

# Center of Excellences

## for global footprint strategy execution

S&OP support & contribution

Mar 2017

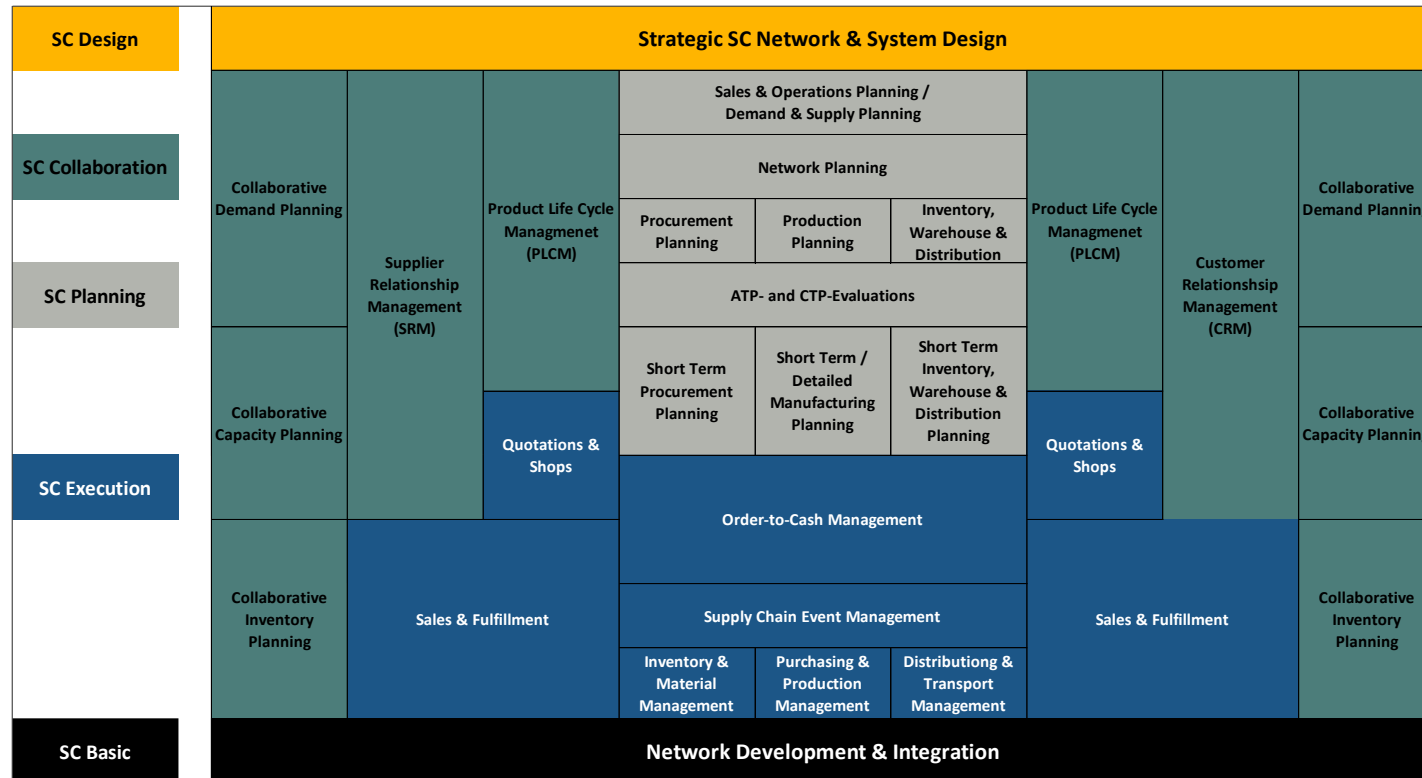
Christian Jahn (MBA / CSCP)

CoE

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# Component to the S&OP Process

