

The Signalling Programme

Lending Agreement regarding ERTMS-DK and STM-DK (Onboard) between Banedanmark and Arriva Tog A/S

banedanmark



banedanmark



Lending Agreement for
ERTMS DK and STM-DK
(Onboard)

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Amendment log

Date	Version	Status
28.03.2019	0.1	Draft version issued to the operator based on "Model II".
12.04.2019	0.2	Revised version to reflect comments received from Arriva at the meeting on the 4 th of April 2019.
02.05.2019	0.3	Revised version with minor changes to reflect comments received from DSB.
12.06.2019	0.4	Revised version to reflect comments received from Arriva on 14 th of May 2019.
17.10.2019	0.5	Revised version to reflect comments received from the Onboard project regarding decommissioning of STM and new functional tests.
12.11.2019	1.0	Initial Contract Document

Between

Banedanmark

Carsten Niebuhrs Gade 43

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Company No.: 18632276

(hereinafter referred to as Banedanmark)

and

Arriva Tog A/S

Skøjtevej 26

DK-2770 Kastrup

Company No.: 12245904

(hereinafter referred to as Stakeholder)

(hereinafter referred to as the "Parties" and individually the "Party")

Have as of today entered into the following

LENDING AGREEMENT

about lending ERTMS-DK and STM-DK (Onboard)

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Definitions

In this Lending Agreement the following defined terms are understood to mean:

“Add Ons” – Has the meaning as defined in the Main Contract and Purchase Agreement.

“Adgangskontrakten” – The agreement in force between the Stakeholder and Banedanmark about cooperative relations, mutual rights and duties etc. in relation to the Stakeholder’s use of allocated train paths.

“APIS” – Authorisation for Placing Into Service submitted by the NSA.

“Business Day” – Monday to Friday except Danish holidays.

“Corrective Maintenance” – As defined in the Main Contract Appendix 17 (“Corrective Maintenance”).

“ERTMS-DK” – ERTMS onboard equipment and parts thereof, and the necessary software that is installed in the Stakeholder’s Rolling Stock, (i.e. the full ERTMS installation onboard a Rolling Stock, including software).

“ERTMS-Supplier” – The consortium led by Alstom Denmark A/S is the supplier that Banedanmark has entered into the Main Contract with.

“Final Acceptance” – As defined in the Main Contract, clause 10, respectively the Purchase Agreement, clause 8, depending on where the Final Acceptance of the relevant part of the Loaned is contractually regulated.

“Fracas” – “*Failure Reporting Analysis and Correctiv Actions System*”, for the time being Favoweb - An IT system provided by the ERTMS-DK Supplier. The system can be used for asset management of ERTMS-DK and STM-DK equipment as well as error reporting towards the ERTMS-DK Supplier.

“Handback” – When an Onboard System has been installed in the specific Rolling Stock and a “handback document” is signed by Stakeholder, Banedanmark and the ERTMS-Supplier.

“Lending Agreement” – This agreement including all annexes and sub-annexes.

“Lending Period” – The period commencing for each ERTMS-DK/STM-DK of the Loaned from the Handback of the Rolling Stock in which the specific ERTMS-DK and STM-DK has been installed until either i) the ERTMS-DK respectively STM-DK has been returned to Banedanmark or ii) has been discarded and not replaced with new units due to Stakeholder’s gross negligence or intent, cf. section 18 below or iii) this agreement is rightfully terminated by either of the Parties/automatically terminated in accordance with the terms in the Lending Agreement.

“Main Contract” – The Contract “Onboard ERTMS Systems for Vehicles operating on Main and Regional Lines (Fjernbanen) in Denmark” on the design and development of Onboard ERTMS systems, concluded March 14, 2012 between Banedanmark and the ERTMS-Supplier”.

“Maintenance Agreement” – The Lot B (subcontract B) under the Main Contract entered into between the Stakeholder and ERTMS-Supplier, which eg. defines the scope of the ERTMS-Supplier's maintenance obligations for ERTMS-DK and the exchange of the faulty STM-DK module on terms specified in the Maintenance Agreement.

“NSA” – The National Safety Authority as defined in the Danish Railway Act (Jernbaneloven) paragraph 55.

“Onboard System” – The signaling equipment installed within the Stakeholder's Rolling Stock which includes ERTMS-DK and STM-DK .

“Preventive Maintenance” – As defined in the Main Contract Appendix 17 (“Preventive Maintenance”).

“Principles of Contract Management” – The Tracé Processes in Annex 6 att 1 and att 2 outline the principles for how Banedanmark will practice the contract management of the Main Contract and where the main topics are managing relationship towards the Stakeholder, contract administration and managing changes etc.

“Purchase Agreement” – The Lot A (subcontract A) under the Main Contract (which also – among other things – regulates maintenance until the end of the Warranty Period) which gives Banedanmark the right to buy ERTMS-DK from the ERTMS-Supplier in order to lend the purchased ERTMS-DK to the Stakeholder.

“Rolling Stock” – A vehicle operated by Stakeholder on the railway network.

“Service Level Goals” – Shall have the same meaning as specified in the Main Contract.

“Signalling Programme Cooperation Agreement” – The agreement entered into between Stakeholder and Banedanmark regarding the cooperation between the Parties in connection to the installation of the Loaned and the fulfilment of the Signalling Programme (The Back-to-Back agreement (Principaftalen) signed on the 4th of December 2015).

“STM-DK” – All Specific Transmission Modules and cubicles including all lowest exchangeable units (LEUs) purchased under STM Framework Agreement and installed in the Rolling Stock, (i.e. the full STM installation onboard a Rolling Stock, including software).

“STM Framework Agreement” – Agreement entered into on 4 April 2014 between Banedanmark and Siemens for the supply of STM-DK. (See Annex 2).

“STM-Supplier” – The supplier that Banedanmark has entered into the STM Framework Agreement with. The supplier is Siemens A/S.

“Systematic Failure” – The term “Systematic Failure” refers to the definition of “Systematic Failure” in the Onboard contract section 17.14 (specified in Appendix 5A, MR5.0MA.509). Systematic Failures are handled in accordance with Appendix 5A, section 5.6.3 in the Onboard contract.

“The Loaned” – The specific ERTMS-DK and STM-DK as listed in Lending Agreement Annex 1 registered in Fracas in connection with Handback including any component (at the lowest replaceable

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unit (LRU)) level registered later in connection with the maintenance/asset management of the loaned equipment.

“Total Loss” – If a loaned ERTMS-DK (the full ERTMS installation in a Rolling Stock) and/or the STM-DK (the full STM installation in a Rolling Stock) is stolen, damaged or disappears in the custody of the Stakeholder and that the estimation of the cost of repair of the ERTMS-DK respective the STM-DK will be more than 75% of the purchase price (including indexation of the purchase price to the point in time, where the ERTMS-DK is stolen, damages or disappeared) of the loaned ERTMS-DK respective the loaned STM-DK, see the columns regarding purchase price for a new ERTMS respective STM-DK in Lending Agreement Annex 4, att. 1. The purchase prices are to be index regulated in accordance with the indexation principles described in clause 25.2.

“Traffic Contract” – The contract in force at the time in question between the Stakeholder and the Danish State or a Danish region regarding the Stakeholder’s rights and obligations connected to the Stakeholder’s provision of public service traffic with trains.

“Warranty Period” – Shall mean two years calculated from Final Acceptance of the ERTMS-DK as specified in the Main Contract (and as illustrated in the phase chart in Annex 8).

1 Background and Purpose

The following shall serve as background information for entering this Lending Agreement including serve as the basis for the interpretation of this Lending Agreement cf. section 3.

In the green transport policy (“grøn transportpolitik”) of 29 January 2009 it was decided that a new and modern signaling system on the Banedanmark network that meets the common European standards shall be established. Banedanmark carried out an EU-tender following the political agreement implemented of the Main Contract. A consortium led by Alstom Denmark A/S won the tender, and the Parties signed the final agreement on 14 March 2012.

The Main Contract gives the Danish stakeholders listed in the EU contract notice published on 25 February 2010 as co-signers, the right to buy ERTMS onboard units from the ERTMS-Supplier and the opportunity to purchase one of the three different maintenance packages for the maintenance of ERTMS-DK with the ERTMS-Supplier.

From the outset it was the plan that purchase of respectively the ERTMS-DK and STM-DK were outside the scope of the Signalling Programme. Banedanmark should enter into a framework agreement with a supplier about the development of ERTMS-DK and that the railway undertakings on their own should enter into a purchase agreement (a subcontract under the above mentioned framework agreement) directly with the supplier regarding the purchase of the onboard equipment. However, due to various reasons – before signing of the Purchase Agreement – it was decided to change this model. Instead Banedanmark should purchase such onboard equipment to the railway undertakings.

The Lot A (subcontract A) contract in the Main Contract provides Banedanmark and stakeholders the right to buy ERTMS-DK, from the ERTMS-Supplier. The Lot A allows Banedanmark to lend the units to the stakeholders receiving compensation for participation in the Signalling Programme. As a consequence of the above Banedanmark has bought the equipment to be installed in the compensated stakeholders’ rolling stock, which forms the background for this Lending Agreement.

The Lot B (subcontract B) contract provides the compensated stakeholders a maintenance agreement directly with the ERTMS-Supplier for maintenance of ERTMS-DK units. In this context the stakeholder may choose from three different maintenance packages. (See Section 11.1.)

On 04 April 2014, Banedanmark signed the STM Framework Agreement with Siemens for the supply of STM units, replacing the ATC system in the trains. (STM Framework Agreement is attached as Annex 2 to the Lending Agreement).

According to the Main Contract, the STM-DK must be integrated into the Stakeholder's Rolling Stock with the ERTMS-DK. The STM-DK unit shall be decommissioned by the ERTMS-Supplier when the ERTMS system is fully installed on the whole Banedanmark infrastructure.

The conditions for the lending of the ERTMS-DK and the STM-DK are described in this Lending Agreement.

The Lending Agreement includes the lending of a number of ERTMS-DK and STM-DK-units as specified in the Annex 1. Other acquisitions through the Purchase Agreement are not covered by this Lending Agreement.

The purpose of this Lending Agreement is to establish the terms and conditions that shall apply for lending of a number of Onboard Systems (as specified in the Annex 1) to Stakeholder and how the contract management shall be carried out by Banedanmark versus respectively (i) the ERTMS-Supplier regarding ERTMS-DK and (ii) STM-Supplier regarding STM-DK.

According to the terms of this Lending Agreement Banedanmark shall with respect of the Onboard Systems until the end of the Warranty Period carry out the contract management of the contracts according to the Principles of Contract Management and as outlined in Annex 6 att 1 and 2 – hereunder collect any penalty amounts – entered into with respectively (i) the ERTMS-Supplier regarding ERTMS-DK and (ii) STM-Supplier regarding STM-DK. Banedanmark may from time to time consult the Stakeholder in relation to the performance of contract management as specified in Annex 6 att 1 og 2.

The Stakeholder shall conduct the initial contact to the ERTMS/STM-Supplier and make the relevant arrangement in case of any malfunction, performance of service and maintenance to be carried out in the Warranty Period according to the Main Contract and/or the STM Framework Agreement.

2 Terms

This Lending Agreement shall enter into force for each specific Onboard System upon the Handback of Stakeholder's Rolling Stock in which the respective Onboard System has been installed, cf. section 5 of this Lending Agreement. The Lending Agreement shall remain in force for the Onboard System until it is terminated in accordance with the Lending Agreement or an ERTMS-DK or STM-DK is replaced by Stakeholder in accordance with section 18. However, the Lending Agreement is not terminated if the Loaned is replaced by the Stakeholder due to Stakeholder's gross negligence or intent, cf. section 18.

3 Interpretation and New Legislation

3.1 General

If any of the provisions of this Lending Agreement are rendered invalid or the provisions cannot be enforced, they shall, unless otherwise specified in the Lending Agreement, be replaced by alternative provisions reached through fair negotiation or through interpretation achieving to the widest extent possible the same (economic) situation, as if that provision was valid and enforceable.

For purpose of interpretation and in case of any conflict between the Lending Agreement and its annexes, the Lending Agreement precedes the annexes.

This Lending Agreement and Adgangskontrakten shall apply in parallel, but in cases of conflict, the Lending Agreement takes precedence over Adgangskontrakten.

For the sake of clarity, if a Danish version of this Lending Agreement should be drafted, it should only be instructive compared to the English version, which is the applicable agreement in case of any conflict.

The Parties are obligated to renegotiate any affected parts of the Lending Agreement due to introduction of new regulation.

3.2 Specifically about The Signalling Programme Cooperation Agreement

Prior to concluding this Lending Agreement Banedanmark and Stakeholder has on December 4, 2015 entered into The Signalling Programme Cooperation Agreement covering the installation period of The Signalling System and setting out Banedanmark's and Stakeholder's rights and obligations in concerning The Signalling Programme. Since The Signalling Programme Cooperation Agreement is in force until "sidste strækning er udrullet og testet", The Signalling Programme Cooperation Agreement and this Lending Agreement will be in force concurrently for this period of time.

In case the Lending Agreement and The Signalling Programme Cooperation Agreement regulate the same subject, and a discrepancy between the two agreements is found, the regulation in this Lending Agreement shall take precedence over The Signalling Programme Cooperation Agreement.

4 Lending Use Rights

4.1 General terms of use

It is a condition for the continuance of this Lending Agreement that the Stakeholder is party to a valid Traffic Contract with the Danish State or Region.

Ownership of the Loaned remains with Banedanmark throughout the Lending Period and Stakeholder only acquires the right to use the Loaned and only for the duration of the Lending Period. Ownership

applies to all parts of the Loaned, including components that are replaced by Stakeholder during the Lending Period.

Stakeholder has the right to use the Loaned only in its operation and in accordance with this Lending Agreement.

During the Lending Period Banedanmark gives Stakeholder the right to use the Loaned in accordance with the usage rights in the Main Contract (clause 23.1.1 (Software and Documentation, including Interface Specifications), the Maintenance Agreement (clause 17.1) and the STM Framework Agreement (clause 15.2) respectively.

