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**HeC**  
**Health-e-Child**

Instrument Integrated Project

Thematic Priority IST

**D.1.5.a Self Assessment Plan**  
**(updating at month 28)**

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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	X
CO	Confidential, only for members of the consortium (including the Commission Services)	

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## Health-e-Child Consortium

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03. I.R.C.C.S. Giannina Gaslini (IGG)
04. University College London – Great Ormond Street Children’s Hospital (UCL)
05. Assistance Publique Hopitaux de Paris – Necker (APHP)
06. European Organisation for Nuclear Research (CERN)
09. University of the West of England (UWE)
10. University of Athens (UoA)
11. Università degli Studi di Genova (DISI)
12. The French National Institute for Research on Computer Science and Control (INRIA)
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15. Gerolamo Gaslini Foundation (FGG)
16. Maat G Knowledge (MAAT)
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## Short description

At the end of the second reporting period, the Self Assessment indicators were used by all WP leaders while preparing the Annual Activity Report: the progress against self assessment plan was declared in each workpackage.

At the same time, a new Description of Work (DOW) for the Phase III of the Project (January 2008-June 2009) was prepared and delivered; all workpackages updated their workprogramme and several tasks were added, while others were concluded at the end of the second reporting period.

After having defined a new DOW for phase III, it became necessary to revise the Objectives and Indicators of the Self Assessment Plan, and this was done following the methodology already chosen for the first release of the plan.

## Methodological note

The self-assessment plan of the HeC project results from a joint effort of all consortium partners. Both the Work package Leaders (WPLs) and the Scientific Committee Chair have been involved in defining modes and characteristics for a self-assessment of the HeC project.

The set indicators, updated whenever necessary, will be monitored on a yearly basis, 1-2 months before the end of each reporting period, in order to make them serve as a specific tool for progress reporting within the project management activity provided for to the Consortium by the Project Coordinator, the Project Management Team Leader and the whole Project Management Team.

### 1.1 WPs performance indicators and self-assessment plans

As a first input, each WP Leaders was requested to clarify the main objectives each respective WP aims to achieve – specifying and describing the activities which are deemed necessary for achieving the designated objectives.

As an intermediate step, a description of the measurement processes/methodologies which were adopted by the various WPLs was also requested, in order to make it possible to self-assess the results achieved carrying on the activities associated with the above mentioned WP objectives.

Finally, and on the basis of the previous inputs, a series of correlated indicators for measuring the outcomes of the various WP activities was defined, associating them, as much as possible, to task-level details with an approximate numerical indication of the allowed threshold limits related to each WP objective.

The format of the WP benchmarking assessment template used for these purposes as well as the various WP inputs provided for by WPLs were included in the following section of this document.

In their inputs, WPLs have included qualitative (subjective) and quantitative (objective) indicators. While qualitative scales usually range between 1 and 5, with level 5 being the

most satisfying achievement of each task's goal, quantitative indicators are related to well defined measurement processes and measurement units.

The following WPs will be assessed using qualitative indicators mainly:

- WP2 – User requirements specifications
- WP3 – Legal, ethical, and regulatory issues
- WP4 – Privacy and security
- WP5 – Grid platform
- WP6 – Medical vertical knowledge representation
- WP7 – Data management layer and data integration mechanisms
- WP8 – Medical query processing
- WP12 – Decision support systems
- WP13 – Biomedical knowledge discovery
- WP14 – Deployment of the data management system and Grid gateway

The following WPs will be assessed using quantitative indicators:

- WP1 – Project coordination / management
- WP9 – Data collection
- WP10 – Ground truth (annotated data) and clinical knowledge gathering
- WP11 – Integrated disease modelling
- WP15 – Training
- WP16 – Dissemination

## 1.2 The Scientific Committee Project Review.

The Scientific Committee (SC) organizes a Scientific Project Review (SPR) about 1-2 months before the annual Technical Review (EC review). Following the scientific review, the SC will produce a set of documents assessing the current scientific status of the project.

Among the various SC functions, as described in Contract-Annex 1, the following ones are of particular relevance:

- “...- Assess technical progress by comparing the project results to the state-of-the-art;  
- Periodically organise sessions for auditing and evaluating the research performed;  
- Stipulate and evaluate measurable results for project activities; ...”

Taking into account these functions the Scientific Project Review might also include suggestions for adopting different or improved self-assessment criteria. The SPR will be handed over to the Executive Board, which shall implement, if necessary, appropriate changes and use, if appropriate, the new release of self-assessment criteria in the Reports submitted to the Commission.

### 1.3 Yearly re-definition of the Self-Assessment plan

It is the WPLs' common belief that the Self Assessment plan must be considered as a dynamic process, undergoing appropriate updating every year in order to validate/modify the chosen indicators, also on the basis of the SC yearly evaluation.

