

NORDUnet Learning Management System (LMS) Framework Procurement: Invitation to Submit Final Bid Vol. 2

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Definitions

Term	Definition
Bidder	A candidate (including consortia or joint venture arrangements) who submitted a response to the PQQ who was selected and invited to participate in dialogue with NORDUnet
Bidder's Response Questions	Numbered question in Volume 2 of the Descriptive Document that a Bidder must answer to describe how it's Detailed Solution meets NORDUnet's Detailed Requirements
Contract Notice	Contract Notice 2016-116380, published in the Official Journal of the European Union
Descriptive Document	A centralised procurement document that contains the Invitation to Submit Final Bids, comprising: <ul style="list-style-type: none"> • Volume 1 –Instructions • Volume 2 – Statement of Requirements and Questions • Volume 3 –Framework Agreement Terms and Conditions
Detailed Solution	The response to the Bidder's Response Questions set out in Volume 2 and any supporting information that represents the offer from the Bidder
Final Bid	The bid(s) prepared and submitted by each Bidder in response to the ITSFB, presented and specified during the dialogue stage and then refined as the Detailed Solution
Framework Contracting party	NORDUnet A/S
Contracting party	The party that makes a call-off contract from the framework agreement
Customer	The customer of the contracting party for example a University
Preferred Bidder	The Bidder chosen as the winner of the competition process for the award of the framework contract
PQQ	The ESPD and ITSOP
SoR	Statement of Requirements

1 Introduction

NORDUnet is a joint collaboration by the 5 Nordic National Research and Education Networks in Denmark (DeIC), Finland (CSC Funet), Iceland (RHnet), Norway (UNINETT) and Sweden (SUNET) and operates a world-class Nordic and International network and e-Infrastructure service for the Nordic research and educational community.

It is anticipated that all NRENS (as listed in the OJEU) could potentially benefit from the Framework Agreements that are awarded. However, the procurement for the Framework Agreements is being carried out with representatives from a subset of the NRENS, forming the Procurement Team (PT).

NORDUnet is the procuring authority acting on behalf of the procurement team, and will be the contracting authority that will enter into the Framework Agreement with the Preferred Bidder, and other potential bidders (max. 3) awarded a contract under this framework procurement procedure.

This document is Volume 2 of the three-volume Descriptive Document that both outlines, and is a mechanism for conducting the Learning Management System procurement process.

Bidders should ensure that they read Volume 1 before responding to this Volume 2.

2 Outline of the Requirement

2.1 Background

This procurement is designed to enable NORDUnet and Nordic NRENs to purchase Learning Management System(s) that will allow them to resell Learning Management Services within their respective countries.

NRENs generally provide “in-country” network and other e-infrastructure services to Research and Education (R&E) users, and in some instances to government departments.

Potentially, NORDUnet and all NRENs associated with NORDUnet (as listed in the OJEU) may elect to use the framework agreement.

This volume 2 have been grouped into two areas: Technical and Commercial.

Below numbered paragraphs with the prefix “Q” denote questions.

NOTE: This is the final bid and all information supplied during the ITSOP and dialogue phases have been noted. If anything has changed that make any of the supplied information invalid NORDUnet must be informed, and updated information supplied.

2.2 Technical Service requirements

It is **ESSENTIAL** that before providing an answer to the questions below Bidders have read **Volume 1** and that the response to each of the Bidder's Response Questions has information relating to and relevant to the actual proposed/offered, Detailed Solution and not to other Software or Services the Bidder also may have available.

2.2.1 General requirements

- Q1 Please describe what steps have been taken or plans that are in place to address environmental concerns on i.e. power consumption and the use of green energy.
- Q2 Please describe how you will support the Nordic R&E community with regards to but not limited to webinars, support, user group meetings and events.

2.2.2 LMS requirements

2.2.2.1 General requirements

- Q3 Please describe how the LMS solution will support the improvement of student completion rates.

2.2.2.2 Data security

- Q4 Please describe in detail the process of data recovery of items that have been deleted by mistake on different levels in the system, i.e. deleted assignment by a student, deleted file by staff, deleted thread in a discussion, deleted user account or course.

2.2.2.3 Access control and Identity Management

- Q5 Please describe how your solution will support a single country instance with university subaccounts, to allow a student to attend courses at multiple universities using the same identity.

2.2.2.4 User interface and communications

- Q6 Please provide a copy of any certificates awarded for accessibility, and list all standards and recommendations regarding accessibility that the solution adhere to.
- Q7 Please describe in detail how the system supports open courses, with and/or without registration. Is it possible to have part of a course as open and other parts of the course as closed?

2.2.2.5 *Structure and User groups*

- Q8 Please describe how groups can be created/used at different levels, e.g. program, faculty, special-interest groups. I.e. is it possible to use groups for personnel e.g. within workshops.
- Q9 Please describe how the solution supports game based learning.

