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**GAP ANALYSIS OF GDMS IN MULTI-PURPOSE SMALL PORTS;
SOUTH FORESHORE BREAKWATER COAST CONSTRUCTION**

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Key Words: Online & offline data & information, Breakwater, Technical documentation, Multi-purpose small ports, Geographical Documentation Management Solution (GDMS)

Introduction

Multi-purpose small ports project in south coast of Persian Gulf and Oman Sea is known as one of the most significant national infrastructure project in recent years. Every body in maritime field is already known strategic importance of this project by its social and economic effects, as one of solutions of maritime-based sustainable development. Some aspects of this project reveals its sensitivity more than before including widely scattered points of the construction, need to obtain permits from various agencies concerned, nature of marine works and its specific limitations and attention to the infrastructure objectives of the project.

Accordingly, it is obvious that the management of this project has special complexity which without using facilitator tools, including integrated information systems, will be difficult.

Gap analysis

Based on Gap Analysis Literature, The distance between the current and the desired status which all users meet the full expectations, is defined as “gap”. The next step is to draw the ideal position up and its particular characteristics, and to plan a suitable strategy, to be implemented. [1],[2],[3]

Geographical Documentation Management Solution, called GDMS, as one of the facilitators has been used in order to manage this project which of course the most of its capabilities doesn't apply yet. It's expected this paper delineate the desired status of its application with regard to level of current use (namely current condition) and potential capabilities of solution through Gap Analysis. [4],[5],[6]

In fact, achieving goals of project owners and top managers and fulfilling their most expectations of GDMS depends on solution development in various dimensions and customization which identifying and assessing these issues will lead to current gap explanation.

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Current status, Desired status

Now, regarding to the implementation of “GUI⁴” and its completion over the time according to the manager's and users' comments, as preceding phase to offline data entry and data gathering have been provided, and applying “TDI⁵” (as one of the solution components) has underpinned the unified procedure in making the reports and documents. Also various digital maps are imported to the main server and required layers have been defined. In fact, the management of offline data, information and maps, with the operational experiences since last year, has had a systematic format that may continue development phases with the least possible problems.

In order to actualize GDMS potentials and to achieve Desired Status, two domains should be considered. In the first field, adding Event Server to the solution is considered that provide empowerment of integrated control and monitoring over all the positions of project by receiving of online data stream through various hard-wares such as CCTV, AC and etc. In the second field, creating a management dashboard is considered as the development agenda of solution that through definition of indicators, models and various administrative rules, can be provided online monitoring and observations about the conditions of distributed points of project to provide essential warnings and alarms to authorized managers and users. At the result all information, documents and reports necessary for their decisions will be provided.

Note that the main activity for achieving the desired status is strengthening the current data entry and documentation. Also, the establishment of desired status will be possible when a data integration capability is one of the strengths of the current status.

Conclusion

South foreshore breakwater construction is an infrastructure for development of coastal areas and ports of this region and accordingly, management of this national infrastructure project, has a special sensitivity. Given the wide geographic distribution points of project (Fig. 1) and construction of the breakwater and small ports, integrated management and coherent control of project sites concurrently is momentous affair which is GDMS solution through its development phase can respond to managerial needs.



Fig. 1) distribution points of breakwater construction project

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⁴ Graphic User Interface

⁵ Technical Documentation Instruction

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