Classification of all material masters in PARTsolutions and SAP, based on the example of wind-energy engineering company REpower Systems SE

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D&TS Simplified Business Processes

Agenda

- REpower as a business and its products
- Material classification actual and target
- The project
- Expansion stages
- PSOL Key-Features / Cooperation with D&TS / CADENAS

REpower – founded in 2001 as a result of a merger of multiple companies

pro+pro product + project development

Denker & Wulf

Jacobs ENERGIE GmbH

HSW Windenergie GmbH

bwu

REpower Systems

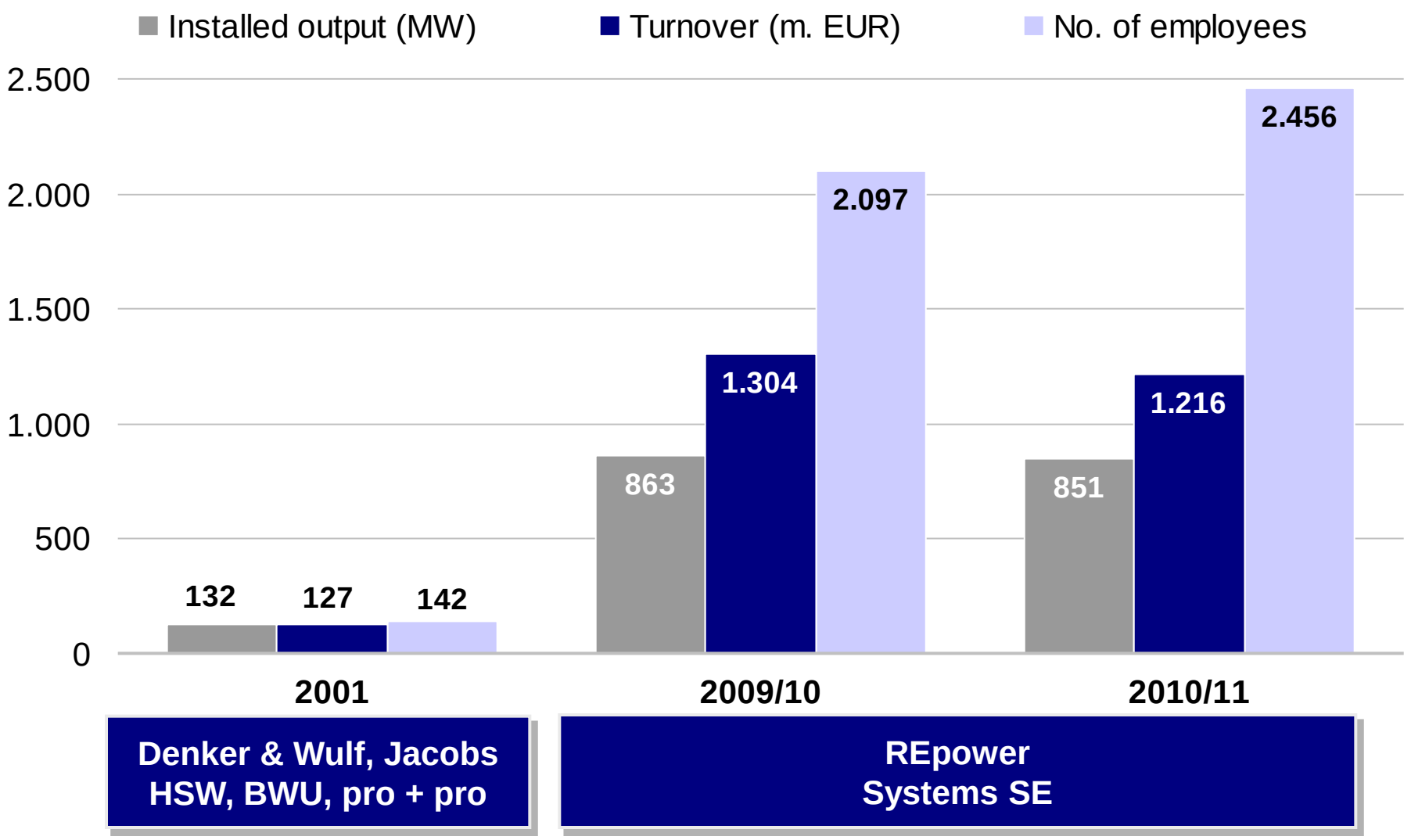
REpower TechCenter

REpower 5M/6M Production facility

REpower Husum

REpower Powerblades

A small engineering company turns into a global player



Product portfolio

	Installation type	Nominal output (MW)	Prototype installation
Offshore installations	6M	6.15	2009
	5M	5.075	2004
Onshore installations	3.4M104	3.40	2009
	3.2M114	3.20	2011e
	MM92	2.05	2005
	MM82	2.05	2003
	MM100	1.80	2011e
Licensed installations	MD77	1.50	2000
	MD70	1.50	1998

Innovations: High-tech offshore and onshore.

