

ECP-2008-GEO-318007

**Plan4all**

## **Validation Methodology**

<b>Deliverable number</b>	<i>D.8.1</i>
<b>Dissemination level</b>	<i>Public</i>
<b>Delivery date</b>	<i>16th November 2009</i>
<b>Status</b>	<i>Final</i>
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***eContentplus***

This project is funded under the eContentplus programme<sup>1</sup>, a multiannual Community programme to make digital content in Europe more accessible, usable and exploitable.

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<sup>1</sup> OJ L 79, 24.3.2005, p. 1.

## Summary

The objective of validation (monitoring and assessment) methodology is to make sure that satisfactory progress is being made towards fulfilling deliverables and reaching milestones. The proposed methodological framework considers all aspects of the evaluation problem at hand, including:

- The monitoring of the progress according to plan
- To check quality of deliverables
- To evaluate all implemented results
- The consideration of the objectives of all relevant stakeholders, i.e. public authorities, private enterprises.
- The consideration of tangible as well as intangible criteria measuring expected benefits and costs resulting from the implementation of the project demonstrators.
- The incorporation of stakeholder preferences expressing the relative importance of the various demonstrator objectives.

The evaluation framework is capable of assessing the technical, operational and socio-economic impacts of the demonstrators and it is based on hypothesis testing, consistency checking and multi-criteria analysis techniques depending on the type of the assessment and the characteristics of the system that should be assessed each time. All the relevant instruments needed for the uniform collection of data at all evaluation sites, i.e. questionnaires, data collection forms etc., will be developed within the evaluation framework.

The second objective is to apply the methodological framework in order to collect and analyse the relevant data needed for the technical, operational and socio-economic performance of all project demonstrators. Conclusions regarding the overall performance of each demonstrator will be derived through the implementation of the evaluation framework. The data collection process will involve all relevant stakeholder groups. It will also synthesise the results derived by the evaluation of each demonstrator and prepare an overall evaluation report for the entire project. Comparison between the results of the various sites will be made (where applicable), and conditions for the applicability of the desired results will be established.

The project conclusions and recommendations will provide a synthesis of the overall results. The overall emphasis will be on providing strategic advice for the relevant stakeholders concerned with taking forward the concept of sustainability. The objective is to synthesise the results derived by the evaluation of each demonstrator and to prepare an overall evaluation report for the entire project. Comparison between the results of the various sites will be made (where applicable), and conditions for the applicability of the desired results will be established.

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## 1. Introduction to the context

The Plan4all validation strategy focuses on two major pillars of the project. One is the SDI infrastructure, the link to the INSPIRE guidelines and its specific Plan4all approach, and the second one is focussing on spatial planning.

Therefore, the validation strategy is structured on the two parts of the Plan4all approach, including three streams: two streams focusing the validation of the SDI part of Plan4all and one stream focusing the validation with the linkage to spatial planning issues and their special actors' needs.

All three streams are done by an overall methodology based on the principals monitoring and reporting progress as well as deliverables quality review. Beside this overall methodology the three streams are done by stream specific methodology like demonstration methodology, user acceptance assessment or stakeholder requirements.

## 2. Plan4all Validation Methodology

### Methods for monitoring and reporting progress

The Plan4All validation approach benefits a continuous monitoring and control over the general process, which assures the respecting of the final results. At the Milestones, the progress achieved on the project and the outlook for exploitation of the results will be reviewed: change in the work programme may be proposed. In case of insufficient technical results or poor outlooks for further exploitation of the results, it can be decided to discontinue the project. The results of the evaluation will impact the redesign and further development phases. The monitoring activities will guarantee the improvement according to previous evaluation results.

- Monitoring of evaluation consequences:
  - An activity plan with priorities and tasks will be developed as a central document
  - During the re-engineering phases the status of the activities will be documented (finished, tested)
  - The time schedules defined in the plan will be periodically monitored using management tools

### Monitoring of progress

Deliverable/task leader will collect information and he / she will describe progress to the WP leader every two months: The deliverable or task leader will format the report as follows:

1. Start date of task (or deliverable)
2. Planned end date of task (deliverable)
3. Objective of task (deliverable)
4. Current status of task (deliverable)
5. Progress of task (deliverable) against WP
6. Expected end of task (deliverable)
7. Reason for any expected delay
8. Which other tasks (deliverables) might be influenced by this delay (if any).