## 2. Rationale of the project's work breakdown structure.

For a better understanding of the project's objectives we refer to the work breakdown structure.

### A1: Project Coordination / Management

- WP1 – Project coordination / management

### A2: User Requirements Specifications

- WP2 – User requirements specifications

### A3: Ethical, Legal and Social Issues

- WP3 – Legal, ethical, and regulatory issues
- WP4 – Privacy and security

### A4: Platform Development, Vertical Data Integration and Knowledge Representation

- WP5 – Grid platform
- WP6 – Medical vertical knowledge representation
- WP7 – Data management layer and data integration mechanisms
- WP8 – Medical query processing

### A5: Data Collection, Annotation and Knowledge Gathering

- WP9 – Data collection
- WP10 – Ground truth (annotated data) and clinical knowledge gathering

### A6: Disease Modelling, Decision Support and Knowledge Discovery based on Integrated Biomedical Information

- WP11 – Integrated disease modelling
- WP12 – Decision support systems
- WP13 – Biomedical knowledge discovery

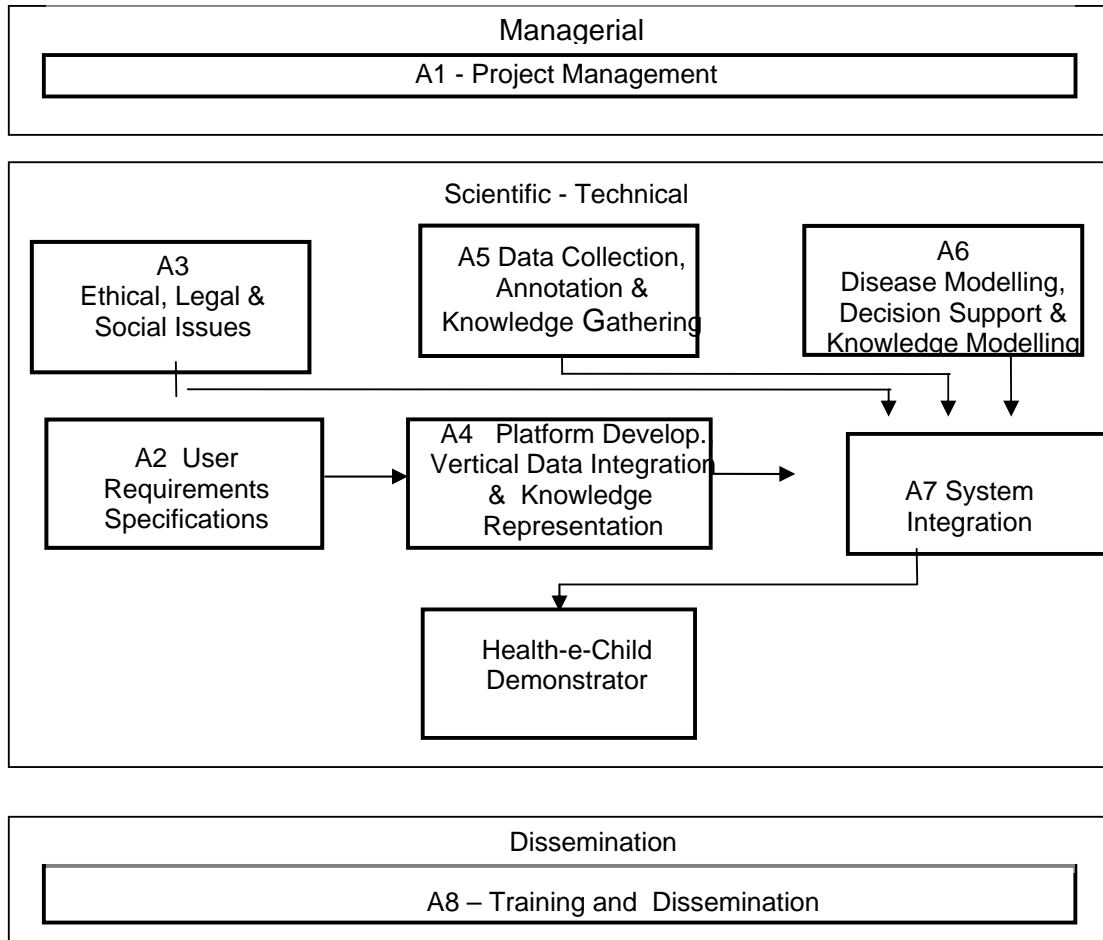
### A7: System Integration

- WP14 – Deployment of the data management system and Grid gateway

### A8: Dissemination Policy and Broader Impact

- WP15 – Training
- WP16 – Dissemination

3. Graphical presentation of the Activities grouping the various WPs



**WPs self-assessment plans**

<b>A1 -WP 1 Project management</b>		
Partners:	Siemens AG - Lynkeus	WP leader: Joerg Freund
Objective n.	WBS code	Objectives' description
1.1.1	T1.1	Monitoring progress of activities, efforts and expenses: timely completion of activities in each single WP.
1.1.2	T1.2 D.1.1 D.1.5	Updating of Self assessment and Quality Guidelines reports. Providing quality assurance guidelines, outlining project timing, quality procedures, deliverables production procedures, and ethical procedures.
1.1.3	T1.3 D.1.2 D.1.3	Progress Reports (Quarterly and Annual reports). Timely production of activity progress reports required by EU
1.1.4	T1.4	Financial Coordination Effective handling of all financial matters arising during the course of the project.
1.1.5	T1.5	Contractual management & Conflict Resolution Effective handling and resolution of all contractually relevant or partner conflict situations.
1.1.6	T1.6 D.1.4	Meetings (planning and reporting) and Communication with partners Efficient organising, planning and reporting on all meetings envisioned in the project plan, and providing the project communication infrastructure.
1.1.7	T1.7	Recruiting of independent experts from institutions internal and external to the consortium members to staff the Scientific Committee and the Ethical and Legal Review Committees .
1.1.8	T1.8	Clustering & concentration Prompt participation to meetings, contribution to common plans and actions as well as participation to events organised by the European Commission in case of clustering activities with other relevant EC-funded projects are organised.

<b>Measurement</b>	
Objective n.	Measurement process and units
1.1.1	Completion of WPs activities by deadline (in percentage)
1.1.2	Advance/delay in defining Self assessment and Quality Guidelines and percentage of indicated issues addressed.
1.1.3	Number days in advance/delay against delivery deadline. The 45 days delay was considered consistent with the possibility of reviewing all deliverables within the consortium.
