



NRK MA-2864/15E
NEW STORAGE
SOLUTION

BASIS FOR QUALIFICATION –
NEGOTIATED PROCEDURE

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1. INTRODUCTION

Norwegian Broadcasting Corporation Ltd., subsequently named NRK, invites interested contenders to request for participation in a negotiated procedure for the delivery of a new storage solution for NRK.

NRK would primarily like to find suppliers/manufacturers of storage systems who have extensive experience and multiple relevant references within professional media production (broadcast, video/audio post-production and visual effects).

1.1. Procurement purpose

The purpose of this procurement is to enter into a contract with one financially solid and otherwise competent contractor for storage products and related services in order to provide NRK with a simplified, robust and future proof storage solution that can grow flexibly over time in terms of functionality, capacity and performance. It will be the central storage solution for both general IT and production, but with a special focus on production.

After several years of specialized storage solutions customized for video production, we now see opportunities for a simplification of the current storage infrastructure with a more extensive and unified storage strategy based on standard storage technology.

With the new storage solution, we aim to provide NRKs production personnel with a solid foundation for efficient media production.

The following list defines the purpose of the procurement into more detail, with no specific order of priority.

- ***Standardization:*** We would like to utilize standard storage technologies, interfaces and protocols. After over 7 years with proprietary file system drivers, we would like to go away from this and standardize on open network protocols like SMB3/NFSv4/HTTP etc. We also want to reduce the number of storage systems and storage vendors.
- ***Simplification of management and administration***
 - Reduction of downtime (e.g. By software- / firmware upgrades and expansions)
 - Possibility of several automated processes (e.g. The possibilities for tiering between different storage nodes, automatic balancing of the system, failover of defective hardware etc.)
- ***Increased security in the form of high redundancy and backup***
- ***The storage system should be well suited for media production***
- ***Simple scaling of performance and capacity***
- ***Future-oriented:*** We are looking for solutions that make it possible to build storage systems that can grow over time both in terms of new functionality, capacity and performance, without the need for so-called "forklift upgrades".

- **Improved economy**
 - *Pricing Model - what options and price structures, we can expect both regards. purchase, leasing and licensing structure?*
 - *Costs and consequences associated with extensions of the system*
 - *Support Options*

1.2. Current situation

NRK's existing storage solution consists of a variety of systems to meet different needs. The current storage capacity at NRK is in total about 46 Petabytes. Tape archive and backup make about 30 Petabytes, while the rest is a good mix of different disk and hybrid flash/disk based systems. For tape archive and backup NRK has running framework agreements expiring Q4 2018, but with an option for prolongation up to Q4 2020.

On a general level, the current storage solution is divided into two categories, production storage and administrative storage. The largest portion of storage is located at Marienlyst in Oslo, but each regional office has shared storage for both production and administrative purposes as well.

As current storage technologies for production were selected and purchased for NRK in the period 2006-2008, there was a relatively clear distinction between suitable storage for video / audio production and storage for general administrative IT. The large traditional vendors and manufacturers of storage at that time had poor insight and understanding of video production, media and entertainment. Hence we had to find storage vendors that specialized in storage solutions for video/audio production. This is however no longer the case when looking at the storage systems technology available today.

Back in 2006, NAS storage solutions mostly relied on servers with direct attached block storage, which was then further distributed to clients via CIFS / SMB / NFS. This quickly became a bottleneck with many client connections and heavy applications such as video editing. NAS storage was also restricted by network capacity and speed, both in terms of delay and memory/buffers. 1 Gbit Ethernet was the predominant standard, while 10Gbit was in its infancy and much more expensive compared to today.

After trying for a while back in 2008 to make NAS storage solutions work well in media production, we quickly realized that SAN storage and block access to storage via Fiber Channel, was absolutely necessary to achieve adequate response and performance. This is the main reason why most of today's post production clients, except for news and sports, is connected directly to SAN storage with block-level access to data.

As technology has evolved in both areas of storage and networking, the distinction between traditional NAS and SAN storage has increasingly diminished. Hence we see less of a gap between production storage and administrative storage today compared to 5-6 years ago. We do however still see a tiny bit more latency with Ethernet compared to Fiber Channel.

Through faster and better network switches, 10-40 Gbit Ethernet, advancements of the SMB protocol and an improved network stack in both OS X and Windows, we finally see Ethernet performance comparable to Fiber Channel. With the rapid development of All Flash Arrays and faster network technology, this will improve even further.

After several years of specialized storage systems customized for video production, we now see an opportunity for a simplification of the current storage infrastructure with a more extensive and unified storage solution and strategy. We would like to achieve this without sacrificing performance and response times in production.

