

IT Support in Decommissioning



International Conference on
Decommissioning of Nuclear
Installations: Strategies,
Practices and Challenges

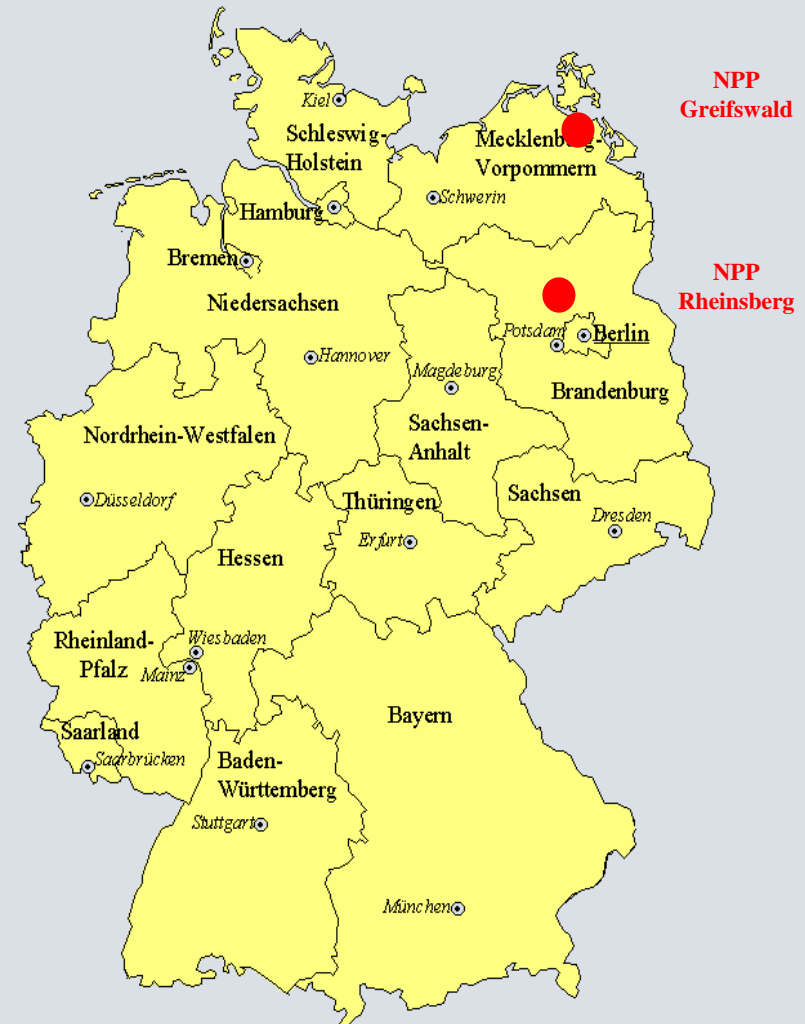
10 November 2015

Markus Birkholz

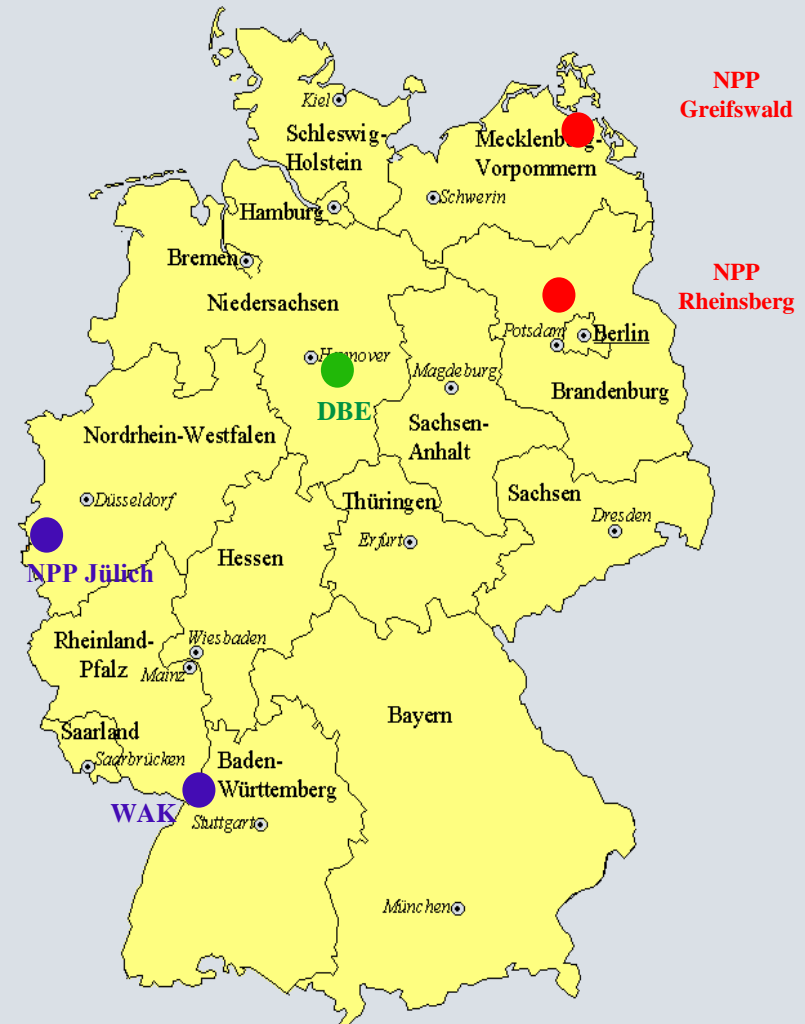
EWN GmbH

- **Till 1990 (1995):**
Operation of the NPPs at the Greifswald and Rheinsberg sites (as state combine)
- **Since 1995:**
Management of decommissioning projects of the above mentioned NPPs (including planning, licensing and implementation with own staff)

→ Our main business



- **Since 2003**
Management of decommissioning the high temperature gas cooled research reactor at the Jülich site - JEN (former AVR)
- **Since 2006**
Management of decommissioning the pilot spent fuel reprocessing plant at the Karlsruhe site – WAK
- **Since 2008**
Shareholder of the DBE (head company for the erection and operation of RAW disposal facilities)
- **Since 2008**
Service provider for decommissioning of NPPs in Germany



- **Since 1997**
Participation in different international projects in the field of NPP decommissioning
- **Since 2003**
Decommissioning of Russian nuclear submarines (Murmansk)



1. Structure of Decommissioning Management Software
2. Lessons learned in the frame of developing of a Decommissioning Management Software

1. **Structure of Decommissioning Management Software**
2. Lessons learned in the frame of developing of a Decommissioning Management Software

- Successful decommissioning of NPPs is primary an organisational and logistic challenge
- Organisation and logistics are very complex tasks with a continuously rising amount of data
- Specific demands on project planning/calculation, supervision and documentation

- To make decommissioning process transparent
- To get real and convincing information about all important subjects concerning decommissioning process or their effects at any time
- To support decision-making processes in the course of decommissioning to increase safety and efficiency
- To collect, systematise and evaluate experience in the course of decommissioning, such as for future decommissioning projects

Support of the Project Management in following primary areas:

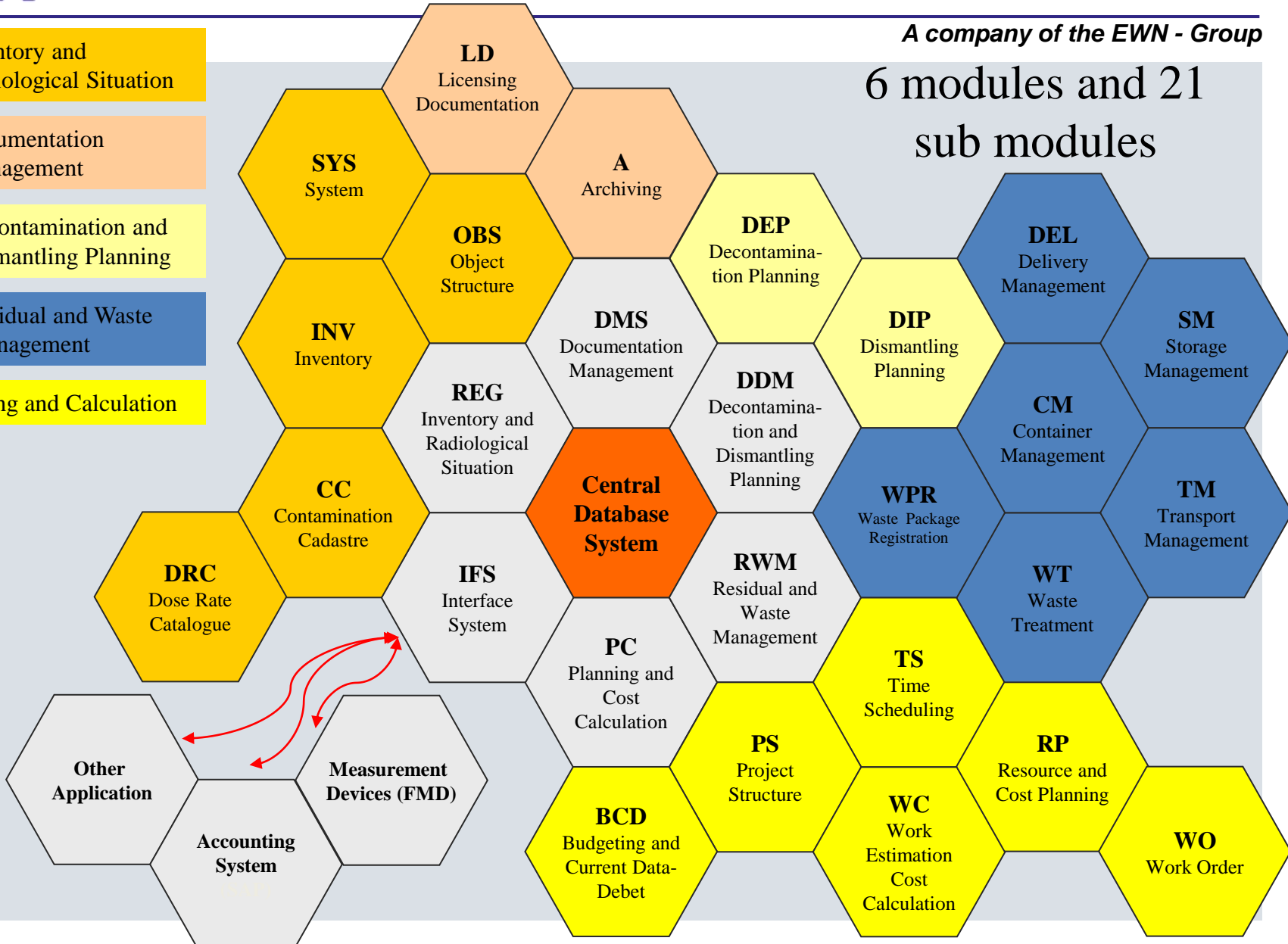
- Planning
- Cost calculation
- Material flow supervision
- Work preparation
- Work permission procedure
- Documentation (project progress, material/waste flow etc.)
- Reporting
- Project controlling