1.1.4	Percentage of completion/update of input of financial data.
1.1.5	Percentage of solved/unsolved requests relevant to contract/Consortium Agreement amendments; percentage of solved/unsolved partners' conflicts.



1.1.6	Efficient organising, planning and reporting on all meetings
1.1.7	Number of experts to cover the clinical and technical areas of the project
1.1.8	Percentage of participating actions on possible opportunities

Indicators [Upper and lower limits associated with WP objectives and measurement units]		
Objective No	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1.1.1	100%	75%
1.1.2	+15 days; 75%	+45 days; 50%
1.1.3	within 45 days; 100%	+45 days; 50%
1.1.4	100%	75%
1.1.5	100%	75%
1.1.6	100%	50%
1.1.7	12 experts	6 experts
1.1.8	50%	25%



A2 - WP 2 User Requirements Specifications			
Partners:	<b>UWE</b> , Siemens, IGG, UCL, APHP, UoA, DISI, INRIA, MAAT	WP leader:	Tamás Hauer
Objective / WBS code	Quality	WP Objectives: description	
1/2.6		<b>Revision of the User Requirements Specifications:</b> the user requirements document will be revisited and the documented requirements critically reviewed with respect to validity, priority, feasibility in light of the experience accumulated during the first three years of the project.	

Objectives	Quality	Description
1	Correctness	The documented requirements shall map to real requirements
2	Unambiguousness	The requirements shall have a unique, unambiguous reading
3	Completeness	The requirements capture the entire system's functional- and non-functional properties
4	Verifiability	It is possible to verify that the system meets each requirement
5	Consistency	No requirements or terms are in conflict with each other
6	Understandability	The end-users can understand the users requirements document
7	Modifiability	The structure and style of the URS allows for later interactions
8	Traceability	The dependency of the requirements and their relation to project goals is transparent.

Measurement	
Objectives	Measurement process and units:
1	1- There is no apparent relation between documented requirements and real ones ... 5- All documented requirements correspond correctly to real requirements
2	1- Most requirements are ambiguous, can be interpreted in many ways ... 5- All requirements and terms are properly defined and there is little to no room to misinterpret them



3	1- The domain captured by the requirements does not overlap with the problem domain of HeC ... 5- The requirements for the full system are completely captured by the URS
4	1- There is no apparent way to use the requirements for system validation ... 5- All requirements are defined in such a way that verifying them by using the final system is apparent
5	1- The amount of contradictions and conflicts in the URS render it unusable ... 5- There is no apparent conflict or contradiction between the documented requirements.
6	1- It is unlikely that readers outside the creators of the URS understand the specifications. ... 5- The URS is fully understandable for end-users with limited IT background.
7	1- There is no possibility to evolve the URS without a major change like rewriting from scratch. ... 5- The structure and style of the URS makes it apparent that further iterations can be incorporated seamlessly.
8	1- There is no apparent semantic links and cohesion between the requirements ... 5- Each requirement is properly and apparently structured in a dependency tree rooted at top project goals

