ABB have developed a work prioritisation model to help clients manage a long term programme of multiple Decommissioning, Demolition & Remediation (DDR) projects more effectively.

Managing a large programme of small demolition packages from plant modifications and redundant equipment can become very complex when they are within existing operating plant.

**What we offer**

ABB’s model has been developed using the experience gained from managing over £250M worth of DDR projects. The model considers:

- Safety, Health and Environment (SHE) risks and liabilities
- Disruption to ongoing live plant operations
- Ongoing development of the site
- Impact of changing prices for recycled materials (i.e. metal, wood, plastic)
- Schedules and cost estimates for each package of work

The model provides a very flexible, easy to use set of information that allows clients to readily develop DDR programmes. It allows the impact of changing a number of factors such as material prices, work timing etc. to be assessed so that the work programme can be optimised. The model delivers:

- Priority action lists
- Project programmes
- Cashflow forecasts
- Project estimates
- Asset value versus liability summary
- Outline DDR strategy

“ABB using their systems and processes, helped us to identify and quantify our potential risk and liabilities on a portfolio of sites and provided a solution to help ensure we reduced our on going liabilities whilst getting the best value for money”

Colin Stewart, Engineering and Services Director, SABIC UK
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**3 stage process model**

The 3 stage process model covers the following areas:

**Stage 1 - Risk assessment**
Stage 1 is a risk assessment of damage to people, environment, equipment and existing operations.

The steps include:
- Identification of all the redundant plant and equipment
- High level assessment of the potential risks to people, the environment and live plant, from plant and equipment in a bad state of repair
- Allocating a risk score to each plant / item
- Define any immediate actions if unacceptable risks are identified
- Recommendations for ongoing inspections

**Stage 2 - DDR requirements and constraints**
Stage 2 reviews the practical requirements and needs for each DDR package covering the following issues:
- What are the future plans for the plant / site?
- Is access required for further development?
- The status of isolation and is there an impact on live operations, e.g.
  - Is a shutdown required to enable isolation?
  - Are re-routes of live services required or cost effective?
  - What enabling works are needed for safe isolation?
- The status of decontamination and remedial work required
- Cash-flow, opportunities in regards to recycled materials

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**Stage 3 - Preparing detailed cost estimates and programmes**

Stage 3 reviews the information ascertained in stages 1 and 2 and produces detailed cost estimates and programmes for each package of work, including:

- Decontamination
- Isolation of mechanical, electrical and instrumentation equipment
- Enabling work
- Demolition, including recoverable scrap metal
- Remediation
- Project management and contingency

The output is based on optimising the sequence of work to balance the factors of safety, risk, cost, efficiency of demolition method, shutdown timings etc. The output is captured in standard software packages, Microsoft® Excel and Project, which are linked together. Changes to key factors (such as sequencing or prices) can then easily be inputted and the impacts assessed.

**Benefits**

- Understand the risks from redundant plant and equipment
- Optimise demolition approach across the programme of projects
- Minimise costs for construction programme
- Easily see the impact of changing priorities and material prices

**Why ABB?**

- Our demolition team has excellent knowledge of demolition projects in operating plants - from small items to whole sites
- ABB understands the safety and costs drivers of the demolition market and contractors so can optimise the approach taken
- ABB has in-house engineering design teams to support isolations, diversions and re-routes