Stakeholder is obligated to comply with all laws and government regulations as well as the general conditions in Adgangskontrakten in connection with the use or possession of the Loaned. To the extent new government regulations require modifications of the Onboard Systems Banedanmark is responsible for the implementation of such modifications in a timely manner with an impact on Stakeholder's scheduled operation of Rolling Stock as minimal as possible. Stakeholder will provide any reasonable assistance with the implementation of such modifications in accordance with section 14.

Stakeholder must ensure that the Onboard System is installed with the at any time provided software, cf. section 14.

If Stakeholder wants to move/replace an Onboard System to another of Stakeholder's owned, rented or leased Rolling Stock units in a Rolling Stock (litra) which has not obtained an Authorisation for Putting Into Service (APIS), including Banedanmark's ETCS system, from the Danish transport authorities, section 23 in the Lending Agreement shall apply.

Stakeholder is only permitted to make changes to the Loaned as described in section 14 of the Lending Agreement.

4.2 Use of the Loaned for Performance not included in the Traffic Contract ("Free Traffic")

The Stakeholder is not allowed – without payment according to the principles as described below – to use the Loaned for any purpose other than in relation to the Stakeholder's obligations regarding public service traffic in Denmark according to the Traffic Contract.

The use of the Loaned to overcome obstacles to traffic flow, such as the transport of degraded rolling stock, is not considered "other purposes".

Notwithstanding any other provision in this section, the Stakeholder is entitled to use trains that have the Onboard Systems installed for other commercial purposes, including commercial traffic that is not financed by public funds under the Traffic Contract ("free traffic"), to the extent that such activities are permitted under the Traffic Contract. Such use requires the payment of rent for the use of the Loaned, when the use is not included in Stakeholder's public service obligations under the Traffic Contract. Stakeholder shall also pay for use of the Loaned during "empty running", if the empty running is connected to Stakeholder's performance of free traffic.

The purpose of the rental amount is to ensure that the use of the Loaned for other commercial purposes does not entail state aid to the Stakeholder.

Payment for the use of ERTMS-DK and STM-DK not included in Stakeholder's public service obligations under the Traffic Contract must take place for every kilometer driven on lines where the use of ERTMS/ATC is a condition for operations, cf. Banedanmark's yearly Network Statement (Netredefølelsen), regardless of whether the lines are managed by Banedanmark or not. The rent is calculated based on a unit price per train kilometre per Onboard System that is installed in the Rolling Stock used. The rental amount and the detailed calculation are shown in the Lending Agreement Annex 5.

If the assumptions for the calculation of the rental amount are changed so that continued use for commercial purposes may involve state aid, Banedanmark is entitled to require a recalculation of the unit price.

The rental amount is regulated once a year per 1st of January (first time on the 1st of January 2020) according to the construction cost index for residential buildings BYG 42 (Main index "Construction Cost Index for residential buildings", Sub index: "Construction Cost Index, total", Kind: "Total") based on the difference in the index for the 3rd quarter in the previous year. (The "basis index" to be used in connection with the yearly regulation is the index for 1st quarter 2018. This means that the first regulation on the 1st of January 2020 will be based on the index difference between Q1 for 2018 and Q3 for 2019. The next regulation (full indexation period) will be on the 1st of January 2021 based on the index difference from Q3 2019 to Q3 2020.

If the index for residential buildings BYG 42 for some reason or other ends, i.e. no longer is updated quarterly, the Parties shall agree on a new comparable index for the future substitute for the aforementioned index.

5 Delivery and Installation of Onboard Systems

The Loaned is to be delivered and installed in Stakeholder's Rolling Stocks as agreed in the Signalling System Cooperation Agreement. In Stakeholder's agreement with the rightful owner (legal owner) of the Rolling Stocks Stakeholder must secure that the owner eg. where a train is leased that the legal owner of the Rolling Stock accepts the installation of the Onboard Systems in the Rolling Stock, before the installation is started. The ERTMS-Supplier is responsible for the installation of the Loaned in Stakeholder's Rolling Stock according to the Main Contract and the Purchase Agreement, and Banedanmark has the responsibility to perform the contract management tasks towards the ERTMS-Supplier in that regard. The Parties' obligations in this regard is handled in The Signalling Programme Cooperation Agreement whereas this Lending Agreement regulates the conditions for lending the Loaned, when it has been installed and Handback is completed.

The ERTMS-Supplier bears the full responsibility for the installation of ERTMS-DK and STM-DK into the Rolling Stock in accordance with the requirements of the Main Contract, the Purchase Agreement and the STM Framework Agreement respectively. In that regard Banedanmark shall carry out the contract management towards the ERTMS- and STM-suppliers pursuant to the Principles of Contract Management on terms as specified in section 10 and Annex 6 att 1 and 2.

In connection with the installation of STM-DK Banedanmark will inform the STM-Supplier about Stakeholder's contact information and the serial numbers of the STM-DK handed out by Banedanmark.

6 Decommissioning of STM-DK

Upon the completion of ERTMS implementation on the Fjernbane infrastructure, and when the Stakeholder shall no longer operate on ATC infrastructure, Banedanmark will ensure that ERTMS-Supplier will decommission STM-DK with an impact on Stakeholder as minimal as possible to its scheduled operation of rolling stocks. The decommissioning for each individual Rolling Stock with STM-DK equipment shall be conducted in approximately 3 days per unit, provided that the Stakeholder has made a significant change analysis to confirm that the removal of the STM-DK is not significant and therefore it will not be necessary to apply for a new APIS. Banedanmark will support the Stakeholder to do such an analysis. Once the STM-DK's are decommissioned and a handback document has been signed by the Stakeholder, ERTMS-Supplier and Banedanmark the Lending Period shall be considered terminated for the decommissioned STM-DK.

Stakeholder shall give the ERTMS-Supplier access to Stakeholder's Rolling Stock in which the Loaned is installed providing the ERTMS-Supplier opportunity to perform the decommissioning of the STM-DK once the ERTMS implementation on the Fjernbane infrastructure has been completed. Stakeholder shall agree on the planned date and time for the decommissioning. Stakeholder will be liable for Banedanmark's documented losses towards the ERTMS-Supplier if Stakeholder does not give access to the Rolling Stock in which the STM-DK is to be decommissioned.

7 Access to the Loaned

Stakeholder has an obligation to allow Banedanmark, the Danish transport authorities (Trafik-, Bygge- og Boligstyrelsen) and other authorities responsible for matters regarding the safety of Rolling Stock, access to inspect the Loaned during the Lending Period. Stakeholder is obligated to give Banedanmark, the Danish transport authorities and the other aforementioned authorities access to the Loaned, access to documents and files/databases regarding the Loaned as mentioned in Section 12 as well as the documentation for any systems interfacing with the Loaned. Access shall be given within reasonable notice and under Stakeholder's supervision. Banedanmark is to be notified by Stakeholder if Stakeholder is requested to give access to the Loaned by the above mentioned parties, except from Banedanmark.

Stakeholder is obliged to take part in and make necessary resources/equipment available in connection with audits and inspections concerning ERTMS-DK from the ERTMS-Supplier as described in the Purchase Agreement section 4.4 (Audits and Inspections) or requested by the Danish transport authorities.

Stakeholder has a similar duty to participate and make resources/equipment available in connection with audits and inspections related to STM-DK as requested by the Danish transport authorities.

8 Certifications/Training

Stakeholder's respective rights and obligations in relation to certificates/training are described in the legislation and general requirements for train operators and the Maintenance Agreement.

The Main Contract and the Purchase Agreement describes the training of Stakeholder's employees regarding ERTMS. Banedanmark compensates Stakeholder in connection with training as described in the Signalling Programme Cooperation Agreement

The Stakeholder shall ensure that the Stakeholder's relevant employees are updated through training, when the ERTMS-Supplier provides updated training in relation to the installation of new parts in the Loaned or new deliverables from the ERTMS-Supplier at the request of the ERTMS-Supplier. The update of training by the ERTMS-Supplier takes place without payment from the Stakeholder to the ERTMS-Supplier unless the update is due to changes caused by the Stakeholder. The updated training is to ensure that the Stakeholder's use of the Loaned is not reduced as a result of the introduction of the new parts/deliverables and to ensure that the Stakeholder can perform the same maintenance as before the new parts/deliverables were installed.

9 Exchange of Information – Confidentiality

9.1 Share of Information

Both Parties are obligated to inform each other without delay on matters of importance to this Lending Agreement and the use of the Loaned, including information on matters of importance to safety, etc.

Relevant information, particularly from the ERTMS- or STM-Supplier, must be disclosed to the other Party without delay. The Parties shall also inform each other without delay on all matters relating to the other Party's rights or obligations under this Lending Agreement.

The obligation to share information also includes sharing information with other stakeholders. It is Banedanmark's responsibility to facilitate this process.

The exchange of information shall comply with the section 9.3 of the Lending Agreement.

If a Party becomes aware of any material breach of the ERTMS- respective the STM-Supplier's warranties regarding the agreed deliverables (e.g. equipment, spare parts, functions or services) in accordance with the Main Contract, Purchase Agreement or STM Framework Agreement, such Party shall notify the other Party in writing without undue delay.

For example – although the following list of examples are not exhaustive – Banedanmark shall disclose the following to Stakeholder in the cases where Banedanmark may reasonably consider that such information is of importance for Stakeholder:

- Any changes to the agreements in place between Banedanmark and the ERTMS-/STM-Supplier, which has an material bearing on this Lending Agreement and/or the Maintenance Agreement, see section 15.1.

- Any changes to the Purchase Agreement which shall be incorporated into the Maintenance Agreement, cf. section 15.1.
- Any relevant monitoring data (performance monitoring data), which is given by the ERTMS-Supplier to Banedanmark under the Main Contract, section 13.3 (Performance Monitoring).
- Claims from other stakeholders against ERTMS-/STM-Supplier.
- Any matters of importance between the ERTMS-/STM-Supplier and Banedanmark related to the Loaned and that Banedanmark may reasonably know will impact Stakeholder's operation and management of Rolling Stock.

For example, although not exhaustive, Stakeholder is to inform Banedanmark without undue delay of the following:

- Any matters of importance related to Banedanmark's ownership of the Loaned or to Banedanmark's system authority.
- Whenever ERTMS-Supplier is obliged to pay damages or penalties according to requirements in the Maintenance Agreement or an agreement between Stakeholder and the STM-supplier regarding maintenance of the STM-DK.
- If Stakeholder plans to sell the rolling stock on which the Loaned is installed or will be installed (see section 23.1).
- Any expected neglect, any breach or other irregularities in relation to the Maintenance Agreement. For example, if ERTMS-Supplier does not perform Preventive Maintenance (assuming Preventive maintenance must be done by the ERTMS-Supplier).

9.2 Request for Information Required by the ERTMS-Supplier

Banedanmark can send the Stakeholder a request for information to get additional information that is necessary for Banedanmark to be able to meet its obligations towards the ERTMS-Supplier, cf. the Main Contract clause 4.2.2 (regarding critical information) and/or as part of carrying out the contract management pursuant to the Principles of Contract Management ref. Annex 6 att 1 and 2, cf. section 10. It is a precondition for the foregoing obligation imposed on Stakeholder that Stakeholder is in possession of such information or that Stakeholder within reasonable effort can provide/produce the information requested himself. In the request for information, Banedanmark must state the required information and purpose of it, and when the information is to be provided. The Stakeholder is to provide Banedanmark with the information Banedanmark seeks without delay, but no later than 14 (fourteen) Business Days from the date the Stakeholder receives the request. If the required information is of such a scale or complexity that it cannot be sent to Banedanmark by the set deadline, the Stakeholder must inform Banedanmark of this and Stakeholder must inform Banedanmark when the information will be provided.

In case the Stakeholder provides incorrect information in an answer to a request for information as described above in the period until the end of warranty of the ERTMS-DK which the request for information is related to and this causes Banedanmark a loss due to a claim from the ERTMS-Supplier caused by the incorrect information, Stakeholder shall be liable for Banedanmark's documented losses caused by the incorrect information according to Danish law, due to claims from the ERTMS-Supplier. E.g. this could be a claim for the extra costs that the ERTMS-Supplier had in order to rectify or correct work that the ERTMS-Supplier had carried out already based on the (incorrect) information received from Stakeholder.

9.3 Confidentiality

The Parties and their employees are obliged to keep confidential any knowledge and information which the Parties become aware of in the course of the implementation of this Lending Agreement.

The Main Contract and the Purchase Agreement contain confidentiality provisions which implies, the Stakeholder must sign Non Disclosure Agreements (NDAs) prior to receiving information under these agreements. The NDAs cover among other information from the ERTMS-Supplier. This NDA is not dependent on this Lending Agreement. This obligation does not include information that is publicly known or known to the recipient, without it being the result of a Party's breach of their duty of confidentiality, as detailed in the NDA.

9.4 Contact Details

For the implementation of the Lending Agreement, each of the Parties designates contact people. Lending Agreement Annex 3 contains a list of contact people for each Party.

10 Contract Management – The Parties Collaboration – Notices of Defects

10.1 General

Banedanmark and the Stakeholder agree that the Stakeholder cannot make any claims against Banedanmark in the event of defects or deficiencies with the Loaned or in respect of defects or deficiencies in the ERTMS-/STM-Supplier's other services. The Stakeholder cannot claim damages due if the Loaned does not correspond to the Stakeholder's expectations.

In the Warranty Period Banedanmark will handle the contract management of the Main Contract, Purchase Agreement and STM Framework Agreement pursuant to the Principles of Contract Management as specified in this section and Annex 6 att 1 and 2, including but not limited to

- (i) correction of general defects with the Onboard Systems which can not be solved at first instance by contact between Stakeholder and the ERTMS-Supplier or the STM-Supplier as well as issues concerning Banedanmark's business interests or other stakeholder's interests, and
- (ii) act towards the ERTMS-/STM-Supplier in situations where there is a conflict between maintenance rights and warranty rights.