A large part of the current storage solution is outdated and multiple systems in its current form has reached End Of Life or end of SLA and needs to be replaced. Hence we see this as a golden opportunity to not only replace existing hardware, but to do an overall modernization of the storage solution and strategy as a whole.

Below is an overview of the different systems in use today at NRK's headquarters at Marienlyst, Oslo and our regional offices.

Office/Region	Current storage system	Current storage capacity (TB)	Planned initial procured storage capacity (TB)
NRK HQ Marienlyst	Promise Vtrak x10/x30 / Apple Xsan	1124	1450
	Harmonic MediaGrid	709	2800
NRK Troms in Tromsø	Harmonic MediaGrid and Promise Vtrak x10/x30 / Apple Xsan	27 + 96	340
NRK Nordland in Bodø	Harmonic MediaGrid	16	250
NRK Trøndelag in Trondheim	Harmonic MediaGrid and Promise Vtrak x10/x30 / Apple Xsan	22 + 214	600
NRK Møre og Romsdal in Ålesund	Harmonic MediaGrid	25	250
NRK Hordaland in Bergen	Harmonic MediaGrid and Promise Vtrak x10/x30 / Apple Xsan	45 + 144	380
NRK Rogaland in Stavanger	Harmonic MediaGrid	27	250
NRK Sørlandet in Kristiansand	Harmonic MediaGrid	16	250
NRK Østafjells in Porsgrunn	Harmonic MediaGrid	22	250
NRK Hedmark og Oppland in Lillehammer	Harmonic MediaGrid	16	250

Office/Region	Current storage system	Current storage capacity (TB)	Planned initial procured storage capacity (TB)
NRK Østfold in Fredrikstad	Harmonic MediaGrid	16	250
NRK Youngstorget in Oslo	Harmonic MediaGrid	38	250
NRK SAMI in Karasjok	Harmonic MediaGrid	38	250

1.3. Scope of procurement

A large part of our current production storage is aging and we need to begin the migration to a new solution by the end of 2016.

The following systems need to be migrated and replaced in 2016-2017

- 13x Harmonic MediaGrid totalling 308 TB used for video production in our regional offices
- 1x Harmonic MediaGrid 682 TB used for video production at our main site at Marienlyst in Oslo
- 2x Harmonic MediaGrid totalling 27 TB used for video production in our test area
- 19x Promise Vtrak x10/x30 / Apple Xsan totalling 1124 TB used for video production at our main site at Marienlyst in Oslo
- 9x Promise Vtrak x10/x30 / Apple Xsan totalling 456 TB used for video production in our regional offices
- 17x SAS SAN Dell each 60 TB used for VMWare

NRK reserves an option to include tape archive and backup in this new contract after the expiry of the framework agreements. NRK also reserves an option to include further expansion of the procured systems.

We are looking for solutions that make it possible to build storage systems that will scale over time both in terms of new functionality, capacity and performance without the need for so-called "forklift upgrades".

Although media production is the main focus for a new storage solution, we would like to clarify that this procurement is supposed to cover all storage needs at NRK. Hence a solution with standardized interfaces and protocols, that can deliver the most comprehensive and simple solution while still being able to cover our needs is considered a strong contender.

Any suggested solution should, as far as possible and practical, have a modular architecture and be based on standard interfaces enabling easy integration of new functionality.

NRK acknowledges and appreciates that the systems covering this market may have different approaches and may solve the functional challenges in different ways. We also understand that

the best approach to solving our storage needs might be a mix of different systems in a modular and integrated system.

The Contractor is expected to provide installation and implementation/migration.

NRK foresees a mainly hardware based initial delivery installed at- and operated by NRK with a subsequent support and maintenance agreement, but will consider elements of the delivery to be service based. Furthermore, an option of migrating to a service oriented delivery during the contract period will be reserved.

NRK expects to enter into a long-term contract, as the solution is expected to have a minimum lifetime of 5-7 years.

1.4. General information about NRK

NRK is the main public broadcasting corporation in Norway with main responsibility to produce and distribute radio and television programs for the entire Norwegian population. NRK also delivers a comprehensive portfolio of Internet, mobile and text-TV content. Presently NRK employs approximately 3,500 people.

As illustrated in the table above, NRK has a nationwide activity, including 12 regional offices and is the country's largest media company.

Today NRK broadcasts 3 television channels, (NRK1, and NRK2 and NRK3/NRK-super in HD), 11 regional TV-channels + radio channels (FM, DAB and net channels) and 16 regional radio services.

