Within Work Package 3.1 a major issue is to develop and apply an appropriate business process modelling methodology. As business process modelling (BPM) has been invented by IT specialists and the current use is mostly also restricted to IT activities, practitioners are not really sympathizing with it. BPM is considered too abstract and the value for practical management obviously is difficult to become realized.

To explain the rationale of EFFORTS BPM, the elucidation of initial project needs will serve best: To contribute to improved effectiveness and efficiency in ports, the EFFORTS overall goals, the extremely heterogeneous port industry, comprising administrations, terminal operators, ship support services and often even manufacturers, must be understood as a whole and in detail. The project consortium, composed of experts from various fields, cannot be fully familiar with all aspects of the port industry. An excellent electrical engineer must not necessarily know to operate gantry cranes. Therefore within the project it was required to develop a model of the port industry providing both, a global understanding of entities and interdependencies and a more comprehensive understanding within the individual work packages’ field of activities.
Business Process Modelling for Ports

Jens Froese

In the industry BPM generally is applied for (Davies et al. 2006):
- Database design and management
- Improvement of internal business processes
- Software development
- Business process documentation
- Workflow management
- Improvement of collaborative business processes
- Design of Enterprise Architecture
- Change management
- Knowledge management
- End user training
to name the most important.

The common denominator for all applications is simply to understand what must go on in detail to meet the company’s business model.

It is the EFFORTS objective to not only provide an internal project platform to foster communication and understanding within the consortium and to explain project activities and expected achievements externally but to create a methodology which will serve the port industry beyond the project and its duration.

Initially there were some problems to explain the possible benefits of BPM to the related industry’s representatives but meanwhile the Port BPM fan club is growing and even ports not being EFFORTS members contribute enthusiastically.

What is BPM? The definition by the Australian Business Process Management Community of Practice (www.bpm-roundtable.com) of Business Process Management is one which fits well to the EFFORTS conditions and elucidates the role of BP modelling in wider context:

Business Process Management is a structured, coherent and consistent way of understanding, documenting, modelling, analysing, simulation, executing and continuously changing end-to-end business processes and all involved resources in the light of their contribution to business improvement.

It is obvious, if you want to manage something you need to thoroughly understand it first and that is one of core objectives of BPM.

Capturing and description of workflows comes pretty close to BPM although it is not exactly the same, BPM results have a wider potential than workflow descriptions. The difficulty always is to capture the really relevant components of a process to avoid too voluminous results. In general BPM is applied for a defined purpose dictating relevant components. Within EFFORTS the results need to serve a wide variety of potential applications which are not yet fully known and which makes the whole approach much more challenging. BPM often is being applied once for an intended change process or for invention of Enterprise Resource Planning (ERP) tools. For EFFORTS, however, the reusability of the BPM results for quite distinct purposes is a governing factor.

This shall, however, not result in too complex process descriptions by covering all aspects from production process, through resources management to risk assessment. Therefore the EFFORTS approach allows for dedicated process descriptions emphasizing aspects of priority or concern. To be able to match various views of the same process the EFFORTS taxonomy provides a systematic „map“ showing process IDs of all relevant processes organized in „domains“. Through the ID process features can easily become retrieved or linked cross all processes using IT-tools.

This example shows that one needs a convention how to visualize process components and related activities. There are some useful notations (refer e.g. to http://www.bpmn.org/) but as long as the depicted content is understandable one does not need to learn a notation method first, at least not to contribute to EFFORTS. Practitioners knowing nothing of BPM but being familiar with the relevant processes are preferred to BPM experts not understanding the processes.

Another EFFORTS peculiarity is the strong technical and technological orientation of the development work. Usually BPM covers the steps of a production process (in this sense „service“ is also considered as „production“) from the organisational point of view. EFFORTS requires the functionalities in more detail. „Technical“ Process Modelling, however, is not a contradiction of „Business“ Process Modelling but can be considered as more detailed view. Thus the technical features and functions can be depicted by zooming into the process but also by maintaining a technical view from the very beginning when capturing the process.

For strategic purposes processes need to be generic whereas for concrete problem solving individualized process descriptions are required.

Pilotage - a simple example of a process with more than one party involved

When?

Estimated Time of (Ship) Arrival (ETA)

Who?

Pilot

Assign Pilot

Estimated Time of (Ship) Arrival (ETA)

Who?

Pilot

Assign Pilot

Vessel

Who?

