center

~750,000 Eng-hours

Annual Capacity

Turnkey Processing Plants

Compounding plant for PA/PBT in Asia



- ✓ Raw material silos
- ✓ 3 extrusion lines
- ✓ bagging & packaging
- ✓ steel structures
- ✓ waste air treatment
- ✓ finished good silos
- ✓ control system
- ✓ complete installation

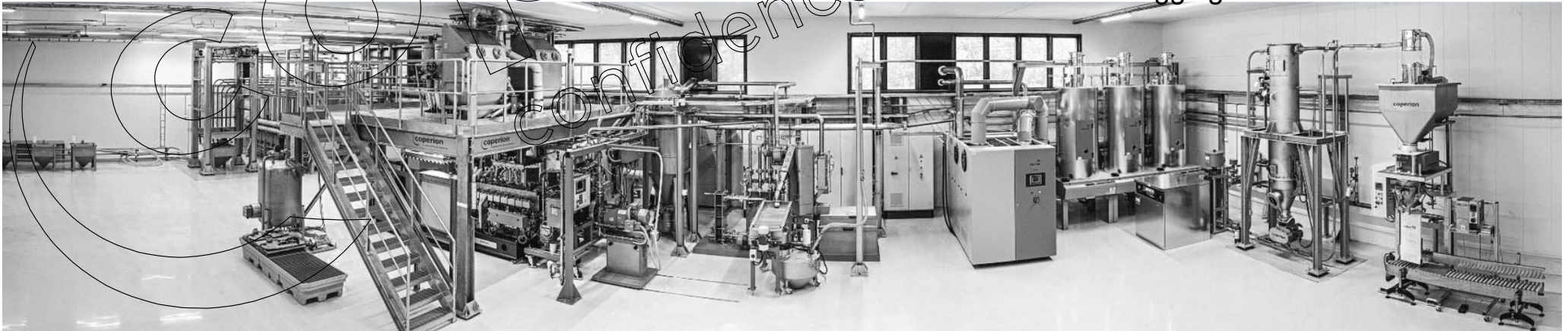
Individual Plant Concepts and Customized Systems

Turnkey Processing Plants

Compounding plant in Scandinavia



- ✓ Integration into existing building
- ✓ Raw material handling
- ✓ Raw material drying
- ✓ Feeding systems
- ✓ Extrusion line
- ✓ Pelletizer
- ✓ Finished good drying
- ✓ Finished good cooling
- ✓ Bagging