# Supply Chain Management Model

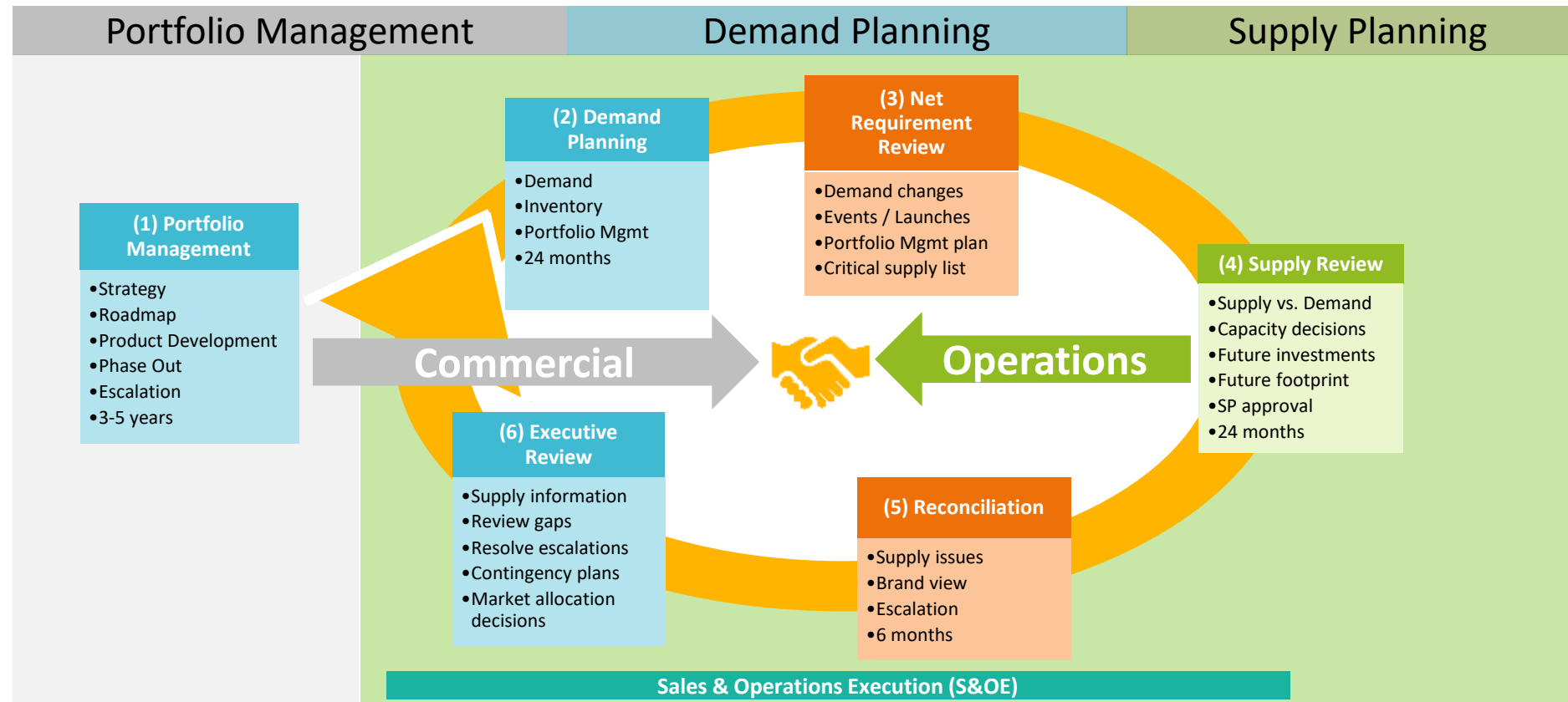


Sales & Operations Planning (S&OP) Framework

Reference: HNI University Paderborn – Concepts and Methods of SCM – Prof. Dr.-Ing. habil W. Dangelmaier

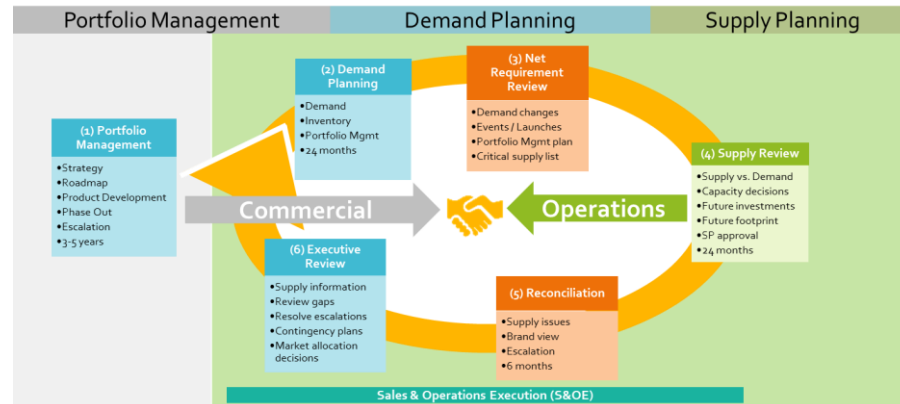
- Each company is working with a SCM Model, formalized or grown over time
- In general 5 major areas
  - **SC Design:** Overall strategy
  - **SC Basic:** Backbone like IT-Systems
  - **SC Execution:** Day-to-day business - the next 3 months
  - **SC Planning:** From 3 to 24+ months / long-term supply network evaluation / prepare for business growth
  - **SC Collaboration:** Framework to align the different areas
- All these areas = **framework for S&OP** process and organization in a company