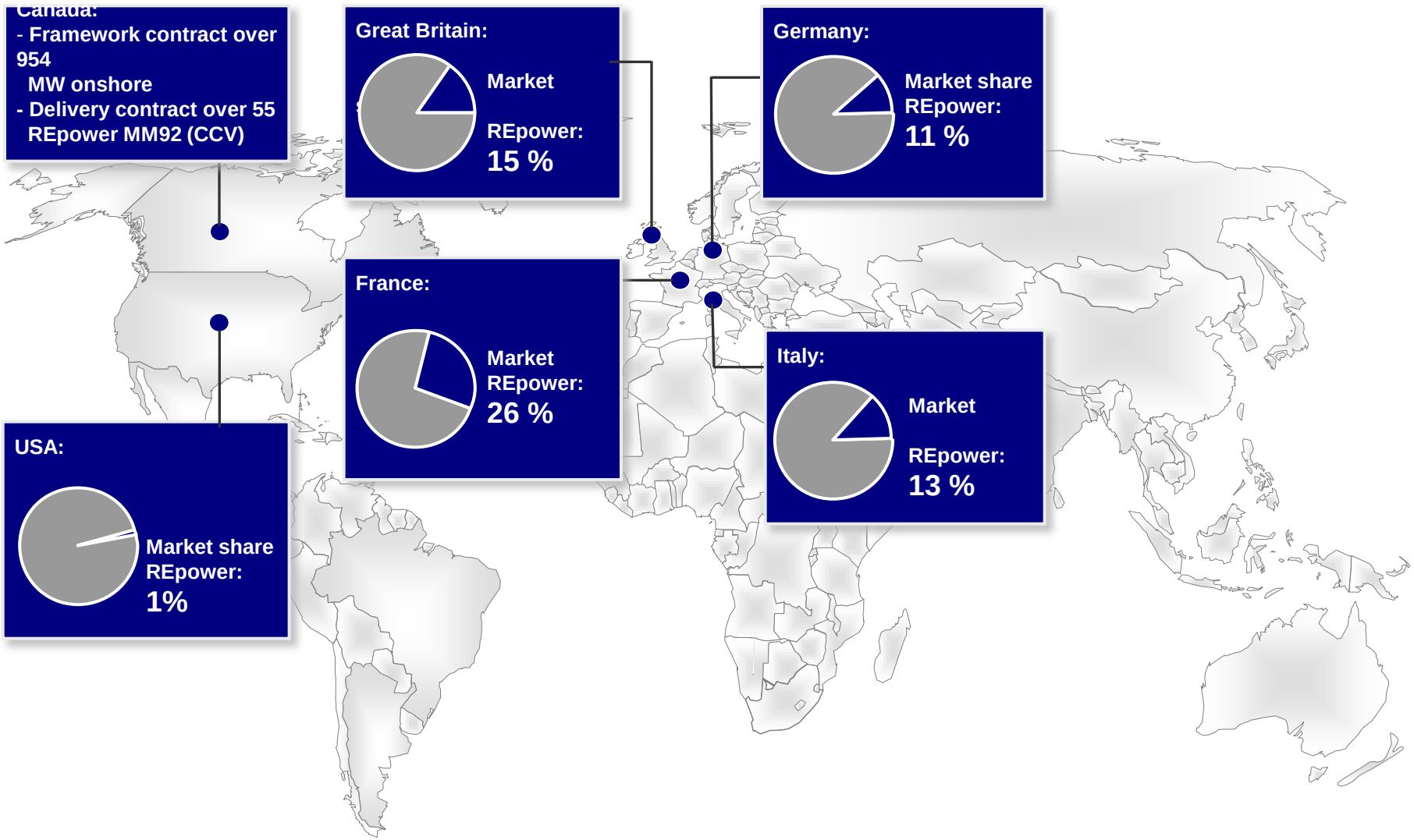
REpower 6M

REpower 3.XM series

Installation type	6M
Nominal output	6.15 MW
Rotor Ø	126 m
Hub height	Onshore: 117 m, offshore: 85-95 m (location-specific)
Nominal wind speed	14.0 m/s
Certification	Offshore IEC Ib, REpower S-classes, onshore IEC class B/IIA

Installation type	3.4M104	3.2M114
Nominal output	3.40 MW	3.20 MW
Rotor Ø	104 m	114 m
Hub height	78-80 m, 96.5-100 m, 128 m Hybrid tower	93 m, 123 m
Nominal wind speed	13.5 m/s	12.0 m/s
Certification	IEC Class IB/IIA	IEC Class IIIA

REpower has respectable market shares, most notably in its core markets



Offshore milestones:
German offshore field test alpha ventus

Construction of six REpower 5M installations on 16. November 2009.

Client: DOTI GmbH

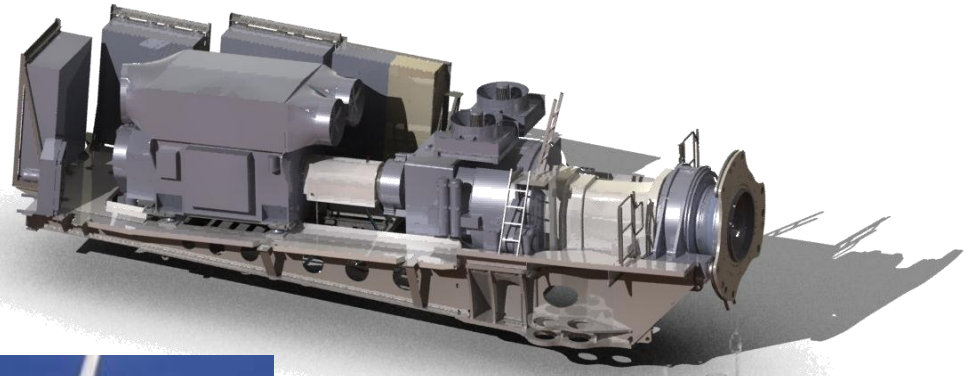
Location: German North Sea, 45 km before Borkum

