



**RBM Support**  
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[Introduction](#)

# RBM Assessment Support

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## Document Change Record

Issue Revision	Date	Affected Section/Paragraph/Page	Reason for Change/Brief Description of Change
I1R1	18/Jan/10	All	Initial Issue

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## 1 Introduction

### 1.1 Scope and Purpose

Within IRPS project (<http://www.irps-project.net>), the approach applied for project assessment is based on Result Based Management ideas (RBM<sup>1</sup>). The present document reminds principles and explain the use of a simple support tool based on MS excel files.

## 2 RBM Evaluation for IRPS

Evaluation items are identified through analysis of activities outputs and outcomes, and captured in a RBM logical model.

### 2.1 IRPS Logical Model

Main activities are those of the Workpackages WP1, WP2, WP3, WP4, WP5, WP6 Activities are further analysed vs outputs & outcomes and listed in table below

IRPS Logical Model		
Description type Name	Definition	Performance measurement Data
Activities	WP 1: Coordination WP6 : Quality & Assessment WP2 : System Specification and design WP3 : Implementation WP4 : Integration and testing WP5 : Deployment demonstration	
Outputs	Deliverables Technical Notes Components ( HW +SW) Publications Multimedia material ( video, 3D models)	Size, quality Quantity Quantity, relevance <sup>2</sup> , reqs-system test Quantity, relevance, scope relevance
Immediate outcomes	Management best practice LIMS concept IRPS concept IRPS evidence EU project evidence	relevance <sup>3</sup> , reqs-system test relevance, scope maturity success <sup>4</sup>
Intermediate outcomes	Partnerships Modular LIMS Modular MCC	relevance, maturity success
Final outcomes	Exploitation plan by partners IRPS market Business opportunities EU project evidence	relevance, scope maturity success

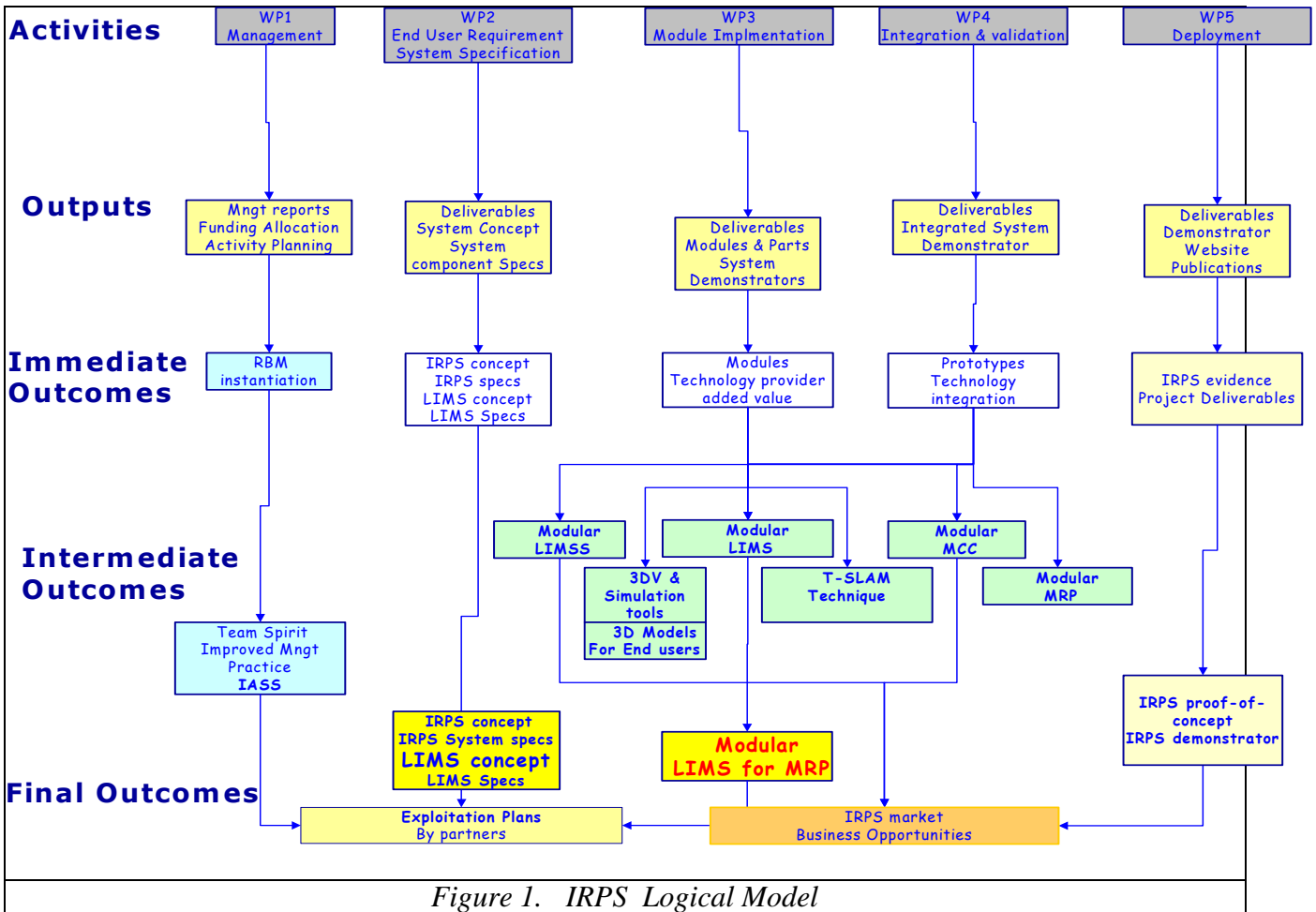
<sup>1</sup> For a tutorial on RBM see Welcome to the RBM E-Learning Tool, [http://www.tbs-sct.gc.ca/eval/tools\\_outils/RBM\\_GAR\\_cour/Bas/bas\\_h\\_e.asp](http://www.tbs-sct.gc.ca/eval/tools_outils/RBM_GAR_cour/Bas/bas_h_e.asp)