<b>Indicators</b> [Upper and lower limits (numbers) associated with WP objectives and measurement units]		
Objectives	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	5	4
2	4	3
3	4	3
4	4	3
5	5	4
6	4	3
7	5	4
8	4	3

**A3 - WP 3 Ethical, Legal and regulatory issues**

Partners:	<b>IGG</b> , Siemens, UCL, APHP, OPBG	WP leader:	IGG - Alberto Martini
Objective n.	WBS code	WP Objectives: description	
1	T3.2	Informed consent illustration: informed consent is submitted to parents and patients (when applicable for age) and any relevant issue discussed and clarified.	
2	T3.2	Investigate on ethical issues related to genetic data, especially data that may gain predictive value as research advances.	
3	T3.3	Effective identification and solution of ethical, legal and regulatory issues	

**Measurement**

Objective n.	Measurement process and units:
1	Percentage of approved consents
2	Percentage of families who refused to participate to the study
3	Percentage of identified ethical, legal and regulatory issues addressed/not addressed within 3 months from identification

**Indicators** [Upper and lower limits (numbers) associated with WP objectives and measurement units]

Objective n.	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	100%	80%
2	10%	0%
3	100%	80%



A3 - WP 4 Privacy and Security			
Partners:	<b>Siemens AG</b> , Maat	WP leader:	Jörg Freund
Objective n.	WBS code	<b>WP Objectives:</b> description	
1	4.4	Operation and maintenance of the certification authority. Check, validate and issue new certificates for HeC community	
2	4.5	Overlooking the security and privacy aspects of the project	

Measurement	
Objective n.	Measurement process and units:
1.	on time: min 2 days max 7 days to provide certificates
2.	no security breaches allowed max. 0

Indicators [Upper and lower limits associated with WP objectives and measurement units]		
Objective n.	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1.	2 days	7 days
2.	0	0

<b>A4 - WP 5 Grid platform</b>			
Partners:	Maat GKnowledge, Siemens, CERN, UWE	WP leader:	Jérôme Revillard
Objective n.	WP Objectives:description		
1	To provide a gLite-based infrastructure for A4 developments, integration and testing.		
2	To develop appropriate grid interface(s) to gLite services for the Gateway components (developed in WP6, 7, 8) and client applications (developed in WP11, 12, 13).		
3	To provide training for Gateway and client application developers in the use of gLite services.		
4	To ensure that updates and releases of gLite are available for the duration of the project.		

<b>Measurement</b>	
Objective No	Measurement process and units:
1	1- The provided gLite-based infrastructure does not satisfy the Health-e-Child applications requirements ... 5- The provided gLite-based perfectly satisfies the Health-e-Child applications requirements
2	1- The developed grid interface(s) can not be used by the Health-e-Child applications ... 5- The developed grid interface(s) can be used by all the Health-e-Child applications
3	1- Health-e-Child applications developers have difficulties to understand and use the produced gLite services ... 5- Health-e-Child applications developers understand and can use the produced gLite services very easily
4	1- None of the required gLite platform updates were released for the Health-e-Child infrastructure to operate properly. 5- Required gLite platform updates and releases were released and integrated in the Health-e-Child infrastructure.

<b>Indicators [Upper and lower limits (numbers) associated with WP objectives and measurement units]</b>		
Objective No	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	5	4
2	5	4
3	4	3
4	5	4



<b>A4 - WP6 Medical vertical knowledge representation</b>			
Partners:	<b>UWE</b> , Siemens, IGG, UCL, APHP, UoA, INRIA, Maat	WP leader:	Dmitry Rogulin
Objective n.	WP Objectives: description		
1	To provide a set of analysis and design models that facilitates the integration of relevant biomedical sources for improved medical knowledge discovery and understanding.		
2	To develop data- and knowledge- models integrating several “vertical” layers of the medical domain for the purpose of a distributed decision support system used in personalised healthcare.		
3	To establish the semantic framework for the communication of agents and services constituting the system of sharing and discovering knowledge in the target medical areas.		
4	To provide the foundation for optimized data mining and query algorithms in a distributed heterogeneous medical data and knowledge storage.		
5	To implement a suitable data access strategy to data held in these models to facilitate the querying and analysis of biomedical data for the purposes of provided elements of personalised healthcare.		