Structure for DeManS

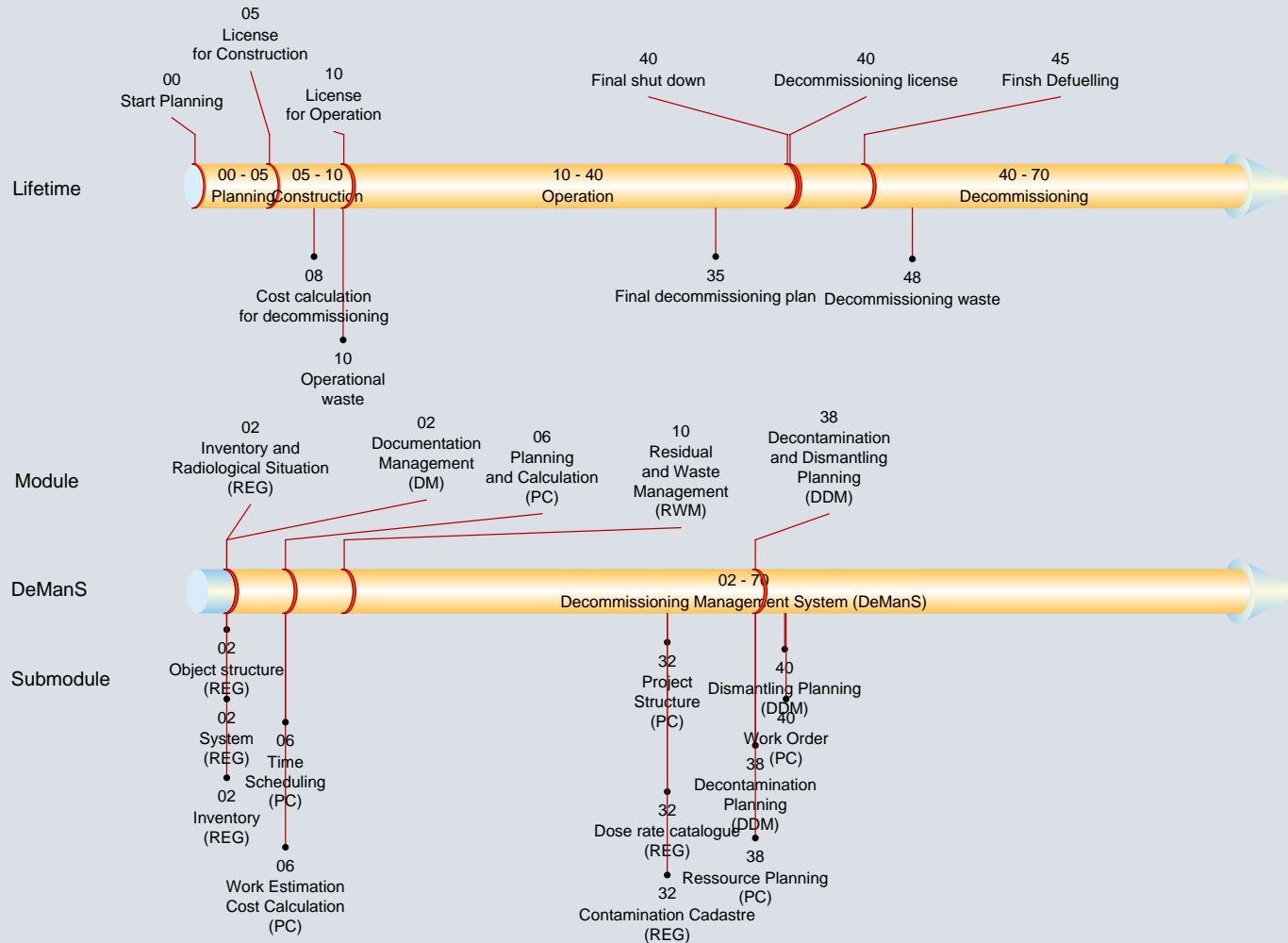
A company of the EWN - Group

6 modules and 21 sub modules

- REG – Inventory and Radiological Situation
- DMS – Documentation Management
- DDM – Decontamination and Dismantling Planning
- RWM – Residual and Waste Management
- PC – Planning and Calculation



- IT System for supporting decommissioning activities



Single database:

- Management of all consistent decommissioning data
- Availability of actual data at any time
- Structured data storage
- Easy and flexible data management

- Centralized data base – consistency of data
- Centralized access
- Uniform user interface
- Modular structure of the Decommissioning Management System and also internal of each module
- Implementation of the modules step by step (dependent of the project progress)
 - Adaptation of Decommissioning Management System to the needs of the requirements – number of modules and submodules
 - Sharing the costs on several years

1. Structure of Decommissioning Management Software
2. Ideal structure for Decommissioning Management System
3. **Lessons learned in the frame of developing of a Decommissioning Management Software**