<sup>2</sup> does the final system actually achieve defined requirements

<sup>3</sup> does the final system actually achieve defined requirements

<sup>4</sup> success meaning effectiveness in meeting intended outcomes within budget and within negative outcomes

A summary of the resulting IRPS logical model is provided in figure 1 below.



## 2.2 Performance measurement Strategy

The Performance Measurement Table (PMT) gives 1 to 3 performance indicators for each output and outcomes identified in the logic model. The data collection method is through surveys, possibly automated, which are easily set-up, and of low cost for every contributor.

Performance Measurement Table		
Output/outcome	Performance Indicator	Information Collection Method
<b>Deliverables</b>	PI1: quality PI2: relevance PI3: maturity PI4: success PI5 : Cost-Effectiveness	Periodic Survey once a year
<b>Publications &amp; dissemination materials</b>	PI1: quality PI2: relevance PI3: maturity PI4: success	Survey
<b>Components</b>	PI2: relevance PI3: maturity PI4: success PI5 :Cost-Effectiveness	Survey
<b>LIMS concept</b>	PI2: relevance PI3: maturity PI4: success PI5 :Cost-Effectiveness	Survey
<b>IRPS concept</b>	PI2: relevance PI3: maturity PI4: success PI5 : Cost-Effectiveness	Survey
<b>Modular LIMS for RP</b>	PI2: relevance PI3: maturity PI4: success PI5 :Cost-Effectiveness	Survey
<b>Modular MCC for RP</b>	PI2: relevance PI3: maturity PI4: success PI5 : Cost-Effectiveness	Survey
<b>IRPS market</b>	PI2: relevance PI3: maturity PI4: success PI5 : Cost-Effectiveness	Survey
<b>Exploitation plans</b>	PI2: relevance PI3: maturity PI4: success PI5 : Cost-Effectiveness	Survey

A pragmatic approach to get honest estimates is to reduce the estimators allowing participants to be metricated from focused view points. In IRPS it was decided to focus only on the following estimators and to capture mainly 4 performance attributes :

- Relevance :is an actual need addressed?
- Maturity : is progress made towards achievement of outcomes?
- Success : level of effectiveness in meeting intended outcomes? within budget and without negative outcomes?
- Cost-effectiveness : are appropriate means being used to achieve outcomes?

The estimator value is a selection of five multiple choices in order to capture credible values and trends :

- (very high ,high, moderate, low and very low,)
- The precise meaning of the estimator would be reminded to the questionnee close to each question of a survey, thus helping him/her triggering an efficient and honest response

The following text is displayed close to the performance evaluation query, reminding the questionnee the four focused attributes and meaning.

For the performance estimator displayed, overall quality, relevance, and success estimators can be quoted from very high to moderate, low a,d very low. We rind you about these estimators meanings

- Relevance :is an actual need addressed?
- Maturity : is progress made towards achievement of final outcomes?
- Success : effectiveness in meeting intended outcomes?( within budget and without negative outcomes)
- Cost-effectiveness : are appropriate means being used to achieve outcomes?