### Handling of delays in task (deliverable) reports

- In case of delays up to one month the WP leader will ask for written explanation
- In the case of delay longer than one month, the WP leader will inform the PB and WP8 leader and will arrange task meeting (could be virtual) to solve any problem (such as impacts on other tasks (deliverables)).

Based on these task (deliverable) reports, the WP leader will submit bimonthly summary reports. This will consist of collection and analysis of the task (deliverable) reports. The WP leader send the summary report to the PC and WP8 leader. The summary report will follow the following format:

1. Start date of WP
2. Planned end date of WP
3. Objective of WP
4. Current status of WP
5. Summary of current status of tasks
6. Progress of WP against Work Plan
7. Expected end of WP
8. Reason for any expected delay of WP (including delays of tasks or deliverables)
9. Which other WPs could be influenced by the delay (including interdependencies with task and deliverables).
10. The task (deliverable) summary reports as appendices.

The PB and WP8 leaders will review the WP progress reports within 10 days of delivery.

Handling of delays in WP summary reports:

- If a delay longer than one month is expected, the PC and WP8 leader will ask for a detailed explanation of the delay and the reasons for it.
- If the delay is longer than two months without dependencies on other WP, the PC and WP8 leader will call for a WP meeting (could be online) and they will inform PO
- If the delay is longer than two months with dependencies on other WP, the PC and WP8 leader will call for a PB meeting (could be online) and inform PO.

The PC will prepare a progress report every 6 months and submit it to the PO. This will contain a summary of the progress reports from all WPs.

1. Start date of WPs: did the WPs start on schedule? Note exceptions.
2. Planned end date of WP: Note which WPs have ended.
3. Objective of WPs
4. Current status of WPs, including current status of tasks
5. Progress of WP against Work Plan, including progress in tasks
6. Expected end of WP
7. Reason of expected delay of WP, including delays of tasks
  - a. Which WPS could be influenced
  - b. Including WP tasks interdependencies

The WP8 leader will compile and summarize all reports into Annual evaluation reports.

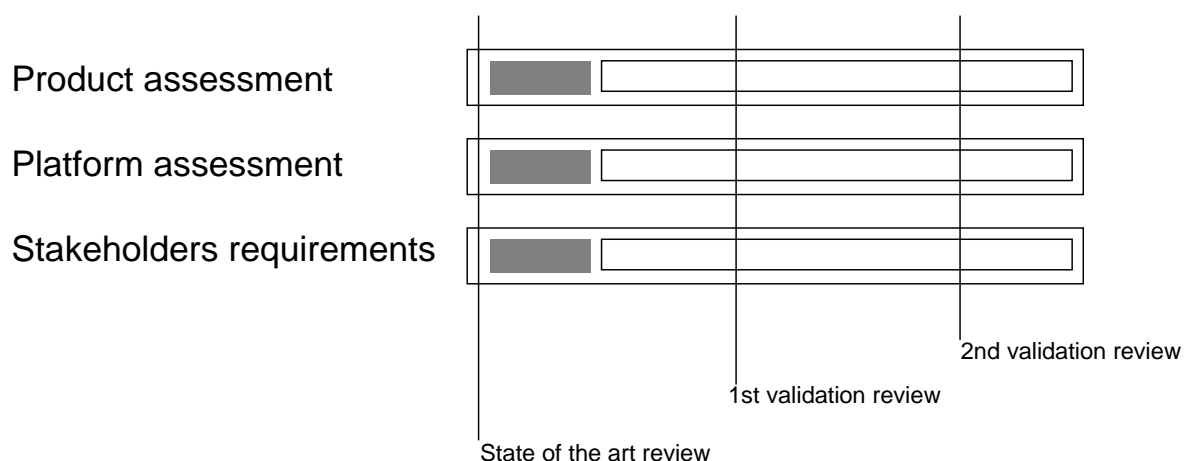
### Deliverables quality review

Deliverables Quality Reviews follow formal procedures and leave an audit trail for anyone wishing to inspect the quality of the work being carried out. The quality assurance procedures to be adopted in the project provide adequate assurance that the processes (in the project life-cycle) conform to their specified requirements and adhere to their established plans. All participants are involved in quality assurance. Based on common responsibility, any partner can provide comments during the life of the project.

## 3. Validation Stream Methodology (Demonstration methodology)

The three validation streams are based on indicators and validation measurements, which will be established by the responsible task leader. These indicators allow a continuous validation of the processes within Plan4all and to the different actors as well.