It is estimated that NRK provides 250 hours from linear channels - TV long-form content - and 1100 hours radio each week. Historic content from NRK's TV- and radio archives will add to this.

For more information please visit www.nrk.no.

1.5. Procurement procedure

This public procurement is conducted as a negotiated procedure in accordance with the Norwegian Act on public procurement of 16. June 1999 and the Regulations on Public Procurement No. 402 of 7.4.2006 (FOA) section I and III - above the EU threshold values.

NRK reserves the right to reduce the number of proposals to be subject to negotiation. A reduction might take place before the negotiations start, or after each of the negotiation stages.

Contenders are expected to possess the necessary knowledge of the general public rules and regulations applicable to the public sector purchases in Norway and the EU. Any omission or mistake in any way whatsoever with reference to this does not give the contender any right to an additional claim.

1.6. Contract notice

The procurement is publicly announced at www.mercell.no (reference NRK-MA2864/15E), www.doffin.no and at TED (www.ted.publications.eu.int/official).

1.7. Time Schedule

The procurement is scheduled to be completed in accordance with the tentative and high level time schedule as given in the table below.

Activity	Date
Announcement of Contract Notice and invitation to request for qualification	20. June 2016
Deadline for submitting questions concerning the document: "Basis for qualification"	12. August 2016
Closing date for submitting request for qualification	22. August 2016 at 12 noon CEST
Notification of the result of the qualification and selection. Distribution of the Tender Basis to qualified and selected contenders	6. September 2016
Closing date for submitting questions concerning the tender documents	30. September 2016
Closing date for submitting written tender proposal	10. October 2016
Initial evaluation	Week 41-43
Feedback to contenders/negotiations	Week 44
Closing date for submitting revised proposals	Week 46
Evaluation of revised proposals	Week 46 - 47
Feedback to contenders/negotiations	Week 48
Closing date for submitting final proposals	Week 49
Evaluation of final proposals	Week 50
Contract award notification	Week 51

The contract will be signed after the expiry of the standstill period following the contract award notification.

2. QUALIFICATION REQUIREMENTS

This chapter contains qualification requirements. They are regarded as minimum requirements that all must be fulfilled in order to participate in the competition.

2.1. Mandatory documentation requirements

Qualification requirement	Documentation requirements
K 01 The Contender should not have substantial tax remarks related to payment of taxes to the public.	<p>Company tax certificate. Documentation on the tax on the employer's salaries and VAT paid from "kemnerkontor" (Norwegian form RF-1244 should be used). They must not be older than 6 months following the deadline for submission of application.</p> <p>Any arrears must be explained.</p> <p>The requirement is only mandatory for Norwegian Contenders, but international Contenders are encouraged to submit similar documentation.</p>

2.2. Organizational and legal position

Personal situation of economic operators, including requirements relating to enrolment on professional or trade registers

Qualification requirement	Documentation requirements
K 02 The Contender shall be a legally registered business	Certificate or equivalent documentation showing that the Contender is registered in a public register in their home country.

2.3. Economic and financial situation

Qualification requirements	Documentation requirements
<p>K 03 The Contender shall have sufficient economic and financial capacity to fulfil his contractual obligations.</p>	<p>Financial statements for the last three fiscal years including P&L statement, balance sheet, board of directors' annual report and external auditor's report</p> <p>Any recent information of relevance, e.g quarterly reports, Solvency Assessment from a business with a license to operate as a credit information bureau. The assessment must:</p> <ul style="list-style-type: none"> • be based on the most recent annual or later financially relevant information • provide information on credit worthiness and the degree of bankruptcy risk • <i>not be dated later than 3 months prior to the closing date for submission of request to participate.</i> <p>NRK may, unless the Contender has stated otherwise in the tender letter, undertake an assessment of the Contenders economic and financial situation through Experian if possible.</p> <p>If the contender relies on other enterprise's capacity in order to fulfil the qualification requirement, the enclosed "Liability Statement" from the relevant subcontractor(s) or co-operating enterprises shall be filled out and submitted, signed by a duly authorised representative from the actual third party/-ies. Similar documentation as requested above must also be submitted for the other enterprise.</p>

