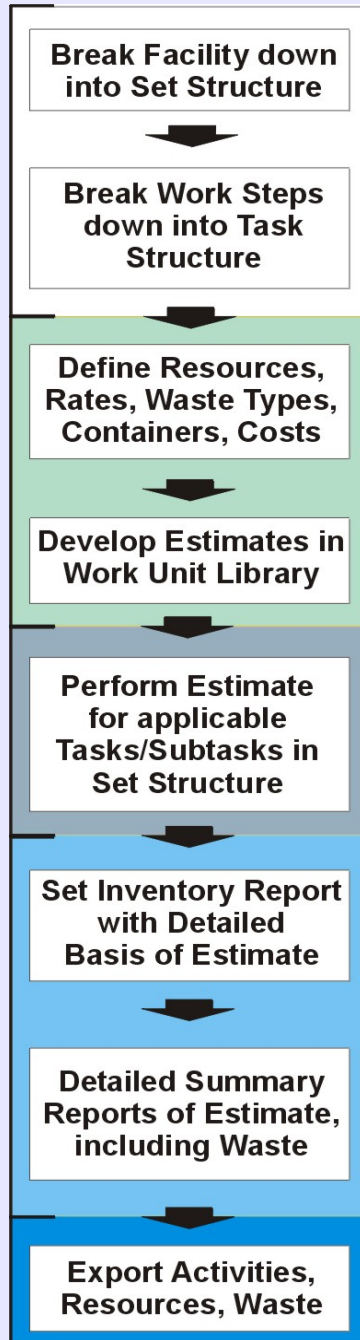


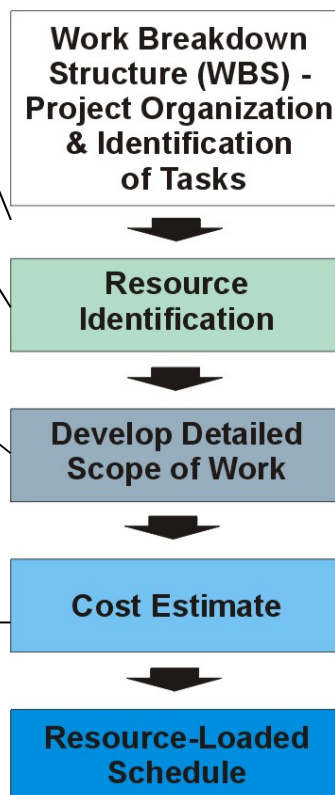
POWERtool®

P4 Process



Polestar developed the **POWERtool®** in response to a need for clients to provide customized and standard estimating methodology for deactivation and decommissioning (D&D) projects. Polestar's D&D experts developed the **Planning Optimization Waste Estimating Resourcing Tool (POWERtool®)** that is a full-service planning and estimating tool, which provides clients with the ability to organize and plan their project, optimize the work activities, estimate the amount and volumes of waste to be generated, develop detailed bottoms-up cost estimates, identify resources needed to perform the work, and export to develop a project schedule.

POWERtool® Project Planning Process (P4) guides the users through the planning process from scoping to implementation.



- 1) The project team or user(s) organizes the project into manageable pieces using the Set structure, formulating a WBS.
- 2) Activities or tasks then identified in the Task Structure, customized for the project in tasks and subtasks.
- 3) Resources needed are identified in the Work Unit Library, creating work units – we maintain an extensive work unit library from most DOE sites and D&D Projects.
- 4) Resources needed are identified in the work units, including labor hours, craft/technical/management categories, waste volumes and/or weights, and schedule duration.
- 5) A detailed scope of work is then developed as the project team enters the number of units for each task/subtask.

The **POWERtool®** is a comprehensive relational database software tool that can be used to plan work tasks, develop detailed bottom-up field cost and waste estimates for S&M and D&D of contaminated facilities, equipment, and environmental restoration projects and produce resource-loaded schedules. Polestar is a recognized leader in planning, estimating, and execution of significant D&D projects across the DOE complex. Capturing our technical expertise and knowledge, the **POWERtool®** has been used widely for small and large-scale D&D projects. Polestar's experience **POWERtool®** users have years of D&D experience, and are available to assist you in estimating your project or facility using the **POWERtool®**, train your personnel, and provide you with the expertise and knowledge for future estimates.

