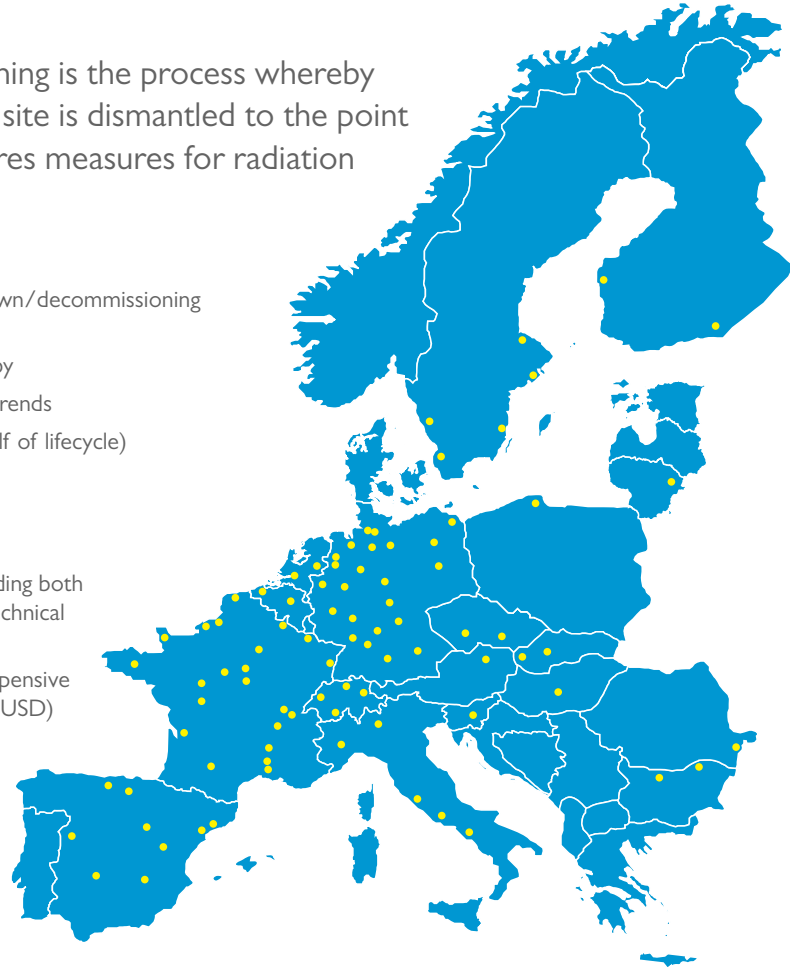


Nuclear decommissioning is the process whereby a nuclear power plant site is dismantled to the point that it no longer requires measures for radiation protection.

- 150 nuclear reactors in EU, 50 in some phase of shutdown/decommissioning
- Decommissioning is driven by
 - Political & environmental trends
 - Technological aging (2nd half of lifecycle)
 - Security factors
- Decommissioning program
 - Very complex and demanding both from administrative and technical perspective
 - Multiyear (10+ yrs) and expensive (costs in hundreds of Mio USD)
 - Requires a specific end-to-end IT solution