The validation streams and their inter-linkage in validation reviews can be shown in the following chart:



The three streams are in detail:

### 3.1 Product assessment – Task 8.2: Validation of Project solutions

Responsible task leader: AMFM

- Verification of compliance of products
- Stakeholder- and expert-based validation of products

The product assessment stream will be performed within the task 8.2 through a cyclic process, such as rapid prototyping, which will appraise Plan4all products, i.e., metadata profiles, data models and networking services architecture concerning spatial planning data.

The task activities for the overall assessment will be based on a Verification and Validation (V&V) phase, which will be customized on the basis of the different nature

of each expected product. In particular, all product will be verified according to the INSPIRE requirements and existing best practices, and validated by involving different Plan4all stakeholders and domain experts. Both these activities require an underlying methodological framework, which includes the instantiation of meta-models, the definition of scenarios, the adoption of proper requirements for stakeholders and experts (taken from specific deliverables), and the specification of assessment criteria (given during the initial step of this phase) for each scenario and related requirements.

The following working steps are planned:

- Time schedule – personnel resources (who is involved)
- Definition of methodological framework
- Verification & Validation

As for the validation of project solutions, proper methods taken from the Software Engineering (SE) discipline may be useful to accomplish such a task. In particular, according to SE specifications, during the life cycle of a system, a verification and validation (V&V) phase is required, meant to check that the final product conforms to its specification (verification) and meets the needs of customers involved (validation). In order to accomplish the V&V phase, the integration of static and dynamic techniques of checking and analysis is suggested, which take into account both requirement documents and designed functionalities. Figure 1 illustrates the role of static and dynamic techniques within the whole product development process.

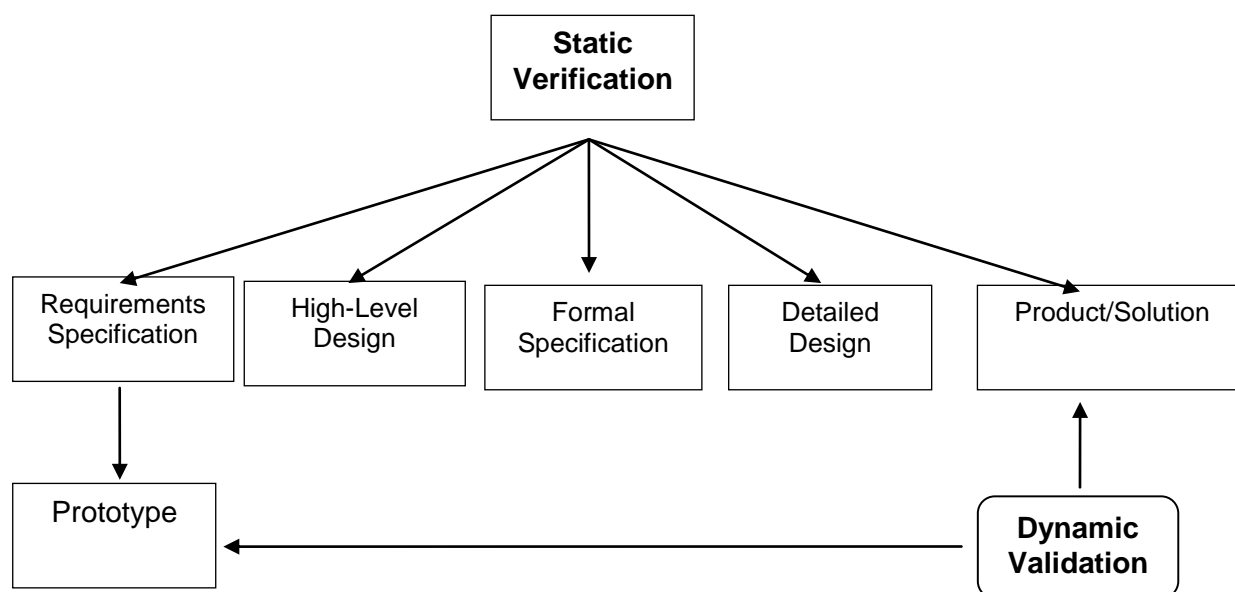


Figure 1. The role of static and dynamic techniques

The goal of the task 8.2 is to validate Plan4all products, which consist of metadata profiles, data models and network services concerning spatial planning data according to the INSPIRE Directive. In order to accomplish this task, a V&V phase is planned, which will be customized on the basis of the different nature of each expected product.