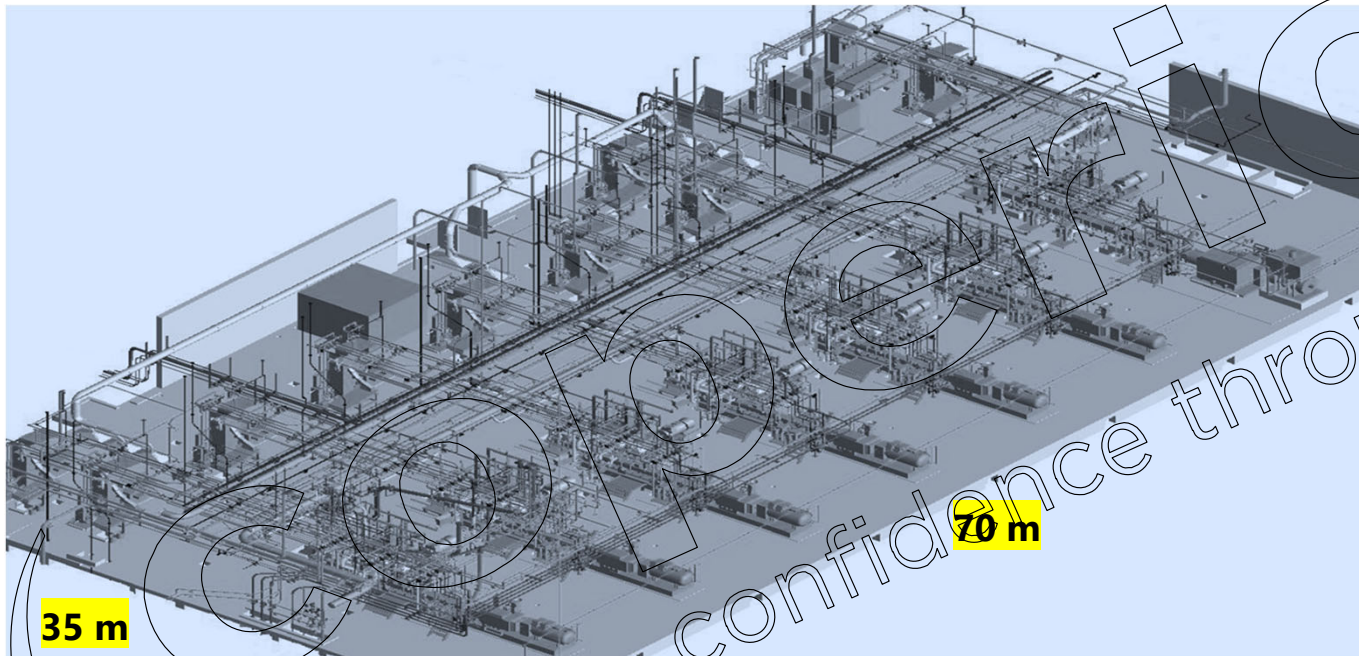


Individual Plant Concepts and Customized Systems

Turnkey Processing Plants



Systems for the production of engineering plastics in Europe

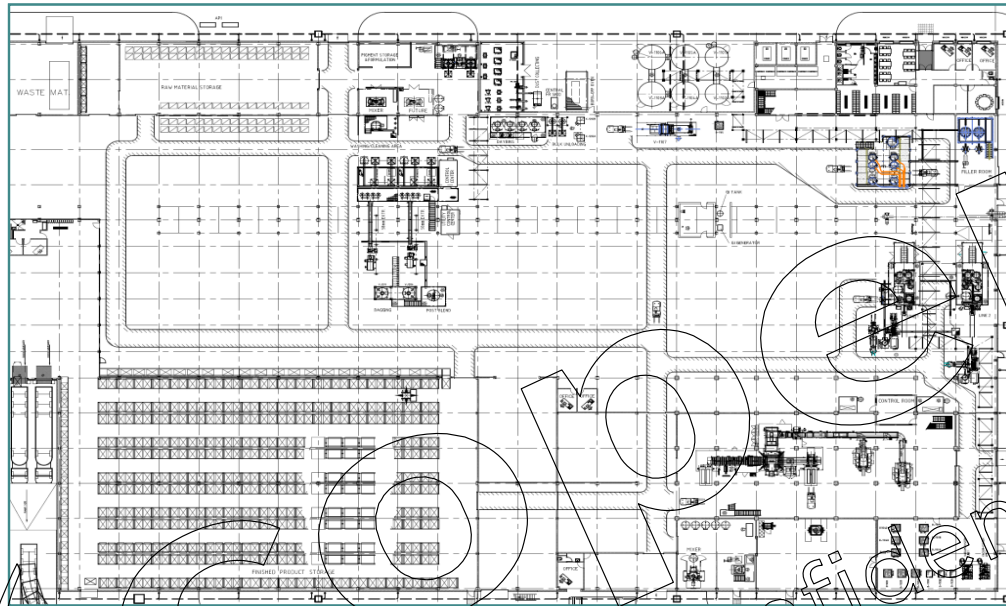


- ✓ 7 extrusion lines
- ✓ 3 separate pelletizing lines
- ✓ conveying systems for raw and finished product
- ✓ storage silos (50) & silo structure
- ✓ utility network from client's tie in
- ✓ power supply for the system