# The S&OP Execution Cycle



- The **S&OP Execution**: standardized processes, structures and agreed planning cycle
- Different industries on different levels - leading sectors e.g. Consumer goods or Automotive
- With **company growth more and more important**
  - Link of different areas within an organization
  - Aligns operations with the real market demands
- Major components are based on 6 integrated modules
- **Key success factor: Owner on real executive level**

# The CoE Concept to support S&OP execution



The **Centers of Excellence (CoE)** approach can be used as a **component to the S&OP process** to design, build and implement the needed network for the Supply Planning execution.

## Definition

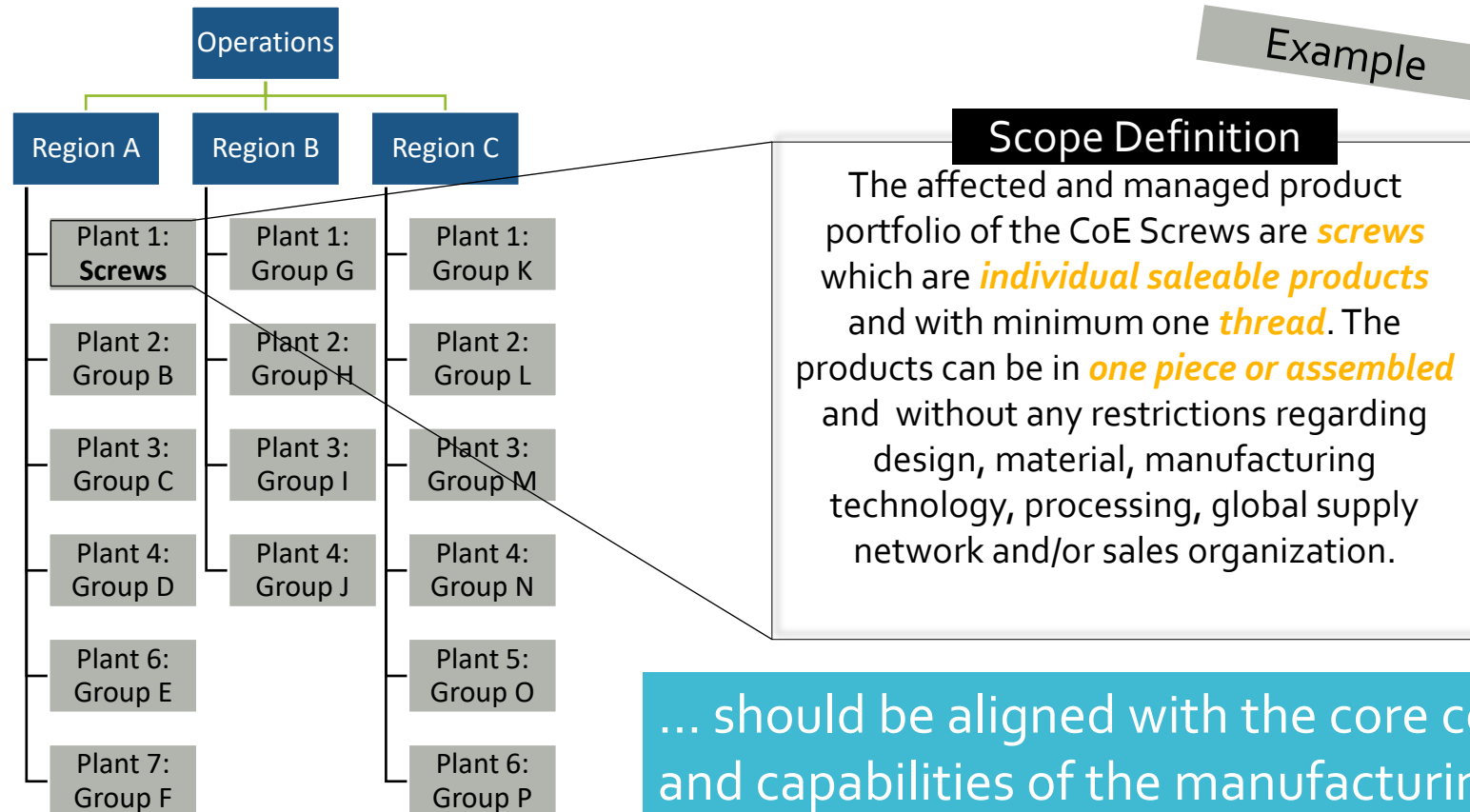
- Is defined for a certain **product group**
- Is responsible for **advancing manufacturing** processes and setting standards
- **Collaborates** with other manufacturing sites
- Is composed of a **distributed team** and well-appointed with appropriate management competencies