<b>Measurement</b>	
Objective n.	Measurement process and units:
1	Evaluation of how precise the Integrated Data Model captures the HeC domain and facilitates the integration of biomedical sources.  Scores: 1 - very bad ; 2 – bad ; 3 – satisfactory ; 4 – good ; 5 - very good
2	Evaluation of how precise the semantics of the medical subdomains under consideration is captured and utilized to facilitate access and integration of biomedical sources  Scores: 1 - very bad ; 2 – bad ; 3 – satisfactory ; 4 – good ; 5 - very good
3	Evaluation of how the integrated model serves the purpose of Integrated Disease Modelling / Decision Support Systems / Knowledge Discovery tools (Scientific/Technical Steering Committee)  Scores: 1 - very bad ; 2 – bad ; 3 – satisfactory ; 4 – good ; 5 - very good
4	Evaluation of semantic annotations mechanisms with respect to the quality of the created annotations and the coverage of the HeC clinical protocols.  Scores: 1 - very bad ; 2 – bad ; 3 – satisfactory ; 4 – good ; 5 - very good
5	Evaluation of the usage of the developed semantic tools with respect to suitability and end-user experience.  Scores: 1 - very bad ; 2 – bad ; 3 – satisfactory ; 4 – good ; 5 - very good



Indicators [Upper and lower limits (numbers) associated with WP objectives and measurement units]		
Objective n.	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	5	3
2	5	3
3	5	3
4	4	3
5	4	3



<b>A4 - WP 7 Data management layer and data integration mechanism</b>	
Partners:	Maat GKnowledge, Siemens, UWE, UoA
WP leader:	David Manset
Objective n.	Description
1	To design and implement the data management and distribution layer for the Health-e-Child Gateway
2	To design and implement the Health-e-Child Gateway services, which provide access to the functionalities of the underlying grid middleware, data management layer(s) and other resources
3	To design and implement (automatic) data integration mechanisms based on the disparate data sources, inferred metadata and domain ontologies
4	To instantiate the APIs conforming to the semantics of the vertically integrated data model produced by WP6
5	To implement the collection of services providing access to the data mining and optimisation algorithms developed by WP8
6	To integrate and refine the security and privacy features prototyped in WP4
7	To integrate and test the grid interface developed in WP5
8	To provide the necessary tools and policies for integrating the different partners' contributions in A4

<b>2. Measurement:</b> Each quality item will be evaluated on a 1-5 scale	
Objective n.	Measurement process and units:
1	1- The designed and implemented data management and distribution layer satisfy the Health-e-Child system requirements ... 5- The designed and implemented data management and distribution layer do not satisfy the Health-e-Child system requirements
2	1- The produced Health-e-Child gateway services do not provide access to the functionalities of the underlying grid middleware for higher level components of the Health-e-Child system. ... 5- The produced Health-e-Child gateway service provide access to the functionalities of the underlying grid middleware for higher level components of the Health-e-Child system.
3	1- The produced Health-e-Child data integration mechanisms do not allow the seamless integration of disparate data sources in the system. ... 5- The produced Health-e-Child data integration mechanisms allow the seamless integration of disparate data sources in the system.



4	1- The instantiated APIs does not conform to the semantics of the vertically integrated data model produced by WP6 ... 5- The instantiated APIs is conform to the semantics of the vertically integrated data model produced by WP6
5	1- The implemented collection of services do not provide access to the data mining and optimisation algorithms developed by WP8 ... 5- The implemented collection of services provide access to the data mining and optimisation algorithms developed by WP8
6	1- The security and privacy features do not satisfy the Health-e-Child requirements, ... 5- The security and privacy features satisfy the Health-e-Child requirements
7	1- The grid interface developed in WP5 is not integrated and does not work well. ... 5- The grid interface developed in WP5 is integrated and works well.
8	1- The facilities provided in A4 do not allow the integration of Partners' contributions. ... 5- The facilities provided in A4 allow the integration of Partners' contributions.

<b>3. Indicators</b> [Upper and lower limits (numbers) associated with WP objectives and measurement units]		
Objective n.	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	5	4
2	5	4
3	5	3
4	5	4
5	5	4
6	4	3
7	5	4
8	5	3

<b>A4 - WP 8 Medical Query processing</b>			
Partners:	<b>UoA</b> , Siemens, UWE, Maat	WP leader:	Manolis Tsangaris
Objective n.	WP Objectives: Description		
1	To deal with integration issues with the rest of the HeC system (addressed by the MPE Architecture, use case development and data model). In particular that of the Workflow Engine, the Security subsystem, the Resource Manager, and the Ontology Engine.		
2	To apply the proposed solution against real problem use cases (addressed by the resource management study, testing and performance evaluation)		
3	To deliver an enhanced prototype to demonstrate the new MPE functionality.		