As for the verification process:

- The resulting Metadata Profiles will be checked with respect to the INSPIRE Metadata Regulation, the user requirements document and the Metadata elements on Dataset Level derived for each spatial data theme.
- The Data Models, expressed at conceptual level, will be checked with respect to the INSPIRE Generic Conceptual Model, the requirements and recommendations applicable to the Plan4all themes, and the analysis document describing specific conceptual models used in single European countries.
- The network service architecture will be checked with respect to the INSPIRE directive for sharing spatial planning data. In particular, the attention will be focused on verifying that the missing SDI services, detected for every partner, are going to be properly designed.

A different approach will be followed within the validation process which involves different Plan4all stakeholders and domain experts. As a matter of fact, requirements validation techniques, such as prototyping, may result useful in this respect, because they are intended to help develop the solution and check the requirement satisfaction. In these techniques, an important role is played by users, who can experiment with requirements and prove how the solution supports their work. To this aim, several tools will be exploited within the task 8.2 to capture users' contribution to the validation process, all of them sharing the cyclic delivery of feedback, which characterizes the most common prototyping techniques. In particular, as for the Metadata Profiles and the Data Models, they will be validated through a cyclic process involving different Plan4all stakeholders. Differently, as the assessment of network service architecture strongly depends on its implementation, the customer satisfaction with respect to this project solution is in charge of the task 8.3 on the basis of results from WP6 large scale testbed. Then, in task 8.2 the network service architecture will be validated in terms of its completeness with respect to functional and non-functional requirements of a reference architecture.

Detailed description of the methodology, along with the work plan and task assignments, will be provided in an interim version of deliverable 8.2.

## 3.2 Platform assessment – Task 8.3: Validation of platform

Responsible task leader: Gijon

- Implementation rules
- Usability

System will be performed through the benefits it provides towards the end users of the system.

- Time schedule – personnel resources (who is involved)
- Testing design and scenarios – procedures and large-scale tests
- Demonstration forms – reports / statistics – evaluation criteria
- Feedback structures – decision procedures - software update
- Completeness and timeliness of the provided information
- Reliability of information



The goal of task 8.3 is to validate Plan4all platform, which consists of data and metadata accessed through Web services (discover, view...) deployed in regional and pan European portals. The assessment will focus on two specific issues:

- Compliance with INSPIRE implementing rules and technical guidelines: to validate implementing rules and technical guidelines over data modelling, metadata profiles and network services, indicators based in those designed in task 8.2 will be used. Moreover, as a result of task 8.3, a monitoring tool based on INSPIRE Monitoring implementation rules will be implemented and used as reporting tool  
([http://inspire.jrc.ec.europa.eu/reports/ImplementingRules/monitoring/MR\\_indicators\\_Template-v.1.0.xls](http://inspire.jrc.ec.europa.eu/reports/ImplementingRules/monitoring/MR_indicators_Template-v.1.0.xls)).
- Usability for potential users: to validate usability, inputs from task 9.2 will be compared to platform outcome, in order to check that stakeholder needs are taken into account. Additionally, usability tests will be carried out involving task 9.2. stakeholders.

Regarding INSPIRE implementing rules and technical guidelines, only those **ADOPTED** before month 18 (December 2010) will be used for validation purposes. That means:

- Metadata (<http://inspire.jrc.ec.europa.eu/index.cfm/pageid/101>).
- Network services: discovery and view services  
(<http://inspire.jrc.ec.europa.eu/index.cfm/pageid/5>).
- Data and Service Sharing (<http://inspire.jrc.ec.europa.eu/index.cfm/pageid/62>).
- Monitoring but not Reporting  
(<http://inspire.jrc.ec.europa.eu/index.cfm/pageid/182>).

As an exception, download and transformation services could be validated using **last** draft available before month 18 (December 2010).

Detailed description of the methodology, along with the work plan and task assignments, will be provided in an interim version of deliverable 8.3., to be provided on month 16. This document will focus on the completeness, timeliness and reliability of the feed-back information and should include:

- Time schedule and personnel resources to validate implementation rules compliance and usability of platform. This schedule will consider that the validation of platform will be performed through a cyclic process to ensure success.
- Testing design, procedures, evaluation criteria and reports/statistics to validate implementation rules compliance, using developed services and regional and pan European portals.
- Testing design, procedures, evaluation criteria and reports/statistics to validate usability of platform, using developed regional and pan European portals.
- Feedback structures, decision procedures and recommendations on data/metadata/services/applications update, which will indeed require another loop in the validation process.