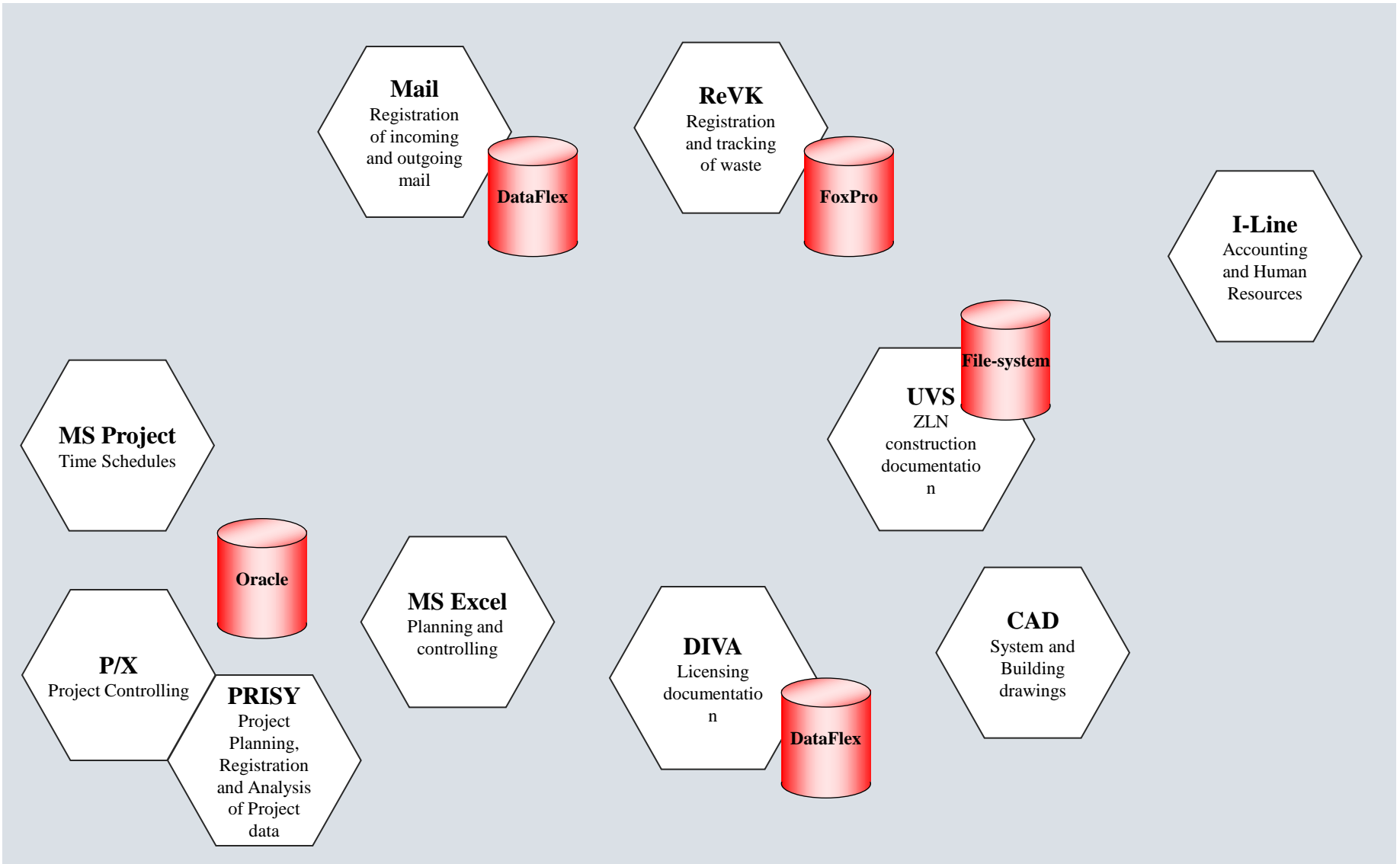
- Decommissioning is not a generic business. So you can't use generic software!
 - The Decommissioning Management System must be tailored to the specific standards, processes and demands of the decommissioning project.

