Helix Nebula – The Science Cloud

Deliverable Title: D2.2 Tender Material Publication

Partner Responsible: CERN

Work Package: 2

Submission Due Date: 30.09.2016

Actual Submission Date: 13.12.2016

Distribution: Public

 Nature: Report

Abstract:
This document summarises the process that was followed to develop the Tender Documents up to the award of the contracts for Phase 1 within the framework of the HNSciCloud Pre Commercial Procurement (PCP). It details the legal, administrative and technical work performed to launch the PCP within the European Commission's procurement guidelines and presents the results of the tender evaluation process.

Document Information Summary

Deliverable number:	*D2.2 Tender Material Publication*
Deliverable title:	*Tender Material Publication*
Editor:	*Christophe Veys*
Contributing Authors:	*Bob Jones*
Reviewer(s):	
Work package no.:	*WP2*
Work package title:	*Tender Material Publication*
Work package leader:	*CERN*
Work package participants:	*INFN, DESY, CNRS, KIT, SURFSARA BV, STFC, EGI, EMBL, IFAE*
Distribution:	
Nature:	*Report*
Version/Revision:	
Draft/Final:	
Keywords:	*tender material publication*

Disclaimer

Helix Nebula – The Science Cloud (HNSciCloud) with Grant Agreement number 687614 is a Pre-Commercial Procurement Action funded by the EU Framework Programme for Research and Innovation Horizon 2020.

This document contains information on the HNSciCloud core activities, findings and outcomes and it may also contain contributions from distinguished experts who contribute to HNSciCloud. Any reference to content in this document should clearly indicate the authors, source, organisation and publication date. This document has been produced with co-funding from the European Commission. The content of this publication is the sole responsibility of the HNSciCloud consortium and cannot be considered to reflect the views of the European Commission.

Grant Agreement Number: 687614
Start Date: 01 January 2016
Duration: 30 Months

Log Table

Issue	Date	Description	Author/Partner
V0.1	15/10/2016	First draft	C. Veys
V0.2	14/11/2016	Second version available for review	C. Veys
V0.3	16/11/2016	Project office	B. Jones, A. Bens, S. Pavlou
V1.0	24/11/2016	Final Version	Approved by the Procurement Collaboration Board
V1.1	12/12/2016	Public Version for publication	C. Veys

Executive Summary

This document summarises the process that was followed to develop the Tender Documents up to the award of the contracts for Phase 1 within the framework of the HNSciCloud Pre Commercial Procurement (PCP). It provides insights into the legal, administrative and technical work performed to start the deployment of the PCP within procurement guidelines.

The preparatory phase has been completed successfully by the Consortium members which resulted in the drafting of the Request for Tender, the Framework agreement, the Functional specification and the Work Order.

The launch of the PCP announced by the publication of a Contract Notice in the OJEU was very well received by the cloud services market. The Tender information day informed the potential Tenderers of the technical and functional requirements, the evaluation process and the legal terms and conditions of the contracts to be awarded.

This deliverable further details how the submitted tenders were evaluated and reports on the findings of the Evaluation Committee resulting in the award of the contracts for Phase 1 the Solution Design.

The report concludes with a brief description of the process for the entry into force of the awarded contracts.

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1. THE PREPARATION OF THE TENDER DOCUMENTS

In the Helix Nebula Science Cloud Pre-Commercial Procurement project (HNSciCloud) we start from a concrete need for which the market at the moment cannot offer a suitable solution, and R&D efforts still remain to be performed by suppliers. The overall challenge of building the Hybrid Cloud Platform consists of three sub-challenges on compute and storage, on network connectivity and Federated Identity Management and finally on service payment models.

The procurement of R&D services within the PCP framework is exempted from the Procurement Directive 2004/18/EC, Article 16 (f) and the EU Procurement Directive 2014/24/EC, Article 14 provided the conditions for such exemption are met. Both of the following conditions are fulfilled in HNSciCloud:

- the benefits do not accrue exclusively to the contracting authority for its own use in the conduct of its own affairs
- the service provided is not wholly remunerated by the contracting authority

The Consortium has commonly agreed to use the PCP methodology as prescribed by the European Commission in the following EU documents: PCP Communication COM/2007/799 and Staff Working document SEC/2007/1668. The preparation and drafting of the Tender Documents represented a major effort and required the involvement of several competencies. These documents are the result of a joint work between technical, procurement and legal teams from the consortium partners of the HNSciCloud project. Two Committees were created: The Administrative and Technical Committees. These Committees successfully produced the full Tender Documents within a tight time schedule and ensured an efficient deployment of the PCP addressing the challenging technical, contractual and financial aspects.

