advanced clean production
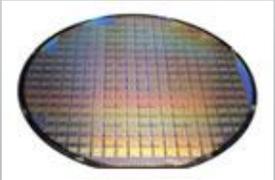**Information Technology AG**

Information Technology

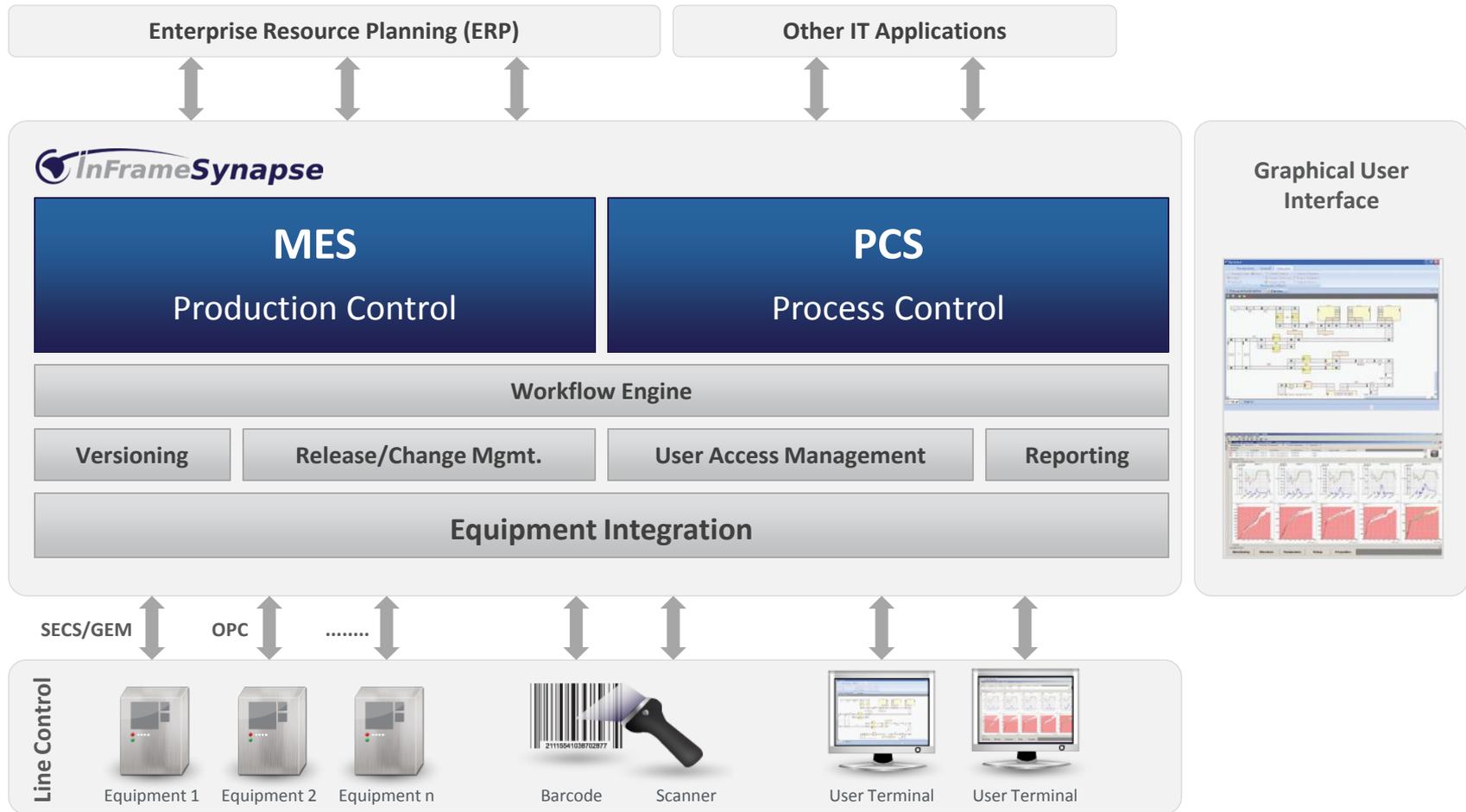*Be a step ahead! **IT** your fab!*

Company Presentation

Target markets of acp-IT

acp-IT focusses in its portfolio on clients with complex and highly automated production environments.