It is the responsibility of Stakeholder to handle the "day to day" management of all matters that relates to errors, defects or deficiencies with the Loaned during the Warranty period through direct contact to the ERTMS-Supplier or STM-Supplier.

After end of Warranty Period Stakeholder will handle the contract management of the Purchase Agreement and the STM Framework Agreement. No later than 3 months before end of the Warranty Period of the first train, Banedanmark will delegate to Stakeholder all the necessary remedies from the

contracts, enabling Stakeholder to perform the contract management towards the suppliers after end of the Warranty Period.

After end of the Warranty Period Banedanmark will still perform the contract management of the Main Contract.

10.2 Defects related to ERTMS-DK

If Stakeholder finds errors, defects or deficiencies with the Loaned ERTMS units – which can not be handled initially through contact between Stakeholder and the ERTMS-Supplier – or the ERTMS-Supplier fails to comply with contractual deadlines of any kind, Stakeholder must without undue delay report this to Banedanmark.

Banedanmark is – to a reasonable extend – obliged to raise all claims relating to the Main Contract and the Purchase Agreement which stakeholder requests Banedanmark to plead towards the ERTMS Supplier. Stakeholder's request to Banedanmark shall include any documentation (all documents to be prepared in English) required according to the relevant contract, such as but not limited to, i) a description of the case history, ii) a reference to the clause(s) in the Main Contract and/or the Purchase Agreement, iii) a legal statement describing the legal basis of the claim, and iv) a statement showing Stakeholder's documented losses caused by the violation.

10.3 Defects on STM-DK

It follows from the STM Framework Agreement that the individual STM-DK is covered by warranty as regulated in § 9 in Annex 2 – STM Frame Agreement.

In case of any defect(s) Stakeholder shall initially handle the case directly with the STM-DK-Supplier with respect of repair or the replacement as described in the STM Framework Agreement, and without undue delay inform Banedanmark (as the owner of the Loaned) about the situation.

If Stakeholder detects a defect which affects the functionality of the overall mobile train control system, which the STM-DK or STM-Supplier's other services are an integral part of and Stakeholder cannot demonstrate that this is due to a deficiency in the STM-DK or other services provided by the STM-Supplier, Banedanmark shall be informed without delay.

For further details reference is made to the Annex 2 – STM Frame Agreement.

Banedanmark is – to a reasonable extend – obliged to raise all claims which stakeholder requests Banedanmark to plead towards the STM-Supplier. Stakeholder's request to Banedanmark shall include any documentation (all documents to be prepared in English) required according to the relevant contract, such as but not limited to, i) a description of the case history, ii) a reference to the clause(s) in the Main Contract and the STM Framework Agreement, iii) a legal statement describing the legal basis of the claim, and iv) a statement showing Stakeholder's documented losses caused by the violation.

11 Maintenance

11.1 Selecting Maintenance Package for ERTMS-DK

The Maintenance Agreement gives Stakeholder the opportunity to choose between three maintenance packages regarding ERTMS-DK for each type of train:

- Package 1 - The ERTMS-Supplier performs all maintenance
- Package 2 - ERTMS-Supplier and the Stakeholder share maintenance
- Package 3 - Stakeholder performs almost all maintenance

Stakeholder is obliged to sign the Maintenance Agreement attached to the Main Contract concluded on 14th of March 2012, between Banedanmark and the ERTMS-Supplier.

The content of the different packages is described in Appendix 5B.

The maintenance of the ERTMS-DK must be carried out in accordance with the conditions described in the Maintenance Agreement and its annexes. The maintenance of the STM-DK is described in this Lending Agreement and the STM Framework Agreement.

11.2 Maintenance in Different Phases of the ERTMS-DK

Annex 8 shortly describes the division of responsibilities regarding maintenance in different phases during the Lending Period. These phases are described below.

11.2.1 Maintenance From Handback until Final Acceptance of the Individual ERTMS-DK

From Handback until Final Acceptance of the individual ERTMS-DK, the ERTMS-Supplier is responsible for the maintenance of ERTMS-DK, cf. the Main Contract clause 11, the Purchase Agreement clause 9.1 and Appendix 5B, section 12. Stakeholder's choice of one of the above maintenance packages, see section 11.1. determines to what extent Stakeholder will assist the ERTMS-Supplier performing the maintenance of the loaned ERTMS-DK in form of "customer participation".

According to the Purchase Agreement, Appendix 5, MR5.OMA.504 and MR5.OMA.505 the ERTMS-Supplier shall maintain the hardware installed on the First of Class (FOC) Rolling Stock until Final Acceptance for each Rolling Stock. Banedanmark is obliged to deliver facilities and customer participation in order for the ERTMS-Supplier to perform the actual work. Stakeholder shall deliver these facilities and if Stakeholder has chosen package 2 or 3 Stakeholder shall also deliver customer participation on behalf of Banedanmark to the ERTMS-Supplier. For a description of the content of customer participation reference is made to Appendix 5B, section 11.1.

11.2.2 From Final Acceptance until the end of The Warranty Period

For a period of two years after the individual ERTMS-DK has obtained Final Acceptance (defined as the "Warranty Period"), the ERTMS-Supplier is responsible for the maintenance of ERTMS-DK, cf. the Main Contract clause 11.1, the Purchase Agreement clause 9.1 and Appendix 5B. However, it is the

responsibility of the Stakeholder to check that the maintenance is performed by the ERTMS-Supplier and make the necessary arrangement with the ERTMS-Supplier enabling the ERTMS-Supplier to perform the required maintenance of ERTMS-DK. Also in this period Stakeholder's choice of one of the above maintenance packages, see section 11.1, determines to what extent Stakeholder will assist the ERTMS Supplier in performing the maintenance of the loaned ERTMS-DK in form of "customer participation".

Stakeholder must pay for the ERTMS-Supplier's performance of maintenance in the period from Final Acceptance (cf. of the latest approved baseline version of the Main Contract clause 10/Purchase Agreement clause 8) to the end of warranty for each loaned ERTMS-DK. This amounts 11.478,00 DKK (2011 prices) per vehicle per year. The maintenance fee is adjusted according to the relevant index listed in the Main Contract, respectively the Purchase Agreement. The fee must be paid to Banedanmark, unless otherwise agreed.

11.2.3 From the end of warranty

After the end of the Warranty Period Stakeholder is responsible for the maintenance of the ERTMS-DK. The maintenance will be performed by the ERTMS-Supplier, respectively Stakeholder as agreed in the Maintenance Agreement and depending on the maintenance package chosen.

11.2.4 Stakeholders use of Subcontractors

If Stakeholder wants to use subcontractors for the performance of the maintenance that the Stakeholder is responsible for, it is the responsibility of the Stakeholder to ensure that the subcontractor is compliant to the legislation and have the required competencies to perform the maintenance.

11.3 Deviation from ERTMS/STM-Suppliers Guidelines for Maintenance

The Maintenance Agreement allows for Stakeholder to deviate from ERTMS-Supplier's guidelines for maintenance. However, the parties to this Lending Agreement agree, that Stakeholder may only deviate from the ERTMS-Supplier's guidelines with regard to the ERTMS-DK, to the extent that it is permitted in the Maintenance Agreement, and to the extent that the issued safety approvals etc. are not rendered invalid or new required safety approvals are obtained. Stakeholder shall inform Banedanmark in writing prior to a deviation from the ERTMS-Supplier guidelines.

If Stakeholder has proposals for revised guidelines for hardware maintenance, Stakeholder shall send these to ERTMS-Supplier and inform Banedanmark thereof.

Regarding the STM-DK, Stakeholder cannot deviate from STM-supplier's guidelines without previous written agreement with the STM-Supplier and informing Banedanmark.

In any case, Stakeholder shall be the sole responsible in case of deviations from ERTMS-/STM-Suppliers' guidelines.

11.4 Specially regarding maintenance of STM-DK

Stakeholder has the responsibility for maintenance of the loaned STM-DK from Handback of the Rolling Stock in which the specific STM-DK is installed.

The ERTMS-Supplier has undertaken certain responsibilities connected to maintenance of STM-DK. See the Purchase Agreement, clause 9 and Appendix 5B, clause 5.1.3.

The STM-Framework Agreement does not contain maintenance obligations for the STM-DK Supplier.

In case of defects during the Warranty Period, section 10.3 applies.

12 Data/Configuration Management, Error Reports, Safety Organisation etc.

12.1 Asset and maintenance data

Stakeholder must establish and maintain a database with detailed asset and maintenance data at lowest replaceable unit (LRU) level about the Loaned.

The database must contain the following minimum assets- and maintenance data for each component:

- Serial number
- Vehicle No.
- Date of installation of equipment into Rolling Stock
- Software version installed
- Date of equipment removed from the vehicle
- Error history of equipment
- Error history of vehicle

The Stakeholder shall maintain the information on the Software configuration installed in ERTMS-DK/STM-DK installed in each vehicle.

When recording information related to vehicle number, the number shall be so detailed that it accurately identifies which specific vehicle is involved. The whole vehicle number should be described (for example ME1501, ER2023 and the like).

Stakeholder must keep a detailed maintenance log that on a component and Printed Circuit Board (PCB) level indicates a specific date and nature of any successful maintenance or repair activity that is carried out, including replacement of components.

Stakeholder is obligated upon request from Banedanmark to report on the Loaned's maintenance status and maintenance history in a format as agreed between the Parties. Stakeholder must send a list with the asset and maintenance data once a year.

Stakeholder must annually report to Banedanmark which parts of the Loaned, that are in Stakeholder's possession and whether they are operational.

12.2 Configuration management

Stakeholder must ensure that configuration management is performed on the Loaned as required by the transport authorities. The allowed configurations are described in the ERTMS-Supplier's Release notes, and the Hardware configuration baseline 3.

Under the Maintenance Agreement packages 1 and 2, the ERTMS-Supplier performs configuration management of the ERTMS-DK on behalf of Stakeholder. Stakeholders that choose package 2 shall contribute with data as listed in the Maintenance Agreement. The same applies to the STM-DK. Stakeholder is obligated to allow Banedanmark to audit the data collected to ensure it meets the requirements.

Upon request by Banedanmark, Stakeholder must send configuration management data connected to a specific litra to Banedanmark within one week after receiving the request. Stakeholder must send Banedanmark the configuration management data connected to Stakeholder's Rolling Stocks fitted with the Loaned within 30 calendar days after receiving such request.

12.3 Reporting Errors

Stakeholder must give Banedanmark access to all data regarding incidents, failures and errors (including system and IT failures) that occurs during the use of the Loaned and the related error/failure correction. The data regarding ERTMS-DK/STM shall be reported into Fracas system provided by the ERTMS-Supplier.

Stakeholder gets access to the IT system via a web connection. The practical circumstances on how connection to the IT system will be handled will be determined later.

Incidents, errors and failures have the meaning as described in Maintenance Agreement.

Registering an error/failure must be done within 5 Business Days after the error/failure was detected.

ERTMS-Supplier and Banedanmark will publish guidelines for Stakeholder's reporting of errors when the Maintenance Preparation phase is completed. Specifically in the period until Final Acceptance of each loaned unit the Stakeholder shall work closely together with Banedanmark in reporting and explaining the nature of all error/failures encountered.

Banedanmark will as part of performing the contract management pursuant to the Principles of Contract Management as specified in Section 10 and Annex 6 at 1 and 2 handle the enforcement against ERTMS-Supplier of Main Contract's and Purchase Agreement's provisions on Service Level Goals with contributions from Stakeholder in the form of data as mentioned above.

12.4 Safety Organisation and Operation Experience Forum

During the Lending Period Stakeholder is obliged to sustain a safety organisation approved by the Danish Transport, Construction and Housing Authority. Stakeholder has the overall responsibility for sustaining a safe level of maintenance for the loaned ERTMS-DK in accordance with the safety approval of the ERTMS-DK. Stakeholder must participate in Banedanmark's ATC/ERTMS operation experience forum.

Banedanmark upholds an operation experience forum with participation of Banedanmark's maintenance organization and operation organization as well as railway undertakings using ERTMS. The operation experience forum meets about 4 times a year where operational experience and error patterns are addressed.

Banedanmark and Stakeholder account for repeated incidents regarding errors in the ERTMS operation occurred since the last operation experience meeting at the first coming operation experience meeting.

13 Documentation

For ERTMS-DK Stakeholder has the right to obtain documentation of the Loaned from Banedanmark as described in the Maintenance Agreement.

During the Lending Period, Stakeholder may only use the documentation for ERTMS-DK in accordance with the Maintenance Agreement.

For STM-DK Banedanmark will provide a user manual, a maintenance manual, and a system description of STM-DK together with the delivery of the first STM-DK units for the convenience of Stakeholder.

14 Modifications to the Loaned

14.1 Modification Frame

Stakeholder is only entitled to make modifications/Add-Ons to the ERTMS-DK if it is expressly entitled to according to Purchase Agreement or Maintenance Agreement, or if Banedanmark has approved it in writing. In addition, a modification of the Loaned/purchase of an Add-On must be carried out according to the process described below and under the condition that Banedanmark gives written approval of the modification/Add-On.

Add-Ons for ERTMS-DK can be ordered, cf. Maintenance Agreement section 5.4, 9.4 and 17.1.

The modification/Add-Ons must not have any impact on the safety case which ERTMS-Supplier delivers to Banedanmark or to other Onboard Customers (cf. definition in Main Contract). Furthermore, the modification/Add-Ons may not have a negative probable influence on Service Level Goals (cf. definition in the Main Contract and Purchase Agreement).

If the Stakeholder wants to buy a modification/Add-On the Stakeholder shall provide a safety assessment in accordance with the Common Safety Method (CSM), and submit it to Banedanmark's system responsible for onboard equipment prior to the purchase.

Banedanmark decides whether the procurement of the modification/Add-On can be approved and to what extent Banedanmark will be the contracting party towards the supplier who shall deliver the modification/Add-On.

Banedanmark may at its discretion instruct Stakeholder to arrange other modifications to the ERTMS-DK if this is required from safety or interoperability reasons based on requirements in the legislation in force at the time in question.