<b>Measurement</b>	
Objective n.	Measurement process and units: each objective will be evaluated on a 1-5 scale
1	1- The integration activities are not adequate to deal with the integration issues mentioned above. ... 5- The integration activities are adequate to deal with the integration issues mentioned above.
2	1- The application of the solution against real problems are not adequate to deal with the integration issues mentioned above. ... 5- The application of the solution against real problems are adequate to deal with the integration issues mentioned above.
3	1- The delivered prototype is not adequate to demonstrate the new MPE functionality ... 5- The delivered prototype is adequate to demonstrate the new MPE functionality

<b>Indicators [Upper and lower limits (numbers) associated with WP objectives and measurement units]</b>		
Objective No	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	5	3
2	5	3
3	5	3

**A5 - WP 9 Data collection**

Partners:	<b>IGG</b> , Siemens, UCL, APHP, UWE, INRIA, OPBG	WP leader:	Giacomo Pongiglione
Objective No:	WBS code	WP Objectives:description	
1	9.3	Data collection at the four hospitals at months 30/36/42 in Paediatric Heart Disease.	
2	9.3	Data is stored electronically and quality has been assessed	
3	9.4	Data collection at the four hospitals at month 30/36/42 in Inflammatory Disease.	
4	9.4	Data is stored electronically and quality has been assessed	
5	9.5	Data collection at IGG at month 30/36/42 in Brain tumours.	
6	9.5	Data is stored electronically and quality has been assessed	
7	9.6	Maintenance of data acquisition tool	

Measurement	
Objective No	Measurement process and units:
1, 2	Number of cases: 270 (by month 30) 340 (by m. 36) 370 (by m. 42)
3, 4	Number of cases: 200 (by month 30) 320 (by m. 36) 350 (by m. 42)
5, 6	Number of cases: 78 (by month 30) 98 (by m. 42)
7	Suitability of data acquisition tools to enter clinical data

Indicators [Upper and lower limits) associated with WP objectives and measurement units]		
Objective No	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	100% of the total number of cases	80% of the total number of cases
2	80% of the total number of cases	60% of the total number of cases
3	100% of the total number of cases	80% of the total number of cases
4	80% of the total number of cases	60% of the total number of cases
5	100% of the total number of cases	80% of the total number of cases
6	80% of the total number of cases	60% of the total number of cases
7	100% of the clinical data can be collected by data acquisition tools	80% of the clinical data can be collected by data acquisition tools

<b>A5 - WP 10 Ground truth (annotated data) and clinical knowledge gathering</b>			
Partner:	<b>IGG</b> , Siemens, UCL, APHP, OPBG	WP leader:	Giacomo Pongiglione
Objective n.	WBS code	<b>WP Objectives:</b> description:	
1	T10.1	Tools for the rapid placement of a representative RV mesh in 3D+t MRI data to extract accurate RV volume information	
2	T10.1-T10.3	Collected ground truth at month 30	
3	T10.1-T10.3	Collected ground truth at month 42	

<b>Measurement</b>	
Objective n.	Measurement process and units:
1	Efficient annotation tool available
2	Ground truth collected for all 3 diseases for the baseline visits
3	Ground truth collected for all 3 diseases for the baseline visits and for follow up visits in Cardiac and Inflammatory Diseases

<b>Indicators [Upper and lower limits associated with WP objectives and measurement units]</b>		
Objective n.	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	Fully automatic RV annotation	Semi-automatic annotation takes 30 minutes for 1 cardiac study
2	80% cases collected at month 30 are also fully annotated. Besides the clinical annotations (staging, classification etc) this requires that all images are scored/evaluated.	40% cases collected at month 30 are also fully annotated
3	All cases (baseline and follow up) collected at month 42 are also annotated. Besides the clinical annotations (staging, classification etc) this requires that all images are scored/evaluated and the annotations are stored on the HeC PROD platform.	75% cases collected at month 42 are also annotated and stored on the HeC platform.



A6 - WP 11 Integrated disease modelling			
Partners:	INRIA, Siemens, IGG, UCL, APHP, DISI, OPBG	WP leader:	Xavier Pennec

Objective No:	WBS code	WP Objectives: description	Milestone
11.2	T11.2	Bio-mechanical models of the heart based on disease-adapted but generic pediatric anatomies. Knowledge based models of heart diseases for decision support	11.2
11.3	T11.3	First models of homogeneous subtypes of JIA	11.2
11.4	T11.4	Computational generative model of pediatric brain images (generic anatomy, evolving tumors). Knowledge based glioma model for decision support system	11.2

Measurement	
Objective n	Measurement process and units [min-max]
All	Yearly scientific meeting with oral and poster presentations, assessed by the scientific committee.
All	Number of paper submitted to peer-reviewed conferences and journals. Minimal numbers are for each task (T11.2, T11.3, T11.4): 2 conferences and 1-2 methodological journal paper in 2008, 2-3 conferences and 1-2 clinical journal paper in 2009.