Production IT with *InFrameSynapse*

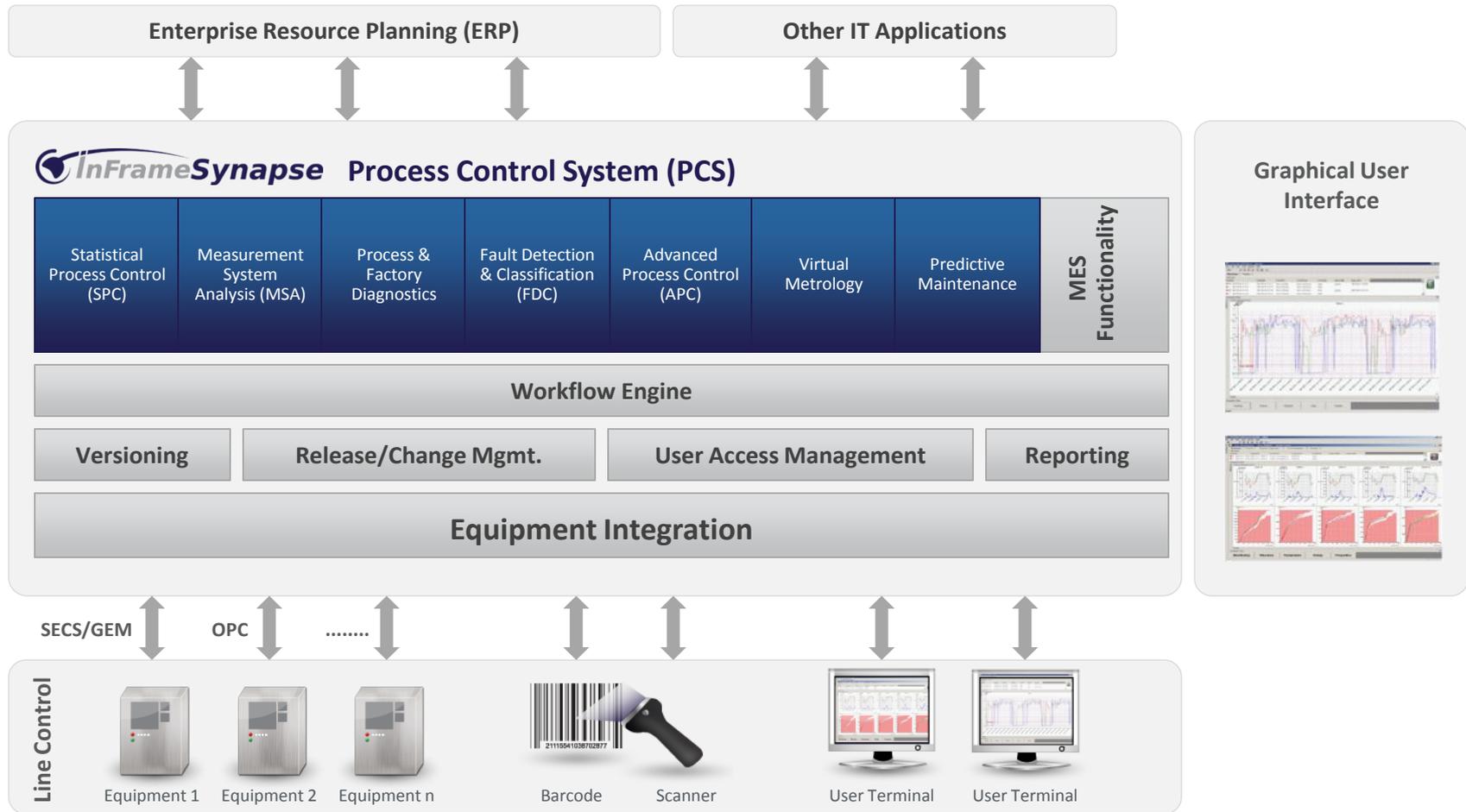| Photovoltaic	Semiconductor	Discrete technology manufacturing	Automotive
Ingot & wafer Poly silicium Cell Thin film Module	Front end Wafer test Back end Final test	PCB manufacturing Precision assembly Sensor fabrication Electronic assembly	Body shop Paint shop Assembly Finishing

InFrame Synapse offers an Integrated Functionality for Production Control and Process Control

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InFrame Synapse Manufacturing Execution System (MES)

Enterprise Resource Planning (ERP)

Other IT Applications

InFrameSynapse Manufacturing Execution System (MES)

Specification Management	Tracking Management	Fab Monitoring	Job & Dispatch Management	Preventive Maintenance	Specification Management	PCS Functionality
Resource Management	Material Management	Recipe Management	Advanced Recipe Management	Operator Skill & Shift Management	Advanced Planning & Scheduling	

Workflow Engine

| **Versioning** | **Release/Change Mgmt.** | **User Access Management** | **Reporting** |

Equipment Integration

Graphical User Interface

Line Control

SECS/GEM   OPC   ....