### 2.3 Surveys through excel tables

From feedback of data collection, it was possible to shrink the surveys into simple excel table templates, with minimum effort on users : they have only to provide predefined values on 4 estimators ( relevance, Maturity, Success and cost effectiveness) associated to each outcome.

The surveys are structured to reflect the performance measurement table with the following sections :

- Deliverables
- Immediate outcomes
- Intermediate outcomes
- Final outcomes

An example of the survey template table is given in figure 2 below for participant iassP7. The procedure is as follows :

- The participant updates the template with the estimator values. He leaves N/A when he cannot provide a value ( he has not read a document, he is not qualified, etc ..)
- The participant sends the survey back to the quality team for consolidation
- The surveys are consolidated in tab IassP3

A detailed listing of the surveys and all results are summarized in an excel file named [45048.CS.D623\\_AR3\\_AX\\_P3Survey-Summary.xls](#)



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**RBM Evaluation for IRPS**

Name	Relevance	Maturity	Success	Cost-effectiveness
<b>DELIVERABLES</b>				
0111 Project management Guidelines	high	high	high	high
0112- Detailed Task description and Schedule	high	high	high	high
0621- IRPS quality & Document Management Plan	high	high	high	high
0611- IRPS Management Plan	high	high	high	high
0611b - IRPS Presentations	high	high	high	high
0622 - IRPS Assessment Plan	high	high	NA	NA
06.3.1 - Publications	moderate	moderate	NA	NA
02.1 - End User Requirements	moderate	moderate	NA	NA
02.2 - State of the Art for relevant mobile robotic technologies	high	high	NA	NA
02.3 Market Analysis for LIMS based MRP	high	high	moderate	moderate
02.4.1 IRPS System Specification	high	high	moderate	moderate
02.4.2 IRPS System Architecture	high	moderate	moderate	moderate
03.1.1- IRPS Platform implementation plan	high	high	moderate	moderate
03.2.1- LIMS Detailed Specification	high	high	moderate	moderate
03.1.1- IRPS Platform implementation plan	high	high	moderate	moderate
03.2.1- LIMS Detailed Specification	high	high	moderate	moderate
03.3.1- 3D Mapping & Change Detection Specification	high	high	moderate	moderate
03.3.2- 3D Mapping Component description	high	high	moderate	moderate
03.3.3- Change Detection Component description	high	high	moderate	moderate
03.4.2- Navigation Component description	moderate	moderate	moderate	moderate
05.1- Application Deployment plan	high	low	moderate	moderate
06.3.4 - Plan for using and Disseminating Knowledge	moderate	moderate	moderate	moderate
06.3.5- Report on Raising Public Participation & awareness	high	low	NA	moderate
<b>Immediate Outcomes</b>				
Team spirit	high	moderate	moderate	moderate
Vingt practice	high	moderate	moderate	moderate
RBM approach	moderate	moderate	moderate	moderate
ASS tool	high	moderate	moderate	moderate
LIMS concept	high	moderate	moderate	moderate
RPS System concept	high	high	high	moderate
<b>Intermediate Outcomes</b>				
Modular LIMSS	high	moderate	low	moderate
Modular MCC	high	high	high	moderate
Modular LIMS	high	low	moderate	moderate
T-SLAM technique	moderate	moderate	low	moderate
Relevance of 3D Simulation Tools	high	moderate	high	moderate
3D Volumic Modelling	high	moderate	high	moderate
Modular MRP Interface	high	moderate	high	moderate
<b>Final Outcomes</b>				
FAPO airport 3D model	high	high	high	NA
ATB 3D model	high	high	NA	NA
Final Demonstrator	high	low	high	NA
Business opportunities	high	high	moderate	NA
Exploitation plans	high	moderate	low	NA
Market Analysis	high	moderate	low	NA

**HM:**  
 For the performance estimator displayed, overall quality, relevance, and success estimators can be quoted from *very high to high, moderate, low and very low*.

We remind you about these estimators meanings  
**Relevance** : is an actual need addressed?  
**Maturity** : is progress made towards achievement of final outcomes?  
**Success** : effectiveness in meeting intended outcomes? (within budget and without negative outcomes)  
**Cost-effectiveness** : are appropriate means being used to achieve outcomes?  
 Please use **NA** if you dont have

« | » | \ iass\_P3 / iassP1 / iassP2 / iassP3 / iassP4 / iassP5 / iassP6 / iassP7 / »

Figure 2. Survey template for P3.



## 2.4 Surveys Consolidation

The quality team responsible for survey consolidation, updates the consolidation file with each survey participant table received. ( this adds a number of tabs in the excel file)

A consolidation table is created (a dedicated tab I the excel file ) where consolidated value is computed as the mean value of all individual values. N/A values are not taken into account.