### 3.3 Stakeholder requirements – Task 9.2

Responsible task leader: ISOCARP

- Target groups and user needs
- Clustering

The Stakeholder requirements will be performed through the benefits it provides towards the end users of the system.

- Consideration of stakeholders requirements (based on users needs, task 2.4)
  - Time schedule – personnel resources (who is involved)
  - Stakeholder requirements design and consideration
  - Involvement reports
  - Feedback structures – link to product and platform assessment
  - Completeness and timeliness of the provided information
  - Reliability of information
- Increase of knowledge about planning and sustainability

## 4. Validation Management

Plan4all Validation Activities will be carried out in accordance with the Plan4all Assessment Methodology described in this report.

The Plan4all Validation Manager will be responsible for implementation of the methodology and will manage this with the assistance of T8.1 Validation Methodology responsible (ISOCARP), T8.2 “Validation of Validation of Project Solution” (AMFM) and T8.3 “Validation of Platform” (GIJON).

Besides WP8 Tasks leader mentioned above, the following main WP’s will be involved in the validation process, namely:

- WP3 “Plan4all Metadata Profile” Leader (HSRS)
- WP4 “Plan4all Data Model Definition” Leader (DIPSU)
- WP5 “Networking Architecture” Leader (AVINET)
- WP6 “Large Test bed” Leader (GIJON)
- WP7 “Content Deployment” (HF)

Finally, the framework will be enlarged to Regional Validation Managers (RVM), one in each Plan4all pilot region hosting the project Regional Implementation (T6.1). Regional Validation Managers will be members of the technical partners in the consortium. At each demonstration site there will be a Validation Liaison Official (VLO), who will be responsible for making the practical arrangements necessary for ensuring validation activities can be carried out as intended. Validation Liaison Officials will be members of those organisations where the Plan4all large-scale test bed will be validated.

The structure is shown below:

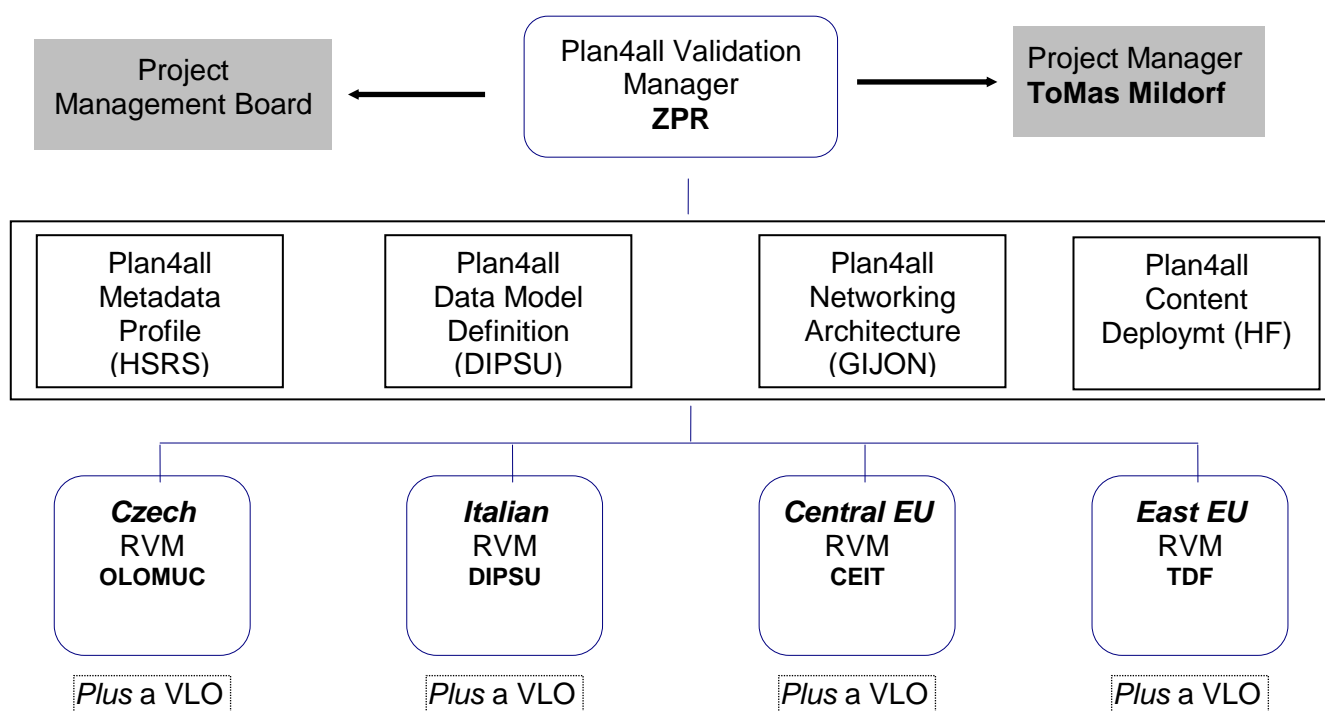


Figure 1 - Plan4all Validation Management Structure

A Regional Validation Manager for a given region will be responsible for:

- Planning, resourcing and scheduling the regional validation activities within the overall constraints and guidelines provided by the Plan4all Validation Strategy.
- Managing the regional validation activities in cooperation with Validation Liaison Officials
- Collating and documenting the results of validation activities
- Providing a written evaluation analysis of the actual results against those anticipated beforehand
- Communicating the evaluation analyses to the Plan4all Validation Manager at the stages defined in the Plan4all Validation Strategy
- Providing a bimonthly progress report on validation activities to the Plan4all Validation Manager
- Responding to reasonable ad-hoc requests from the Plan4all Validation Manager

The Plan4all Validation Manager has overall responsibility for the successful execution and conclusion of Work Package 8 of the project, “Validation”. Within this context the Manager will:

- Advise Regional Validation Managers on the requirements and interpretation of the Plan4all Validation Strategy & monitor the progress of validation work in each region
- Receive written regional analyses and compile a project register of results across the regions
- Report validation results to the Project Management Board (at User Group/Technical Group meetings) and recommend corrective action for any identified shortcomings at the regional level. Between such meetings to recommend corrective action as required to the Project Manager for authorisation.
- Prepare from regional contributions an interim “Assessment of Large Scale Test Bed” report for delivery shortly after completion of all validation activities. This report will provide a technical assessment of the Plan4all solutions: it will clarify technology-related problems, feasibility considerations and infrastructure set-ups.
- Prepare from regional contributions a final “Assessment of Large Scale Test Bed” report for delivery at the end of the project. This report will extend the interim report through a careful investigation of the large test bed stage results
- The Validation Manager will visit at least one of the large scale test bed sites in each region at least once, both to exchange validation experiences from around the consortium and to review the test bed site itself and the validation methods used.

#### *Assessment Criteria*

The Validation methodology is in charge to identify Assessment Objectives and to provide Assessment Criteria for all Plan4all outputs (i.e. Metadata Profile, Data Model Definition, Networking architecture, Large Scale Test Bed, Content Deployment) identifying for each of them the following main aspects:

1. Indicators (would be qualitative or quantitative, depending on the particular case)
2. Reference Case
3. Definition of Success
4. Methods of Assessment

### Metadata Profile Assessment

- Assessment Objectives

Please list below the objectives for this Plan4all Output

INDICATORS	REFERENCE CASE	DEFINITION OF SUCCESS	METHODS OF ASSESSMENT
1. Please fill in the table			
2.			
3.			
4.			
5.			
6.			
7.			

### Data Model Definition Assessment

- Assessment Objectives

Please list below the objectives for this Plan4all Output

INDICATORS	REFERENCE CASE	DEFINITION OF SUCCESS	METHODS OF ASSESSMENT
1. Please fill in the table			
2.			
3.			
4.			
5.			
6.			
7.			

### Networking architecture Assessment

- Assessment Objectives

Please list below the objectives for this Plan4all Output

INDICATORS	REFERENCE CASE	DEFINITION OF SUCCESS	METHODS OF ASSESSMENT
1. Please fill in the table			
2.			
3.			
4.			
5.			
6.			
7.			

## Content Deployment Assessment

- Assessment Objectives

Please list below the objectives for this Plan4all Output

INDICATORS	REFERENCE CASE	DEFINITION OF SUCCESS	METHODS OF ASSESSMENT
1. Please fill in the table			
2.			
3.			
4.			
5.			
6.			
7.			