Pilots Association

Assign Berth

Assign Tug Boat

Tug Boat Company

Tug Boat Driver

Harbour Master

JF 2007

Who?

Terminal Operator

Berthing

Angel Terminal

What?

Where?

Boating Devil’s Island

Conning Hell River

Who?

Who?

Who?

Who?

Who?

Who?
Business Process Modelling for Ports
Jens Froese

Experience shows that whatever methodology is applied the results widely depend on the view of the process capturing individuals. To achieve a homogeneous port process picture for EFFORTS all process information is collected at ISSUS. A small team of well-trained experts then rate the necessary conformity of the distinct views. This approach also allows the purchase of expensive modelling tool licences only once. It also restricts rather time consuming and challenging training to only a small team.

To ensure conformity of results on international level common sense is not sufficient, standards have to be followed. The framework to capture port processes within EFFORTS is being provided by CIMOSA (www.cimosa.de) and through ISO CEN 19439 and 19440. Compatibility with architectural standards already in use within the maritime domain (e.g. ARKTRANS) does not provide problems.

For optimum use of results regional workshops will be held to „sell“ the benefits for strategic and operative port industry activities within and beyond EFFORTS. Further the EFFORTS website provides access to the ongoing BPM activities and invite for contribution.

Technical Details of Process „Ship Supply“ (individual case), restricted to „Spare Part Supply“ (see figure above)

Relaunch of www.efforts-project.org
Jochen Kilian

In July 2007 the redesigned Efforts internet portal was launched. The amount of information provided on the pages had grown during the precedent period, so we rearranged the structure of the website. The navigation through the content is now much easier and faster.

The website provides now PMP, the Process Modelling Platform: This is a web-based tool to model the port processes. Any interested person or entity that has expertise on each of the specific port processes defined in the EFFORTS process domain is called upon to contribute to the improvement of port processes. On the top level of the website there now is a shortcut to the project-wiki where EFFORTS offers a platform as a project ontology and a glossary relating to the port processes to provide a common understanding in the complex community. Finally there is a list of all upcoming events with links or pdf downloads for in-depth information to keep you up-to-date with all meetings, conferences et cetera around port processes. Currently we are working on a feature to subscribe to the EFFORTS RSS-feeds for Events and News.
In 1996, throughput at the port was just over 15 million tonnes. Following increased shipping services operating at the port and a period of sustained national growth, Dublin Port will exceed annual throughput of 30 million tonnes for the first time in 2006. This increase has been the culmination of 10 years growth in the port and has been delivered across the board to Lift-on/Lift-off (Lo/Lo) and Roll-on/Roll-off (Ro-Ro).

There has also been significant growth in the number of passengers passing through the port. Last year, some 75 cruise liners visited the city through Dublin Port and when combined with ferry passengers the total number of passengers comes to 1.2 million annually.

R&D is a recent innovation and is based at the Dublin Port Training Centre. We are currently participating in a wide variety of projects including EFFORTS, INTERREG, UNCTAD Train For Trade and locally, in conjunction with FAS, the national training organisation, we have formed a training network of employees in the port area, aiming to deliver over 6,000 training days in 2006.

Dublin Port Company has long placed significant emphasis on good corporate citizenship and through the years has supported a range of social, environmental, sporting and educational initiatives. In recent times, these have included an elementary school, community health centre and water purification plant in earthquake stricken Banda Aceh, Indonesia and other ventures such as the sponsorship of a local community drugs awareness program and computer training for local children.

**Efforts People**

**Purpose**

The purpose of the High Level Group is to validate the main scientific or technical results of EFFORTS and to act as an expertise team for the project and the European Commission. During the realisation phase, the HLG reviews project achievements, giving proper expertise at the important milestones of the different main sub-projects (detailed specifications, architecture design, unitary tests in laboratory, demonstration results, final evaluation and exploitation). The HLG further supports in dissemination of project results.

**Composition of the HLG**

The HLG is chaired by Mr. Geoffroy Caude, general manager of CETMEF (French Technical Institute for Maritime and Waterways Studies), partner of the EFFORTS project. It is composed of 6 European experts and professionals (including chairman) working in several fields (navigation, terminal operation, environment, ...).

The HLG meets on a basis of one or two meetings a year depending upon the pace achievement of the project with main objective to examine each sub-project production at different relevant steps. The first meeting of the HLG will be held January 2008 (with SP leaders and TCT).