PUMPIT v2.0k (Work Unit Library)

File Edit View Insert Format Records Data Window Help

PUMPIT WORK UNIT LABOR/WASTE LIBRARY DATA

1. EDIT - CHOOSE FAMILY 2. EDIT - SELECT WORK UNIT NAME

Remove

Unit: 1

Description:

Unit: 1

Cancel Done

Delete Current Unit

PDWETool 2.0 - [Power Tool]

File Edit View Insert Format Records Tools Window Help

Set: Basement - Hot side Task Filter Superset: R-MAD Hot side

Subtask: Z-B-1 Gallery DETAILS Estimator: bill

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

wastetype: LLW

Container: fruk

Task: Disassemble Case: A 1

Subtask: Remove piping 1 B 2

View: Existing C 3

Work Unit: Piping low, Rad & lin ft D 4

E 5

F 6

Estimate work units: EXCEPTION

WorkSheet Comment

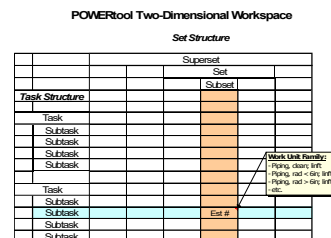
Est WU 1800

Has WorkSheet

Labor Information

Duration/Waste Info EXIT

POWERtool® uses a two-dimensional work space to divide the facility or project into manageable pieces for both project and schedule management. Tasks and Subtasks are identified and defined for the project – the activities that will be performed during the project. Work Units are created or customized from other POWERtool® work unit libraries which define the activity (i.e. scope of work), identifies the resources and amounts required to complete a discrete volume or unit of work, the amount and type of waste to be generated, and the basis of estimate and key assumptions are also captured. Finally, the appropriate section of the facility is selected, the phase of work, and the work task to be performed, and the estimate developed. The user-friendly screens to the right show how this information is presented in the tool.



This process and tool allows the user to capture the estimate, in a fashion to actually plan out the project from planning and engineering, through execution and close-out. A suite of comprehensive reports are included that can be filtered to the level of information you need to present. What if scenarios can be easily estimated using different cases in the POWERtool® as different closure alternatives are evaluated. The data in the POWERtool® is organized so it can be exported directly into project management software, such as Primavera Project Planner (P6) or Microsoft Project.

POWERtool[©] was successfully used at:

- Hanford's B Plant and PUREX
- K3 and Corette coal plants
- Plutonium Finishing Plant (PFP)
- Fast Flux Test Facility (FFTF)
- SRS F-Canyon
- SRS F-BLine
- Rocky Flats Buildings 771, 707, 776/777
- Brookhaven's HFBR
- CANDU and PWR in ROKorea
- Oak Ridge Y-12's Building 9206
- NTS Nuclear Rocket Facilities
- PNNL RTL Building Complex Demolition

Polestar applies technology and innovative solutions to the complex challenges and provides clients with the tools and expertise that can be used for the life of the project or the long-term benefit of the organization.

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BENEFITS

The POWERtool[®] and P4 Process provide the following advantages:

- Provides a common project planning process and tool tailored to projects of all magnitudes.
- Creation of WBS and detailed Scope of Work
- Multi-user Communication and Estimating Tool – common baseline among field, engineering, project controls, work planners, and management
- Pre-loaded D&D library data (updated) and pre-programmed database calculations make it easier to develop quality and consistent cost estimates
- Detailed tasks identified for work package development
- Work Management Tool – defines work packages for each zone/area
- Develops a solid, defensible, bottoms-up estimate, including waste
- Immediate reports and export of data to other software
- Flexibility to quickly generate ‘what-if’ cases initially and as the project progresses
- Changes accommodated quickly and easily
- Ability to track changes and actuals in cost and schedule.