### Generic Impacts in each Test Bed

Impacts in each region will be selected for validation on the basis of one or more of the following criteria:

- 1 Negative as well as positive impacts should be selected
- 2 Each impact should be validated by at least one appraisal group (more if resources permit)
- 3 Impacts to be validated should concentrate on those which
  - 3.1 represent the characteristics of the applications which are fundamental to Plan4all, rather than from beneficial, but fortuitous, side-effects of the applications
  - 3.2 are likely to lead to non-trivial results

Each region has been encouraged to include in validation the following project-wide objectives and impacts, providing resources allow:

- 1 Conformity to Plan4all networking architecture
- 2 Improved quality of spatial planning and decision-making
- 3 Increased efficiency and cost-effectiveness of spatial planning and decision-making processes
- 4 Improved conformity of stakeholder IT systems to current and emerging 'de jure' or 'de facto' standards

In particular, for each Large Test Bed the following Table would be prepared identifying main aspects as below:

Summary Review of Platform and Validation Test Bed Sites

Technologies & Approach Used	Functionalities	Main Decision Makers	User Groups		Validation Test Bed Site(s)
			Stakeholders Within Project	Stakeholders Outside Project	

## 5. Quality Assurance mechanism and risk management

According to the Deliverable D.1.1 “Project Management Structure and Processes”, the quality assurance will be carried out in two levels:

- **Project output assessment level** - related to the assessment of the different outputs of the project (e.g. content output, technical/software output, evaluation/validation output, dissemination/valorisation output, scientific output).
- **Progress monitoring level** - related to monitoring of the formal milestones of the project as well as the WP-internal milestones of smaller granularity. All of these milestones are listed in the table below.

Due to the fact that the project and WP-internal milestones correspond to the different outputs of the project the quality assurance mechanism will be ensured in both levels at the same time in accordance with the project and the WP-internal milestones as defined in the table below. For each milestone quality assurance review process will be set up.

	Month	Deliverable	Responsible partner		
Project milestones	Milestone 1	M6	D1.1.1 Progress Report	UWB & all partners	
			D2.1 Cluster of Leading Organisation in SDI for Spatial Planning	ISOCARP	
			D2.2 Analysis of Innovative Challenges	CEIT ALANOVA	
			D2.3 INSPIRE Requirements Analysis	EUROGI	
			D2.4. User Analysis Report	HF	
			D9.7.1 Workshops and Conferences	EUROGI & all partners	
			D8.1 Assessment Methodology	ISOCARP	
	WP-internal milestones	WP3-1	M7	D3.1 Analysis of National Requirements on Spatial Planning Metadata	UWB
		Milestone 2	M9	D3.2 European Spatial Planning Metadata Profile	HSRS
				D5.1 Analysis of Demand on European Spatial Planning Data Sharing	TDF
				D9.7.2 Workshops and Conferences	EUROGI & all partners
		WP4-1	M10	D4.1 Analysis of Conceptual Data Models for Selected Schemes Used in Single Countries	TDF
		Milestone 3	M12	D1.1.2 Progress Report	UWB & all partners
				D1.2.1 Annual Report	UWB & all partners
				D1.3 Financial Statement	UWB & all partners
				D1.4 Pre-financing Request	UWB & all partners
		Milestone 4	M16	D4.2 Conceptual Data Model for Selected Themes	UWB
				D5.2 Plan4all Networking Architecture	DIPSU
				D9.7.3 Workshops and Conferences	EUROGI & all partners
		Milestone 5	M18	D1.1.3 Progress Report	UWB & all partners
				D8.2 Assessment of Project Solutions	AMFM
	WP6-2	M20	D6.1 Deployment of Platforms on Local, Regional and National Levels	ZPG	
	Milestone 6	M24	D1.1.4 Progress Report	UWB & all partners	
			D1.2.2 Annual Report	UWB & all partners	
			D1.5 Financial Statement	UWB & all partners	
			D1.6 Pre-financing Request	UWB & all partners	
D6.2 Pan European Plan4all Platform			HSRS		
D7.1 Metadata Deployment Stage 1			LGV Hamburg		
D7.2 Data Deployment Stage 1			LGV Hamburg		
D9.7.4 Workshops and Conferences			EUROGI & all partners		
Milestone 7	M30	D1.1.5 Progress Report	UWB & all partners		
		D1.7 Financial Statement	UWB & all partners		
		D1.6 Final Report	UWB & all partners		
		D7.3 Metadata Deployment Stage 2	HF		
		D7.4 Data Deployment Stage 2	HF		
		D8.3 Assessment of Platform	GIJON		
		D9.6 Report from Clustering	ISOCARP & all partners		
		D9.7.5 Workshops and Conferences	EUROGI & all partners		
		D9.10 Exploitation Strategy	EUROGI & all partners		
		D9.11 Multimedia Project Presentation final	UWB		

Table - Project and WP-internal milestones

## Risk management

Risk identification and resolution in the Plan4all is taking place on three levels:

1. *Strategic level*: concentrates on the relation between the project and the consortium in the environment in which they operate. Risk management on this level is the responsibility of the Project Board.
2. *Tactical level*: concentrates on the work packages' contribution to the project objectives. Risk management at this level is the responsibility of the Executive Board.
3. *Operational level*: concentrates on the activities within the work package, which is the responsibility of each WP Leader.