Equipment 1   Equipment 2   Equipment n   Barcode   Scanner   User Terminal   User Terminal
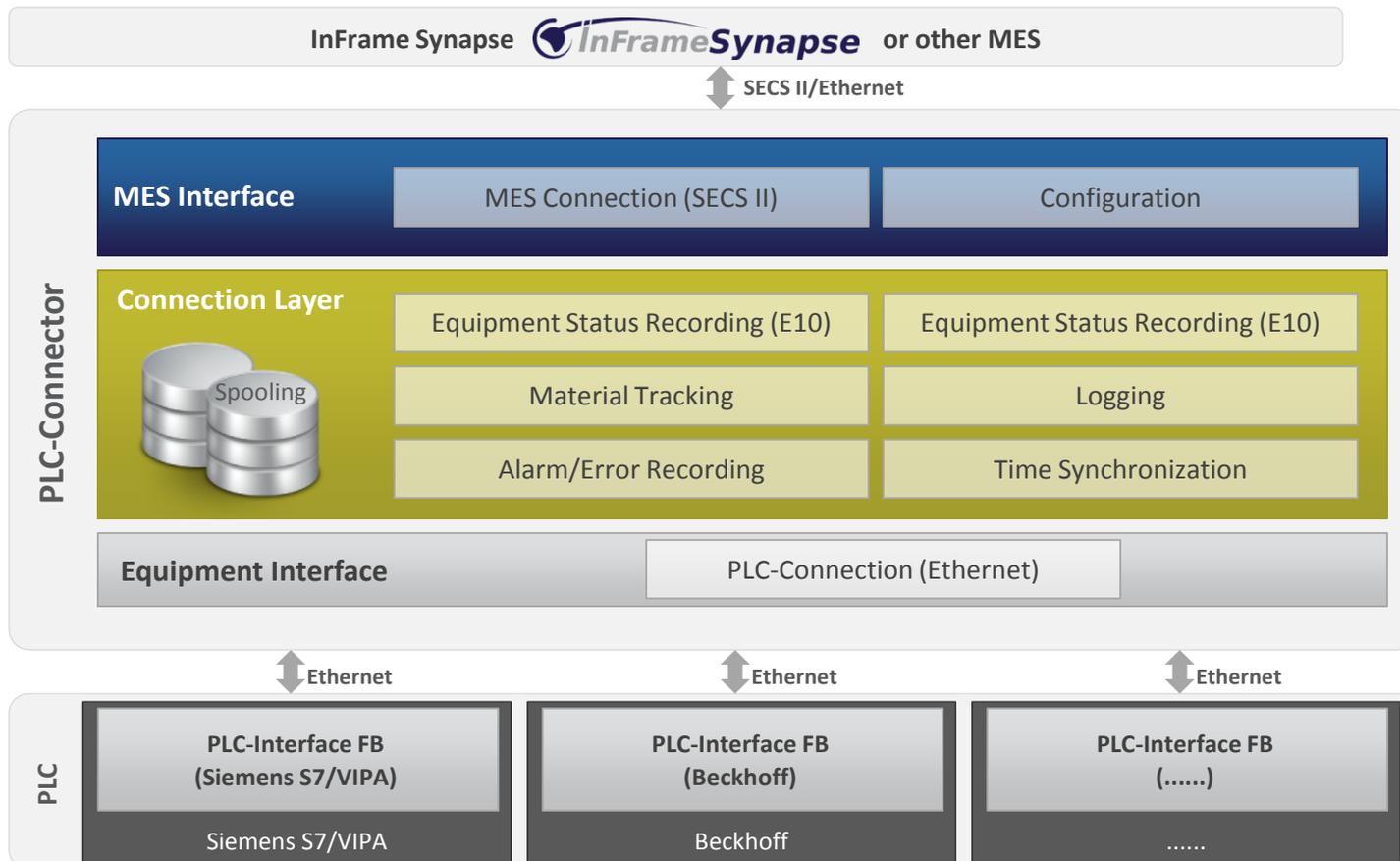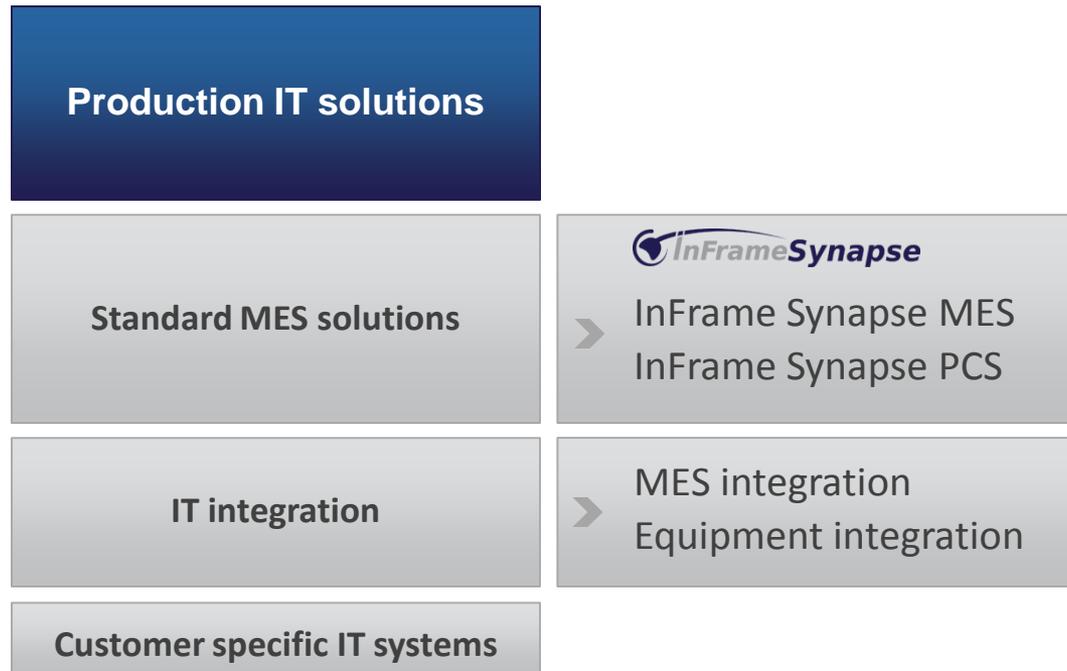
InFrame Synapse Process Control System (PCS)