## Responsibility

- Cross functional **Collaboration** within Organization
- **Major contact** for new product introduction
- **Best practice** & knowledge leverage
- Driver for **business process development** & changes
- Cost & **complexity reductions**
- **Standardization** & automation

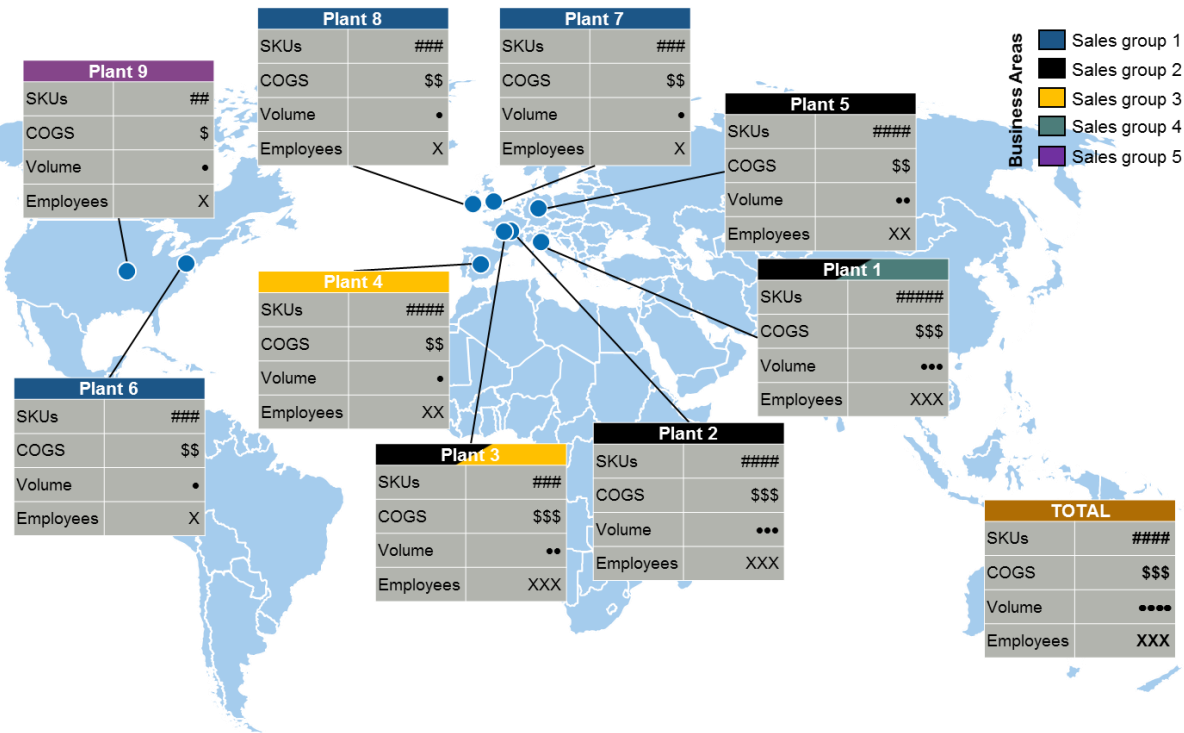
- CoE concept - **significant support for the S&OP execution** to build up the needed manufacturing footprint
- In case if S&OP is not available - CoE concept could be an **approach to start long-term planning processes**