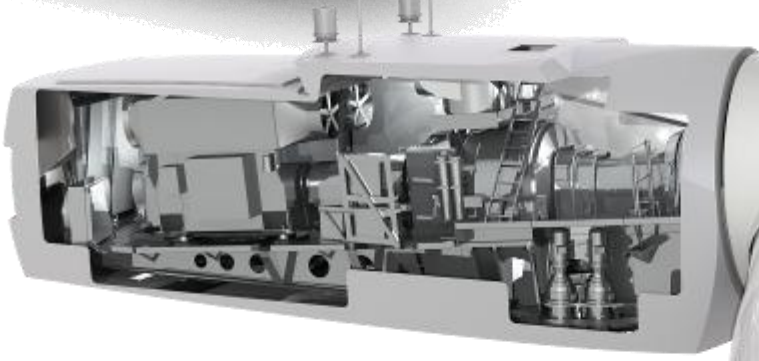
Turbine type: 6 x REpower 5M

Output: 30 MW

Rotor Ø : 126 m

Impressions





Agenda

REpower as a business and its products

Material classification, actual and target

The project

Expansion stages

PSOL Key-Features / Cooperation with D&TS / CADENAS

Material classification, actual and target

What is our background?

- Engineering office, small groups
- Significant detailed and varied development and research
- File saving is file system based
- Systems are the main consideration - "BlackBox" drives, converters, etc.
- Manual material data management in SAP

Available working principles?

- SAP is the central logistic system
- The drawing represents the document
- Material management processes in SAP are quite easy
- Master data are managed centrally, constructional engineers submit change notifications

Material classification, actual and target

What do we want to achieve?

- Corporate group, spread locations
- Significant detailed and varied development and research
- File-saving development master data, database supported -- SAP
- Systems right down to spare parts level are considered → Spare parts catalogs
- Automated material data management based on available supplier catalogs

Available working principles?

- SAP is the central (logistic) system
- Development master data use / support processes
- Material management processes ensure high data quality
- The constructional engineer manages the master data himself; a central standardization office ensures data quality

Material classification, actual and target

Ideas / requirements

- We require classification structures and parts attributes in SAP
- We have to identify and avoid duplicates
- We have to simplify part searches and location
- We want to create a basis for electronic catalogs
- We have to be able to compare parts of different suppliers

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The project: Point of departure

SAP as a strategic platform

- With REpower Systems SE, SAP is a strategic platform
- SAP is the central system for logistic processes
- SAP is available virtually everywhere
- At this stage, SAP is already providing the infrastructure
- SAP has a number of relevant PDM-functions

Moving from "simple" material classification to PDM/PLM functions

Systems used i.e. dependent on:

- SAP
- Solid Works
- xPLM
- EPLAN P8
- Catia V5
- Etc.

The project: Service provider selection

Criteria (amongst others)

- Experience in the field of
  - classification systems
  - ecl@ss
  - CAx
  - SAP
- A provider for all products / catalogs
- Simple and homogeneous user interface
- Limited customization in the SAP system
- Handling of large assemblies
- Features such as conversion, start-up, geosearch
- Direct contact with the system house
- Overall costs, low-priced solution

The project: Project organisation

Project order PSP: E.000105

- Project management: R&D
- Project team: R&D, Global Supply, Operations and maintenance, Support centre, etc.
- External adviser: D&TS; CADENAS, Itelligence AG

The project: Project organisation

Project targets

- Using data from suppliers' catalogs
- Material classification in SAP and PSOL
- Improving / safeguarding data quality
- Search optimisation within SAP
- Avoiding duplicates
- Based on international standards (e.g. eCl@ss; ETIM)