InFrame Synapse PLC-Connector (SECSII/GEM)

acp-IT's PLC-Connector (SECSII/GEM) provides a configurable bridge between equipment and the MES

InFrame Synapse   **InFrameSynapse**   or other MES

↕ SECS II/Ethernet

PLC-Connector

MES Interface | MES Connection (SECS II) | Configuration

Connection Layer | Spooling

- Equipment Status Recording (E10) | Equipment Status Recording (E10)
- Material Tracking | Logging
- Alarm/Error Recording | Time Synchronization

Equipment Interface | PLC-Connection (Ethernet)

↕ Ethernet   ↕ Ethernet   ↕ Ethernet

PLC

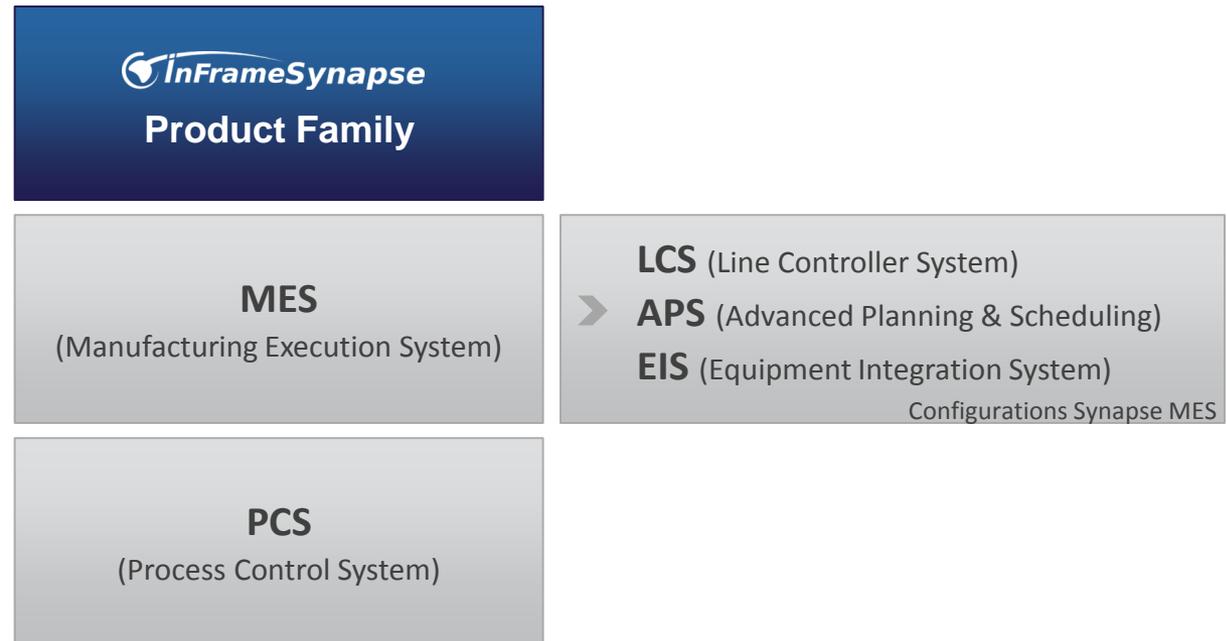| PLC-Interface FB (Siemens S7/VIPA)	PLC-Interface FB (Beckhoff)	PLC-Interface FB (......)
Siemens S7/VIPA	Beckhoff	......

acp-IT AG develops and implements software solutions for automation and operating of complex production and manufacturing equipment.