# The organizational implementation ...



- Organizational set up should be aligned with the existing plant network and core competencies
- A clear scope definition helps to build up the understanding within the organization

# The global as is network ...



... drives the CoE strategy, aligned with the overall footprint strategy and the goals to support long-term business growth, cost and complexity reduction, business continuity risk mitigation as well as core technology & competence development.

- Starting point for the CoE evaluation & implementation is the **existing network**
- Often a lot of locations produces **similar products** - but only **less with focus, core competence, high volume and latest technologies**
- Transparency needs to be gain by a network analysis

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Standardization

Long-term capacity flexibility

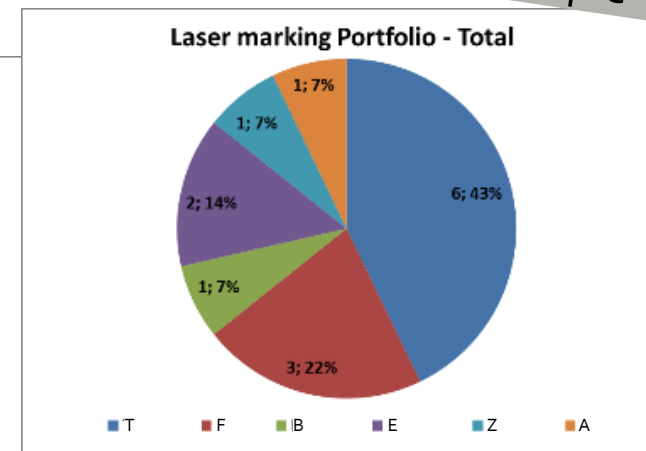
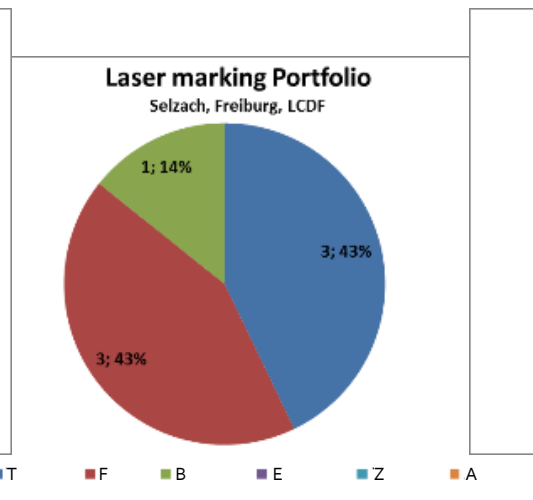
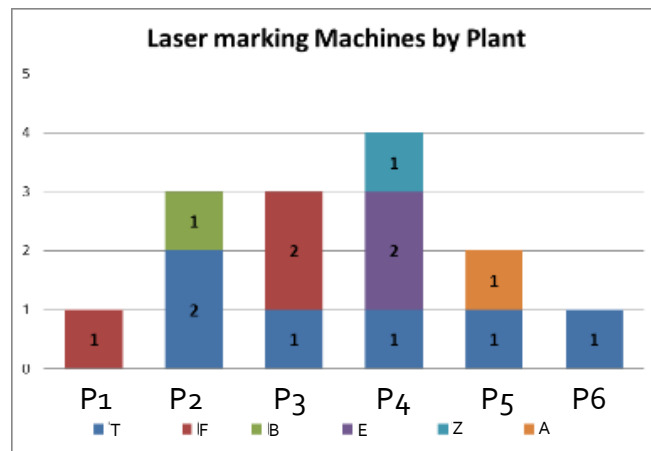
Supply chain integration



# The equipment and technology analysis ...

Type of Technology	Plant 1	Plant 2	Plant 3	Plant 4	Plant 5	Plant 6
Product marking	1x Brand F	1 x Brand T Type A 1 x Brand T Type B 1 x Brand B	1x Brand T Type A compact 2x Brand F	2x Brand E 1x Brand Z 1x Brand T Type C	1x Brand A  Supplier: 1x Brand T	1x Brand T Type A