<b>A6 - WP 12 Decision support system</b>			
Partner:	<b>Siemens</b> , IGG, UCL, APHP, UoA, DISI, INRIA; EGF, OPBG	WP leader:	Martin Huber
Objective n.	WP Objectives: Description		
1	Clinically validated Right Ventricle (RV) and Left Ventricle (LV) Models for Volume and Ejection Fraction (EF) Extraction from MRI at month 36 and 42 respectively		
2	Clinically validated feature extraction from wrist MRI in JIA		
3	For each disease decision support provides one or more of the following systems and services: <ul style="list-style-type: none"> <li>• Disease classification into types / subtypes</li> <li>• Personalised treatment planning: predicting timing and type of treatment/intervention</li> <li>• Personalised prediction of disease behaviour</li> <li>• Similarity-based search and retrieval from Grid databases</li> </ul>		

<b>Measurement</b>	
Objective n.	Measurement process and units:
1	Number of RV and LV models clinically verified wrt volumes and ejection fraction at month 42
2	Number of wrist MRI clinically validated at month 42
3	Number of DSS providing at least one of the listed systems or services

<b>Indicators [Upper and lower limits associated with WP objectives and measurement units]</b>		
Objective n.	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	150 cardiac MR from all hospitals	75 cardiac MR from at least 2 hospitals
2	100 wrist MRI from all hospitals	50 wrist MRI from all hospitals
3	3	2

### A6 – WP13 Biomedical knowledge discovery

Partners:	<b>UoA</b> , Siemens, IGG, UCL, APHP, DISI, INRIA, ASPER, EGF, OPBG	WP leader:	Harry Dimitropoulos
Objective n.	<b>WP Objectives:</b> Description		
1	<b>D13.3.</b> Prototype implementation of the devised knowledge discovery methods and early evaluation against some of the medical disease problems under consideration. (assesses <b>T13.2</b> & <b>T13.3</b> by M30)		
2	To make significant progress in the Brain Tumour Genetic Study ( <b>T13.4</b> ) and the Genomics Data Analysis task ( <b>T13.5</b> ) by M36.		
3	<b>D13.4.</b> Proof-of-concept Health-e-Child Biomedical Knowledge Discovery (BKD) demonstrator		

Measurement	
Objective n.	Measurement process and units:
1	1- The implemented knowledge discovery methods fail in their early evaluation against all of the medical disease problems under consideration ... 5- The implemented knowledge discovery methods succeed in their early evaluation against all of the medical disease problems under consideration
2	1- No significant advances made in the Brain Tumour Genetic Study (T13.4) and the Genomics Data Analysis task (T13.5) ... 5- Significant advances made in the Brain Tumour Genetic Study (T13.4) and the Genomics Data Analysis task (T13.5)
3	1- The BKD demonstrator fails to demonstrate proof-of-concept ... 5- The BKD demonstrator, with its innovative knowledge discovery algorithms and systems suitable for heterogeneous data sources, is successful as proof-of-concept

<b>Indicators</b> [Upper and lower limits associated with WP objectives and measurement units]		
Objective n.	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	5	3
2	5	3
3	5	3

<b>A7 - WP 14</b>	
<b>Deployment, Integration and test of the HeC Platform</b>	
Partners:	<b>Maat GKnowledge,</b> Siemens, CERN, UWE, UOA, DISI INRIA
WP leader:	Jordi Paraire
Objective n.	WP Objectives: Description
<b>Deployment Objectives</b>	
1	To deploy the Health-e-Child platform at the different medical and non-medical institutions
2	To ensure a stable and secure production environment for the clinical users. To enforce WP4 security and privacy policies on VO structuring and site/service responsibilities in the different environments
3	To put in place appropriate monitoring and maintenance tools, following recommendations from WP5 and WP14
4	To upgrade the different components of the platform and underlying operating systems based on recommendations from WP5 and WP7
5	To provide appropriate support via consultancy and documentation to assist in the deployment
<b>Integration Objectives</b>	
6	To test WP5/6/7/8 APIs. To report on any bugs/inconsistencies to A4 through established reporting facilities.
7	To provide support to A6 developers in porting their applications to either the Gateway or the Grid, when necessary.
8	To maintain a list of integrated applications as well as a roadmap to be used as synchronization means between A4 and A6 developers. Define use cases / demonstration scenarios validating the system functionality

<b>Measurement</b>	
Objective n.	Measurement process and units:
1	1- The Health-e-Child platform deployment has failed, one or several institutions were not installed ... 5- The Health-e-Child platform deployment is successful, all concerned institutions were installed
2	1- The deployed production environment is not stable and/or does not guaranty security and privacy guidelines from WP4 are respected ... 5- The deployed production environment is stable and guarantees security and privacy guidelines from WP4 are respected