Turnkey Processing Plants



Complete Compounding Plant KSA

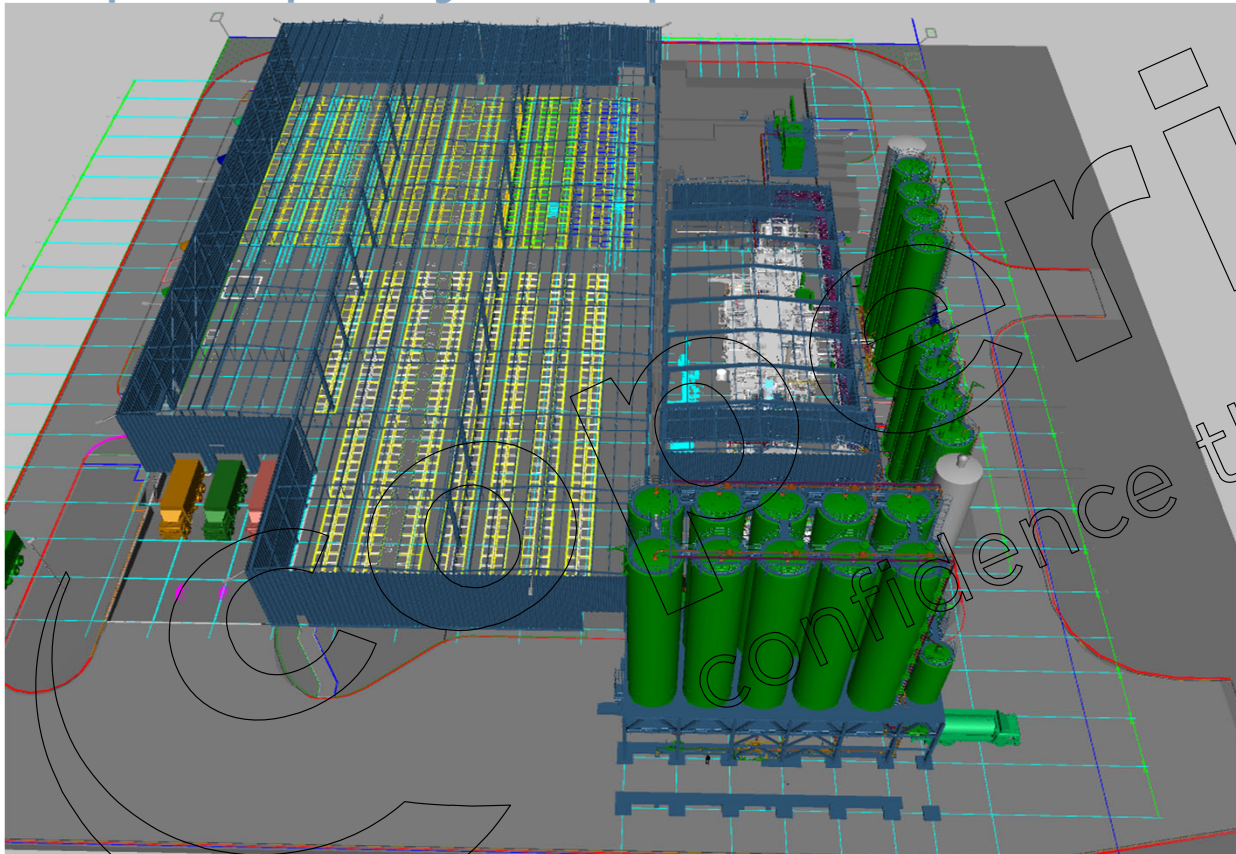


Individual Plant Concepts and Customized Systems

- ✓ Integration of a compounding plant with **4 extrusion** lines in an existing building
- ✓ Extruders incl. LIW Feeders and pre-hoppers as **modularized system**.
- ✓ Raw and finished Product storage & Handling
- ✓ Packing and Palletizing
- ✓ Demolition of old facilities
- ✓ Piling, Foundations, steel structures, building modifications and all other required civil works
- ✓ Utilities generation and distribution system
- ✓ All other services and supplies to build a complete plant.