2.4. Technical and professional capacity

Qualification requirement	Documentation requirements
<p>K 04 Previous experience The Contender shall have good experience from previous similar and relevant deliveries</p>	<p>Documentation of the most important relevant deliveries.</p> <p>The documentation must provide for:</p> <ol style="list-style-type: none"> customers' name and contact information delivery scope and delivered solutions value and duration of the delivery statement of the delivery's relevance to this procurement. statement of whether the delivery has been performed by the contender itself or by subcontractors/co-operating enterprises. In the latter case the part/extent of delivery performed by subcontractors shall be specified <p>NRK reserves the right to make necessary investigations about the true relevance of the documented deliveries in order to get a complete picture of the Contenders capabilities.</p>
<p>K 05 Capacity The Contender / manufacturer shall have the capacity to deliver and support the system.</p>	<p>Description of the organisational, professional and technical qualifications of the contender, whether it belongs to the contender itself or subcontractors/ co-operating enterprises, listing the number of personnel that can be made available for the execution of the contract; particularly:</p> <ol style="list-style-type: none"> Description of the supplier's organization and the resources the contender can use for fulfilment of the contract. Overview of technologies and services offered by the company and the contender's certifications on these. The number of employees who will be made available for the fulfilment of the contract within the related technologies with regards to the delivery project, and subsequent support and maintenance, as well as possibilities for remote operation, and service-based storage deliveries, described by the number of employees and their certification and experience level per area. <p>It must be identified to which organisational/legal entity the resources belong/are employed.</p> <p>If the contender relies on other enterprise's capacity in order to fulfil the qualification requirements, the enclosed "Liability Statement" from the relevant subcontractor(s) or co-operating enterprises shall be filled out and submitted, signed by a duly authorised representative from the actual third party/-ies.</p>
<p>K 06 Quality assurance system The Contender shall have adequate methods of quality assurance.</p>	<p>Description of the Contender's quality assurance system and how this is implemented in the enterprise. Alternatively, a copy of certificate issued by an accredited certification body or equivalent documentation for operations is presented.</p> <p>Description of the Contender's methodology for similar delivery projects.</p>

3. REQUIREMENTS FOR THE APPLICATION

3.1. Language

The request for qualification shall be written in Norwegian or English.

3.2. The structure and the content of the application

Contenders are asked to note in particular that all descriptions must be as complete and as transparent as possible.

The contenders must ensure that the documentation requirements are sufficiently exhaustive for NRK's ability to evaluate the Contenders qualifications, though NRK encourage you to keep responses short and concise. Extensive use of references to *external* and general information where we have to search for necessary information may be a disadvantage for the scoring of the Contender during the assessment.

The application should contain the following parts and documents:

Part	Description
1.	Signed application letter (scanned letter with signature), including <ol style="list-style-type: none"> Full name and address, and complete contact information for the Contender, including contact information for the person responsible for the application. Brief description of the Contender and any subcontractors/partners; history, markets, products and services, organization, etc. Information of which parts of the delivery any subcontractors/partners are intended to be used The Contender's statement for his understanding of section Feil! Fant ikke referansekinden..
2.	Signed liability statements from any subcontractors/co-operating parties.
3.	Documentation on the fulfilment of the qualification requirements in chapter 2 including certificates and attachments as described. K 01 Certificate on the taxes and VAT paid (c.f. section 2.1) K 02 Certificate or equivalent documentation showing that the Contender is registered in a public register in their home country (c.f. section 2.2) K 03 Financial statements with the annual report and auditor's report, recent information, Solvency assessment (c.f. section 2.3)
4.	Documentation on fulfilment of the requirements to the Contenders technical and professional capacity (K-04 – K-06) in the same outline as in Section 2.4 above.

All electronic application files/documents must be labelled as follows:

<MA-2864>_<name of document>_<Company name>

Example: **MA2864_Cover letter_Company-A**

3.3. Submission of request for qualification

The application shall be delivered electronically via the Merccell-web portal, no later than the closing date stated in section. 1.7 and must contain the following:

- One complete electronic version as described in section 3.2 (set of single files/documents, preferably in its original format)

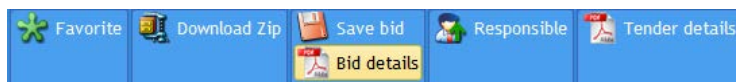
- One “Complete application PDF-binder” as described below
- One censored version as described in chapter **Feil! Fant ikke referanseilden**.

For avoidance of doubt and errors in the above-mentioned single files and to present the total layout as it is intended, we also want to receive *one* single PDF-binder containing the complete set of documents in the right order.

Please note that the Mercell portal will close at delivery deadline.

The Norwegian public procurement regulation only accepts e-signatures issued in accordance with a national Requirement Specification by certification service providers registered with the Norwegian Post and Telecommunications Authority. Non Nordic Contenders may not be able to use e-signatures. Please test your e-signature well in advance.

Contenders that do not have such an e-signature may use an alternative. Print and sign the “bid details”, then scan it and upload it along with the response submission.