Production IT solutions	
Standard MES solutions	**InFrameSynapse** InFrame Synapse MES InFrame Synapse PCS
IT integration	MES integration Equipment integration
Customer specific IT systems	

InFrame Synapse Turn-Key solutions

InFrame Synapse is a modular product family configurable for customer specific production IT software solutions

- Products are independent
- Based on identical technologies and libraries
- Open interfaces
- Easy to adapt to customer requirements

InFrameSynapse
Product Family

MES
(Manufacturing Execution System)

PCS
(Process Control System)

LCS (Line Controller System)
APS (Advanced Planning & Scheduling)
EIS (Equipment Integration System)
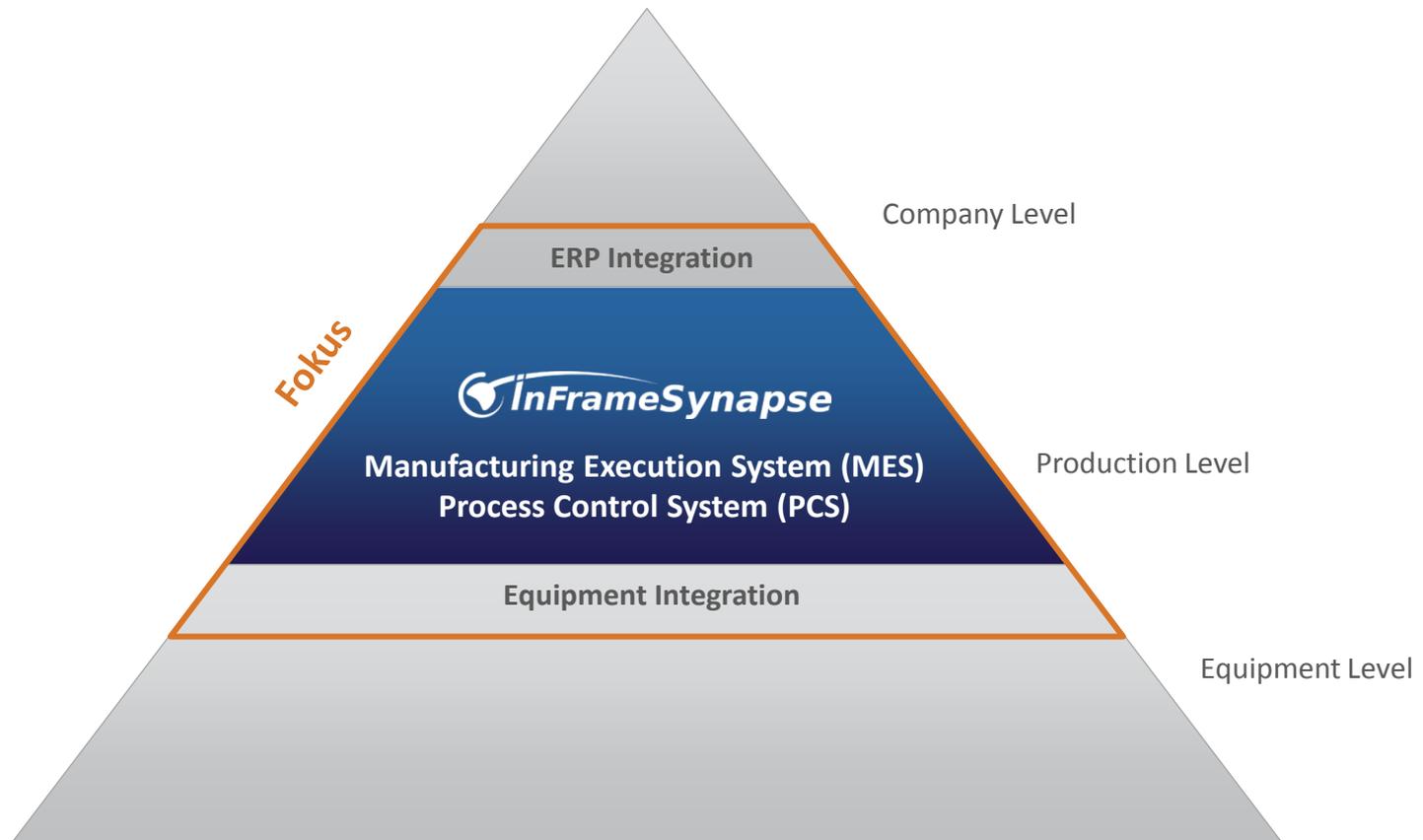
Configurations Synapse MES