Transparency in accordance with REpower terminology

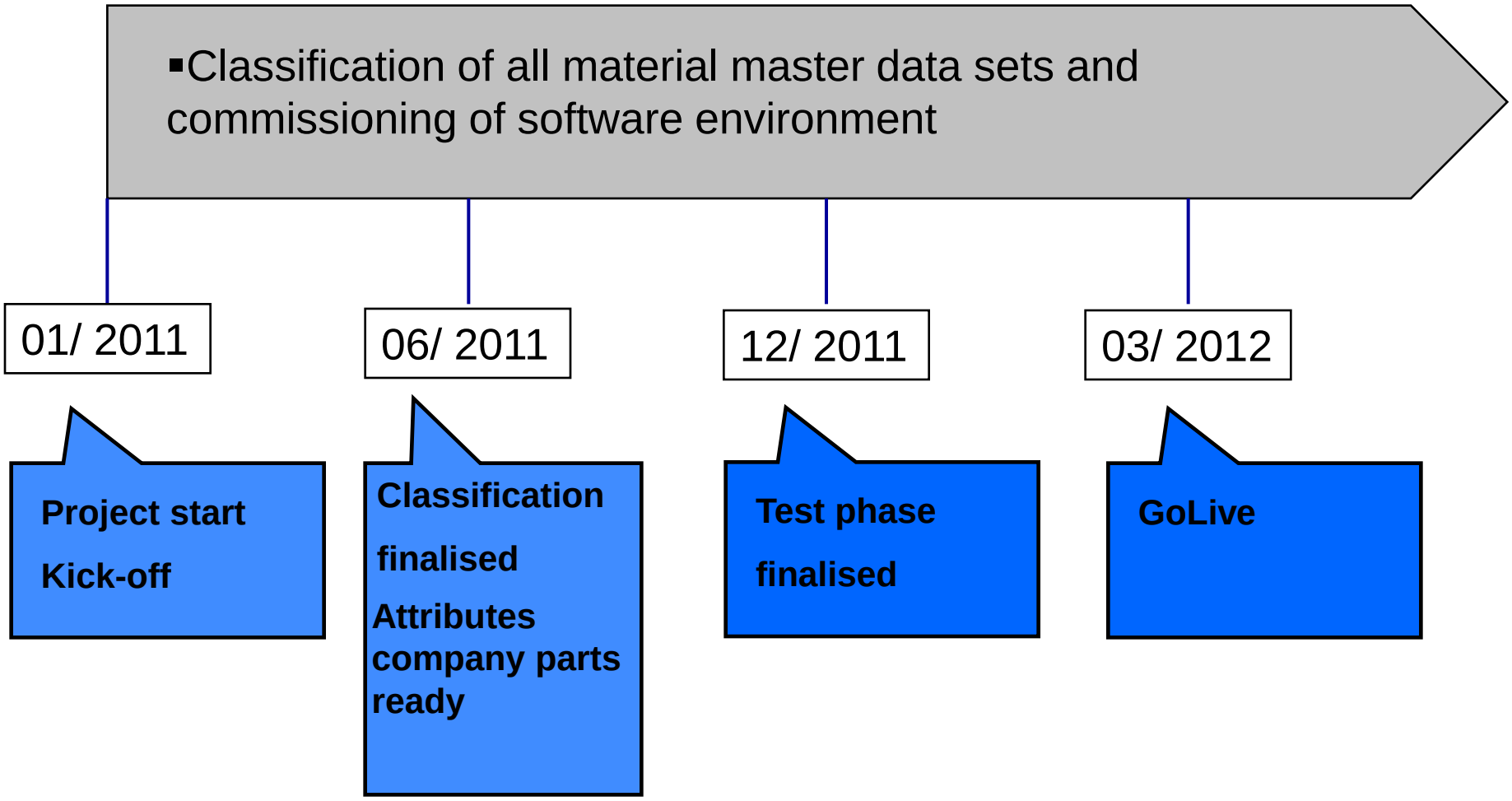
Project stages

What needs to be done within the project.....

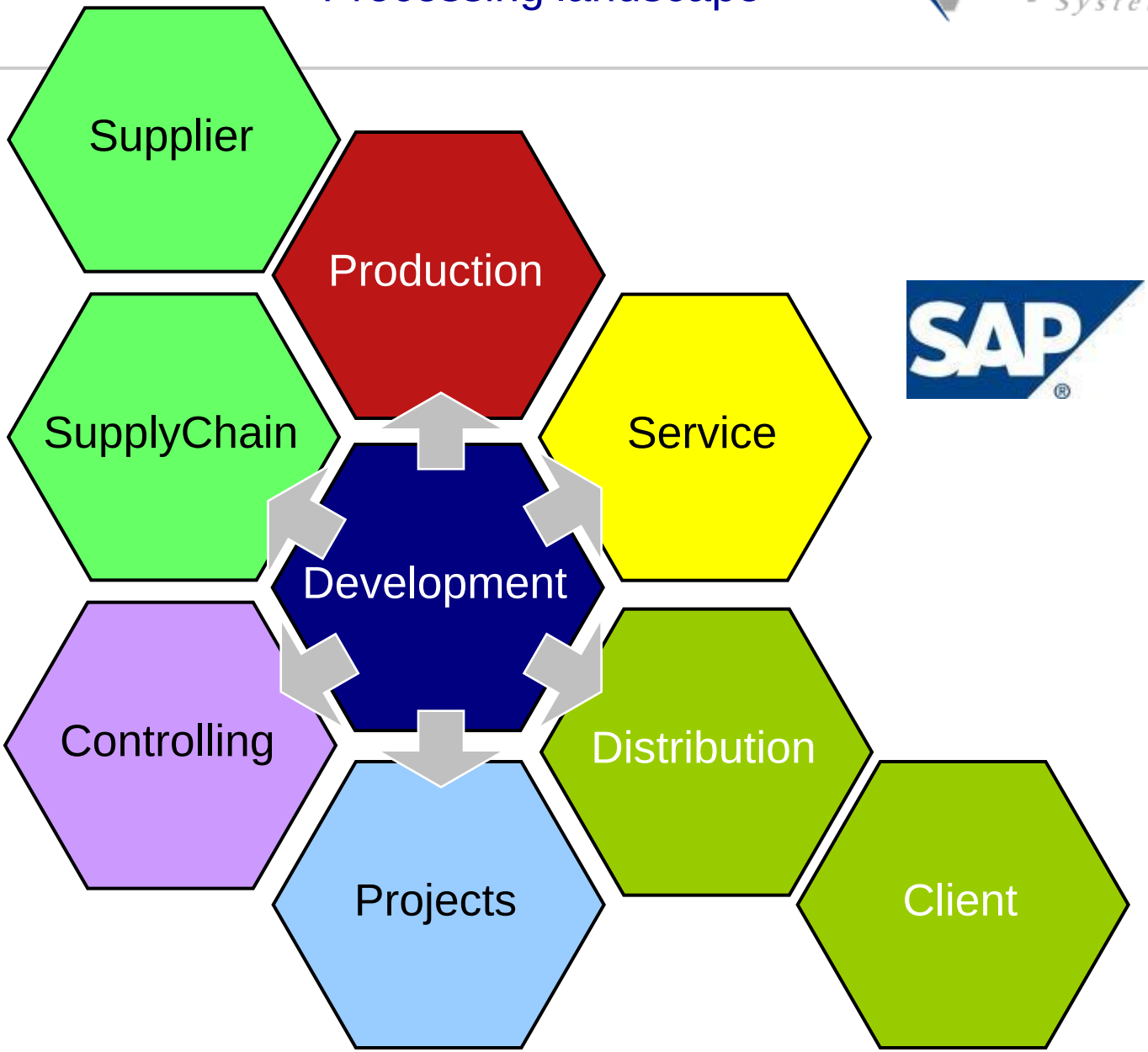
- Analyse existing material master data
- Classify material master data; populate characteristics and characteristic values
- Check / update material - document links
- Plan, implement SAP customization and set up infrastructure
- Define processes; define / program interfaces
- Specify access rights and roles in SAP and PartSolutions
- Comprehensive integration tests
- Planning and preparing training courses
- Close contact with solution provider