The principles listed in this section apply also in relation to modifications of STM-DK, however with the expectation that add-ons to STM-DK (software and/or hardware that extend the functionality of the STM-DK without implying changes in the software or hardware included in the STM-DK) is not covered by the Maintenance Agreement, but must be handled through a separate agreement with a relevant supplier.

14.2 Principles Regarding Payment for Modifications/Add-Ons of the Onboard System

Stakeholder shall bear all costs connected to modifications of ERTMS-DK, STM-DK and Add-Ons, requested explicitly by Stakeholder.

Banedanmark will make new versions of the software available free of charge for Stakeholder, if the update of software is initiated by Banedanmark. The same applies for software updates to STM-DK.

If Banedanmark instructs Stakeholder to arrange modifications to the ERTMS-DK due to safety, or interoperability reasons as described in section 14.1, Banedanmark shall pay for the development and approval of the system change in the ERTMS-DK, while Stakeholder shall pay the cost of purchasing new components and deployment of such changes.

Stakeholder is obligated to accept and pay for the rollout of the modifications, including the installation of the new software, software updates etc. Stakeholder must not, without compelling reasons, delay the installation of new software versions.

The same applies in relation to modifications of STM-DK.

14.3 New Functional Tests

The authorities and/or Banedanmark can in the event of changes affecting the functionality of the Loaned demand a new functional test completed. In such a case Stakeholder is required to make the specific Rolling Stock available for the execution of the new test. A new functional test will be conducted on one specific Rolling Stock at a time and should be completed within 7 Business Days.

Stakeholder must pay its own costs incurred in providing the Rolling Stock available for the execution of the tests as well as the execution of the test.

14.4 Obsolescence Management

During the Lending Period it might appear that components or other parts of the Loaned will be obsolete. This means that a spare part/component or a piece of software which is part of the Loaned is no longer available in the market (or for software no longer supported/serviced) and therefore cannot be acquired/supported/serviced as hitherto. As the system authority for both software and hardware design under the Main Contract and STM Framework Agreement Banedanmark shall be involved in obsolescence management under these contracts.

Upon obsolescence of components of the Loaned, Banedanmark is obligated to involve Stakeholder in making certain decisions – ref. the following – on selecting a new product or component as a replacement for the component. Prior to implementation and execution Banedanmark is obliged to consult Stakeholder regarding decisions, that Banedanmark estimates to have a significant economical impact on respectively (i) Stakeholders maintenance of ERTMS-DK and (ii) STM-DK as well as to decisions on changes to components in the trains. Reference is made to clause 15.1 as regard the situations where Banedanmark is obliged to obtain Stakeholder's approval of decisions having an economically impact on Stakeholder's maintenance of the Loaned.

Banedanmark shall inform Stakeholder of decisions that Banedanmark has taken in relation to obsolescence management as part of performing the contract management pursuant to the Principles of Contract Management.

15 Amendments to the Agreements in place

15.1 Amendments to the Agreements in place between Banedanmark and the Relevant Supplier

The following applies with respect of the Lending Agreement section 14.1, which prevails over the content in this section. If Banedanmark wants to make amendments to or otherwise modify the Main Contract and/or the Purchase Agreement and/or the STM Framework Agreement pursuant to the Principles of Contract Management, the Purchase Agreement and STM Framework Agreement that affect the Loaned, Banedanmark is obligated to consult Stakeholder to the extent Banedanmark estimates that such changes/decisions have material influence to the Loaned or has an economical impact on Stakeholder's business. If the change/decision implies – in combination with other changes/decisions made according to this section within the same year – that Stakeholder will have an additional cost connected to the Loaned at an amount of 10.000 DKK (or higher) in total per Rolling Stock per year Banedanmark must obtain Stakeholder's written approval before the change/decision is made. The same applies to decisions Banedanmark makes in relation to Obsolescence Management, cf. the Main Contract clause 11.2 and the Purchase Agreement clause 9.2 (see the Lending Agreement section 14.4 above).

The aforementioned 10.000 DKK is regulated once a year per 1st of January (first time on the 1st of January 2020) according to the construction cost index for residential buildings BYG 42 (Main index "Construction Cost Index for residential buildings", Sub index: "Construction Cost Index, total", Kind: "Total") based on the index for the 3rd quarter in the previous year. (The "basis index" to be used in

connection with the yearly regulation is the index for 1st quarter 2018. This means that a regulation on the 1st of January 2020 will be based on the index difference between 1st quarter for 2018 and 3rd quarter for 2019.) The next regulation (full indexation period) will be on the 1st of January 2021 based on the index difference from Q3 2019 to Q3 2020.

If the index for residential buildings BYG 42 for some reason or other ends, ie. no longer is updated quarterly, the Parties shall agree on a new comparable index for the future substitute for the aforementioned index.

15.2 Amendments to the Lending Agreement in general

Both Parties can take the initiative for amendments to this Lending Agreement.

If there is a change in the quantity of the Loaned, Annex 1 must be updated and agreed upon by both Parties by way of e-mail or signature.

16 Payment, Off-setting and Right of Retention, Guarantee

16.1 Payment Terms

Stakeholder does not pay Banedanmark for use of the Loaned, when Stakeholder's Rolling Stock is used for public service transport as agreed in the Traffic Contract.

Payment for use of the Loaned in connection to "Free Traffic", please see section 4.2 and annex 5.

Payment for "Free Traffic" and other cases where Stakeholder is obliged to make payment to Banedanmark in accordance with this Lending Agreement will be charged by Banedanmark submitting invoices. Payment must be made to Banedanmark as described in the invoice within 30 calendar days after the invoice has been submitted.

If payment to Banedanmark is late, Banedanmark is entitled to demand the default interest from the due date, see the Danish Interest Act, section 5, and until the full amount is paid by Stakeholder.

16.2 Off-setting & right of retention

The Parties are not entitled to set off any claim against payments due under the Lending Agreement or to withhold items lent under this agreement.

17 Collection of Penalties and Compensation - Service Level Goals

Banedanmark will collect and receive any penalties compensation for failures and defects or other breaches concerning the ERTMS-Supplier's services in relation to the Main Contract and/or the Purchase Agreement.

Stakeholder will be entitled to a proportional share of any penalty amount collected and received by Banedanmark which relates to the ERTMS-Supplier's failure to comply with the Service Level Goals specified in the Main Contract and/or the Purchase Agreement. The allocation of the penalty amount collected by Banedanmark with respect to any Service Level Goals will be determined by Banedanmark taking into account the direct loss suffered by Banedanmark and all affected stakeholders in relation to the specific Service Level Goal not achieved.

Banedanmark shall after receipt of the payment from the ERTMS-Supplier transfer the amount which Stakeholder is entitled to, cf. the above, to Stakeholder.

Stakeholder can only obtain compensation to the same extent as Banedanmark is allowed to according to the Main Contract respectively the Purchase Agreement.

Stakeholder is not entitled to obtain compensation for the same documented loss according to the Lending Agreement, Adgangskontrakten or the Traffic Contract.

The above mentioned principles apply also to compensation paid by the STM-Supplier for failures, defects or other breached under the STM Framework Agreement.

18 Loss or Destruction of the Loaned

This section does not regulate defects. Defects are handled in section 10.

Stakeholder bears the risk of loss or destruction of the Loaned throughout the Lending Period (i.e. from Handback) for whatever reason, including but not limited to theft, disappearance and accidental destruction of the Loaned.

If the ERTMS-DK and/or the STM-DK in a Rolling Stock is damaged or lost, Stakeholder shall notify Banedanmark thereof without undue delay and at the same time try to limit the extent of the damage as much as possible. Stakeholder is obliged to repair or replace (including installation) such damaged ERTMS-DK and/or STM-DK. In this case ownership remains with Banedanmark, cf., section 4.1.

If a lent ERTMS-DK and/or the STM-DK suffers Total Loss, Stakeholder is obliged to purchase a new ERTMS-DK and/or the STM-DK (including installation) and procure scrapping the damaged ERTMS-DK and/or the STM-DK unit in accordance with applicable legislation. The new, purchased ERTMS-DK and/or the STM-DK replacing the damaged ERTMS-DK and/or the STM-DK shall remain the property of Stakeholder, unless the Total Loss is caused by Stakeholder's gross negligence or intent. The conditions under this Lending Agreement shall not apply to the replaced ERTMS-DK and/or STM-DK if it/they are the property of Stakeholder.

Banedanmark must be consulted and shall confirm in writing that it is a case of "Total Loss" of the ERTMS-DK and/or the STM-DK.

19 Insurance

19.1 ERTMS-Supplier Insurance

According to the Main Contract, clause 21.2, the ERTMS-Supplier has an obligation to take out insurance against all relevant general liability including 3rd party liability, professional liability and product liability insurance according to the general rules of Danish law. The minimum coverage of the insurance must be DKK 200 million for any one occurrence or series of occurrences arising from one original cause or event with a yearly minimum coverage equivalent to DKK 500 million. The above coverages apply to any and all insurance claims raised under the Main Contract or the Purchase Contract respectively. (See clause 21.1 about compensation and aggregated liability in the Main Contract and clause 16.1 in the Purchase Agreement). Banedanmark must ensure that the ERTMS-Supplier is covered by the above mentioned insurance.

If the ERTMS-Supplier fails to renew the insurance or to provide documentation to Banedanmark prior to the expiry of the insurance, within the frames of clause 21.2 in the Main Contract Banedanmark shall use all reasonable effect in obtaining – to the extend possible – an equivalent insurance as stated in the Main Contract clause 21.2 on behalf of the ERTMS-Supplier, unless the ERTMS-Supplier renews the insurance within 5 Business Days after Banedanmark has submitted a notice to the ERTMS-Supplier stating that Banedanmark otherwise will obtain insurance on behalf of the ERTMS-Supplier. Banedanmark must provide such insurance certificate to Stakeholder by request.

19.2 Stakeholder's insurance

Stakeholder is obligated to take out statutory insurance equivalent to the statutory liability for any claims for damages in connection with Stakeholder's railway undertaking or damages caused by railway infrastructure managers (cf. § 53 of the Railways Act or the then-current statutory provision) during the entire Lending Agreement.

Banedanmark is entitled to request Stakeholder to provide a copy of the statutory insurance in form of an insurance certificate from the respective insurance company taken out by Stakeholder.

19.3 Banedanmark's Insurance

Banedanmark is covered by the State's self-insurance.

20 Liability for Damages

20.1 General about Liability for Damages

Unless otherwise stated in this Lending Agreement Danish Law applies regarding liability between the Parties. As part of the legal assessment when applying Danish Law the parties' agreements in the Signalling Programme Cooperation Agreement should be taken into consideration.

Each Party is liable for its own subcontractors.

Banedanmark is liable for the Stakeholder's direct losses caused by a Systematic Failure. Danish law applies when it is to be determined which losses Stakeholder has a right to be compensated for, however with respect of section 20.2 below.

Any liability is subject to the limitations described in section 20.2.

20.2 Limitations of Liability

Stakeholder can only make Banedanmark liable for errors, omissions or delays (whatever the nature of the error, omission or delay) in relation to the ERTMS-Supplier's installation of the Onboard units or a breach of the Main Contract or Purchase Agreement to the extent Banedanmark has acted gross negligent in terms of performing the contract management of the Main Contract pursuant the Principles of Contract Management.

Banedanmark shall in no event be liable towards the Stakeholder to a greater extent than what follows from (i) the Main Contract and or (ii) the STM Framework Agreement; including any other existing/future agreements, amendment, change order etc. concluded between Banedanmark and the ERTMS-Supplier/STM-Supplier based on respective (i) and (ii).

Banedanmark shall not be liable towards Stakeholder for costs incurred by Stakeholder to interruptions of the train traffic such as but not limited to payment of substitute transport as well as refund of tickets and "travel time guarantees" in connection with such interruptions.

Neither Party shall be liable to the other Party for any indirect and consequential damages, such as but not limited to loss of profit, production, or contracts.

Neither Banedanmark nor Stakeholder is obligated to pay or pursue damages for the same loss more than once, regardless of whether the loss is covered by different agreements between the Parties.

Neither Party shall be entitled to claim the other Party for any loss or damage howsoever if such claim has not been notified by the Party suffering the damage(s) within as short a period as possible, however, not later than 6 months after the date on which the damage(s) occurred or latest one year after the date where the Party suffering the damage became aware of the circumstances resulting in a claim.

21 Changes

After the signature of the Contract, either Party may request changes according to the processes outlined in annex 6.

22 Force Majeure

Neither Banedanmark nor Stakeholder shall be deemed liable to the other Party, to the extent the liability is due to circumstances beyond the Party's reasonable control and which the Party could not reasonably have been expected to have taken the impediment into account at the time of signing the Lending Agreement or could not reasonably have avoided or overcome the effects of the impediment (force majeure).

Likewise a Party shall be entitled to invoke force majeure in case a Party has engaged a sub-contractor to perform wholly or partly his duties under this Lending Agreement and where such sub-contractor declares force majeure with respect of any of its deliveries on the same conditions as stated in the agreement entered into between such Party and its subcontractor.

A Party invoking force majeure is relieved from its duty to perform its obligation under this Agreement from the point in time where the impediment causes the failure to perform, if notice is given without undue delay. The defaulting Party must notify the other Party in writing of the occurrence and cessation.

The Parties shall, in accordance with Danish law's general rules on the duty of damage limitation, take all reasonable means to limit the effect upon performance of its contractual duties under the Lending Agreement of the impediment or event invoked attempt to prevent or reduce the event, damage or delay.

23 Relocation of the Loaned and Transfer of Rights and Obligations

23.1 Stakeholder's Relocation of the Loaned and Transfer of the Rights and Obligations

If Stakeholder wants to relocate an Onboard System from one Rolling Stock to another of Stakeholder's owned, rented or leased Rolling Stock units in a litter which has not obtained an Authorisation for Putting Into Service (APIS) from the Danish transport authorities, (including Banedanmark's ETCS system), this is only allowed against written consent from Banedanmark. In connection to this Banedanmark will determine the conditions under which the relocation can take place. Stakeholder is responsible for fulfilling the activities in the First of Class-project (including obtaining the APIS) connected to the relocation of the Onboard Systems. Stakeholder shall pay all costs connected to the fulfilment of the First of Class-project (including obtaining the APIS) and the relocation of the Onboard Systems. Stakeholder must contact Banedanmark and agree the process for documenting safe integration with the signalling system.