Figure 3 below provides an example of consolidation for period3 assessment in the IRPS project.. The file *045048.CS.D623\_AR3\_AX\_P3Survey-Summary.xls attached to this document* is the consolidation of all surveys. The performance estimation summary ignores<sup>2</sup> the values stated as “N/A” in the surveys.

Name	Relevance	Maturity	Success	Cost-effect
<b>DELIVERABLES</b>				
D111 Project management Guidelines	4	4	4	4
D112- Detailed Task description and Schedule	4	4	4	4
D621 - IRPS quality & Document Management	4	4	4	4
D611 - IRPS Management Plan	4	4	4	4
D61b - IRPS Presentations	4	4	4	4
D622 - IRPS Assessment Plan	4	4	4	3
D6.3.1 - Publications	3	3	3	3
D2.1 - End User Requirements	3	3	3	3
D2.2 - State of the Art for relevant mobile robotics	4	4	4	3
D2.3 Market Analysis for LIMS based MRP	4	4	4	4
D2.4.1 IRPS System Specification	4	4	4	4
D2.4.2 IRPS System Architecture	4	4	3	4
D3.1.1 - IRPS Platform implementation	4	4	4	4
D3.2.1 - LIMS Detailed Specification	4	4	4	4
D3.1.1 - IRPS Platform implementation	4	4	4	3
D3.2.1 - LIMS Detailed Specification	4	4	4	4
D3.3.1 - 3D Mapping & Change Detection	4	4	4	3
D3.3.2 - 3D Mapping Component description	4	4	4	4
D3.3.3 - Change Detection Component description	4	4	4	3
D3.4.2 - Navigation Component description	4	4	3	3
D5.1 - Application Deployment plan	4	3	3	3
D6.3.4 - Plan for using and Dissemination	3	3	3	3
D6.3.5- Report on Raising Public Participation	4	3	3	4
<b>Immediate Outcomes</b>				
Team spirit	3	3	3	3
Mngt practice	3	3	3	3
RBM approach	3	3	3	4
IASS tool	3	3	3	3
LIMS concept	3	3	3	3
IRPS System concept	3	4	4	4
<b>Intermediate Outcomes</b>				
Modular LIMSS	4	2	2	2
Modular MCC	4	4	4	4
Modular LIMS	4	2	2	3
T-SLAM technique	3	3	2	2
Relevance of 3D Simulation Tools	4	3	4	4
3D Volumic Modelling	4	3	4	4
Modular MRP Interface	4	3	4	4
<b>Final Outcomes</b>				
FARD airport 3D model	4	4	4	4
ATB 3D model	4	4	4	4
Final Demonstrator	4	3	3	3
Business opportunities	4	4	3	3
Exploitation plans	4	3	2	2
Market Analysis	4	3	3	3
EU project Evidence	5	5	5	3

**Estimators**

- **Relevance** : is an actual need addressed?
- **Maturity** : is progress made towards achievement of final outcomes?
- **Success** : effectiveness in meeting intended outcomes?
- **Cost-effectiveness** : are appropriate means being used to achieve outcomes?
- **N/A** if not enough information

Figure 3. Example of Survey results for P3 –green bars indicate moderate to high or very high estimates, red bars indicate low to very low estimates, .



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Conclusion

### 3 Conclusion

Main lessons learnt are :

- The RBM approach is recognized as a tool to help participants to identify project level and individual outcomes, but should be put in place very early in the project to maximize its impact in a pro-active way.
- The maturity of outcomes have been assessed without over flooding the project participants with questions and metrics. In counter side it requires that all outcomes have been identified<sup>5</sup>
- The data collection procedure is implemented as a light weight tool, and can be easily extended. The following extensions should be implemented to improve the process :
  - Provide focused surveys with a webtool to release users from as much as possible inputs constraints and workload. Consolidation should then be automated to visualize both users status (responsiveness, participation, degree of honesty...) and estimator figures over time.
  - In particular a 3D representation could be used to better synthesize and visualize estimator values evolution over time or in case their number would scale up. This however requires that the estimators list is frozen.
- although “self assessment” could possibly be biased, the estimator values are in the end smoothed and provide objective values. As such the estimations on relevance, maturity or costs effectiveness of outcomes evaluated are significant.

The results obtained through our RBM approach were helpful, and we would recommend its early application on future projects; the approach will then help improve working practices and provide valuable inputs for project management.

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<sup>5</sup> --this is in fact a first step of RBM which recommends to list all the outcomes in the project logical model see [figure 1](#)