Your Partner for *Clean Production*

acp-IT is your partner in the design of lean production processes, efficient logistics and flexible information technology. Targeted is a *clean production,* i.e. optimum process flows with flexible IT tools.
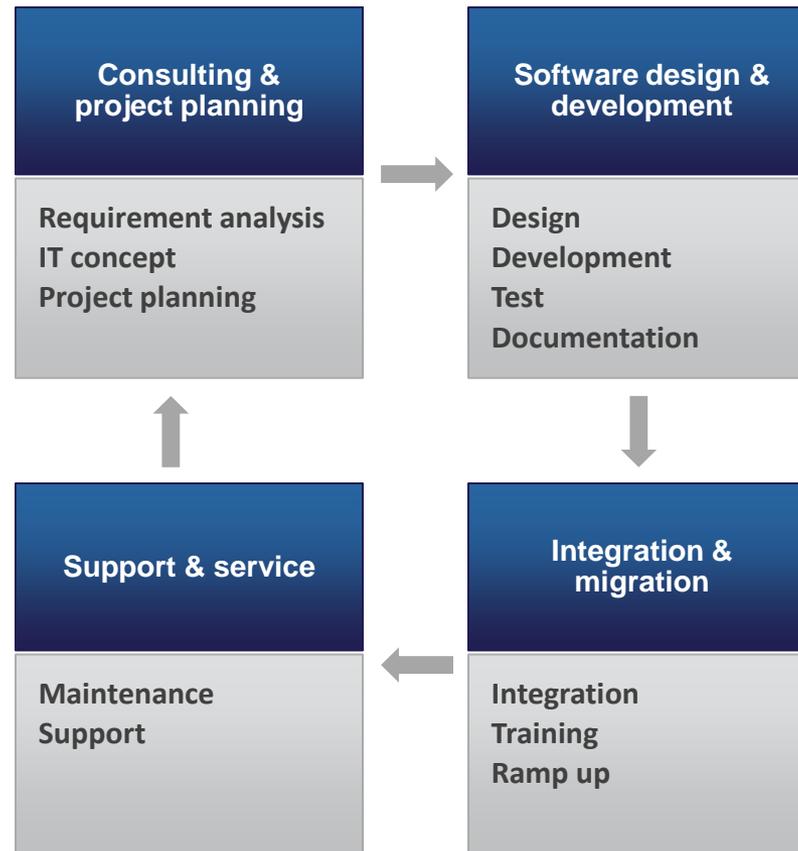
Business filed 1	Business field 2	Business field 3
Production IT solutions	**Logistics & Digital Factory**	**IT Excellence**

Application range and focus of acp-IT

Our focus is on processes and systems in the area of engineering and manufacturing

Fokus

ERP Integration — Company Level

InFrameSynapse

Manufacturing Execution System (MES)
Process Control System (PCS) — Production Level
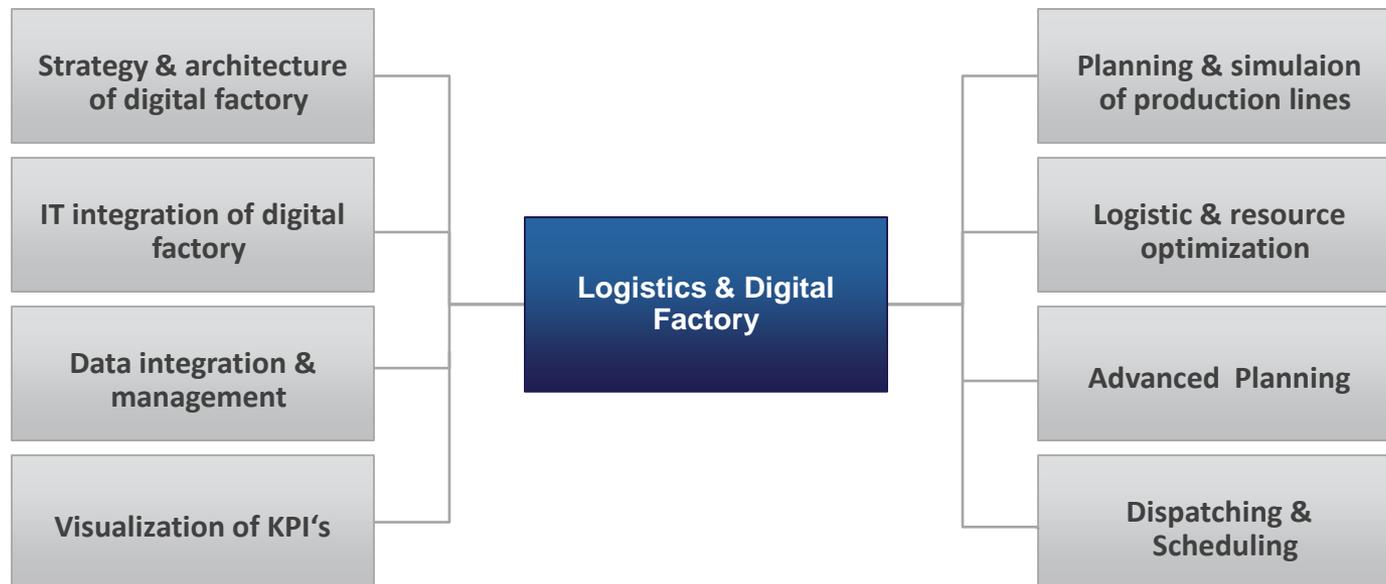
Equipment Integration