2.2.2.6 *Integrations and API*

- Q10 Please describe which connection standards are used to connect/synchronize with external calendars.

2.2.2.7 *Archiving*

2.2.2.8 *Learning Analytics*

- Q11 Please describe in detail how the LMS solution supports predictive and diagnostic analytics i.e. student completion predictions, teacher behaviour i.e. use of technology linked to completion rates.

2.2.2.9 *Examination and assessment*

- Q12 Please describe the workflow and teacher overview during an examination using a group discussion/forum.
- Q13 Please describe the workflow for an assignment that includes peer review between students.
- Q14 Please describe the workflow for a test or assignment which will be marked/graded by several different teachers.
- Q15 Please describe the workflow for marking a test using student anonymity/blinded grading.
- Q16 Please describe the workflow for marking an assignment using anonymity/blinded grading.

2.2.2.10 *End of contract provisions*

2.3 **Commercial**

2.3.1 **Background to the Commercial Structure**

It is assumed that organisations using the framework will consume a mix of the services offered under the Framework. This will be reflected in the TCO model where all services will be included and weighted. Please note the provision for making consolidated volume discounts that will cover the total Framework and not just individual call-off contracts or customers.

2.3.1.1 *Relationship: NORDUnet to Successful Bidder*

NORDUnet is undertaking a procurement procedure for Learning Management System framework contracts on behalf of the National Research and Education Network (NREN) Customers according to the contract notice published in the Official Journal of the European Union.

The outcome of the procurement will be an award of Framework Contracts to a maximum of three Bidders of compliant services. Figure 2.1 below illustrates the contractual arrangement between the parties.

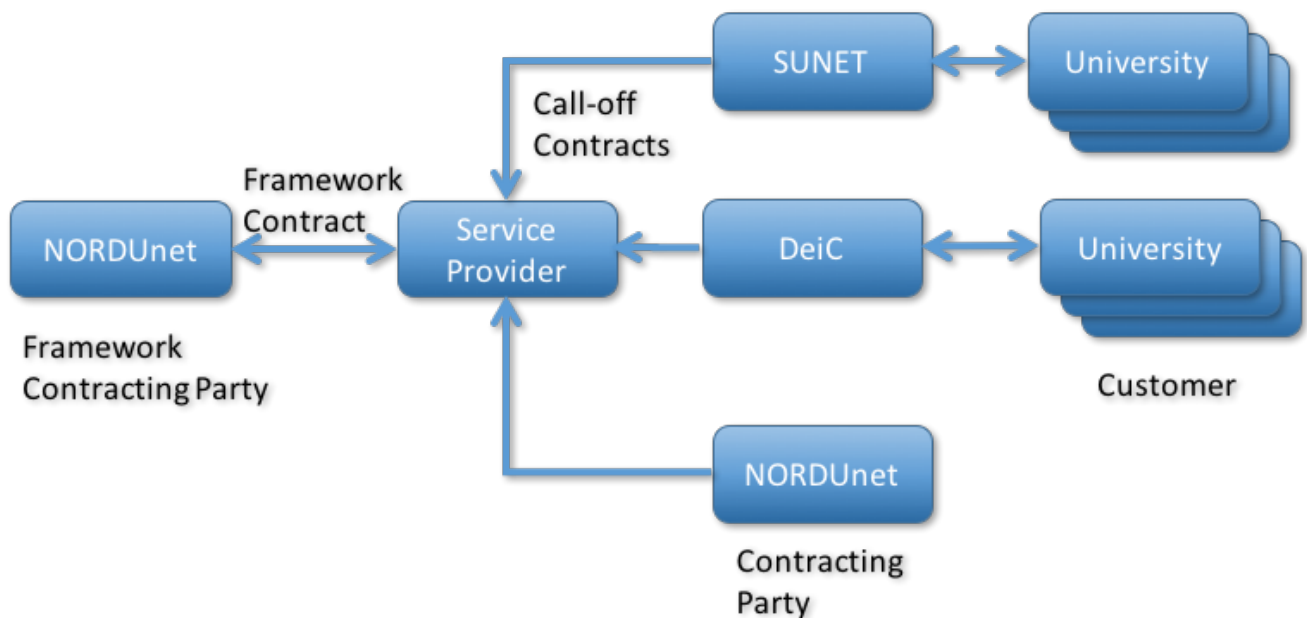


Figure 2.2: Relationship between parties

The Framework Agreement will have a Service Catalogue which will define the products and services offered by that Bidder, and the terms and conditions of sale.

NORDUnet will be responsible for the management of the Framework Agreement, ensuring it remains accurate and up to date. It is envisaged that the Framework Agreement and the service catalogue will be reviewed annually for this purpose.