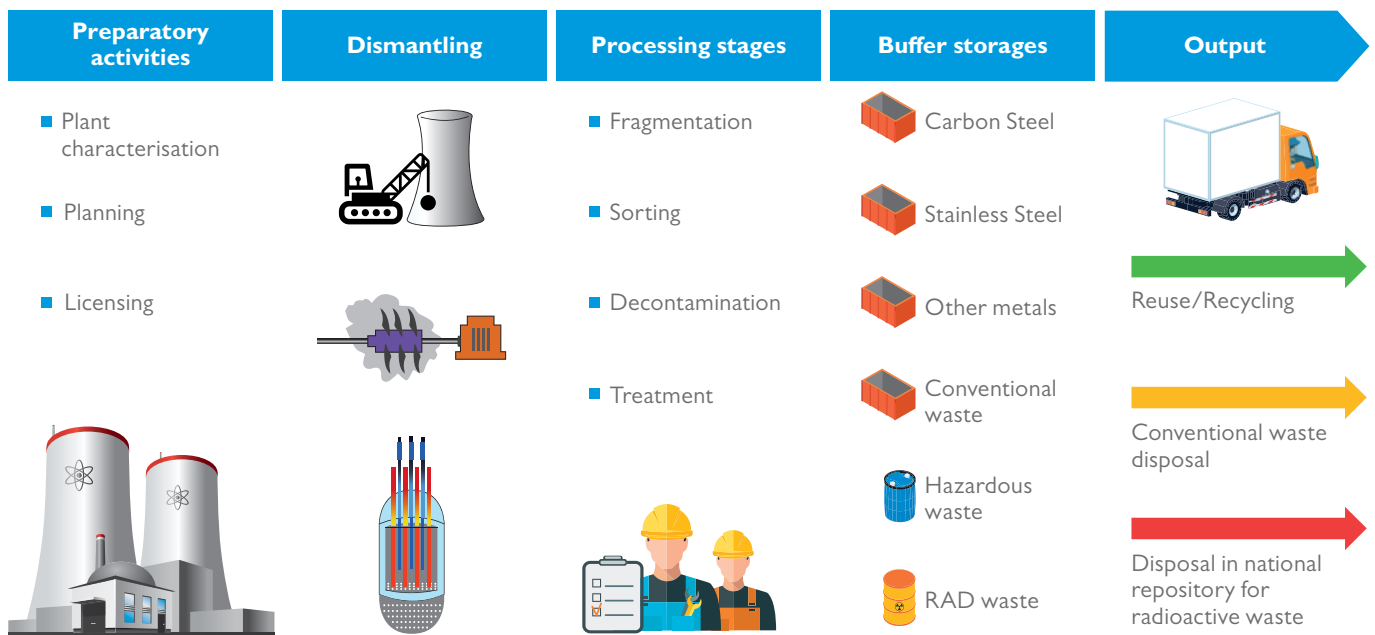


Decommissioning process of a nuclear plant and all the requirements linked with it are integral parts of the Ness Decommissioning solution. This allows decommissioning of complex structures where planning, monitoring and dynamic reactions to any change are required. It allows implementation of internal and external rules, whether they are specific for the company or for a particular country.

Challenges

- Decommissioning process of a nuclear power plant block can take dozens of years. It requires a **long term planning** of the individual decommissioning phases.
- It requires **qualified control of the decommissioning itself** – it is necessary to generate the strictest projects plan and have a possibility to respond to unexpected situations, new technologies and legislative requirements.
- It requires **compliance with the corresponding legislation** in the individual decommissioning processes – it must take into consideration technological procedures, radiological measurements at various points of process and requirements for handling the potentially radioactive waste.
- An overall **material flow records** including operations – it needs to be clear all the time what is included in the packaging unit, how the content of packaging unit was created, from what and when, what its anticipated route is, what the real route is, who was responsible person at a certain point of the process and what technological operations the material underwent.
- **Reverse assessment** of waste and materials lifecycle due to legislative requirements.
- **Planning, management and monitoring of measurements and inspections of waste and material.**

Solution scheme



Benefits

Processes of decommissioning of nuclear power plants are very demanding in terms of technology, legislation and finances. Therefore it is crucial to plan and control the decommissioning years in advance and record and monitor all processes.

- makes it possible to **manage all components** of Nuclear Power Plants in the course of decommissioning process,
- **monitors material flow** during the entire process, provides all the necessary information about situation and characteristics of materials under all circumstances,
- allows **identification of materials** generated during decommissioning in real time and their archiving,
- enables **making the work progress clearer** during disassembling process and to estimate the generation of materials and occupation of various phases,
- allows **flexible reaction to changes**, comparing the alternative scenarios and simulation of plans in order to validate a business decision before its implementation,
- allows **authentication of responsible persons** at each point of the process,
- **keeps the data consistency** through all modules and ensures that no inconsistent data are created through the integrated systems. All the data are stored in SAP,
- **simplifies processes** for implementation of logistic operations.

Decommissioning of Jaslovské Bohunice Power Plant

CASE STUDY



Ness Decommissioning solution is used for the decommissioning of VI block in Jaslovské Bohunice Power Plant. Decommissioning is controlled by Jadrová a vyradovacia spoločnosť, a.s. which is specialising in energy security and management of the final phase of nuclear energy production, i. e. in the decommissioning of nuclear facilities, handling dangerous radioactive and other materials and their final disposal. Ness has implemented the complete system solution based on SAP process platform. The solution includes the system extension developed by Ness for planning and management of the individual decommissioning projects including the detailed monitoring of all operations of handling materials and their flows in all phases of logistic process.

The solution includes all the necessary reporting and automatic mirroring of planned and real conditions in financial and cost accounting. Project was implemented through an agile methodology with iterative solution method.

International experience of Ness

Ness Technologies has a dedicated team of experts with unique know-how for the whole energy sector. We have also experience from local and international projects for large companies including contracts co-financed from EU sources. Ness provides complete system solutions as well as process related know-how and connected with corporate consultancy.



Ness Technologies is both your experienced business consultant and IT services provider. We connect business insight with technological expertise so as to help you to meet your targets, improve business efficiency and boost your overall success. We combine IT solutions, software, applications and outsourcing services in order to fully match your corporate requirements. Our services are based on future-proof solutions, robust competencies and major technology vendor partnerships. We have long-term experience of complex IT implementation across a range of industrial sectors in various European countries. More than 800 Ness experts in Slovakia, the Czech Republic, Hungary, Romania and Macedonia combine global knowledge with local expertise.