S&M POWERtool® – The requirements-based surveillance and maintenance (S&M) POWERtool® was developed to identify S&M requirements for a facility entering or in a post-operational, safe shutdown, or deactivated state to assure the minimum requirements for safe stewardship are maintained and developed cost estimates for facilities. Polestar assists our clients in implementation and utilization and provides training to our clients to be self-sufficient users of the POWERtool®

SUPERMODEL



Ranking and Sequencing Model Process

- Env. Restoration Program at the Savannah River Site
- Integrated Facility Disposition Project at Oak Ridge
- National Legacy Liability Program in Canada
- NNSS RTBF Program Base Operations and Infrastructure
- Large Scale Proposal Development
 - Hanford Plateau Remediation
 - East Tennessee Technology Park

Faced with tens, hundreds, or thousands of projects to sequence, each with constraints, technical challenges, risks and limited information; determining end states and producing an unbiased cost and schedule profile and waste forecast seems like a daunting, almost impossible task to perform with a small army of support personnel.

Polestar steps up to the challenge and has performed large- and small-scale planning, estimating, prioritization, sequencing, and scheduling of projects ranging from the thousands to the billions of dollars; from 10 facilities to over 7,500 facilities. Using the 'SUPER-Model' application and a small team of experts, we have delivered on some of the most challenging scheduling and integration projects at large federal sites and facilities across the country. Results include producing integrated site plans for decommissioning, environmental restoration, and modernization / reconfiguration projects. Our team of experts utilizes the custom-designed SUPERModel application to perform the following:

- **Project (Facility/Environmental Remediation Units/Modernization) Inventory**
- **Strong Technical Basis Development**
- **Facility End State Determination**
- **Rough Order-of-Magnitude Cost Estimating for Facility Decommissioning, Environmental Restoration projects, and requirements-based Surveillance and Maintenance (S&M)**
- **Ranking, Sequencing, Prioritization, and Scheduling**
- **Cost, Waste, Deferred Maintenance projections and profiles**
- **Quick alternative and scenario analyses**

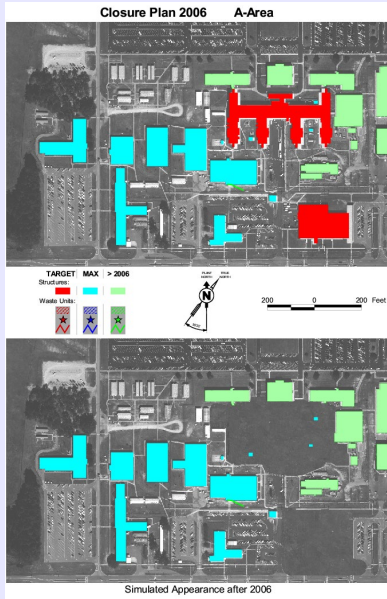
Supermodel takes into account multiple factors and parameters such as: Economic, Programmatic, and Environmental Safety and Health risks, which include the following technical criteria: radiological conditions, characterization, proximity to water and site boundaries, overall facility condition, structure complexity, mission end dates, net present value, present value ratio, security, access, etc.

Changes in the available funding, priorities, or schedule can ripple through your project schedule and cost profiles, with numerous known and unknown impacts. The Supermodel enables users to make these changes in minutes, and perform model runs, and be able to respond quickly to predict the impacts instead of months! Projects can be grouped logically to show safety and risk reduction, maintenance reduction, and cost avoidance as well as geographic completion of projects. The Supermodel is customizable to the needs of each site, facility, or program.

The Supermodel saves your budget, optimizes the use of the available funds, and provides a solid technical basis for your integrated planning. The Supermodel provides a comprehensive approach and tool to any production facility, nuclear power plant, federal state and local government agencies, military bases, utilities, and other industries who are cleaning-up and contemplating major decommissioning and/or reconstruction projects.