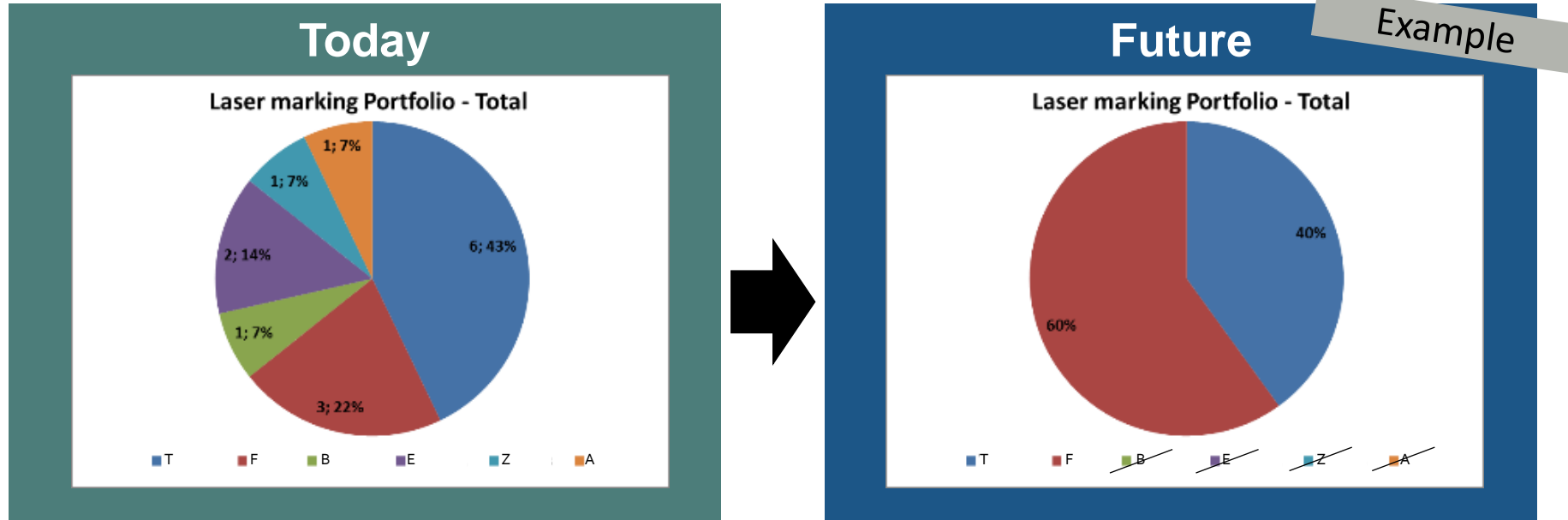
Example



... for the key processes is a starting point to drive the standardization strategy.

- **Standardization** - key element to enable growing capacity flexibility and resource sharing
- Starting point of the analysis within the CoE
- Driver for **complexity and costs**
  - Low purchasing power
  - Multiple CNC programing systems
  - Different processes and tools
  - Different outcomes
- The technologies in the major plants could be an indication for the standardization

# The technology and equipment standardization ...



## ... supports different opportunities:

- Increased network leverage capabilities and capacity flexibility
- Reduced complexity
- Broader know how base
- Global contracts, reduced purchasing prices
- Process and program standardization → easier design and manufacturing transfers

- **Standardization strategy** will be developed - presented to CoE Steering Committee for approval
- Execution **embedded in the local investment budgets** for the upcoming years
- The definition of SME can support the needed know how transfers

# The technology matrix gap analysis ...

⚠ Gap ⏻ Started ← Available

Today	CNC			Inspection			Automation			New Processes		
Impact Area	P1	P2	P3	P1	P2	P3	P1	P2	P3	P1	P2	P3
Quality	←			←	←	←	⚠					
Customer	⚠	⚠	⚠							⚠		
Service	←						⚠	⚠	←			⏻
Cost				⏻	⏻	⏻	⚠		←			

... needs to reflect and follow the Marketing, Sales & R&D Strategy and delivers the process development & investment demand per location within the network.