Stakeholder is only entitled to rent out, lend, sell or otherwise transfer the Loaned, or assign Stakeholder's rights and obligations under the Lending Agreement, with the prior written consent from Banedanmark. This applies when rights and obligations regarding the Loaned in a specific Rolling Stock are to be transferred, as well as when the Lending Agreement is transferred as a whole.

In order to be able to consider the state aid aspects of an eventual rent, lending, sale or transfer of rights and obligations under the Lending Agreement Banedanmark will determine the conditions under which the renting, lending or other kind of transfer of the Loaned in a specific Rolling Stock and/or obligations and rights under the Lending Agreement can take place. This applies to the conditions for Stakeholder from time to time, as well as for the new train operator using the Loaned.

Banedanmark is obligated to give the consent described in the previous paragraph, if the letting, lending, sale or transfer is to new train operator awarded in a public tender where (parts of) the Rolling Stocks including Onboard Systems covered by this Lending Agreement is to be used to fulfil the obligations in the awarded contract. In this case Stakeholder is obliged to handover the Loaned to the new train operator in accordance with the conditions for this determined by Banedanmark.

Before the new train operator is allowed to use the Loaned, the new train operator must either a) purchase the Loaned or b) enter into and assume all rights and obligations regarding the Loaned in the Rolling Stock under a Lending Agreement and a Maintenance Agreement, as well as the obligations connected to the fitment of the specific Rolling Stock under the Signalling Programme Cooperation Agreement. In such cases Stakeholder's liability for the Loaned ceases not until the new train operator has purchased the Loaned or assumed all rights and obligations under the obligations as mentioned above.

If the new train operator does not sign an agreement about the assumption of the rights and obligations mentioned above or a purchase agreement, Stakeholder is obligated to remove and return the Onboard System to Banedanmark in working order, or purchase the Onboard Systems at the price determined in accordance with section 24.2 and Lending Agreement Annex 4.

Stakeholder must notify Banedanmark and Stakeholder's contracting party in the Traffic Contract in writing three months prior to any expected transfer of the Loaned, also see section 9.1.

23.2 Banedanmark's Transfer of Rights and Obligations under the Lending Agreement

Banedanmark is entitled to transfer rights and obligations under this Lending Agreement to another public entity or company or private entity owned by the State or financed mainly by public funds if the tasks so far performed by Banedanmark or tasks under this Agreement are completely or partially transferred to one of the said entities.

24 Termination of the Lending Agreement

24.1 Notice and Termination of the Lending Agreement

This Lending Agreement can be terminated by Stakeholder with six months' notice to the first day of a calendar month. The Lending Agreement can be terminated in its entirety or partly, as it can be terminated for an ERTMS-DK, respectively STM-DK installed in a specific or several units of Rolling Stock(s).

The Lending Agreement cannot be terminated by Banedanmark for an ERTMS-DK or STM-DK before end of the depreciation period of the respective ERTMS-DK/STM-DK, see Lending Agreement Annex 4, unless the termination is due to the Stakeholders breach of contract. After the end of the depreciation period Banedanmark can terminate the Lending Agreement for the respective ERTMS-DK/STM-DK with 6 months notice.

The Lending Agreement shall be deemed terminated (automatically) for a specific (number of) Onboard System(s) if an Onboard System is destroyed, lost or accidentally suffers Total Loss and Stakeholder is not responsible herefore, cf. section 18.

The Lending Agreement shall also be deemed terminated (automatically) if the Stakeholder's Traffic Contract or Adgangskontrakten is terminated and no longer in force, or – on request from Banedanmark – the relevant part of it shall be transferred to a new train operator awarded in a public tender where (parts of) the Rolling Stocks including Onboard Systems covered by this Lending Agreement is to be used to fulfil the obligations in the awarded contract, cf. clause 23.1 above. This means that in cases where parts of the Loaned are to be transferred to a new operator awarded in a public tender, the Lending Agreement related to the transferred parts of the Loaned is to be transferred to the new operator.

If the Stakeholder's Traffic Contract is partly terminated the Lending Agreement still apply for the Onboard Systems necessary for the fulfilment of the public service passenger transport obligation covered by the remaining part of the Traffic Contract. The Lending Agreement can only be upheld to the extend the Loaned is necessary for Stakeholder to be used in order to be able to fulfill Stakeholder's obligations in the Traffic Contract.

Furthermore, the Lending Agreement shall be deemed terminated for the specific ERTMS-DK/STM-DK unit, that is decommissioned from a Rolling Stock, and the ERTMS-DK/STM-DK unit has been returned to Banedanmark (see section 24.2). The decommissioned ERTMS-DK/STM-DK unit must be returned to Banedanmark within 30 Business Days. (However, see section 23 about relocation of an Onboard System from one ltra to another and section 24.2 about the retention of the rights and obligations under this Lending Agreement). In connection to decommissioning of STM-DK by the ERTMS-Supplier the Lending Agreement is deemed terminated at Handback of the Rolling Stock in which the decommissioned STM-DK was installed, cf. section 6.

Stakeholder or Banedanmark receives no compensation in connection with the termination of the Lending Agreement.

24.2 Right to Purchase the Loaned upon Termination of the Agreement

Upon termination of the Lending Agreement, Stakeholder has the right to purchase the lent ERTMS-DK and STM-DK unit(s) covered by the notice of termination at the device/devices' residual value. The residual value shall be determined in accordance with Annex 4 of the Lending Agreement.

An indexation of the values regarding the Loaned in Annex 4, att. 1, shall take place for the respective Loaned, when the Lending Agreement starts for a specific ERTMS-DK or STM-DK.

As regard ERTMS-DK the value shall be regulated as if the value has been regulated once a year per 1st of January according to the construction cost index for residential buildings BYG 42 (Main index "Construction Cost Index for residential buildings", Sub index: "Construction Cost Index, total", Kind: "Total") based on the index for the 3rd quarter in the previous year. (The "basis index" to be used in connection with the yearly regulation is the index for 1st quarter 2018. This means that a regulation on e.g. the 1st of January 2020 will be based on the index difference between 1st quarter for 2018 and 3rd quarter for 2019.) The next regulation (full indexation period) will be on the 1st of January 2021 based on the index difference from Q3 2019 to Q3 2020.

As regard STM-DK the value shall be regulated as if the value has been regulated once a year per 1st of January according to index ILON12 (Main index "Lønindeks for virksomheder og organisationer", Sub index: "Branche" = "TOT Erhverv i alt" and "Ikke sæsonkorrigeret") based on the index for the 3rd quarter in the previous year. (The "basis index" to be used in connection with the yearly regulation is the index for 1st quarter 2018. This means that a regulation on e.g. the 1st of January 2020 will be based on the index difference between 1st quarter for 2018 and 3rd quarter for 2019.) The next regulation (full indexation period) will be on the 1st of January 2021 based on the index difference from Q3 2019 to Q3 2020.

However, in order to take into account any possible state aid aspects of a sale of the Loaned, Banedanmark has the right to ask an independent assessor to estimate the value of the part of the Loaned, which Stakeholder wants to purchase. Banedanmark must ask the Danish Institute of Arbitration (Voldgiftsinstituttet) to propose an impartial assessor. If the Danish Institute of Arbitration is not able to propose an assessor and Banedanmark may seek for another Danish or foreign institute or the like that is able to propose an impartial assessor, and Banedanmark will appoint the assessor after approval of Stakeholder.

If the value estimated by the assessor is higher than the residual value, the estimated value shall be the price at which Stakeholder is allowed to purchase the requested part of the Loaned. Banedanmark pays for the costs for the assessor.

Upon the lapse of the depreciation period for an ERTMS-DK or STM-DK, Stakeholder has the right to purchase the ERTMS-DK respectively STM-DK for 1 DKK, however Banedanmark may require an assessor as described in the paragraph above to estimate the value of the ERTMS-DK respectively STM-DK. If the price is estimated higher than 1 DKK by the assessor it shall then be this price at which Stakeholder is allowed to purchase the ERTMS-DK respectively STM-DK.

Upon Stakeholder's purchase of each ERTMS unit, it shall be agreed between the Parties how and to what extent rights and obligations towards the ERTMS-Supplier according to the Purchase Agreement shall be transferred to Stakeholder.

The same principle applies to Stakeholder's purchase of any STM-DK unit and the contractual rights connected to it in regard to the STM Framework Agreement.

To the extent Stakeholder does not purchase all lent ERTMS-DK and STM-DK upon the expiry of the Lending Agreement, Stakeholder is obligated at its own expense and risk to deinstall and return the non purchased ERTMS-DK respectively STM-DK to Banedanmark within 30 Business Days from the event giving rise to a termination of the agreement, cf. section 6, 21 and 24.1. Stakeholder's responsibilities and risks under this Lending Agreement stay in force until the Loaned has been returned to Banedanmark and Banedanmark has acknowledged receipt. From this point in time the Lending Agreement is terminated in respect of the relevant parts of the Loaned.

Upon return, the Loaned must be in the same condition as when the lending commenced, but with reservations as to normal wear and tear, and with any modifications/changes made to the Loaned according to section 14 of this Lending Agreement.

If Stakeholder has installed Add-Ons/modifications on the Loaned, Stakeholder must ensure that the Loaned can be returned to Banedanmark including all rights associated with using the Loaned with Add-Ons/the modification, without involving extra costs for Banedanmark.

Add-Ons not installed in the Loaned remain the property of Stakeholder, unless otherwise specifically agreed between the Parties.

24.3 Stakeholder's obligation to Purchase STM-DK upon Phasing-Out STM in Denmark

If Stakeholder wants to use the loaned STM-DKs, after Banedanmark has decided that the use of STM for operation on the Banedanmark's infrastructure is phased-out, Stakeholder is obliged to buy the STM-DKs that Stakeholder wants to use continued.

The price for the STM-DK is to be set in accordance with the principles described in section 24.2.

After Banedanmark has phased-out the use of STM as described above Banedanmark will no longer provide system support for the STM-DK system.

25 Disputes

25.1 Negotiation and Mediation

This Agreement is subject to Danish law, however, without respectively (i) recourse to the conflict of law principles of such jurisdiction and (ii) the international law – CISG. If a dispute arises in connection

with this Agreement, the Parties shall seek to resolve it through negotiation in a positive, cooperative and responsible spirit in order to solve the dispute.

If the Parties cannot reach agreement on the dispute, the matter shall be placed on the agenda at the next client meeting between the Stakeholder and Banedanmark, if such a set-up already exists. Otherwise, the Parties arrange a meeting on an ad hoc basis with participation of the management members of respectively Banedanmark and Stakeholder.

Should a solution not be reached, the Parties can seek consensus by jointly appointing an independent and expert mediator, who can mediate and give non-binding proposals for the resolution of the dispute.

Any dispute not resolved as described above, shall be settled by arbitration in accordance with the rules of the Danish Institute of Arbitration as described in section 25.2.

25.2 Arbitration

A dispute not resolved as described in section 25.1 shall be settled by arbitration administrated by The Danish Institute of Arbitration in accordance with the rules of arbitration procedure adopted by The Danish Institute of Arbitration and in force at the time when such proceedings are commenced.

The place of arbitration shall be Copenhagen. The language to be used in the arbitral proceedings shall be Danish.

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This Agreement is signed in duplicate, of which one copy is given to Banedanmark and one copy is given to Stakeholder.

Date: 28.11.2019

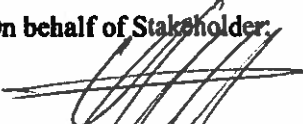
Date:

On behalf of Banedanmark:

On behalf of Stakeholder:




NAME Søren Byg
POSITION Director of Operations



NAME NICOLAI HENNE
POSITION CFO

NAME
POSITION



NAME MARIANNE LØFTAGER
POSITION CEO

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Signalprogrammet
Onboard
Aftale om udlån af ERTMS- og STM- udstyr
Udlånsaftalebilag 1 -
Beskrivelse af Det Lånte


The Signalling Programme
Onboard
Lending Agreement on ERTMS- and STM
equipment
Annex 1 - Description of the Loaned



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Ændringslog / Change log

Version	Initial	Kommentar / comment
1.0	XCKF	Første version / First version
1.1	XMVR	Small corrections
1.2	XCKF	Updated according to latest A-list 07/05/2015
2.0	XMVR	Version approved by the Board of Directors
2.1	XMVR	List of trains adjusted to the A list as per 13 October 2015
2.2	XCSP	Version for Arriva (after input from XDCN)
3.0	LDDV	12.11.2019: Final version as issued to Stakeholder. Updated with BDK's new adress.

	Signalling Systems Fjernbane Onboard Tender Document Annex 1 Description of the Loaned	Mail: onboard@bane.dk Phone: 8234 0000
	Banedanmark Carsten Niebuhrs Gade 43 1577 Copenhagen www.banedanmark.dk	

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1. List of rolling stock

Main Contract Appendix 2 A-LIST as per 13 October 2015						
Class ID (LITRA)	Type	Operator	ERTMS in total	Included CBTC	STM DK	STM SE
Lint 41 AR	DMU	Arriva	43	0	43	0
Total			43	0	43	0

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2. List of equipment per train type

		ERTMS-onboard udstyr ERTMS-onboard equipment										Kabler m.v. Cables etc.			Mounting kits m.v. Mounting kits etc.	
Operator	Material	European Vital Computer (EVC) with accelerometer	Radar sensors	Wheel Speed sensor	Eurobalise antenna	GPS and GSM-R antenna dual mode	Cold Movement Detector	Juridical Recorder (CPM)	Driver Machine Interface DMI 10"	Cap Radio	Pre-wired cables	Power DC/DC converter	DMI Mounting Kit	Mounting kits	STM-OK	
Arriva	Lint41	1	1	2	2	2	1	1	2	1	1	0	0	1	1	

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banedanmark



Allonge til Rammeaftale
om priser, betingelser og specifikation for levering af STM-DK til mobile
ETCS-anlæg mv. i perioden 1. april
2014 til 31. december 2025
kontrakt nr. 10006

Nærværende tillægsaftale til den mellem parterne indgåede Rammeaftale er begrundet med udvidelse af leverancerne omfatter af Rammeaftalen.