3	1- The infrastructure monitoring tools are not in place or do not supply meaningful information to system administrators ... 5- The infrastructure monitoring tools are in place and supply meaningful information to system administrators
4	1- The infrastructure software components are not upgraded as suggested and in time ... 5- The infrastructure software components are upgraded as suggested and in time
5	1- Support and documentation to deploy and maintain the infrastructure is not provided or inadequate ... 5- Support and documentation to deploy and maintain the infrastructure is provided and adequate
6	1- The A4 developers did not receive enough/any feedback from the operation of the platform in production ... 5- The A4 developers receive enough feedback from the operation of the platform in production
7	1- The A6 developers didn't receive enough assistance/information to integrate their applications with the platform ... 5- The A6 developers received enough assistance/information to integrate their applications with the platform
8	1- The identified relevant Health-e-Child use cases were unsuccessfully demonstrated/validated against the platform ... 5- The identified relevant Health-e-Child use cases were successfully demonstrated/validated against the platform

**Indicators [Upper and lower limits associated with WP objectives and measurement units]**

Objective n.	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	5	4
2	5	4
3	5	4
4	5	4
5	5	4
6	5	4
7	5	4
8	5	4

<b>A8 - WP 15 Training</b>		
Partners:	<b>EGF</b> , Lynkeus, UWE, Maat	WP leader: Giovanni Romeo
Objective n.	WBS code	<b>WP Objectives:</b> description
1	T15.2	Training contents of the second course: book of abstract and slide presentation folder released at month 30, ondemand version ready and at disposal at month 35.
2	D15.2 M15.2	Deliverable D15.2, documentation of training requirements Specifications, Training Content standards and Training assessment will be released at month 30. Training material originated for and by the 2nd course (book of abstracts, slide presentation) available at month 30. The on demand version will be delivered within month 35. The main objective is to ensure the diffusion of the knowledge originated by the course to all participants.
3	T15.4.	Feedback and assessment of training: evaluation of questionnaires distributed to participants during the courses. This will ensure a high quality of training and the needed participant satisfaction.
4	T15.5	Evaluation of the level of satisfaction of professional who will be utilizing the scientific products originated by the course.
5	T15.7 T15.8	To ensure that the project makes state-of the art training available to the project participants and the larger community and to create an important means of dissemination for the project achievements.

Measurement	
Objective n.	Measurement process and units:
1	The deadlines for releasing the requirements of the three courses (month 18, 30 and 42) become measurements for the achievement of the objectives.
2	The training material for the 2nd course ready at month 30 and the on demand version ready at month 35. Three courses have to be organized in the framework of this project. Each course will originate an abstract book, a streaming on demand version and a folder containing all lectures slides: 9 items have to be created in the four project years.
3	All course participants are asked to fill-in a questionnaire in order to evaluate their level of satisfaction. The questionnaire is anonymous and is distributed at the beginning of each course. The courses are evaluated under several aspects: organization, quality of training, program ant topics, faculty skill, etc...



4	Internal survey among EGF training staff. The aim is to collect all feedback coming from professional who use the learning tools produced by 2 <sup>nd</sup> course and asses their level of satisfaction.
5	Learning objects ready and at disposal of medical and technical personnel

Indicators [Upper and lower limits associated with WP objectives and measurement units]		
Objective n.	Upper limits (result's maximum expectation)	Lower limits (below which result is not acceptable)
1	All 3 learning objects are created for the 2nd course	2 or less learning objects are created
2	No delay with respect to the deadline	30 days delay
3	80% of positive evaluation (or above)	At least 60% of positive evaluation
4	90% of positive evaluation (or above)	At least 70% of positive evaluation
5	10 learning objects at month 40	5 learning objects at month 40

<b>A8 - WP 16 Dissemination</b>			
Partners:	<b>Lynkeus, FGG</b>		WP leader: Edwin Morley-Fletcher
Objective n.	WBS code	WP Objectives: description:	
1	T 16.1	HeC Activities strategy and plan	
2	T 16.2	HeC portal: updating the private and public website	
3	T 16.3	Quarterly Newsletter	
4	T 16.4	Dissemination materials (Brochure, Booth, Posters)	
5	T 16.5	Publication of technical and specialised articles	
6	T 16.8	Conferences and Seminars /workshops	

<b>Measurement</b>	
Objective n.	Measurement process and units:
1	Number of publications referring to HeC; Conferences and Seminars attended; number and quality of exploitable outcomes
2	Frequency of updating/Number of visitors at month 24
3	Timely issuing and outreach increase
4	Number of events attended where dissemination material has been distributed
5	Number of articles per year on international publications
6	Number of seminars organised in 12/18 months

<b>Indicators [Upper and lower limits associated with WP objectives and measurement units]</b>		
Objective n.	Upper limits (result's maximum expectation)	Lower limits (below which result not acceptable)
1	10 publications - 10 Conferences - 5 Seminars	2 - 2 - 0
2	Once a month / 60 active users	Every 2 months/30 active users
3	15% increase at each issue	7% increase at each issue
4	5 events (in 12 months)	3 events (in 12 months)
5	5	1
6	2 internal seminars + 1 int.l (in 12 months)	1 internal seminar + 1 int.l (first 18 months)