- The overall **technology matrix analysis** within network – major goals:
  - **Gap identification** - long-term business needs (e.g. NPI)
  - **Cost reductions opportunities** - weak processes
  - **Basement - technology development strategy**
- Benchmarking other industry sectors and market trends should be considered in addition

# The technology investment roadmap ...

⚠ Gap ⏻ Started ← Available

Future	CNC			Inspection			Automation			New Processes		
	P1	P2	P3	P1	P2	P3	P1	P2	P3	P1	P2	P3
Impact Area												
Quality						20xx: Anodization	←					
Customer	20xx: Product marking	←	←						20xx: New Metal	←		
Service						20xx: Integration / Industry 4.0	←	←			20xx: Cap. Redundancy	←
Cost				20xx-xx: Inspection / Packaging automation	←	←	←	←				






Today	CNC			Inspection			Automation			New Processes		
Impact Area	P1	P2	P3	P1	P2	P3	P1	P2	P3	P1	P2	P3
Quality	←			←	←	←	⚠					
Customer	⚠	⚠	⚠							⚠		
Service	←						⚠	⚠	←			⏻
Cost				⏻	⏻	⏻	⚠		←			

... is a major driver for the long-term capacity-flexibility.

- Outcome: long-term & approved investment roadmap
- **Standardization & capabilities growth** - significant increase capacity-flexibility within network
- Manufacturing **transfers** - easier or maybe even at all possible
- **Dual Sourcing during NPI** - business risk mitigation become from beginning on
- CoE PMO is needed - project owner = affected plant managers

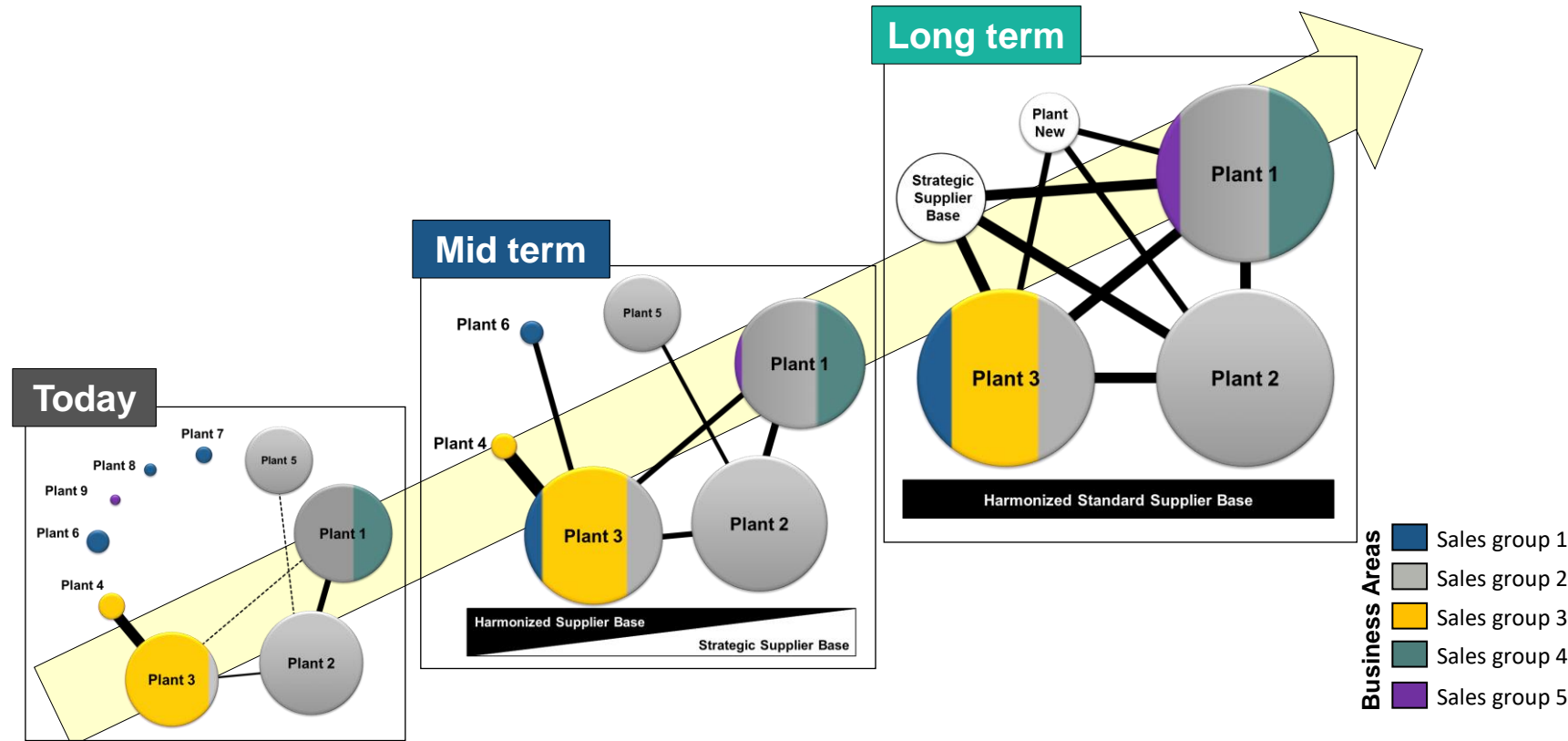
# The CoE network development strategy ...