- The **Administrative Committee** composed of procurement and legal experts of each procuring partner in the consortium was responsible for the procurement strategy, the drafting of the Request for Tender and its annexes according to the applicable law and specific PCP requirements. Additionally, the Committee was responsible for the establishment of a sound evaluation process. In total 9 meetings were organized to ensure an alignment between the partners and compliance with the EU Procurement Directives and PCP requirements.

- The **Technical Committee** composed of IT technical experts of each procuring partner in the consortium prepared the Functional Specification detailing general requirements and technical constraints. The Technical Committee was also responsible for the development of selection criteria to be used for the selection of the companies as well as a range of technical award criteria specific to the cloud environment. In total 14 meetings were organized.

Joint Procurement and validation of the legal framework

The goal of the HNSciCloud project from a purchasing perspective is to jointly procure, with contracting authorities from different countries, the development of solutions for the set-up of a cloud platform for public research communities, taking into account the performance, security and management aspects of a hybrid cloud infrastructure, including technical functionality, interoperability, portability, as well as building trust and confidence in cloud computing services. The innovative IaaS–level services will need to be integrated with a range of resources operated by public organisations and publicly funded e-infrastructures to form a hybrid cloud solution.

The development shall be done in three distinctive PCP-phases. The **overall challenge** of building the Hybrid Cloud Platform is based on **three sub challenges** described in detail in the Functional Specification, taking into account use cases sponsored by the procuring public organisations.

An analysis of the procurement legal framework was executed before the launch of the tender in order to avoid that differences in legislation and tendering procedures prevent any of the procurers from participating in the joint order. CERN, as lead procurer, proceeded with an in-depth examination of its General Procurement Conditions to identify any discrepancies with the EU Procurement Directives.

The organisation of the HNSciCloud PCP

The overall organisation used within this PCP is based on the governance structures established through the consortium agreement.

- **The decisional level**: The Procurement Collaboration Board (PCB) is the ultimate decision-making body of the project as regards the procurement aspects. The PCB takes decisions based on the recommendations of the Administrative and Technical Committees.

- **The operational level**: The Project Coordination Team (PCT) is responsible for the daily management of the Project. The Technical and Administrative Committees are responsible for the tendering process and the drafting of the tender documents, including the Prior Information Notice and the Contract Notice.
  A monitoring team will be appointed to evaluate the activities performed by the Contractors on the basis of the technical documentation and Functional Specification.

For each Contractor, a main Technical contact person (a supervisor) will be appointed to support and monitor the Contractor with the implementation of the contract.

- **The quality and technical level**: The submitted tenders were evaluated by high-level experts from the procuring organisations grouped in an Evaluation Committee. This Committee was responsible for the assessment of the selection criteria and the award criteria.

- **The legal level**: the PCP tendering process itself was administered by the CERN Procurement Service and partnering consortium members. The PCP tender documents have been submitted prior to the launch of tender to the approval of the Legal Service.

2. THE TENDER DOCUMENTS

CERN, in close collaboration with the consortium partners, has elaborated the Tender Documents within the Technical and Administrative Committees. The PCP-procedure deployed in the framework of HNSciCloud is based upon the PCP methodology prescribed by the EC and the model outlined in Annex 9.

The following documents have been prepared with the greatest care:

2.1. The Framework Agreement and Work Orders

The Framework Agreement establishes terms governing contracts covering the three phases of the PCP: the solution design, the prototype platform phase and the pilot platform phase. It is a general agreement that sets out terms and conditions for making specific purchases (Work Orders - call-offs) in each of the PCP phases.
The Framework Agreement includes provisions for important aspects including Intellectual Property Rights, Data Protection, SLAs, Payment models and confidentiality clauses.