Parterne er som følge heraf enige om de ændringer/tilføjelser til Rammeaftalen, der er angivet med ændringsmarkeret i teksten i den opdaterede Rammeaftale og bilag af den 24-04-2015.

Følgende bilag til Rammeaftalen, jf. § 1, er tilføjet eller ændret:

- Bilag 1a: STM-DK Components list – nyt bilag
- Bilag 2: Leverandørens forslag til indkøb af reservedele - Ændret
- Bilag 3: Leverandørens prisoversigt - ændret
- Bilag 3a: Leverandørens reservedelspriser - ændret
- Bilag 4: Leverandørens uddannelsesprogram til slutbrugere m.fl. - ændret
- Bilag 5: Tidsplan - ændret

Teksten i Rammeaftalen ændret i følgende bestemmelser:

INDLEDNING

Tilføjelse til sidste afsnit i indledning er indsat.

§ 2 Leverandørens ydelser

Tilføjelse til teksten i § 2 stk. 1, 2. afsnit er indsat.

Tilføjelse til teksten i § ~~2~~ stk. ~~1~~, 4. afsnit er indsat.

Ad § 3 Ændring i lovgivning/TSI

Tilføjelse til § 3, stk. 2, stk. ~~3~~ og stk. 7 er indsat.

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Allonge til Rammeaftale
om priser, betingelser og specifikation for levering af STM-DK til mobile
ETCS-anlæg mv. i perioden 1. april
2014 til 31. december 2025
kontrakt nr.10006

Ad § 4 Bestilling

Tilføjelse til teksten i § 4, stk. 2 - Øvrige køb – samt til § 4 stk. 4 er indsat.

Ad § 6 Prisregulering

Teksten i § 6, stk.1, § 6 stk. 2, § 6 stk. 3, § 6 stk. 4 og § 6 stk. 5 er ændret.

Ad § 9 Garanti

Tilføjelser til teksten i § 9 stk. 1 er indsat.

Ad § 10 Mangler ved det leverede

Tilføjelser til teksten i § 109 stk. 3 og § 109 stk. 4 er indsat.

Ad § 11 Generelt vedr. forsinkelse hhv. mangler ved en leverance

Tilføjelser til teksten i § 11 er indsat.

Ad § 13 Leverandørens erstatningspligt

Tilføjelser til teksten i § 13 stk. 2 er indsat.

Ad § 17 Overdragelse

Tilføjelser til teksten i § 17 stk. 2 - Overdragelse af STM-DK - er indsat.

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**Allonge til Rammeaftale
om priser, betingelser og specifikation for levering af STM-DK til mobile
ETCS-anlæg mv. i perioden 1. april
2014 til 31. december 2025
kontrakt nr.10006**

Underskrift af tillægsaftalen

De ændringer af Rammeaftalen, der følger af nærværende tillægsaftale, er gældende fra parternes underskrift heraf.

Tillægsaftalen underskrives i to identiske eksemplarer.

København, dato: 26/3/2015

Ballerup, dato: 27-3-2015

.....
(for Banedanmark)


.....
(for Leverandøren)


.....
(for Banedanmark)
**Morten Søndergaard
Programdirektør
Signalprogrammet**


.....
(for Leverandøren)

Mellem

Banedanmark
Amerika Plads 15
DK-2100 København Ø
CVR nummer: 18 63 22 76
(i det følgende kaldet "Banedanmark")

og

Siemens A/S
Borupvang 3
2750 Ballerup
CVR nummer: 16 99 30 85
(i det følgende kaldet "Leverandøren")

er indgået følgende rammeaftale om priser, betingelser og specifikation for levering af STM-DK til mobile ETCS-anlæg mv. i perioden 1. april 2014 til 31. december 2025 ("**Rammeaftalen**").

Kontrakt nr.: 10006

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INDLEDNING

Formålet med Rammeaftalen er at fastsætte de betingelser, der skal være gældende for Leverandørens serieproduktion og levering af Specific Transmission Moduls i henhold til Udviklingsaftalen ("STM-DK"), der erstatter den mobile del af ATC anlægget, samt øvrige leverancer og tjenesteydelser i tilknytning hertil i kontraktperioden.

Grundlaget for serieproduktion af STM-DK er udviklingen af en prototype af STM-DK, der er reguleret i særskilt aftale mellem Banedanmark og Leverandøren, jf. kontaktnummer A3098010 (i det følgende benævnt "Udviklingsaftalen"). De serieproducerede leverancer skal derfor opfylde de aftalte specifikationer fastsat i Udviklingsaftalen og enhver senere ændring deraf (For nuværende Tillægsaftale 1 og 2, jf. nedenfor).

Udviklingsaftalen omfatter udvikling af STM-DK prototype version 2.3.0d til og med gennemført Factory Acceptance Test ("FAT") samt UNISIG Conformity Acceptance Test ("UCAT"). Herudover indeholder prototypen en præliminær FAT godkendt software for UNISIG Baseline 3 funktionaliteten. Prototypen udvikles som en interoperabel Notified Body ("NoBo") godkendt komponent for generel anvendelse i køretøjer, som er udrustet med ETCS, og som skal fremføres på danske strækninger udrustet med dansk ATC (ZUB 123). Det er endvidere aftalt, at Leverandøren er forpligtet til at fortsætte udviklingsarbejdet med prototypen version 2.3.0d umiddelbart efter godkendt UCAT indtil endelig Certificate of Conformity (CoC) af STM-DK kan udstedes af den dertil kompetente myndighed. Der er endvidere indgået aftale mellem parterne om gennemførelsen af arbejdet fra godkendt UCAT og frem til udstedelse af endelig CoC, idet produktionen af STM-DK, og dermed indkøb i henhold til nærværende Rammeaftale, ikke kan finde sted forinden. Leverandøren er endvidere forpligtiget til at fortsætte udviklingen af Baseline 3 softwaren frem til endelig CoC, når endelige og godkendte specifikationer for denne version foreligger. Der er ligeledes indgået særskilt aftale mellem parterne herom forud for gennemførelse af dette arbejde. Herudover er aftalt, at Leverandøren skal kunne levere yderligere komponenter til STM-DK Cubicle, som specificeret i bilag 3a.

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§ 1 Bilag til Rammeaftalen

- Bilag 1: Delaftale til brug for køb af STM-DK m.v.
- Bilag 1a: STM-DK Components list
- Bilag 2: Leverandørens forslag til indkøb af reservedele
- Bilag 3: Leverandørens prisoversigt
- Bilag 3a: Leverandørens reservedelspriser
- Bilag 4: Leverandørens uddannelsesprogram til slutbrugere m.fl.
- Bilag 5: Tidsplan
- Bilag 6: Banedanmarks Paradigme for sikkerhedsstilling

Ovennævnte bilag udgør en integreret del af Rammeaftalen. I tilfælde af uoverensstemmelser mellem Rammeaftalen og bilag er Rammeaftalens ordlyd gældende forud for bilagene.

§ 2 Leverandørens ydelser

Stk. 1 Efter udstedelse af endelig CoC og NoBo godkendt overensstemmelseserklæring af STM-DK prototypen, skal Leverandøren forestå serieproduktion af STM-DK med henblik på at kunne levere den mængde STM-DK, som Banedanmark har bestilt i Initialkøbet, dog mindst 300 styk.

Leverandøren skal endvidere levere STM-DK, samt øvrige komponenter angivet i bilag 3a, på Rammeaftalens betingelser til enhver dansk eller udenlandsk operatør, materielejere og infrastrukturejere, som retter henvendelse til Banedanmark om køb af STM-DK til brug for de pågældendes materiel. Tilsvarende kan leverandører til de førnævnte erhverve STM-DK i henhold til Rammeaftalen til brug for installation i de pågældendes materiel.

Ovennævnte erhverver af en STM-DK er i det følgende samlet benævnt "Operatører" eller Banedanmark. Samlet benævnes Operatørerne og Banedanmark som "Kunden".

Den enkelte ordre på en leverance omfattet af Rammeaftalen specificeres i de delaftaler, der indgås mellem Leverandøren og den pågældende Kunde (i det følgende benævnt "Delaftalerne"). Delaftalerne indgås efter den skabelon som fremgår af bilag 1, samt bilag 1a, der indeholder de årlige opdaterede priser, aktuelle leveringstider mv., udarbejdet i henhold til de betingelser, der er aftalt i Rammeaftalen.

Samtlige leverancer og tjenesteydelser omfattet af Rammeaftalen skal i kontraktperioden leveres på de leveringsbetingelser, der fremgår af Rammeaftalen og de enkelte Delaftaler.

Stk. 2 Leverandøren er berettiget til frit selv at fastsætte priser og leveringsbetingelser for STM-DK til købere heraf, som ikke er omfattet af stk. 1.

Stk. 3 Leverandøren er forpligtet til at forestå hardware support, der omfatter levering af reservedele og komponenter til leverede STM-DK samt forestå reparation af de leverede moduler.

Leverandøren har i bilag 2 angivet forslag til indkøb af komponenter og reservedele samt anført de for STM gældende MTBF tider. Priser for STM-DK samt de enkelte komponenter og reservedele er specificeret i bilag 3 og 3a.

Leverandøren skal i hele kontraktperioden sikre, at der løbende produceres en tilstrækkelig mængde reservedele til, at Leverandøren vil kunne levere i henhold til den aftalte leveringstid, jf. § 7 stk. 2.

Stk. 4 Kunden kan vælge selv at forestå installationsarbejde eller at lade dette udføre af tredjemand uafhængig af Leverandøren og Leverandøren er forpligtet til at bistå Kunden hhv. tredjemand hermed, såfremt Kunden /tredjemand måtte ønske det. Leverandøren er i den forbindelse udelukkende ansvarlig for fejl og mangler, der kan tilskrives Leverandørens forhold, jf. § 10 stk. 7. Priser og øvrige betingelser for Leverandørens bistand i henhold til nærværende bestemmelse skal aftales særskilt med den enkelte Kunde med udgangspunkt i de i bilag 3 anførte timepriser.

Stk. 5 Leverandøren er forpligtet til at forestå uddannelse af slutbrugere, tekniske ansvarlige hos Kunden og disses drifts- og vedligeholdelsespersonale eller en af Kunden valgt tredjemand til at forestå drift og vedligehold. Leverandørens uddannelsesprogram for de pågældende kurser udarbejdes endeligt efter CoC af STM-DK, men vil i indhold og omfang svare til de kurser, der er beskrevet i bilag 4.

Stk. 6 Med hver leverance af STM-DK skal Leverandøren levere dokumentation for, at samtlige krav er opfyldt, jf. gældende TSI (Technical Specification for Interoperability Control Command and signaling) i form af et "EC Verifikations Certifikat" udstedt af et bemyndiget organ NoBo.

Stk. 7 Leverandøren kan ikke uden Banedanmarks forudgående skriftlige samtykke benytte andre underleverandører end Siemens AG, (registret i Berlin-Charlottenburg, Reg. nr. HRB 12300 og i München, Reg. nr. HRB 6684) til udførelse af ydelserne i videre omfang, end hvad der er aftalt ved Rammeaftalens underskrift. Udskiftning af underleverandør kan ikke nægtes uden saglig grund.

§ 3 Ændring i lovgivning / TSI

Stk. 1 Leverandøren er forpligtet til at sørge for, at opfyldelsen af Rammeaftalen sker under overholdelse af den til enhver tid gældende lovgivning, herunder normer og praksis, og at de leverancer, der leveres i henhold til Rammeaftalen, opfylder den til enhver tid gældende lovgivning og gældende TSI

Stk. 2 Sker der væsentlig ændring i lovgivning / TSI mv., som nødvendiggør en ændring af leverancen, kan Leverandøren kræve en ændring af de tilbudte priser, jf. bilag 3 og 3a, såfremt denne ændring er rimeligt begrundet.

Stk. 3 Såfremt der er indtrådt en ændring i lovgivning / TSI, der giver anledning til ændring af leverancen og dermed af de tilbudte priser, skal Leverandøren skriftligt meddele Banedanmark dette med angivelse af:

- Den pågældende ændring i lovgivningen / TSI.

- De faktiske konsekvenser af ændring i Lovgivningen/TSI, herunder eventuelle ændringer i Drifts- og Vedligeholdelse af leverancen.
- Den forventede betydning for de enkelte priser, jf. bilag 3 og 3a.

Stk. 4 Ændringer og installation af nye software versioner som følge af ændret lovgivning, jf. ovenfor, kan alene finde sted på foranledning af Banedanmark. Den nye version stilles i så fald vederlagsfrit til rådighed for Operatørerne af Banedanmark. Operatørerne er forpligtet til at acceptere og bekoste installation af den ny version.

Stk. 5 Myndighederne og/eller Banedanmark kan i tilfælde af ændringer i produktet forlange gennemført ny funktionstest. En Kunde, der har installeret en STM-DK i sit køretøj, er på dette grundlag forpligtet til at stille det pågældende materiel til rådighed for gennemførelse af ny test. Priser og øvrige betingelser for Leverandørens bistand i henhold til nærværende bestemmelse skal aftales særskilt med udgangspunkt i de i bilag 3 anførte timepriser.

Stk. 6 Prissætning af de økonomiske konsekvenser (positive som negative) af ændringer i lovgivning / TSI skal ske i enighed efter drøftelse mellem parterne. Betaling for udvikling i denne forbindelse aftales særskilt mellem Banedanmark og Leverandøren.