- Ensure that your work convinces with regard to
  - model versioning and release
  - neutral, internally registered document numbers ("non-identifiable" ID)

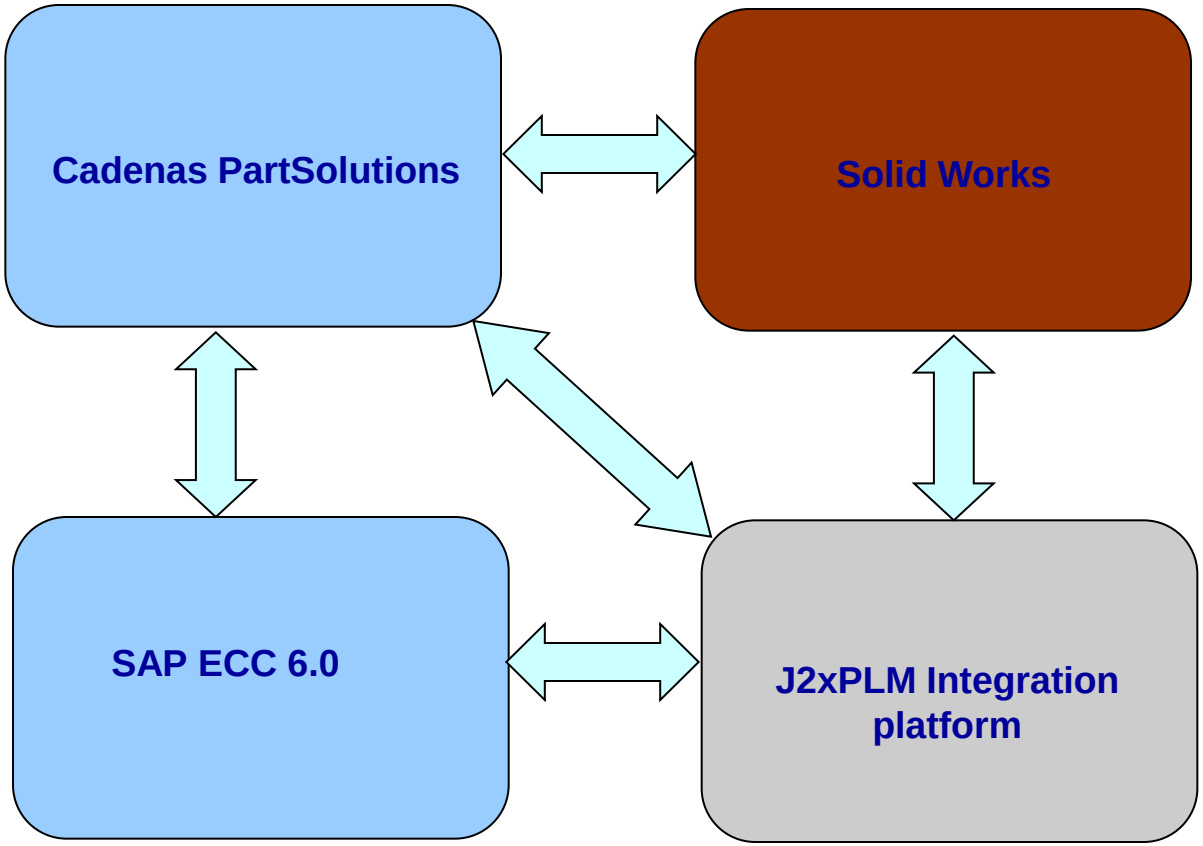
The project: Project timeline



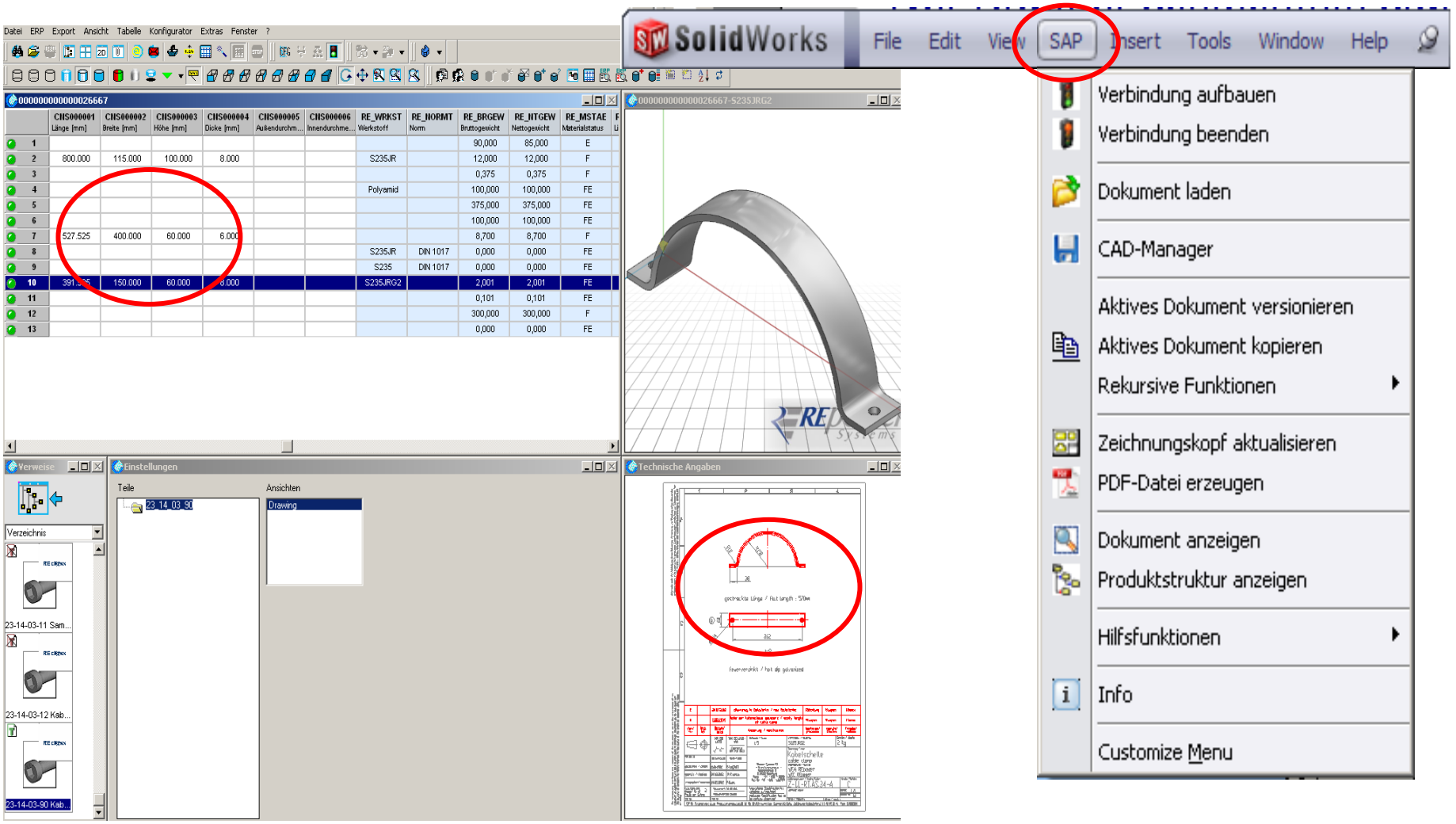
Processing landscape



The project: Project environment - interfaces