2.2. The Request for Tender

The Request for Tender (RfT) describes the specific PCP procedure with the aim of generating competing offers from different Tenderers and to finally award R&D service contracts. The RfT follows the European Commission model provided in Annex 9 and starts with an introduction on PCP, a description of the scope of the tender, a timetable and an explanation of the tendering procedure including the selection and award criteria. Furthermore the RfT provides information on how to submit a tender, the legal provisions foreseen and the way tenders will be evaluated.

As part of the preparations, the partners discussed intensely the procurement strategy for the three phases and the approach to be followed in respect to the infrastructure (VMs) that had or had not to be purchased within the framework of this PCP.

As one of the objectives of PCP is to support innovative SMEs, it was agreed to encourage smaller entities to participate by using selection criteria that were accessible to economic operators of all sizes. This approach resulted in a significant number of smaller businesses being motivated to participate and were able to submit a tender within this PCP.

The RfT has numerous annexes as listed below:
- Annex A: Submission Form
- Annex B: Exclusion Criteria
- Annex C: Selection Criteria
- Annex D: Compliance Criteria
- Annex E: Technical Offer
- Annex F: Financial Offer

2.3. The Functional Specification

In order to define a clear set of Functional Specifications, an iterative approach was adopted within the Technical Committee. All the partners have actively participated in drafting this key document detailing the fundamental requirements of Hybrid Cloud Platform.

The tender documents were submitted for review to the EC project officer and the appointed external reviewers on 20 June 2016. The EC reviewers provided their feed-back on 5 July 2016. The reviewers requested minor changes to the tender documents, provided suggestions and considerations concerning the whole PCP.

3. THE PUBLICATION OF THE CONTRACT NOTICE AND THE TENDER INFORMATION SESSION

On 20 January 2016 CERN published a **Prior Information Notice (PIN**) in the OJEU (2016/S 013-019573) to attract and inform the industry about the Call for Tender to be launched and the organisation of an Open Market Consultation (OMC) on 17 March 2016 which took place at CERN. More than 80 participants participated (or joined via Webcast) to the OMC from both procures and supply side.

On 19 July 2**016** the HNSciCloud **Contract Notice** was published in the OJEU (2016/S 137-249686) and launched the Tendering process. The Tendering process included the following milestones

- Issue Request for Tenders : 19 July 2016
- Deadline for submitting questions about tender documents: 02 September 2016
- Tender Information Session: 07 September 2016
- Deadline for submission of Tenders for the Phase 1: 19 September 2016 at 12:00
- Tender opening session: 22 September 2016

In total the Tender documents were downloaded 229 times categorised according to geographical location as shown hereunder

Table 1 - Downloads of Tender Documents

Country	Registrations	Country	Registrations
Afghanistan	1	Netherlands	7
Australia	1	Norway	17
Austria	4	Pakistan	2
Belgium	6	Poland	1
Bulgaria	1	Portugal	3
Canada	1	Romania	4
Czech Republic	4	Slovenia	6
Denmark	1	Spain	23
Finland	3	Sweden	3
France	17	Switzerland	28
Germany	15	Turkey	3
Greece	2	Turks and Caicos Islands	1
Iceland	1	Ukraine	1
India	2	United Kingdom	37
Ireland	3	United States	6
Italy	20		
Lithuania	1		
Luxembourg	4	Total	229

Figure 1 - Geographical distribution of Tender Documents downloads

According to the information provided during the download process, the majority of the downloads were made by representatives from large enterprises.

Figure 2 - Size of Companies that downloaded the Tender Documents

The **Tender Information Session** took place at CERN on 7 September at CERN, Geneva, Switzerland. A webpage was prepared link to inform interested companies as well as an event page where the agenda and presentations are available https://indico.cern.ch/event/547858/timetable/

The essential figures of the tender information session are as follows:

- 99 participants to the session (56 attended the session in person; 43 participants via webcast)

In total 94 questions were received from the companies on the published Tender Documents before the Information Day that can be categorised as follows:
- On the Request for Tender and annexes - 39 questions
- On the Functional Specification - 45 questions
- On the framework Agreement - 3 questions
- 7 questions were of a more general nature

The document containing the answers to all the questions were for confidentiality reasons anonymized in order to make it impossible to identify the company asking the question. Each one of the companies that downloaded the Tender Documents received the answers to all the questions.