Equipment Level

Production IT Solutions: Life Cycle

acp-IT offers the complete service from conception and planning via implementation to maintenance and support.

Consulting & project planning	Software design & development
Requirement analysis IT concept Project planning	Design Development Test Documentation

Support & service	Integration & migration
Maintenance Support	Integration Training Ramp up

Logistics and Digital Factory

acp-IT offers proved know how for analysis, layout, simulation and optimization of production sites as well as their mapping in the digital factory.


Strategy & architecture of digital factory		Planning & simulaion of production lines
IT integration of digital factory		Logistic & resource optimization
Data integration & management	**Logistics & Digital Factory**	Advanced Planning
Visualization of KPI´s		Dispatching & Scheduling

acp-IT has developed a specific PV Library in AnyLogic™ shortening time and reducing the effort in order to create a factory base model.
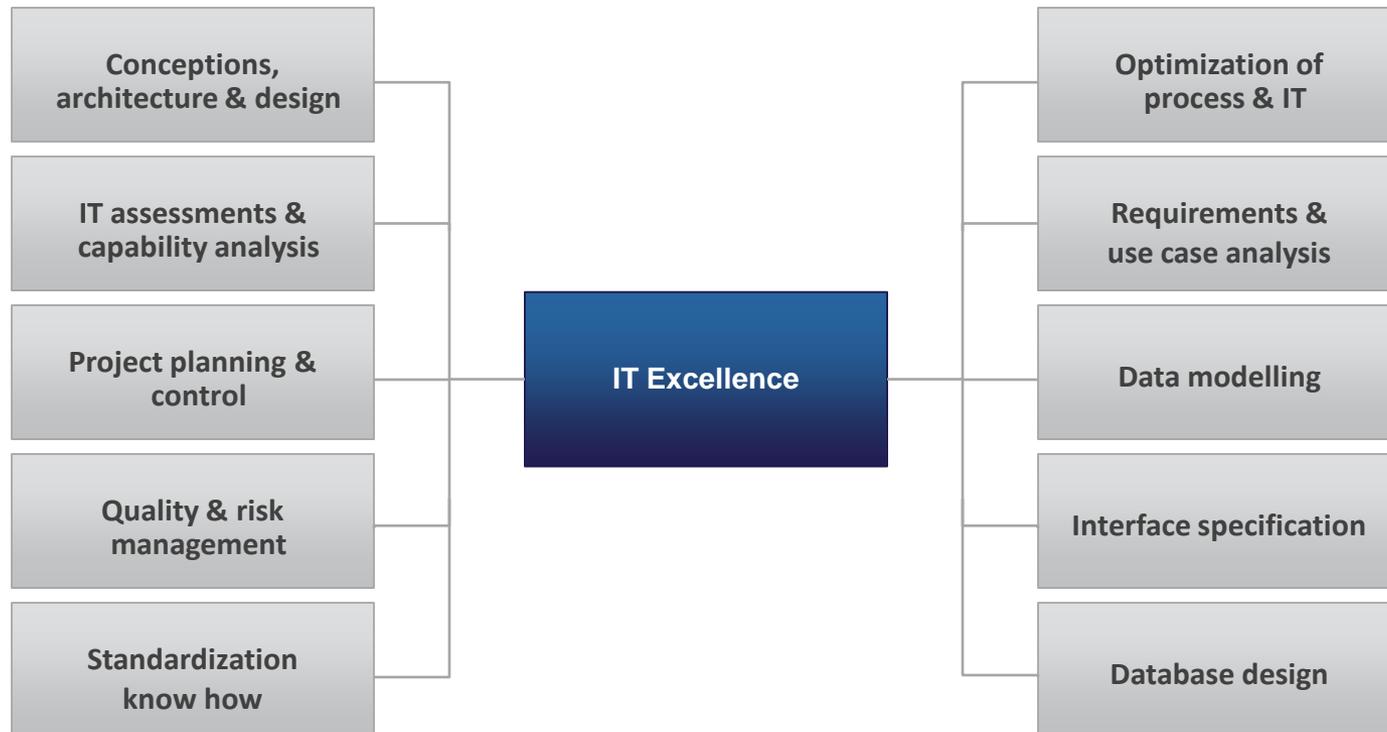
AnyLogic™ Simulator is