2.3.1.2 Call-Off Contracts

Once the Framework Agreement has been established between NORDUnet and the Bidder, NRENs are able to purchase goods and services described within them. This is achieved by means of a Call-Off Contract: The Call-Off Contract will exist between the NREN and Bidder where a purchase is made. NORDUnet will have no involvement in this activity.

Figure 2.2 shows four NRENs on the right-hand side. In practice, any NREN listed in the OJEU Notice are eligible to purchase products and services using this process. NORDUnet may do its own call-off contract to provide Services to its constituency.

The Call-Off Contract will reference the Framework Agreement Terms and Conditions and the NREN will only be able to purchase configurations of the Products and Services specified within the Framework Agreement Service Catalogue.

2.3.2 Total Cost of Ownership (TCO)

In accordance with Volume 1 Section 2.3, regarding the Invite to Submit Final Bid (ITSFB) NORDUnet will compute the Most Economically Advantageous Tender, which will include a calculation of the TCO over the length of the framework (6 years).

The TCO evaluation will be based on four scenarios. That all must contain the basic LMS functionality, as listed below. The three first scenarios will include additional features that must be priced if they carry an additional cost.

The cost model will be a per institution yearly site license based on Student FTE. For each FTE a minimum of 500MB of storage must be included.

ALL COST MUST BE INCLUDED, including but not limited to; cost relating to licenses, maintenance, support and network ingress/egress charges.

The price should be given in Euros (€) per year, excluding VAT.

The price for year 2-6 must include any year over year price increase build in to the product or service.

The evaluation will be done by calculating the yearly average price per price component and adding the price components to get a total yearly average cost per scenario. This is then divided by the respective FTE number for each scenario, to give a per FTE yearly average cost. These four average FTE cost numbers will be added to give the evaluation key.

2.3.2.1 LMS Base Service

The LMS Base Service must as a minimum have the following features and functionality:

- Course templates that enable quick set-up for new courses, content can be copied from course to course and entire courses can be copied
- Course specific file area with drag-n-drop uploading
- Repository for sharing resources between courses and with other teachers
- Ability to set content access based on completion, i.e. pass a quiz to access new content
- Quizzes allowing for text, images, video and audio, with multiple question types, e.g. multiple choice, image matching, text, etc.,
- Repository for quiz questions that can be reused between quizzes and in other courses
- Assignments which support peer review and anonymity, as well as group assignments, revision and re-submission
- Assignment Peer review with possibility of anonymity and enabling easy redistribution between students
- Examination that supports IP-range restriction and support lock-down browser (see service catalogue)
- Calendar events can be imported and exported.
- Calendar supporting European week, starting with Monday.
- Project groups which can be created automatically as well as manually by teachers and students
- Grading rubrics which can be connected to course learning objectives/outcomes
- Detailed and visual learning statistics for individual students and lists of students
- Possibility of tracking student progress not only through a course, but between courses and through a learning program.
- Predictive Learning analytics that support e.g. student completion rate reports and predictions.
- Support for visual statistics tracking student activity in a course, e.g. log-ins, content views, etc
- Student to-do lists with possibility of automatic notifications and reminders
- Toggling of student view for teachers/administrators
- All interface, menus and help available in Danish, Swedish and English.
- Support foreign characters (Unicode character tables) e.g. Arabic
- Discussion forum with the ability to post first before reading the discussion
- Discussion forum making it possible to collect post from one student before grading.
- In-system messaging as well as messaging through email.
- Messaging with option to sort, forward, send to multiple recipients, etc.
- Multi-purpose surveys, e.g. for course evaluations, formative assessment or polls
- System logging accessible to administrators to track user activities
- Student course progress viewable by teachers and student
- Support for disability functions - Compliance with Voluntary Product Accessibility Template (Learning Environment 10.5.7) and Web Content Accessibility Guidelines (WCAG 2.0)
- A preview before publishing for teachers and administrators

- Ability for Teacher and Admin to use and see student social security number in the most important views for grading and list of students etc. It shouldn't be visible between the students.
- Soft delete of courses, documents, discussion forums and so on. The course admin, teacher and student should be able to recall their information.
- A full responsive design to e.g. support access from mobile devices
- Integration with plagiarism tools (Urkund, etc.)
- Integrate with major cloud services used by Students and teachers
 - MS Office365
 - Google Apps
 - Google drive
 - YouTube
 - Dropbox
- Integrate with NREN Service portfolio
 - Kaltura
 - Adobe Connect
 - Box
 - Zoom

2.3.3 Service Catalogue

The Service catalogue has a number of different sections that should be completed using the relevant templates.

- LMS Base Service
- LMS Mandatory Additional Services, Features and Functions
- LMS Additional Services, Features and Functions
- LMS Project, Implementation, other activities and Professional Services

The last item in Service Catalogue is the SLA. The SLA is prescriptive and any cost to fulfil the SLA must be included in the Base LMS Base Service cost.