4. THE EVALUATION PROCEDURE

The evaluation process for the Tenders received was composed of the following four steps:

- **Step 1:** The Tender was inspected to confirm it was complete and compliant with the procedural requirements and formalities.
- **Step 2:** Check of the administrative section of the Tender, the eligibility of the Tenderer and verifications that they do not meet any of **the exclusion criteria** (Annex A and B).

For Tenderers passing the exclusion criteria, an assessment of the Tenderer's capacity to perform the contract was performed, on the basis of **the selection criteria**. The selection criteria are divided into technical and non-technical selection criteria comprised in Annex C. The Tenderers must be able to satisfy all of the criteria and were evaluated on a PASS/FAIL (yes/no) basis.

- **Step 3:** For a Tenderer passing Step 2, the technical section of the Tender was evaluated. The **compliance criteria** will be assessed on the basis of the declaration made in Annex D of the RfT, followed by the assessment of the **Technical Offer**. The evaluation of the Technical Offer was based on technical (see section 5 of the Functional Specification) and non-technical award criteria and according to the scoring model. A minimum threshold of 50% of the total amount of points (excluding the price) must be reached.

-   **Step 4:** For a Tender passing Step 3, the **Financial Offer** (Annex F) was assessed on the basis of the formula foreseen in the scoring model (appendix 5 of the RfT) and the evaluated price was the Actual Price.

The steps of the Tender evaluation process are represented in the figure below:

Figure 3 - Tender evaluation process
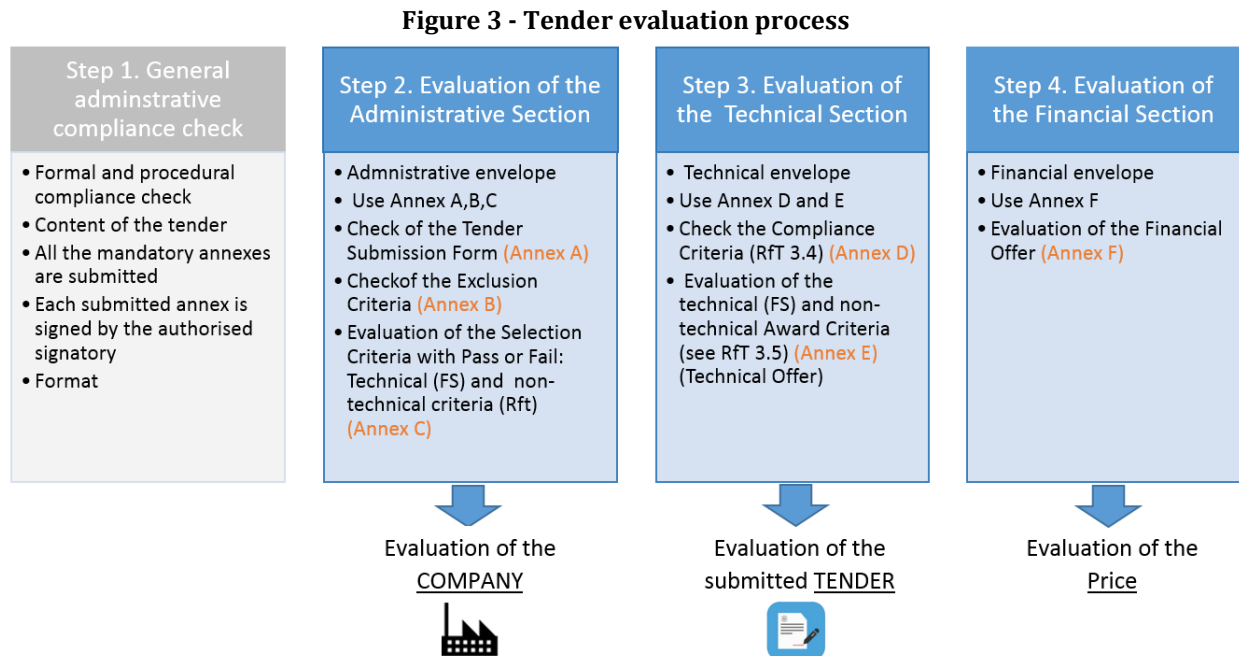
For the evaluation of the tenders two Evaluation Committees were established:

1. The **Administrative Evaluation Committee** performed the following activities:

-   Signing of the confidentiality declaration and proceed with the opening of the tenders;
-   Drafting the minutes of the tender opening session reporting the identity of the Tenderers, the composition of the consortia, the contact person, the date and hour the tenders were received and the number of envelopes delivered;
-   The opening the administrative section of the tender;
-   Perform a general compliance check and evaluate the content of the Administrative section of the tenders.