- a powerful multi-paradigm software for material flow modelling written in Java,

- provides a highly advanced flexible animation framework,

- enables excellent data visualisation and

- has the capability to run on any Java™-enabled platform and even to make simulation runs with generated applets.
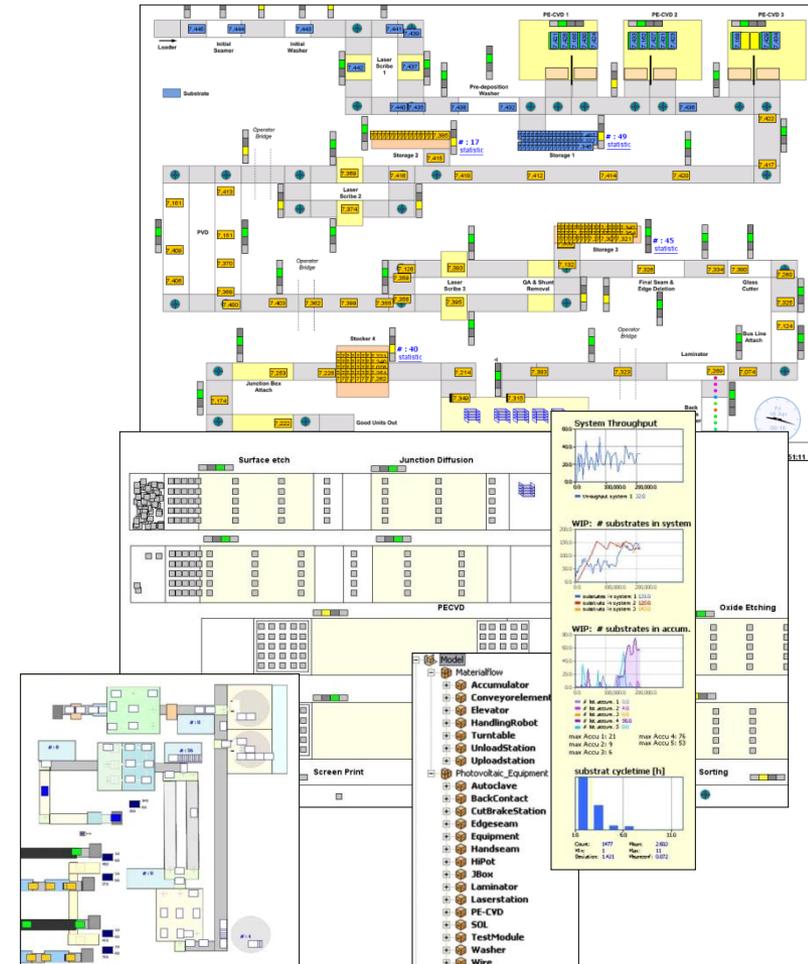
IT Excellence

We offer a complete service portfolio to supply our clients in IT project management which comprises technical and organisational aspects.

Conceptions, architecture & design		Optimization of process & IT
IT assessments & capability analysis		Requirements & use case analysis
Project planning & control	**IT Excellence**	Data modelling
Quality & risk management		Interface specification
Standardization know how		Database design

advanced clean production Information Technology AG

Overview:

- 62 employees

- Founded in 2001 as spin off of Fraunhofer Institute of Production Engineering & Automation, Stuttgart

- Key Accounts in the areas:

Photovoltaic	Semiconductor
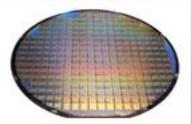
Discrete technology manufacturing	Automotive

Partners: FHG IPA, FHG ISE, Miraq LTD, DrSchenk, …
Active member of standardization organisations (e.g. SEMI, VDI, VDMA)
Certified according to DIN EN ISO 9001-2000

A network of implementation and service partners supports our customers worldwide

Partner network for InFrame Synapse

- A worldwide network of implementation and service partners is presently being build up
- Implementation and services (2nd level support) are handled by the local partners

SYSTEMA (Germany)

DrSchenk (Germany)

Xyratex Japan, Ltd. (Japan)

CH2MHill (USA, worldwide presence)

ACIS (China)

ORTEC LTD (Israel)

Duality Priniciple (USA, Portugal)

Miraq LTD (Singapore)

References (extract)

acp-IT AG has supported major companies in successful projects.

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Thank you for your attention.

Contact:

acp-IT AG
Handwerkstrasse 29, 70565 Stuttgart

Telefon   +49 (0)711 782 40 89-0
Telefax   +49 (0)711 782 40 89-10
eMail   info@acp-IT.com