Industry 4.0
The Future of Manufacturing Begins Today

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Technology Drivers

ADDITIVE MANUFACTURING

Augmented Reality

Smart Products

BIG DATA

INTERNET OF THINGS
Market Drivers

Shorter Engineering Times
Industrial Digitalization – Advanced Manufacturing

- **Agile factories** rapidly respond to changes in customer demands.
- **Demand driven supply chain**:
  - Higher product availability
  - Minimal inventories
- **Products tailored to the customer**
- **Real time information flow** between Factories and distribution centres
- **Smart Grid** – Optimised energy usage
- Business systems closely linked with Supply chain and factories
Industry 4.0

Integrated Engineering

Vertical Integration

Horizontal Integration

I4.0

People
Energy Efficiency in Pneumatics

Intelligent Air Supply

- Enables Energy Management
  - Reduced Plant Operating Costs
  - Optimise Product Costs

- Enhanced Diagnostics
  - Reduced Down Time
  - Predictive Maintenance Implementation
Digitalization in Pneumatics

Digital Pneumatic Valve Terminal

- Faster Engineering Times
  - Quicker Time to Market
  - Reduced Engineering Cost
  - Reduced Assembly Costs

- Standardisation
  - “Lego” modularity production
  - Reduced Inventories

- Enhanced Diagnostics
  - Reduced Down Time
  - Predictive Maintenance Implementation
Digitalization in Handling Systems

Effort at Customer

- Peripherie
- Front end Tool
- Process Know-How
- System Integration
- Software
- Control
- Hardware

Save Time Save Cost

Platform for movement of tool workpiece

Effort at Customer

Peripherie
Front end Tool
Process Know-How
System Integration
Software
Control
Hardware
On-line Engineering and Ordering Systems

Handling Guide Online

- Reduced Engineering Time
  - Reduced Costs
  - Quicker Time to Market

- Customized System from Standard Products
  - Standardization
  - “Lego” modularity production
  - Reduced Inventories

- Horizontal Supply Chain Integration
  - Shorter Lead Time
  - Lower Working Capital
  - Quicker Time to Market
Modular Conveyance & Control

**Multi Carrier System**

- Flexible Transport System
  - Enables Multiple Products on the Line
  - Efficient Low Batch Production

- Configurable Transport System
  - Fast Product Changeover
  - Efficiency in Low Batch Assembly

- Standardisation of Assembly Solutions
  - Enables Pre-Engineered Solutions for SME
  - Fast Plant Deployment
  - Quick Time to Market
I4.0 Application
I4.0 Pharmacy Case
14.0 Pharmacy Case

Automated Pharmacy Systems

- Efficient, Exact pill dispensing
  - Reduced Error Rate

- Data available
  - Automatic Replenishment and Ordering
  - Demand Adapted Inventories

- Quicker Prescription fulfillment
  - More face to face time with pharmacist
Learning to Progress
Festo Mechatronics Centre
Solution Engineering Centre
Mississauga, Ontario
24,000 Sq Ft facility
24 Staff (16 Engineering)

Festo in Canada
Mississauga/Montreal/Quebec City
150 Staff
Technical Sales, Engineering, Service

Festo Didactic in Canada
Quebec City/Montreal/Mississauga
250 Staff
Learning Systems, Training