LOCATION	INVEST	SPACE	VOLUME	NPI	HC	NOTES
Plant 1 (Core Competence)	↑	↗	↗	↑	↗	<ul style="list-style-type: none"> <li>• Increase Capacity for ...</li> <li>• Additional SQM based on ...</li> </ul>
Plant 2 (Core Competence)	↑	↔	↗	↑	↗	<ul style="list-style-type: none"> <li>• Output increase due to ...</li> <li>• Headcount in align with ...</li> </ul>
Plant 3 (Core Competence)	↑	↑	↑	↑	↑	<ul style="list-style-type: none"> <li>• Additional equipment planned for ...</li> <li>• Output increase due to ...</li> </ul>
New Plant	↑	↑	↑	↑	↑	<ul style="list-style-type: none"> <li>• Regulatory Strategy based on ...</li> </ul>
...	↓	↘	↘	↓	↘	<ul style="list-style-type: none"> <li>• ...</li> </ul>
Plant 9	↓	↓	↓	↓	↓	<ul style="list-style-type: none"> <li>• NPI and re-investments until end of ...</li> </ul>

 Increase / New / Yes    
  Limited    
  Equal / Neutral    
  Decrease after 20xx    
  Decrease / No

- Footprint development strategy - another important topic
- Needs to be **aligned** with the overall **company strategy**
- Long-term consolidation - key to increase leverage & reduce complexity
- Input: **network analysis** results + “**real**” **core competencies**
- After approval yearly review should be done, e.g. to integrate M&A impacts

# ... drives the global footprint development ...



... and the long-term supply chain integration.

- **To final stage** - strong integrated supply chain network
- Looks **different for each CoE** - maybe coming from 2 plants to 4 instead of a reduction
- Can be used for **communication within the Company**
- Needs to be reviewed on a regular base to take changes and progress into consideration

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# Cross-functional and -organizational collaboration

# The needed CoE Management Board ...



... is a key enabler for cross-functional and -organizational collaboration.

- The CoE Management board is a cross-functional and global team (Matrix)
- **Clear roles** and responsibilities needed
- CoE should be lead by a **CoE Leader**, reporting into Sr. Management
- **Success factor:** clear & communicated support by **Senior Management**
- Business process needs to be reviewed and adjusted (e.g. decision processes for investments)
- A **governance model** is needed (reporting, review and decision cycles)



## The approach of Centers of Excellence (CoE) to manage a global footprint strategy

- Is an additional / optional **component to the S&OP Process**, but can also be implemented as stand alone approach
- Can **drive standardization**, increase the long-term **capacity flexibility** and support **supply chain integration**
- Is an enabler for cross-functional and -organizational **collaboration**

# Author

Introduction summary

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Diplom-Betriebswirt (BBA) – DHBW Lörrach

MBA (Business Integration) – Julius-Maximilians-University Würzburg

Certified Supply Chain Professional (CSCP) – APCIS

Chief Technology Manager (CTM) – WZL RWTH Aachen & Fraunhofer IPT

SAP Certified Business Associate (ERP 6.0)

## Professional Background

- Supply Chain Management, Planning & Execution
- Operations & Plant Management
- Business Process Development, Implementation & Validation
- ERP & IT Solutions
- Quality Management
- 20+ years in Metal Processing & Medical Device Industry

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