The tenders that pass this evaluation will be allowed to the next step.

2. The **Technical Evaluation Committee**:

The evaluation was performed **remotely**. Each tender was assigned to 6 evaluators, who performed their assessment independently and individually. Each evaluator had one vote. The more points a tender scored in total the higher it was ranked. Based on the evaluators' remote assessments, **a preliminary ranking** of the tenders was made.

Afterwards the evaluators met face to face as the Evaluation Committee at CERN to collect, compare and discuss the comments of each evaluator for each tender. Subsequently, the Evaluation Committee reviewed the preliminary scoring and ranking. The Committee ensured that the assessment of all tenders was consistent and non-discriminatory, and it could adjust the preliminary ranking and assessment. By consensus[1] the Committee made the **final recommendations** in writing for the award of the contracts to the Procurement Collaboration Board (PCB). The PCB is the ultimate decision-making body of the HNSciCloud-PCP, and its decision needed to be endorsed by the Finance Committee of CERN as lead procurer.

5. THE EVALUATION OF THE TENDERS WITHIN THE HNSciCloud PCP

5.1. The Tender Opening Session

An Opening Committee was appointed by CERN Head of Procurement and composed of representatives from CERN and EMBL/EBI.

The tender opening session took place on 22 September 2016 at 9:35.

In total 9 tenders were submitted, by more than 30 enterprises, within the specified deadline. The origin of the Tenderers are predominantly from Europe. In addition, one tender was received after the deadline.

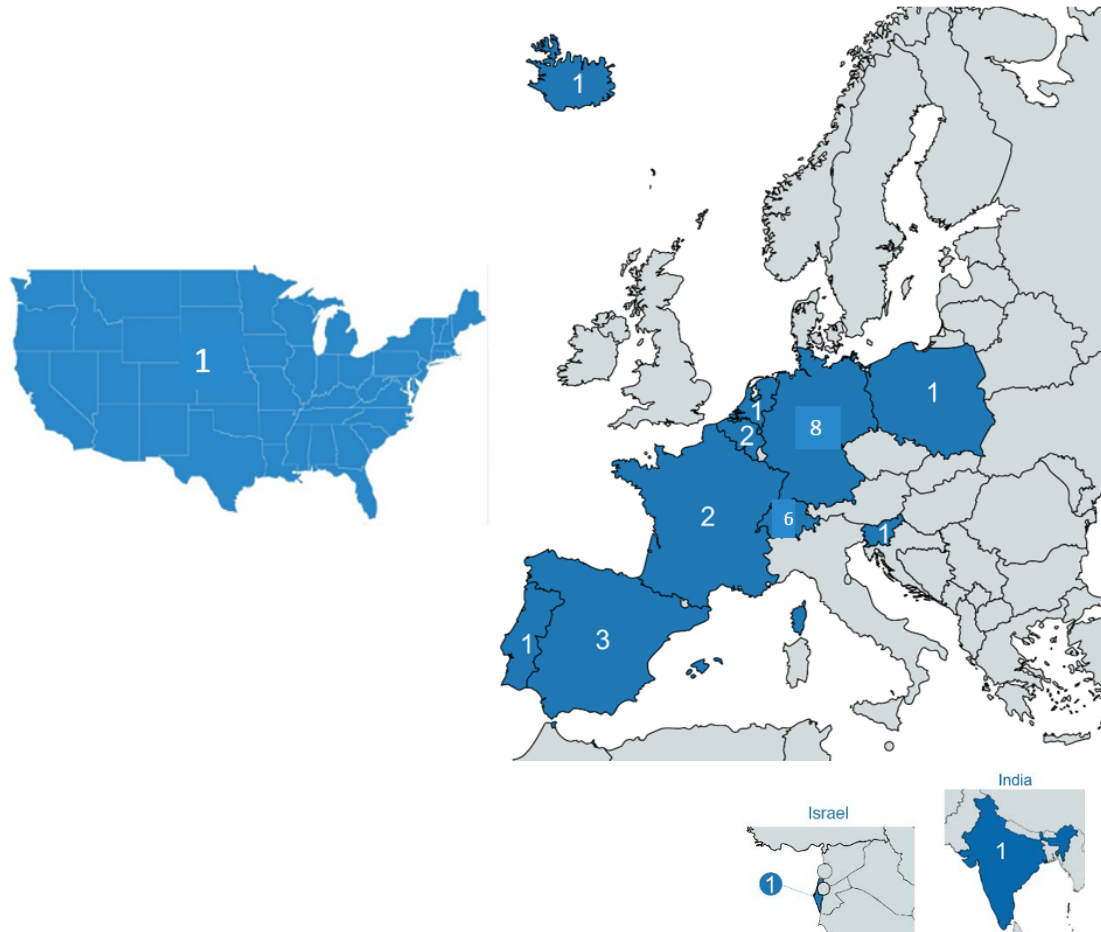Hereunder an overview is provided of the country of origin of the different tenderers:

Figure 4 - Geographical location of the Tenderers and consortium members/ subcontractors
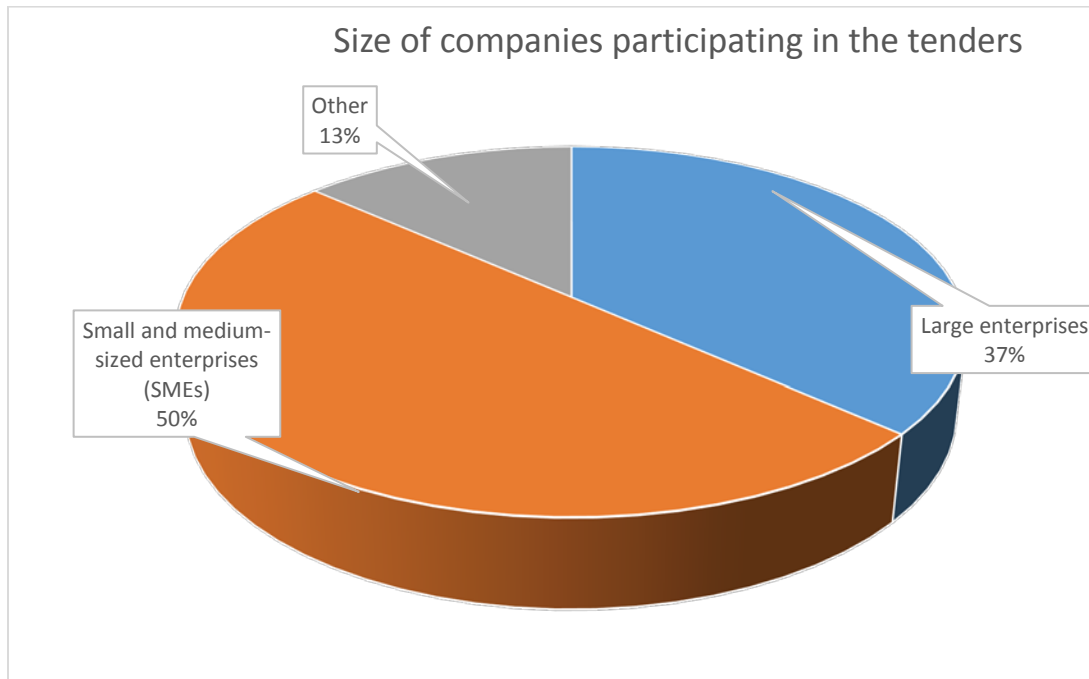
Figure 5 - Size of companies participating in the tenders

5.2 The evaluation of the Administrative Section of the Tenders

The Committee proceeded with the evaluation of the following steps:

General administrative compliance check: the tenders were checked on their completeness and compliance with the procedural requirements and formalities.

Eight tenders were found complete and compliant with the procedural requirements and formalities. Two tenders were rejected at this stage.

Opening and evaluation of the administrative section of the tenders:

Check of the **Submission Form** (Annex A): Six tenders were compliant with the requested information of Annex A.
Two tenderers were requested to provide clarifications. Both Tenderers provided the requested clarifications within the time limit.

Check whether the Tenderers were eligible and did not meet any of **the Exclusion criteria** (Annex B).
All eight tenders were evaluated eligible and did not meet the exclusion criteria.