Stk. 7 Ændring, der ikke er omfattet af nærværende bestemmelse, giver hverken Leverandøren eller Banedanmark ret til ændring af priserne i bilag 3 og 3a bortset fra, hvad der i øvrigt måtte følge af Rammeaftalen, herunder eksempelvis ændring af danske afgifter, jf. 5 stk. 1 og indeksregulering, jf. § 6.

§ 4 Bestilling

Initialkøbet

Stk. 1 Parterne er enige om, at Banedanmark skal bestille mindst 300 stk. STM-DK (herefter benævnt "Initialkøbet") til levering i henhold til ~~den aftalte detaljerede tidsplan, jf. bilag 5~~ og straks nedenfor. Denne bestilling afgives som en samlet ordre ved indgåelsen af en delaftale mellem Leverandøren og Banedanmarks, jf. bilag 1.

Banedanmark prioriterer leverancerne til de enkelte Operatører i forhold til Signalprogrammets udrulningsplan og er selv ansvarlig for at levere STM-DK til de Operatører, der skal modtage STM-DK i medfør af Initialkøbet.

Øvrige køb

Stk. 2 I kontraktperioden er Leverandøren forpligtet til at levere STM-DK og komponenter i henhold til denne aftale til alle Kunder, jf. § 2 stk. 1, uanset mængde pr. ordre. Bestillingen sker ved specifikation af ordre i en Delaftale, der underskrives af Leverandøren og den pågældende Kunde

Senest ved udgangen af den første uge i hvert kvartal (januar, april, juli og oktober) igangsætter Leverandøren produktion af de leverancer, der er bestilt i det forudgående kvartal i henhold til Delaftaler.

Stk. 3 Bestilling af leverancer omfattet af nærværende Rammeaftale kan senest finde sted den 31. december 2020.

Stk. 4 Leverandøren skal uden ugrundet ophold og senest 3 uger efter modtagelse af en af en Kunde underskrevet Delaftale fremsende Delaftalen i underskrevet stand til den pågældende Kunde, som accept af ordre.

Sammen med fremsendelse af den af Leverandøren underskrevne Delaftale er Leverandøren forpligtet til at specificere leveringstermin, jf. § 7 stk. 2, og pris for samtlige leverancer omfattet af Delaftalen, jf. bilag 3 og 3a, jf. §§ 5 og 6.

§ 5 Priser og betalingsbetingelser

Stk.1 Priserne for STM-DK, komponenter og reservedele samt øvrige leverancer og tjenesteydelser omfattet af Rammeaftalen er fastsat i Leverandørens prisoversigt, jf. bilag 3 og 3a.

Alle priser er angivet i danske kroner ekskl. moms. Ved ændring af gældende danske afgifter, skal priserne dog reguleres med den økonomiske nettokonsekvens heraf.

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Betaling af købesummen

Stk. 2 Købesummen for STM-DK forudbetales ved Kundens modtagelse af den af Leverandøren underskrevne Delaftale i henhold til den tilhørende faktura.

Såfremt Leverandøren ved en Delaftales indgåelse forventer, at leveringstiden, jf. § 7, vil overstige 12 måneder, kan købesummen dog tidligst faktureres 12 måneder før den forventede levering.

Parterne er enige om, at købesummen for Initialkøbet, og andre køb foretaget af Banedanmark, skal betales med 40 % ved underskrift. Den resterende del af købesummen på 60 % betales af Banedanmark i forholdsmæssige delbetalinger således, at leverandøren kan opkræve en delbetaling, hver gang leverandøren har leveret 20 styks STM-DK eller ved den sidste levering under delaftalen, uanset om der sker levering til Banedanmark eller direkte til de enkelte Operatører.

Leverandøren skal senest ved fremsendelse af den af Leverandøren underskrevne Delaftale tilbyde at stille uigenkaldelig anfordringsgaranti for den erlagte del af købesummen, jf. bilag 6.

Anfordringsgarantien skal udstedes af et anerkendt pengeinstitut eller forsikringsselskab til sikkerhed for den forudbetalte købesum.

Ved anerkendt pengeinstitut eller forsikringsselskab forstås et pengeinstitut/forsikringsselskab, hvis gældende rating svarer til niveau A (A- til AAA) på Standard & Poor's ratings af langfristet gæld eller en tilsvarende rating fra et andet anerkendt kreditvurderingsinstitut, f.eks. niveau A (A3 til Aaa) på Moody's ratings af langfristet gæld eller niveau A (A- til AAA) på Fitch's ratings af langfristet gæld.

Stk. 3 Betalingsfristen er 30 dage fra modtagelse af korrekt faktura. Såfremt Kunden har ønsket anfordringsgaranti til sikkerhed for Købesummen skal denne anfordringsgaranti være modtaget af Kunden senest 10 dage før betalingsfristens udløb. Er anfordringsgarantien ikke modtaget af Kunden senest 10 dage

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før betalingsfristens udløb udskydes betalingsfristen til 10 dage efter Kundens modtagelse af anfordringsgarantien.

Betaling sker til den på Leverandørens faktura anviste konto.

Stk. 4 Ved betaling efter betalingsfristens udløb forrentes det forfaldne beløb fra betalingsfristens udløb til betaling sker med den til enhver tid gældende rente i henhold til dansk rentelovs almindelige betingelser.

§ 6 Prisregulering

Stk. 1 Alle priser i bilag 3 og 3a er gældende i hele kontraktperioden og reguleres udelukkende i henhold til følgende indeks:

L0 = ~~Lønindeks for den private sektors virksomheder og organisationer - ILON12 (1. kvartal 2005 = 100) efter sæsonkorrigering, branche og tid / Ikke sæsonkorrigeret, TOT Erhverv i alt~~, gældende for 4. kvartal 2010 = 119,8

Stk. 2 Leverandørens priser reguleres op eller ned en gang årligt pr. 1. januar (~~første regulering 1. januar 2016 første gang med virkning fra den 1. januar 2012~~) med virkning for faktureringer og betalinger i henhold til en Delaftale i det samme år. Bliver en opgave udført senere end forudsat i tidsplanen i en Delaftale, jf. bilag 5, og er der tale om en forsinkelse, som Leverandøren bærer ansvaret for, vil vederlaget for den pågældende leverance blive beregnet på baggrund af det indeks, der ville have været gældende, såfremt levering havde fundet sted og var faktureret i henhold til det aftalte leveringstidspunkt.

Stk. 3 Reguleringen vil ske på baggrund af de forud for reguleringen seneste offentliggjorte indeks, hvilket for reguleringen pr. 1. januar betyder, at denne vil tage udgangspunkt i det anførte lønindeks ("LR") pr. 3. kvartal det forudgående år (offentliggøres ultimo kvartalet efter referencekvartalet).

Stk. 4 Regulering af priserne i bilag 3 og 3a:

Priserne for STM-DK leverance, reservedele og komponenter angivet i prisoversigtet samt vederlag for kurser og Leverandørens timepriser, jf. bilag 3 og 3a, reguleres i henhold til det anførte indeks. Formlen for reguleringen af leverancevederlaget er som følger:

Vederlag fra 1. januar til 31. december:

$$\frac{\text{Leverandørens pris}}{100} * \left(100 \frac{LR}{LO} \right)$$

Den første regulering (1. januar 2016~~2~~) vil ske på baggrund af det anførte basisindeks (LO) tilgængeligt pr 14. kvartal 2015~~0~~.

Stk. 5 I forbindelse med indeksregulering af prisen skal Leverandøren i forbindelse med accept af en Delaftale, jf. § 4 stk. 4, fremsende dokumentation for ændringer af de pågældende indeks og opdatering af priserne i ~~bilag 3 og 3a~~ tilsvarende.

Stk. 6 Ved bortfald af det pågældende indeks, der indgår i pristalsreguleringen, skal dette udskiftes med et andet officielt indeks, der dækker prisudviklingen inden for tilsvarende tjenesteydelser.

Stk. 7 Såfremt Leverandørens priser falder i kontraktperioden for så vidt angår priserne for de Leverancer eller dele heraf, der er omfattet af Rammeaftalen, er Leverandøren forpligtet til forholdsmæssigt i samme omfang at reducere de i bilag 3 og 3a anførte priser.

§ 7 Leveringsbetingelser

Stk. 1 Levering har fundet sted, når en delleverance med tilhørende følgeseddel og krævet dokumentation, jf. § 2 stk. 6, er stillet til den pågældende Kundes disposition på den aftalte leveringsadresse i Danmark.

Leverandøren bærer risikoen for en leverance frem til levering heraf har fundet sted og skal holde leverancen forsikret indtil dette tidspunkt.

Leverandøren betaler samtlige omkostninger frem til levering af en delleverance har fundet sted herunder fragt (inkl. aflæsning) samt forsikring under transporten, klarering af varen

for eksport, såfremt dette er påkrævet mv. Leverandøren er dog ikke forpligtet til at betale importtold eller varetage evt. formaliteter ved importfortoldning.

Stk. 2 Leveringstiden for den første STM-DK bestilt under Initialkøbet er 18 måneder fra afgivelse af bestillingen. Herefter leveres de øvrige under Initialkøbet bestilte STM-DK med 200 styk pr. år.

Leveringstiden på ordrer af STM-DK, reservedele og komponenter mv., der bestilles i henhold til en Delaftale er 12 måneder. Leveringstiden i henhold til nærværende bestemmelse regnes fra tidspunkt for Leverandørens igangsættelse af produktion, jf. § 4 stk. 2, sidste afsnit, uanset datering af den indgåede Delaftale for den pågældende ordre.

Såfremt Leverandøren senest 12 måneder før levering af den sidste delleverance i Initialkøbet, fastsat i bilag 5, modtager yderligere ordrer fra en Kunde, er Leverandøren forpligtet til at levere disse delleverancer på tilsvarende vilkår som Initialkøbet.

Såfremt den samlede ordreindgang overstiger produktionskapaciteten på 200 styk pr. år, vil leveringstiderne i henhold til nærværende bestemmelse blive forlænget tilsvarende.

§ 8 Forsinkelse

Stk. 1 Leverandøren skal give skriftlig og begrundet meddelelse til Kunden i en Delaftale, straks når Leverandøren må forudse, at der er risiko for, at forsinkelse indtræder eller for at leverancen ikke bliver rigtigt opfyldt med den aftalte kvantitet og kvalitet.

Stk. 2 Ved gentagne forsinkelser med en delleverance har Kunden ret til at hæve den pågældende Delaftale for så vidt angår den ikke leverede del af den samlede delleverance. Hvis Kunden vil benytte sin ret til at hæve, skal Kunden meddele Leverandøren dette uden ugrundet ophold.

Stk. 3 Uanset om Kunden vælger at hæve, jf. stk. 2 ovenfor, eller fastholde købet, har Kunden ved forsinkelse i forhold til den aftalte leveringsdag krav på en bod svarende til 0,5 % af kontraktsummen for den forsinkede del af leverancen pr.

påbegyndt arbejdsdag forsinkelsen varer. Den totale bod kan dog ikke overstige 10 % af kontraktsummen af den forsinkede del af delleverancen.

Påløbet bod modregnes i Leverandørens krav på betalinger fra den pågældende Kunder.

Stk. 4 Uanset om Kunder vælger at fastholde eller hæve købet eller kræve bod, har Kunder altid ret til at kræve erstatning for konstaterede tab ud over den erlagte bod i forbindelse med forsinkelsen, jf. §§ 11 og 13.

§ 9 Garanti

Stk. 1 Leverandørens garanti for en STM-DK og komponenter er gældende i 24 måneder regnet fra tidspunktet, hvor endelig ibrugtagningstilladelse af leverancen på det enkelte tog er udstedt af den kompetente myndighed.

For komponenter, jf. bilag 3a, leveret til drift og vedligeholdelse af STM-DK, er garantiperioden tilsvarende 24 måneder regnet fra ibrugtagning af den pågældende komponent.

Stk. 2 Ved udbedring eller omlevering begynder en ny garantiperiode at løbe for så vidt angår de udbedrede eller omleverede dele, jf. dog stk. 3.

Stk. 3 Al garanti for leverancer leveret i henhold til nærværende Rammeaftale udløber dog senest 48 måneder fra levering, jf. § 7 stk. 1.

Stk. 4 Leverandøren hæfter for sine underleverandørers ydelser på samme måde som for sine egne forhold.

§ 10 Mangler ved det leverede

Stk. 1 I garantiperioden garanterer Leverandøren, at enhver leverance i henhold til nærværende Rammeaftale er fri for mangler af enhver art. En mangel ved en leverance foreligger, såfremt denne ikke opfylder de i Rammeaftalen eller de i Delaftalen fastsatte krav, eller såfremt leverancen ikke svarer til, hvad Kunder med føje kunne forvente og som i øvrigt må anses for tilsikret fra Leverandørens side.

- Stk. 2 Kunden skal afgive skriftlig reklamation til Leverandøren inden rimelig tid efter, at Kunden har konstateret, at en leverance er mangelfuld.
- Stk. 3 Leverandøren skal hurtigst muligt efter modtagelsen af skriftlig reklamation enten udbedre manglen eller foretage omlevering.
- Ved udbedring kan Kunden, inden for Leverandørens normale åbningstid (hverdage fra kl. 08.00 – 16.00) indlevere den defekte STM-DK eller Lowest Level Replaceable Unit (LLRU) komponent til Leverandøren på en nærmere aftalt adresse i Danmark og vil samtidig modtage enten 1) et nyt modul/komponent LLRU til erstatning for det defekte eller 2) et brugt modul/komponent LLRU af tilsvarende kvalitet og stand som det indleverede.
- Alternativt kan Kunden vælge at modtage en erstatningsenhed/LLRU, der kan anvendes vederlagsfrit i udbedringsperioden. Erstatningsmodulet/LLRU returneres til Leverandøren ved udlevering af den udbedrede STM-DK/LLRU. Efter endt udbedring kan Kunden afhente den udbedrede STM-DK/LLRU på den aftalte adresse mod samtidig aflevering af erstatningsenheden.
- Samtlige omkostninger til fejlfinding og udbedring af en mangel sker for Leverandørens regning herunder betaling af rimelige fragtomkostninger til og fra Leverandørens forretningsadresse.
- Stk. 4 Kunden kan vælge at indgå en serviceaftale med Leverandøren. Leverandøren vil i så fald efter omstændighederne stå for udbedring på stedet eller afmontering af defekte STM-DK/LLRU enheder og montering af såvel erstatningsenheder som nye og udbedrede STM-DK enheder/LLRU. Priser og betingelser i en serviceaftale aftales særskilt mellem den pågældende Kunde og Leverandøren.
- Stk. 5 Såfremt Leverandøren i henhold til stk. 3 ikke har draget omsorg for afhjælpning eller omlevering, er Kunden berettiget til efter eget valg enten at hæve Delaftalen for så vidt angår den mangelfulde del af delleverancen eller kræve et forholdsmæssigt afslag i vederlaget for delleverancen.