Intermediate result



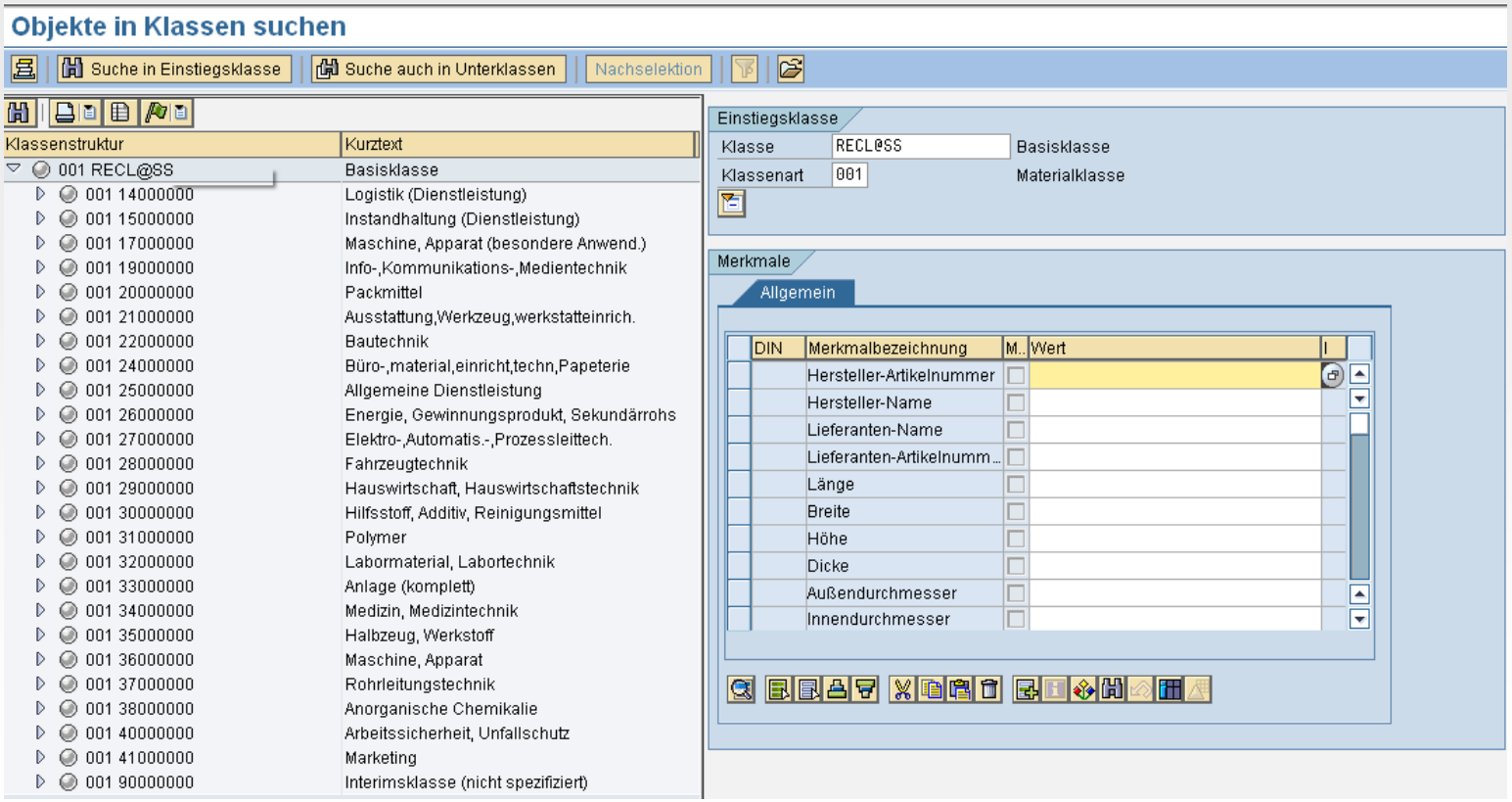
The project: Intermediate result

Steps towards GoLive

- more than 23,700 (+6,000 Delta) materials classified
- approx. 6,000 3D-models read, converted and linked
- interfaces defined; programming / fine tuning in progress
- produce training course documentation / prepare training courses