Evaluation of Annex C: **the Selection criteria.**
One Tenderer was evaluated with a FAIL unanimously by the Evaluation Committee on the selection criteria.

The 7 remaining tenders were selected for the next step, the technical evaluation.

 Conclusion

All seven tenders were evaluated positively and compliant with the exclusion criteria and the selection criteria

5.3 The technical evaluation of Tenders

After the administrative evaluation, seven tenders were subjected to a technical evaluation against the technical and non-technical award criteria as foreseen in the Request for Tenders.

Table 2 - Overview of the Award Criteria

Not-technical Criteria	
Criteria 1 - Merit of the Resources	12
Criteria 2 - Merit of the Technical Capacity	12
Criteria 3 - Merit of the time schedule	8
Criteria 4 - Commercalisation approach	8
Technical Criteria	
Criteria 5 - Large Data Sets	10
Criteria 6 - Data Access	10
Criteria 7 - Container Support	10
Criteria 8 - Network Peering	10
Criteria 9 - Support for Identity and Access Management Services	8
Criteria 10 - Business Models	8
Criteria 11 - SLAs	8
Criteria 12 - IaaS Innovative Cloud Service Requirements	8
Criteria 13 - Cloud Services	5
Criteria 14 - Data Protection and Security	8
Criteria 15 - Reporting, Accounting and Management Portal	5
Criteria 16 - Support Desk	5
Criteria 17 - HPCaaS	5
Subtotal Non-technical and Technical Criteria	**140.0**
Price Criteria	
	60.0
Overall Score	**200.0**

The members of the Evaluation Committee evaluated individually, independently and remotely the tenders. The evaluation process started on 24 September 2016 and last till 6 October 2016. In order to optimize the evaluation process, the evaluation was done in steps. The award criteria have been bundled in several evaluation sessions.

For each evaluation session a teleconference of the Evaluation Committee was organised. The goal of each session was to find an agreement on the scores and to reach a consensus on each specific criteria. A summary of the discussion and outlying opinions for each Tender and each evaluation session is provided below.

With respect to the best ranked Tenderer, the tender did not include enough details about the organization of the work. The proposed timetable did not include information of specific actions in the design phase of the project.

5.3.1 Overview of the evaluation of the Technical Offer

Five Tenderers reached the threshold of 50% (70 points on 140) and were eligible for the next evaluation step.

Two Tenderers did not meet the threshold and are excluded from further evaluation.

5.4 Evaluation of the Financial Offer

In accordance with the terms of the Request for Tender, the Financial Offer is scored on the "Actual Price" according to the following formula:

Points awarded = (1 - (tender price / maximum price))* maximum of points on Price for Phase 1

All the financial offers were eligible.

No submitted tenders have exceeded the maximum budget 130.000 EUR.

5.5 Overall Evaluation and award decision

The Evaluation Committee confirm that the assessment of the tenders is consistent and non-discriminatory.

The Evaluation Committee recommended the Procurement Collaboration Board to award four Work Orders for Phase 1 to the best ranked Tenderers: IBM, T-Systems, RHEA Systems and INDRA SISTEMAS.

The recommendation of the Evaluation Committee was followed by the Procurement Collaboration Board.

5.6 Standstill period and entry into force of the contracts

The four winning Tenderers and the unsuccessful Tenderers were notified by letter, dated 14 October 2016, about the completion of the evaluation procedure in accordance with the award criteria published in the Request for Tenders. All of them received their obtained individual scores against each criteria, their total score and the score obtained by the highest ranked Tenderer. In addition, each Tenderer received written details on the decision taken. The unsuccessful Tenderers were informed about the reasons why they were unsuccessful and the characteristics and relative advantages of the successful tender.

The letter further informed them about the start of the mandatory "standstill" period (10 calendar days) which lasted until the 25 October 2016 at midnight. As during this period no complaints were received and the award decision was legally not challenged, a letter of entry into contracts was sent on 26 October 2016.

The Framework Agreement and the Work Order for Phase 1 entered into force on the 1 November 2016 and will remain in effect until the completion date of Phase 1 on 30 January 2017. A Kick-Off meeting was organised at CNRS with all four Contractors on 2-3 November 2016.

The contract award notice was published in the OJEU on 11 November 2016, referenced as 2016/S 218-398477.