NB: To enable electronic submission without the e-signature, please contact us well in advance before the deadline. For further assistance, please contact Mercell support at support@mercell.com / +47 21 01 88 60 / +47 21 01 88 00.

3.4. Amendments and recall

The request for qualification can be recalled or changed until the application deadline. Revocation shall be made in writing.

Changing the application is considered as a new application and shall be compiled in accordance with the requirements for the application that is stated above.

4. NRK´S PROCESSING OF THE REQUESTS FOR QUALIFICATIONS

Received requests for qualification will be processed in accordance with the provisions set out in section 4.1 – 4.3 below.

4.1. Opening

Opening of applications will be made in NRKs premises immediately after the submission deadline, by at least two representatives from NRK. Contenders will not be allowed to be present at the opening.

4.2. Evaluation of the qualifications

Properly submitted requests for qualification will be evaluated as to whether the qualification requirements are met. Contenders that do not meet the qualification requirements will be rejected in accordance with the provisions set out in the procurement regulations.

Similarly, public procurement regulations, FOA § 20-12 will be applied for assessment of the Contender in general.

4.3. Selection criteria

Among the qualified contenders, NRK will select a minimum of three (3) to be invited to participate in the tender proposal stage provided that a sufficient number of suppliers are qualified.

The selection will be based on an overall assessment of the contenders documented economic and financial situation (cf. section 2.3) and technical and professional capacity (cf. section 2.4), of which the latter will be emphasised. NRK will particularly seek to select suppliers with good experience from similar deliveries within the media/production industry.

The selection will also take into consideration the need for good competitive dynamics. Thus NRK may select the best qualified Contenders with experience from different technologies.

5. OTHER PROVISIONS

5.1. Communication regarding procurement

This procurement process is managed via the Mercell portal. The contenders will gain access to the portal in order to download qualification and competition documents, as well as conduct other correspondence concerning the acquisition and submit the application for participation.

Any questions regarding the basis for qualification and other matters concerning the procurement process should only be addressed through www.mercell.no. Inquiries should be marked "Case number NRK MA-2864/15E ". The deadline for questions is stated in section **Feil! Fant ikke referanseilden..**

Other inquiries cannot be expected to be answered. Attempts to acquire information or to influence NRK's employees involved in the procurement process may lead to rejection or that the competition is cancelled.

Incoming questions will be reviewed and answered in a general and anonymous manner, and will be continuously distributed via www.mercell.no, where e-mail notification will be submitted to the contact persons registered, not later than the date stated in section **Feil! Fant ikke referanseilden..**

5.2. Confirmation of intent to participate

Contenders are kindly asked to confirm the download of the basis for qualification, and inform whether they intend to apply for participation. This can be communicated through the procurement portal www.mercell.no by using the "I want to submit an offer" preferably within 10 days after reading.

5.3. Corrections, addendums or change of the basis for qualification

If a contender understands that the basis for qualification may contain errors, ambiguities or that submitted files cannot be read as expected, the contender is encouraged to contact NRK to get the error corrected or to get possible confusion clarified.

NRK reserves the right to make necessary changes in the basis for qualification. If needed, the deadline could be extended proportionately.

5.4. Confidentiality and freedom of information

With reference to the regulation on public procurements (FOA) § 3-5 has new Act on the right to access to public services (Act 2006-05-19 no 16) entered into force with effect from 1.1.2009. In pursuance to this, the public can after the Contract award, require access to, among other things, filed qualification applications and submitted tenders prepared for publication.

In accordance with the Norwegian Freedom of Information Act § 23 (3), the public can request access to information in requests for qualification as well as proposals after the contract is awarded. NRK may exempt information considered as trade secrets and other matters of competitive significance, ref. the Norwegian Public Administration Act § 13.

Hence NRK will require the Contender to enclose a copy of the request for qualification where any trade secrets or other matters of competitive significance has been censored. The contenders should note that NRK has an independent responsibility to assess the extent of information that the Contender requests to be exempt from publication.

If the contender does not enclose a document specifically prepared for publication, NRK will consider the original qualification document ready for publication at its own discretion.

Qualification applications and tenders will not be returned, but filed or properly destroyed.

5.5. Cost of participation in the competition

Contenders prepare and deliver request for participation and participate in the subsequent Concept proposal stage and negotiated procedure at their own expense and risk

NRK assumes no further financial responsibility for the invested effort or other costs in connection with the request for participation or the participation in the competition as such.

5.6. Cancellation of the competition and complete call off

NRK reserves the right to cancel the competition if there are objective reasons for this.