Turnkey Processing Plants

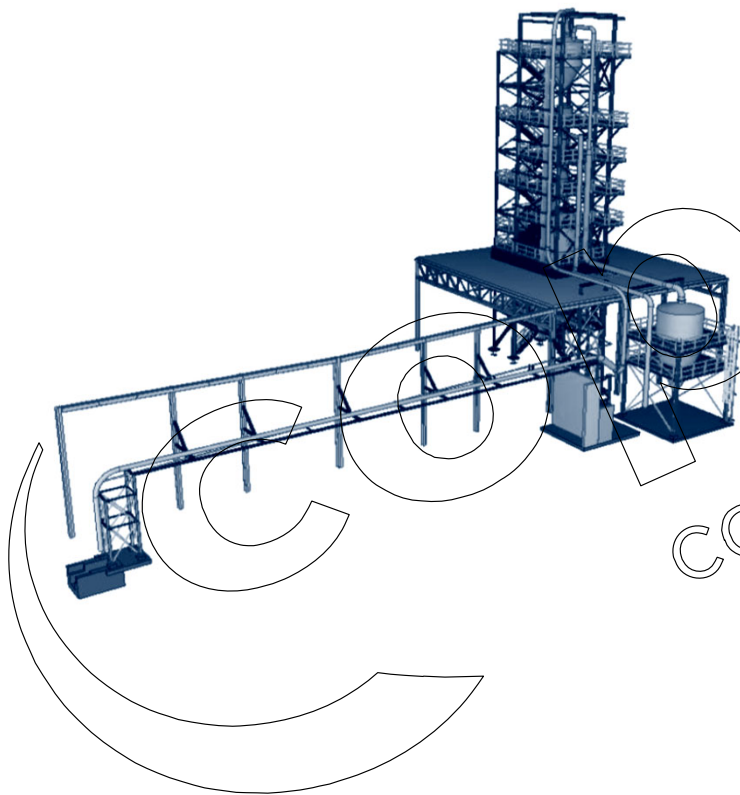
Complete Compounding Plant Europe



- ✓ Compounding Plant on **Green Field**
- ✓ Production **Building**
- ✓ **Office** /Maintenance Complex
- ✓ Warehouse incl. logistic Office
- ✓ **Roads**, Parking's and other open areas
- ✓ Piling, Foundations, steel structures, and all other required civil works
- ✓ **Utilities** generation and distribution system
- ✓ All other services and supplies to build a complete plant.

Turnkey Processing Plants

New Bagging Line KSA



- ✓ Hook-up of an existing conveying system to new bagging location, incl. Elutriator system, Piping, Bagging and Palletizing
- ✓ building modifications, steel structures, piping ducts for road crossing, utilities, lighting etc.
- ✓ integration of the system in an existing plant during production

Turnkey Processing Plants

PP Conveying and Storage Plant in Europe



- ✓ Implementation in Existing Conveying Systems
- ✓ Preparation of Building Permit Design Package
- ✓ Design and execution of steel-, civil and foundation works
- ✓ Design, execution and assembly of utility systems
- ✓ PP Blender Silos
- ✓ PP Storage Silos 200 T incl. Support structure in concrete
- ✓ Pavements and roads in the area
- ✓ Mobile Container-Loading-Unit and Telescopic Loaders