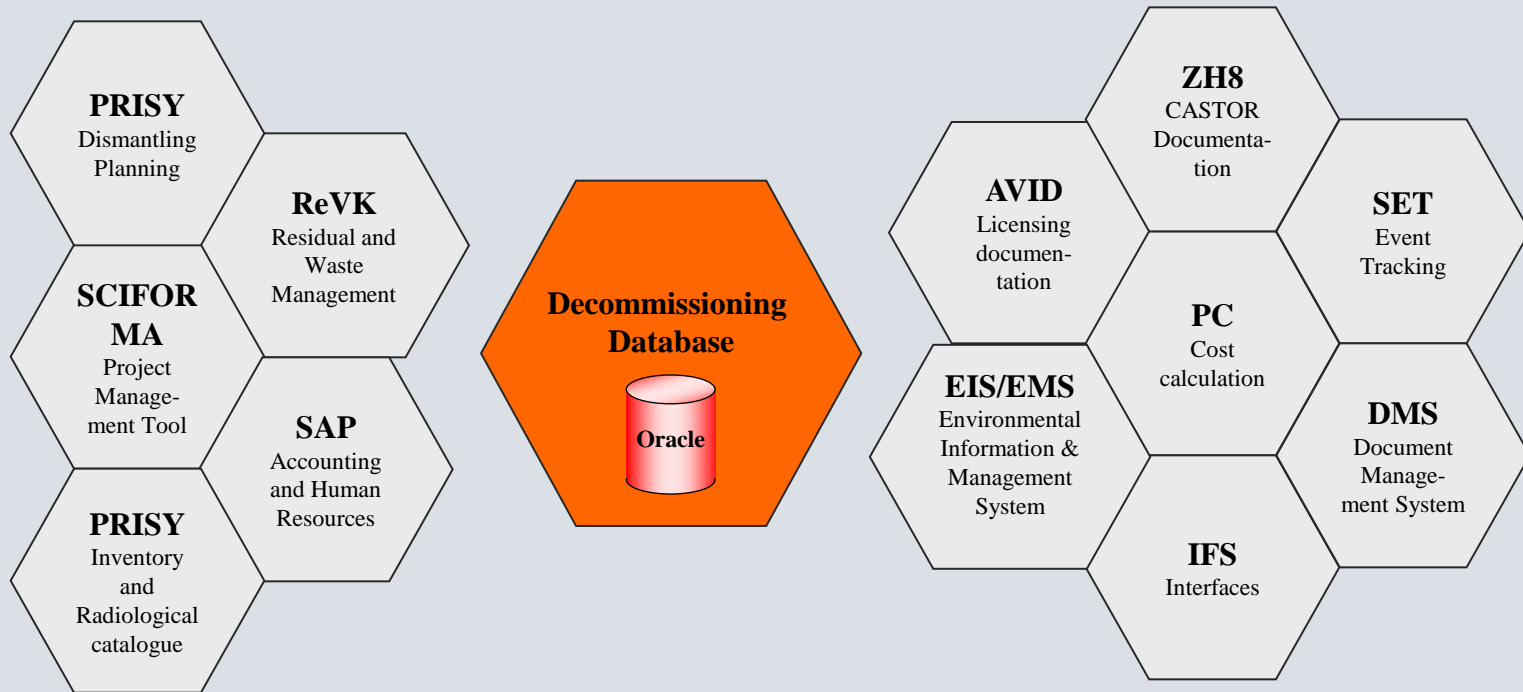
- Start as earlier as possible

- Preconditions to develop useful Decommissioning Management System:
 - Decommissioning strategy
 - Technical decommissioning concept
 - Know-how about the business processes during the different decommissioning stages

- It helps to adopt the best practises and lessons learned from other decommissioning projects to a new one.

- Avoid a fragmented Decommissioning Management System structure!
- Choose a integrated solution based on a centralised IT structure
- For example: Adapt the concept of the Microsoft Office System for your decommissioning software
 - It includes several programs under one umbrella - including Word, Excel, PowerPoint, Outlook, Project...
 - “Specifically tailored to work together.”
 - “A complementary mix of business software solutions should help to focus on your business.”
- 3-tier architecture is recommended





- Systems in operation
 - Greifswald NPP and Rheinsberg NPP (DeManS)
 - Kozluduy NPP (DeManS – partly)
 - Northern submarine fleet of Russia (RAMMSIS)
 - Ignalina NPP (DMSD)
 - Chernobyl NPP (DISS)
 - Rovno NPP (RTS)
- Systems in preparation/tendering
 - Mezamor NPP (DISDB)

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EWN

Safety and Responsibility.
For Decades.