

Integration of Telematic Projects: from UN projects to local authorithies' projects

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Abstract

A number of telematics projects is going, is planned or has been implemented in Ministry of Environmental Protection, Lithuania. Joint Research Centre is responsible for all these activities. As a number of projects is continuously increasing the integration of a set of projects to entire system is one of the main problems to be solved all the time..

The integration should include all components of telematics projects in full life cycle of project from idea to developing to implementation and to maintaining of knowledge base for experience collecting and dissemination and for providing a feedback. The components of projects are business processes, information content, informatics and telecommunication systems. All types of resources (human, financial, equipment, facilities, information) should be used in the most reasonable mode and assessed to meet requirements of a system approach..

The Ministry is dealing with projects in different levels: UN (INFOTERRA, maESTro), European Union (EIONET), European Regions (BALLERINA, Lielupe River Basin Water Monitoring and Management in Latvia and Lithuania), national wide projects (VADIS (Government Administrative Information System), State Treasury System), Ministry (information networks , including level of regional departments and agencies (municipalities).

As projects are in different stage and different technological infrastructure is used there is a number of integration problems both in technological aspects and in institutional ones including management (from international to local level) of project system, institutional strengthening (business process reengineering if possible), harmonizing legal and environmental content aspects and so on.

The Ministry has collected some experience in integration of projects and has prepared proposals for better management of the system of projects and solving of the integration problems.

There are a number of environmental information technology (IT) projects in different management and using level that our Ministry is carrying out, implementing, maintaining or discussing to start.

Level	Projects	Responsible
World and international organizations	UNEP UN network for environmental information dissemination UN maERSTro UN Environmentally Sound Technologies DB in WWW	JRC Science and Research coordination division Standard and Technology Division
European Union	EIONET European Environment Information and Observation Network	JRC Centre of Information Technology (CIT)
European regions	BALLERINA (all Baltic Sea Countries) Baltic Sea Region On_line Environmental Resources for Internet Access LIELUPE project (Latvia_Lithuania_Sweden) Water Quality monitoring and management for Lielupe River Basin	JRC CIT JRC CIT
LITHUNIA	Coordination Workgroup for Information Society Special Committee of Communications, Information and Informatics, National UNESCO Committee	ZB ZB
Government and interagency systems	State TREASURY system VADIS Government Administrative Information System	Accountant office of MEP CIT CIT Document Office of MEP
Ministry of Environmental Protection	Denmark ISIT project Institutional Strengthening through Information Technology (development of Klaipeda Regional Department LAN and connecting of Ministry and Klaipeda RD LANs) Homepage of Ministry of Environmental protection (legal, administrative and environmental information) PHARE DB of protected areas	CIT CIT MEP, JRC, CIT MEP, CIT
Regions (counties)	PHARE DB of protected areas (parks, reserves) Denmark ISIT project (Klaipeda) LIELUPE project (Siauliai, Panevėžys)	CIT
Agencies (municipalities)	Finland - Druskininkai environmental inspector GIS application	CIT, Druskininkai agency

I Integration aspects of environmental IT projects

For success of such a large number of projects to reach the best cost-performance, the best effectiveness, to minimize obstacles of implementation we

should integrate different aspects of projects during full life cycle:

- integration of goals
- integration in institutional aspect
- integration of information technologies for all components -networks, hardware, software
- integration of information content mainly in structured and paying special attention to understanding in different user groups

2 Problems for integration

Integration of goals needs to arrange linking of projects that are initiated, supported, maintained and used in very different institutions and organizations, e.g. UNEP, EEA, Government of Lithuania, Environmental institutions and funds of different countries and organizations, Environmental Protection Ministry of Lithuania, universities and research institutes, NGO and public.

As levels of management are very different there is a lot of different approaches how to prepare proposals for developing of goals and their integration.

Therefore institutional aspect of integration depends on persons responsible for initiating of the projects developing and implementing them. Institutional structures both of Environmental protection ministry and Ministry of Communications and Informatics is very important. Now in Lithuania one more public administration reform is expected after inauguration a new President in February 26, 1998.

Integration of IT consists of integration of hardware, software and telecommunications (network). The software is operational systems, data base management systems, office systems and so on. It is important if there are programs for conversion (transformation) formats from one software to other without losing the most important features of information structure and content.

Software is changing in increasing speed and not always the new

versions can use the information of previous version. Therefore it a lot of problems in integration both different software and different versions of the same software.

Integration of content consists of different components. One of them is a classificatory or coding tool. The best solution is to use international codes but there are problems both in region (e.g. Europe) and in the country and sometimes in one large institution, e.g. Ministry. Other problem is terms; the third problem is related with grouping and storing of information and afterwards with searching. In Lithuania we plan to use Eurovoc for searching of documents in governmental institutions. Using of EnVoc is in the stage of discussion.

3 Other problems and obstacles

- management and integration of all types of resources (people, finance, equipment, information)
- long project life cycle, sometimes especially in preparation stage. IT are developing very fast and therefore if the prepared proposal or application is discussed for a long time the situation can be changed and you need to prepare new version.
- usually to small attention to information content as a lot of environmental IT projects are managed by IT specialists

4 Project success factors

- understanding of the importance of IT projects by top managers
- climate in institution or computer literacy
- high skilled IT staff
- professional system analysis especially in the preparation of proposals
- sufficient motivation for initiating of the new projects and for implementing and understanding of benefits of using IT
- understanding of extra time and labor expenses in the stage of implementation
- sufficient attention or integration of IT with existing (traditional) technologies (e.g. paper documents)

5 Proposals

- Ad hoc workshop for integration of environmental IT projects
- Study for developing of strategy for integration of IT projects
- Discussion on the main directions
 - integration of business process reengineering and IT projects
 - integration of information management and IT

- integration of project management with information content quality assurance
- increasing of public awareness
 - developing of proposals for content structure to be understood in different user groups or easily transformed
 - target dissemination of information by implementing the new IT (webcasting, videoconferencing and so on)
 - increasing of feedback between publishing sources and users
- training
 - general system theory as a background for integration of IT projects and information content
 - information management
 - teamwork for developing new information

6 Conclusion

As the world is going to global information society and a lot of independent projects are carried out, going on or planned both in developed countries and countries in transition it is just a time to discuss the problems of integration of IT projects both in one sector and entire IT strategy for implementing in different sectors.