Individual Plant Concepts and Customized Systems

Turnkey Processing Plants

PA PBT Compounding Plant in Asia

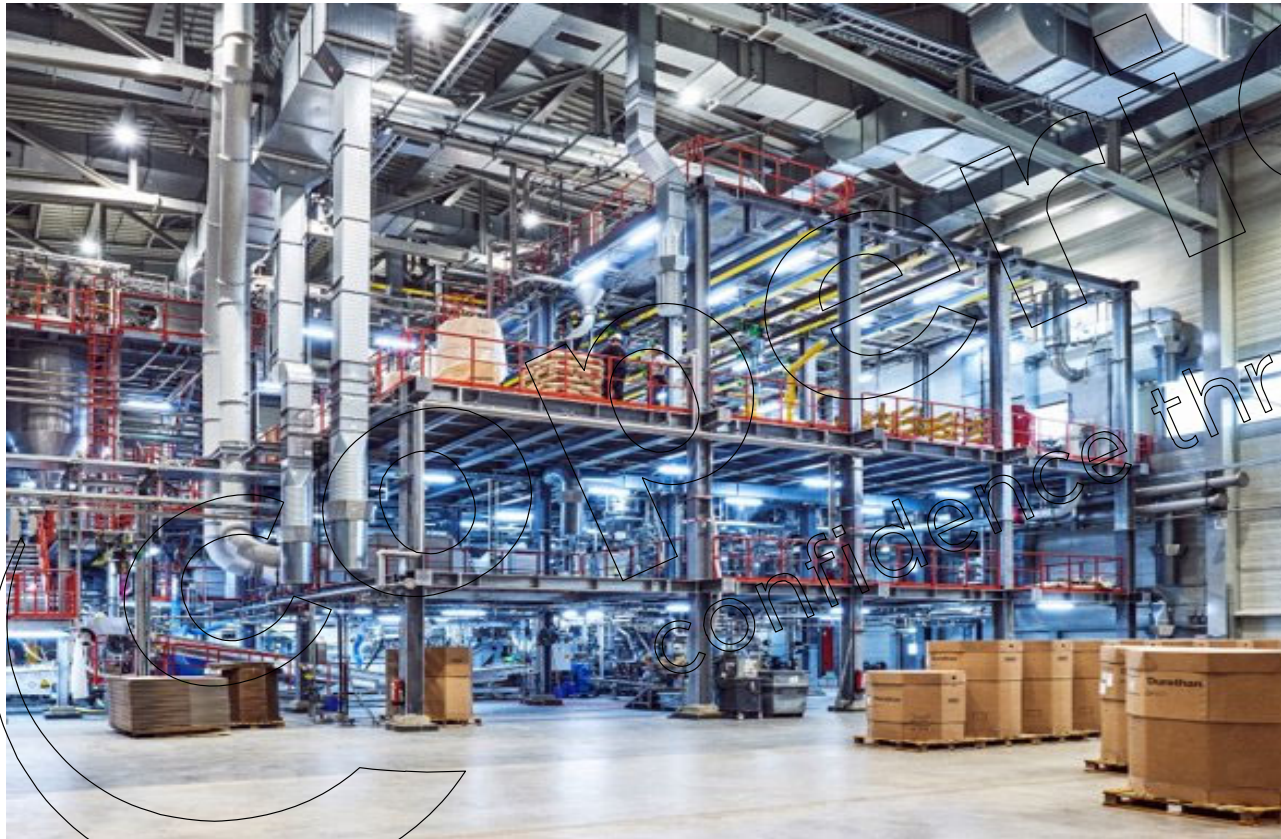


- ✓ Modification / Extension of existing plant
- ✓ 4 Extrusion Lines
- ✓ Feeders, Strand Pelletizer etc.
- ✓ Raw Material Mixing
- ✓ Bagging and Packaging
- ✓ Steel Structures
- ✓ Installation & Commissioning

Turnkey Processing Plants



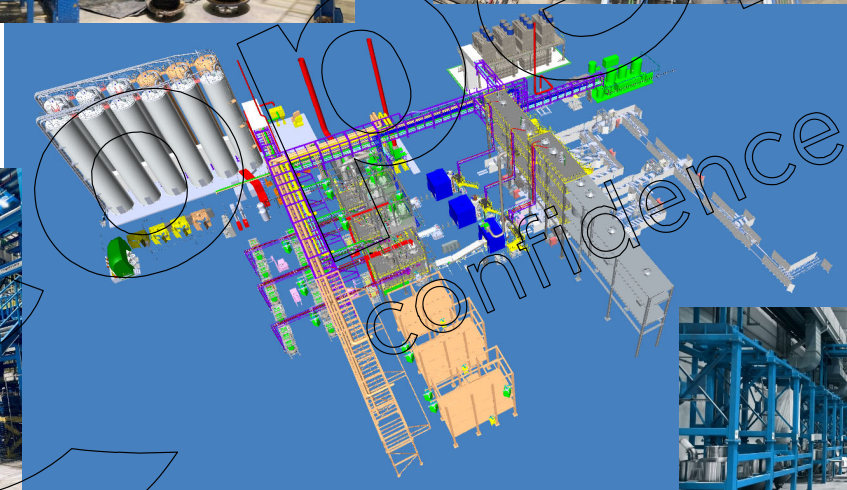
Complete Plant for PA6.6 + 30-50% GF in Europe



- ✓ raw materials handling
- ✓ receiving and conveying,
- ✓ feeding, extrusion, automatic strand pelletizing system,
- ✓ PP Silo
- ✓ utilities,
- ✓ steel structure
- ✓ Control system
- ✓ complete installation

Turnkey Processing Plants

Compounding plant for PA/PBT in Asia



Individual Plant Concepts and Customized Systems

- ✓ RM Handling (Truck unloading, Silos, BB stations, Piping & Conveying)
- ✓ Mixing stations
- ✓ Feeding systems
- ✓ Extruders
- ✓ Pelletizing systems, Classifier, Spiral Conveyor
- ✓ Finished Good Handling (Conveying, Silos, Cleaning system)
- ✓ Packaging lines for Bag and BB
- ✓ Steel structures (430 tons) and piping systems (7,6 km)
- ✓ Auxiliaries (Water treatment, Cleaning oven, Dry and Wet aspiration)
- ✓ Entire control system with hard- & software and cables (78 km)
- ✓ Site management and supervision by multiple Coperion sites

Turnkey Processing Plants



2 extrusion lines for Middle East



- ✓ Modularized Systems
- ✓ Delivery in several containers
- ✓ Each line as a plug and play system
- ✓ Pre-commissioning (until ready for start-up) in Coperion premises

Our references

Some of our Customers



Individual Plant Concepts and Customized Systems

Summary and essence



coperion offers a **unique experience** in both process and material handling know how
confidence through partnership

coperion is the **ONLY** worldwide supplier that designs and produces the core equipment for the complete process chain by itself.
confidence through partnership

Our customers benefit our added value:

Design and execution of an **entire process plant** is a complex exercise. Our detailed **knowledge of the complete process chain** and **experience** in providing numerous production lines, enables us to provide the **right process solution**. Our **deep understanding** of everything which is around the plant's process core enables us to develop, whilst balancing and harmonizing all required disciplines, for the **perfect overall solution of your plant**.

This is what the experience of coperion stands for.
confidence through partnership



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Thank you
very much for
your attention.

You're very welcome to follow us.