SEQUENCING
UNIT
PRIORITIZATION
ESTIMATING
RISK
MODEL

SUPERMODEL



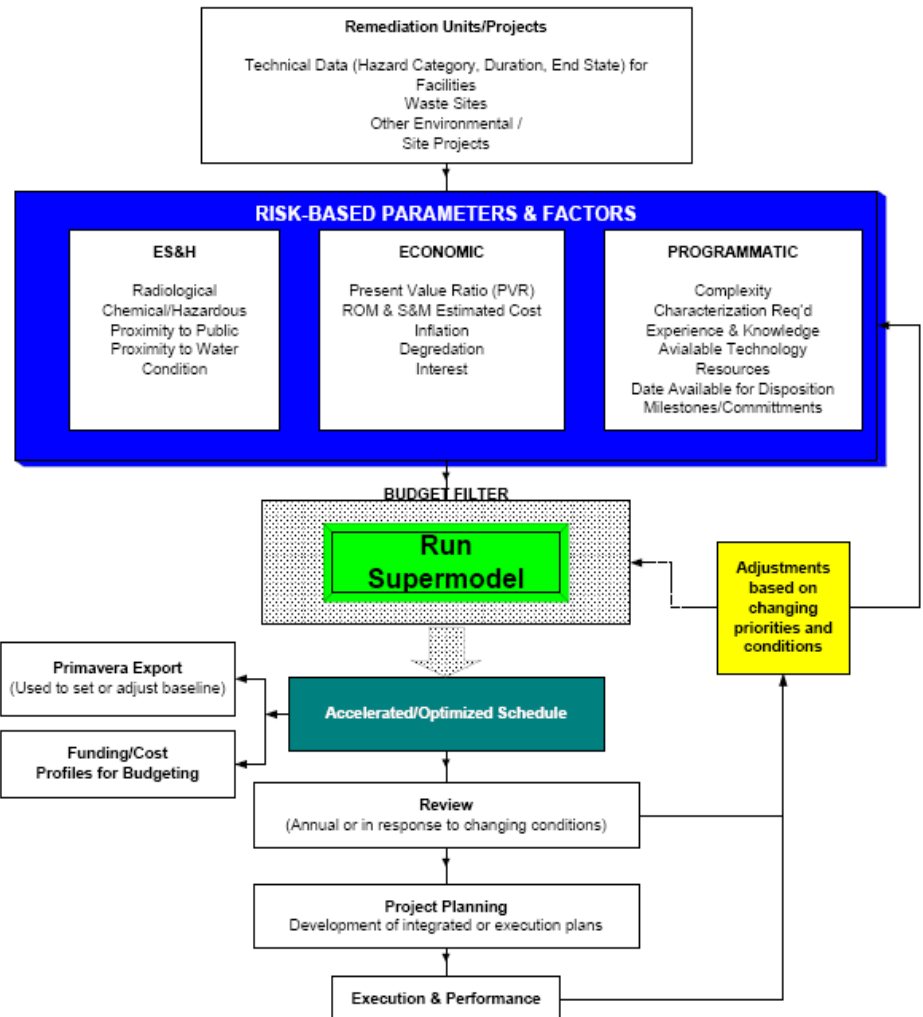
Integrated Closure

The Inspector General (IG) validated the use of the model at SRS by stating:

'The RSM is designed...to make D&D decisions considering offsite receptors. Use of the Model would focus on risk for prioritizing D&D activities.' The IG further stated *'Use of the Model could have lead to D&D of 20 facilities that could have reduced S&M costs by \$2.2M.'*

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The application ranks a facility based on the inputs to these main factors and provides an optimized recommended sequencing/scheduling of these facilities, based on an available budget and previous commitments. An incredible tool to assist sites, organizations, and projects, in small and large-scale planning efforts, and enabling companies and organization to run different case scenarios based on different funding limits, facility availabilities, weighting or risk factors, or contractual commitments.

The RSM prioritizes activities based on risk reduction. Risk factors are individually evaluated, assessed, and scored, based on a user-defined weighting system, which allows the team or management to determine the priorities and manage the risk. The RSM then calculates the ranking for each facility, based on information for each risk factor. Once the facilities are ranked, the Sequencing module, schedules the facility optimizing the closure sequence within an acceptable level or risk to the contractor, maximum benefit to the stakeholders, in the most cost-beneficial manner – all at the push of a button!