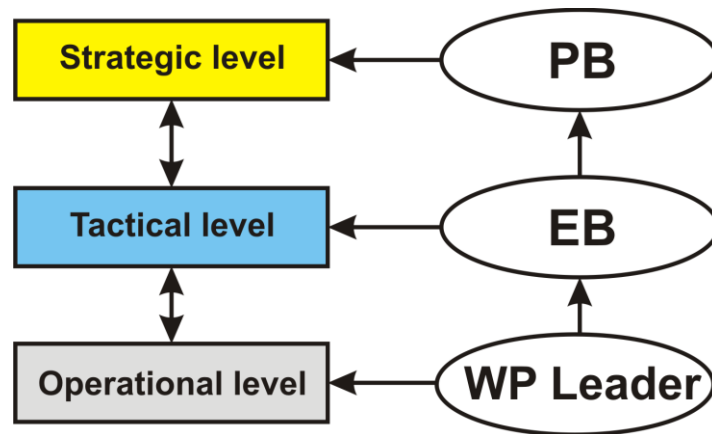


Figure - Risk management levels and responsible bodies (PB - Project Board, EB - Executive Board)

The initial risks identified on each of this level are present in the table 20. Further identified risks will be incorporated throughout the life of the project. Many risks, especially on strategic level, are covered by Consortium Agreement, where all potential risks and necessary actions are described.

Throughout the project, the responsible body (as mentioned in the figure 5) tracks progress handling the risks, to ensure that necessary actions are taken.

Estimation of the risk was made according to the possible consequences in terms of threats - high, medium, low.

	Indetified risks	Description	Estimation	Action
Strategic level	Lack of cooperation inside the project	The partners are no cooperating in collaborative manner in order to achieve the project objectives.	High	Indetify weak points in collaboration and find their cause. On the basis of this analysis further steps will be set by the Project Board with assistance of other bodies (Executive Board and WP Leaders)
	Weak project management	Project management is identified as weak by Project Board and the continuation with such management would harm the projects objectives.	High	Recommendations by the Project Board should be undertaken and in case of failure, the another project coordinator will be assigned.
	Not enough experience of some partners	Some partners from the Plan4all consortium might be not enough experienced for the execution of the project activities.	Low	Weak point should be identified and on the basis of discussion with the partner make further steps.
Tactical level	WP objectives not achieved	A work package will not achieve its objectives.	High	The cause of the failure should be identified and decision based on the influence of the overall project's objectives should be taken by the Project Board.
	Outcomes not met by stakeholders.	The outcomes may not reflect the real needs and priorities of the stakeholders.	High	Decision made by the Project Board with assistance of other bodies (Executive Board and WP Leaders) should be taken in order to modify the DoW and particular WPs work plan.
	WP not finished in time	A work package is not finished in due time.	Medium	The decision by the Project Board should be taken. There are several actions that might be taken: shift of person effort, delay in delivery will not harm any other WP - no action needed, delay in delivery will harm other WP - possibility of extension of the project duration should be taken into account.
Operational Level	Lack of communication	Partners are not collaborating within a work package in a collaborative manner.	High	Indetify weak points in collaboration and find their cause. On the basis of this analysis further steps will be set by the WP Leader.
	Complexity	The WP objectives are too complex to realise.	High	Decision leading to simplification of the objectives (e.g. change in the DoW) should be taken by the Project Board.
	Scope too large	The total set of activities may be too large for the partners to realise and/or manage.	High	Decision leading to simplification of the objectives (e.g. change in the DoW) should be taken by the Project Board.
	Some partners are not actively participating	Some partners are not actively participating in execution of the WP objectives and they do not use their labour effort attributed for the execution.	High	Labour effort (also respective budget) will be shifted to another partner. Decision taken by Porject Board.

Table - Risk analysis

## 6. References

Plan4all Grant Agreement, Annex I - Description of Work

MediaWiki - <http://www.mediawiki.org/wiki/MediaWiki>

A Risk Management Standard, AIRMIC, ALARM, IRM: 2002