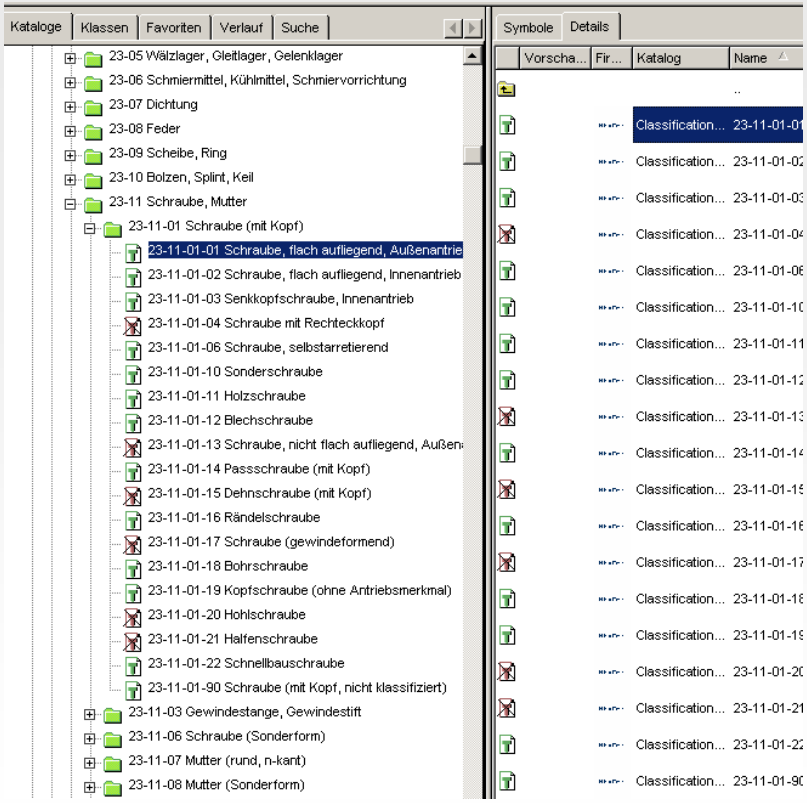
Locate materials in SAP

Using hierarchic class searches

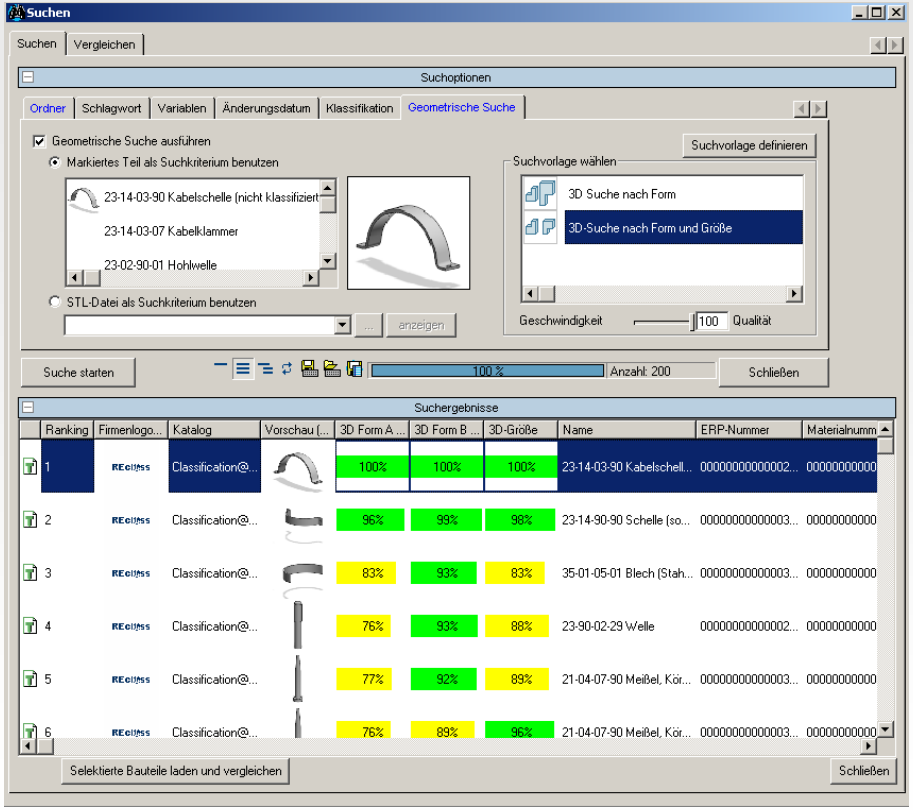


Locate materials in PartSolution

Hierarchic class search



Geosearch



The project: Key points

GoLive qualities

- Import of electronic data from catalogs during data creation process
- Continuous management process via CAD-xPLM-PSOL-SAP
- Improved data quality and management information with regard to material master
- Fast search and location of parts / assemblies
- Company-wide access to classification data in SAP and PSOL
- Integration into existing data creation process
- Automation possibilities

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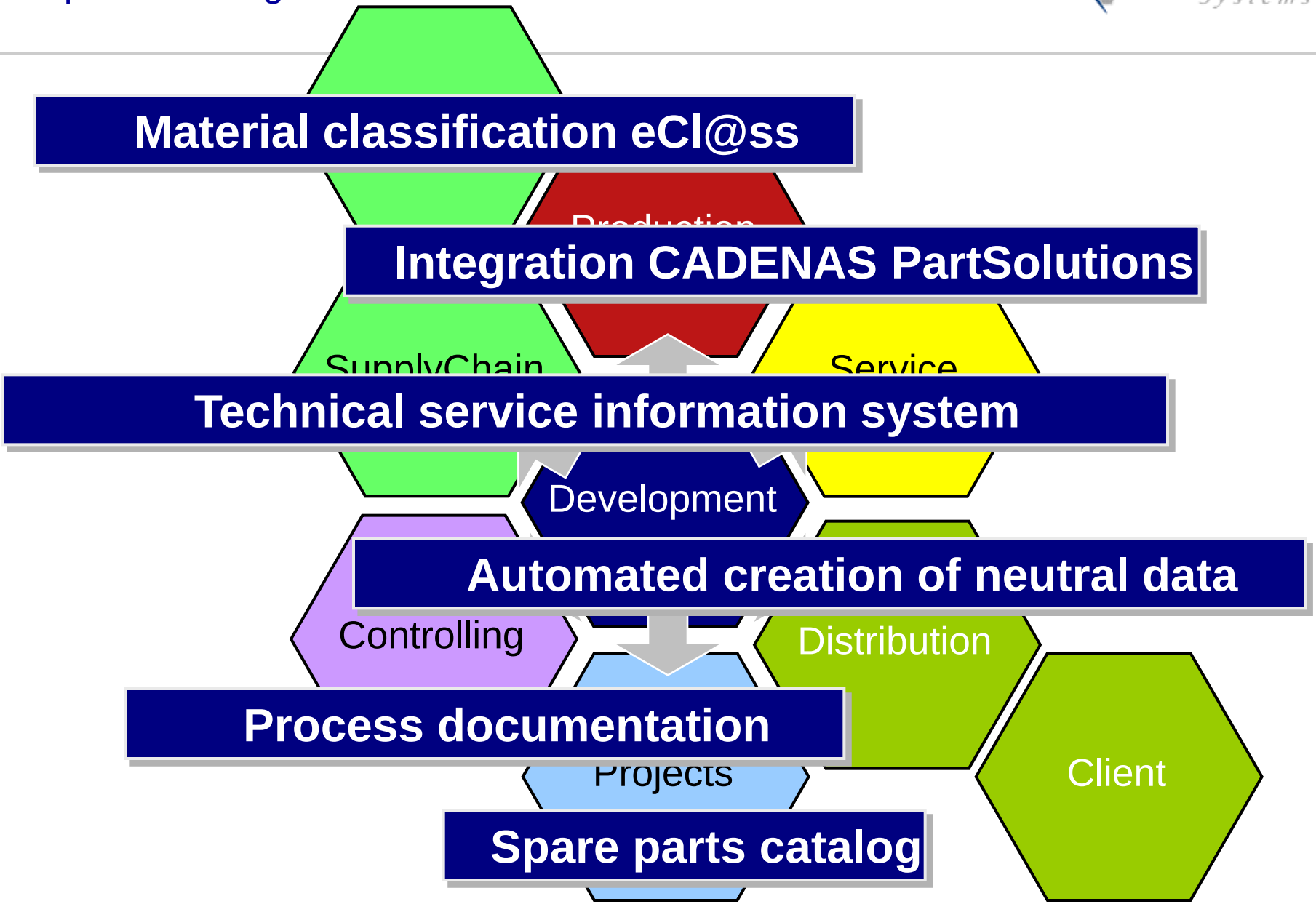
Expansion stages



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- **PSOL Key-Features / Cooperation with D&TS / CADENAS**

PSOL- Key features

Excellent features

- Integration of a large number of supplier catalogs
- Minimal customizing in SAP (using standard functions MM)
- System configuration via parameter files
- Product transparency for engineers and buyers
- Allows for data transparency (Avoid duplicates)
- Simple and homogeneous operation

Cooperation with D&TS / CADENAS

- A wealth of experience in this field
- Continuous project support
- Close cooperation with regard to solution design
- Open-minded about "new“, still to be developed, requirements
- Extremely satisfied with the qualified support

Thank you for your attention

Any questions?

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