

SMART Ports - Port Maintenance System

Trends in Maintenance Management of ports and similar infrastructure facilities show growing demands for

- Systematic and well documented maintenance management
- Easy access to large and complex amounts of data and documents
- Economical, preventive maintenance solutions

For these purposes an IT-system is evident. The system should be user-friendly and be able to support all levels of Maintenance Management, from the administrative level to the executive and contractors' level. SMART Ports is a web-based system developed by Rambøll.



Why use SMART Ports

Since SMART Ports is web-based and anchored in state-of-the-art principles within operation and maintenance, the following can be obtained by using SMART Ports

- An unlimited number of users may easily access valid and updated data and information (Design data, drawings, photos, videos, reports, etc.)
- Advanced facilities for recording and maintaining technical and administrative data
- An extensive document management module with features to establish links to external files and web pages
- Advanced job management facilities with the option of allowing for external partners to report progress and

completion of tasks directly into the system

- Management of time schedules with features that inform on overdue tasks and tasks planned for execution in the near or far future
- Long-term budgets with options which allow for differentiation on job types and priorities – and give a detailed overview of expected future expenses for operation and maintenance
- Updated budgets (budget follow up) for the present budget period, as planned assignments are carried out, and the final expenses are known

Advantages of a Web-Based System

There is no need for installing specific programs on the user's computer. Consequently, the

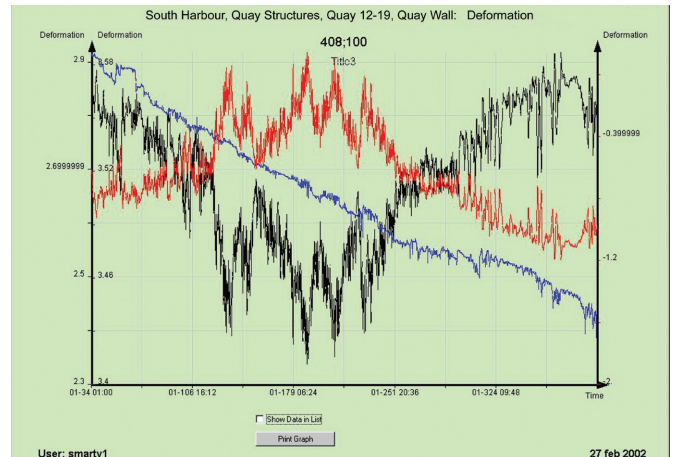
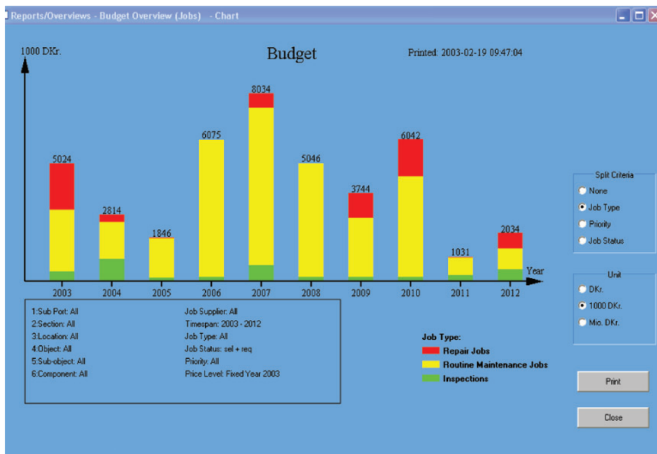
user does not need to be concerned about distribution and backup of data. Programs and data are installed and maintained on a central server which can be situated anywhere as long as there is a connection to the internet or intranet. Typically, the server is situated at the port or with the plant owner.

Users are granted different access levels.

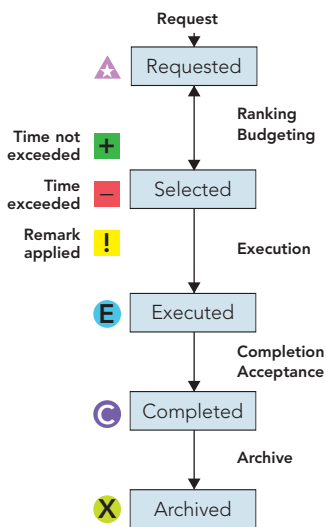
Long-term Budgeting

At any time, SMART Ports can provide an overview of the long-term budgets. In the example above, the budget for each year is divided into job types. It is further possible to sort by priority, by job status, etc. Budgets can be isolated to include only specific structures and be limited to specific job

types, contractors, consultants, etc. By postponing, canceling, and selecting jobs for execution, one can equalise the budgets for the years to come, based on illustrative budget charts.



Job and Budget Management - the basis of SMART Ports



In SMART Ports, a job passes through five steps of status on its way from planning to archiving.

SMART Ports is based on managing jobs such as inspections, repair works and routine activities.

The person responsible for each stage enters the actions that make the jobs status change.

Request

A request defines the need for inspections or repair works. The job request includes a deadline and a cost estimate. The first status of jobs is Requested.

Ranking / Budgeting

E.g. once a year, all requested jobs are handled in a ranking procedure that is based on the actual maintenance budget. The jobs that are ranked to be executed will get the status Selected.

Execution

Jobs can be executed by the port manager or by contractors, divers, consultants, etc. When jobs are done, status is set to Executed.

Completion/Acceptance

When jobs are completed and accepted, they get the status Completed.

Archive

All completed jobs can be filed in SMART Ports. The last status of jobs is Archived.

SMART Ports - the Main Functions

Inventory

Registration of the port in a six level hierarchy with user defined graphical navigation.

Job Management

Management of maintenance activities as jobs undergoing shifts in status.

Condition

Principal Inspection Module, Access to condition assessments and ratings of each structural component.

Monitoring

Logging of monitoring data from mounted probes in the port structures.

Reports/Overviews

Withdrawing of job overviews, budget overviews, budget follow-up overviews, document overviews, inventory data reports, principal inspection reports, etc.

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