Alternativt er Kunden berettiget til at lade de konstaterede fejl og mangler udbedre af Kunden eller tredjemand for Leverandørens regning, dog begrænset i henhold til bestemmelserne i § 13.

Stk. 6 Såfremt gentagne delleverancer har været helt eller delvist mangelfulde, eller Leverandøren ikke overholder de aftalte tidsfrister for afhjælpning/omlevering, skal Leverandøren senest én uge efter henvendelse fra Kunden meddele, hvilke muligheder der er for forcering med levering af mangelfri leverance i henhold til en ny aftalt leveringstermin samt for rettidig og mangelfri levering af endnu ikke leverede leverancer. Kan Leverandøren på dette tidspunkt ikke dokumentere at være i stand til at udbedre de pågældende mangler ved afhjælpning/omlevering hhv. sikre at fremtidige leverancer kan leveres uden mangler er Kunden berettiget til at hæve Delaftalen i sin helhed for de mangelfulde leverancer samt for bestilte men ikke leverede delleverancer.

Såfremt Kunden ønsker at hæve en Delaftale i henhold til nærværende bestemmelse, skal Kunden uden ugrundet ophold efter at have konstateret det hæveberettigede forhold give Leverandøren meddelelse om ophævelsen.

Stk. 7 Leverandøren hæfter ikke for fejl og mangler, der ikke kan tilskrives Leverandørens forhold herunder fejl/mangler, der er en følge af Kunden eller tredjemands installation af en leverance, udførelse af vedligeholdelsesarbejder mv.

Stk. 8 Betaling for en leverance betyder ikke, at Kunden afstår fra at fremsætte krav overfor Leverandøren på grund af fejl eller mangler ved en delleverance.

Stk. 9 Uanset om Kunden vælger at fastholde eller hæve købet, har Kunden altid ret til at kræve erstatning for konstaterede tab i forbindelse med en mangel, jf. § 13.

§ 11 Generelt vedr. forsinkelse hhv. mangler ved en leverance

Kunden har bevisbyrden for, at forsinkelse med eller mangler ved en leverance eller en delleverance omfattet af

Rammeaftalen eller en Delaftale skyldes forhold, som Leverandøren er ansvarlig for.

Kan Kunden påvise en mangel, der påvirker funktionaliteten af det samlede mobile togkontrolsystem, hvori STM-DK/LLRU eller Leverandørens øvrige ydelser indgår som en integreret del, uden at Kunden kan dokumentere, at dette skyldes en mangel i STM-DK/LLRU eller andre ydelser leveret af Leverandøren, er Leverandøren forpligtet til at deltage i fejlfinding evt. i samarbejde med de øvrige leverandører til det mobile togkontrolsystem indtil fejlen er lokaliseret og endelig afhjulpet af Leverandøren eller anden leverandører. Denne bestemmelse finder anvendelse uanset om fejlfindingen finder stede i eller udenfor garantiperioden, jf. § 9.

Kan manglen tilskrives Leverandørens leverance eller forhold i øvrigt, er Leverandøren i garantiperioden, jf. § 9, forpligtet til at forestå udbedring af den mangelfulde leverance under ugrundet ophold. Alle omkostninger til fejlfinding og udbedring sker for Leverandørens regning og risiko.

Kan en mangel ikke tilskrives Leverandørens forhold, har Leverandøren krav på betaling af et rimelig og dokumenteret vederlag for sin bistand til fejlfinding, beregnet efter den til fejlfindingen medgåede tid og til de i bilag 3 anførte timesatser, samt betaling af rimelige og dokumenterede udgifter til udlæg herunder kørsel, rejser mv.. Tilsvarende er gældende, såfremt fejlfinding og udbedring finder sted efter garantiperiodens udløb, jf. § 9.

§ 12 Levering af reservedele mv..

Stk.1 Leverandøren garanterer, at der i kontraktperioden vil kunne leveres godkendte erstatningsdele og komponenter til reparation, drift og vedligehold af det leverede.

§ 13 Leverandørens erstatningspligt

Stk. 1 Leverandøren er erstatningsansvarlig efter dansk rets almindelige regler med mindre andet følger af Rammeaftalens bestemmelser.

Stk. 2 Leverandøren er dog ikke ansvarlig for driftstab, følgeskader og andre indirekte tab.

Tab, der opstå i forbindelse med skader på bygninger, spor, tog eller andet materiel, passagerer, eksisterende signalsystem eller andre eksisterende og nye systemer/anlæg, som STM-DK samt øvrige komponenter omfattet af leverancen grænser op imod, anses for at være direkte tab, som er omfattet af Leverandørens erstatningsansvar.

Stk. 3 Leverandørens samlede ansvar i forhold til den enkelte Kunde under nærværende Rammeaftale, herunder erstatningsansvar for Delaftaler indgået i henhold til Rammeaftalen, kan ikke overstige den totale kontraktsum for den pågældende Kundes samlede ordrer, idet det samlede ansvar overfor den enkelte Kunde dog som minimum skal udgøre DKK 4.000.000.

Ved beregning af det samlede ansvar i henhold til nærværende bestemmelse indregnes betalt bod, forholdsmæssig afslag, omkostninger til dækningskøb samt enhver form for erstatning eller kompensation betalt af Leverandøren i henhold til nærværende bestemmelse, dog undtaget erstatning for produktansvar, jf. stk. 4 nedenfor.

Har Leverandøren til en Kunde betalt bod, erstatning eller godtgørelse svarende til det ovenfor anførte maksimale erstatningsansvar, ophører Leverandørens forpligtelser i henhold til nærværende bestemmelse overfor den pågældende Kunde.

Stk. 4 Leverandørens erstatningsansvar kan i forbindelse med produktansvar under nærværende Rammeaftale med tilhørende delaftaler højst udgøre DKK 30.000.000 pr. skade.

Ved køb på op til 300 STM-DK moduler kan Leverandørens samlede erstatningspligt for produktansvar i henhold til nærværende Rammeaftale med tilhørende delaftaler højst udgøre DKK 45.000.000 i alt. Ved køb af mere end 300 STM-DK moduler kan Leverandørens samlede erstatningspligt for produktansvar i henhold til nærværende Rammeaftale med tilhørende delaftaler højst udgøre DKK 75.000.000 i alt.

Denne ansvarsbegrænsning gælder for alle Kunder under et, og disse kan således samlet ikke opnå en erstatning, der overstiger ovennævnte beløb.

Denne ansvarsbegrænsning gælder ikke for personskader.

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Stk. 5 Leverandørens forpligtelse til betaling af erstatning/godtgørelse til Kunden i henhold til Rammeaftalen eller en Delaftale kan ikke begrænses yderligere end angivet ovenfor.

Ovenstående ansvarsbegrænsninger gælder ikke, såfremt et tab kan henføres til grov uagtsomhed eller forsætlige forhold hos Leverandøren.

Stk. 6 Leverandøren er forpligtet til i hele aftalens løbetid at opretholde en sædvanlig erhvervsansvars- og produktansvarsforsikring.

Erhvervsansvars- og produktansvarsforsikringens dækningsomfang skal stå i rimeligt forhold til omfanget af Leverandørens virksomhed og i øvrigt være i overensstemmelse med det sædvanlige i Leverandørens branche. Leverandøren skal på Kundens anmodning godtgøre forsikringens eksistens og omfang.

§ 14 Force majeure

Stk. 1 Hverken Leverandøren eller Kunden skal anses for ansvarlig over for den anden Part for så vidt angår forhold, der ligger uden for Partens kontrol, og som Parten ikke ved underskrift af Rammeaftalen eller en Delaftale, burde have taget i betragtning (herunder strejker) og ej heller burde have undgået eller overvundet. Forhold hos en underleverandør anses kun for force majeure, såfremt der for underleverandøren foreligger en hindring, der omfattes af 1. punktum, og som Leverandøren ikke burde have undgået eller overvundet.

Stk. 2 Force majeure ved forsinkelse kan højst gøres gældende med det antal arbejdsdage, som force majeure-situationen varer. Såfremt en tidsfrist for Leverandøren udskydes på grund af force majeure, udskydes de betalinger, der knytter sig dertil, tilsvarende.

Stk. 3 Force majeure kan kun påberåbes, såfremt den pågældende Part har givet Meddelelse herom til den anden Part senest fem Arbejdsdage efter, at force majeure er indtrådt.

Stk. 4 I tilfælde af force majeure forsinkelse påhviler det hver af parterne i henhold til Rammeaftalen eller en Delaftale at foretage alle rimelige skridt til at minimere forsinkelsen og tab opstået som følge heraf.

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Stk. 5 Såfremt forsinkelsen som følge af de i stk. 1 nævnte årsager vedvarer mere end 60 dage, er parterne i en Delaftale berettiget til helt eller delvist at annullere aftalen for de(n) pågældende leverance(r), der er bestilt men ikke leveret ved indtrædelse af den pågældende force majeure begivenhed. Kunden er ligeledes berettiget til at hæve Delaftalen i sin helhed, såfremt den leverede delleverance ikke kan ibrugtages uden den forsinkede del eller på anden måde ikke kan anvendes af Kunden som forudsat.

I tilfælde af sådan annulation tilbageleverer begge Parter snarest muligt, hvad de har modtaget fra den anden Part, og der består derefter ingen yderligere krav mellem Parterne.

§ 15 Tavshedspligt/Rettigheder

Stk. 1 Kunden og Leverandøren samt deres ansatte er forpligtet til at hemmeligholde enhver viden og oplysning, som måtte komme i deres besiddelse, om den anden parts kommercielle og tekniske knowhow, kundekreds m.m. Denne pligt gælder også efter Rammeaftalens ophør eller Kundens overdragelse af STM-DK til en erhverver, jf. § 17.

Stk. 2 Tegninger, diagrammer eller andet materiale, som måtte udveksles mellem parterne under denne Rammeaftale, skal være tydeligt mærket af modtageren som overdragerens ejendom og må alene anvendes i forbindelse med nærværende Rammeaftale. Den modtagne part bærer det fulde ansvar for materialet, indtil tilbagelevering har fundet sted.

Stk. 3 Leverandøren garanterer, at leverancen ikke krænker andres rettigheder, herunder patenter eller ophavsrettigheder.

Stk. 4 Rejses der af tredjemand sag mod en Kunde med påstand om at STM-DK krænker tredjemands immaterielle rettigheder af en hver art, giver Kunden Leverandøren og Banedanmark skriftlig meddelelse herom og Leverandøren overtager herefter sagens førelse og samtlige hermed forbundne omkostninger, idet Operatøren og Banedanmark dog er berettiget til fuld indsigt i sagsførelsen. Leverandøren er forpligtet til at følge Operatørens hhv. Banedanmarks rimelige anvisninger om sagens førelse.

Stk. 5 Leverandøren er pligtig til i enhver henseende at skadesløsholde Operatøren hhv. Banedanmark for enhver

omkostning i forbindelse med sagen, herunder omkostninger til advokat mv. samt sagsomkostninger, som måtte blive tilkendt vedkommende sagsøger.

Stk. 6 Foreligger der krænkelse af tredjemands ret, er Leverandøren pligtig til for egen regning at skaffe Operatøren hhv. Banedanmark retten til fortsat at udnytte leverancen eller bringe krænkelsen til ophør ved at ændre eller erstatte leverancen, således at den opfylder kravene i Rammeaftalen og den indgåede Delaftale.

Stk. 7 Ingen af parterne overdrager immaterielle rettigheder i forbindelse med indgåelse af aftalen.

§ 16 Myndighedsforskrifter/Instruktionsmateriale

Stk. 1 Leverandøren garanterer, at alle leverancer udført af Leverandøren opfylder lovgivningens krav og alle relevante myndighedsforskrifter, herunder ændringer og/eller opdateringer i de til enhver tid gældende ETCS specifikationer, miljøkrav, arbejdsmiljøkrav mv. således, som disse foreligger på tidspunktet for indgåelse af en Delaftale, jf. § 4 stk. 4.

Stk. 2 Leverandøren er i medfør af "Udviklingsaftalen" forpligtet til at udarbejde dokumentation i form af manualer om anvendelsesbetingelser, betjeningsvejledning til slutbrugere og tekniske systemansvarlige hos Banedanmark, installations- samt vedligeholdelsesmanualer mv. Det pågældende materiale stilles til rådighed for øvrige Operatører af Banedanmark.

Kunden i henhold til en Delaftale er berettiget til at anvende materialet selv og til at udlevere dette til tredjemand i forbindelse med test, drift og vedligehold eller lign. som er omfattet af Kundens sædvanlige anvendelse af STM-DK.

§ 17 Overdragelse

Stk. 1 Overdragelse af Rammeaftalen og Delaftaler

Banedanmark overdragelse af Rammeaftalen og Initialkøbsaftalen

Banedanmark skal være berettiget til i forbindelse med Banedanmarks omorganisering, omdannelse, selskabsdannelse eller lignende helt eller delvis at overdrage sine rettigheder

eller forpligtelser i henhold til denne Rammeaftale eller Initialkøbsaftalen til den enhed/de enheder, det selskab/de selskaber mv., hvori de relevante aktiviteter fremover skal udføres, idet det forudsættes, at der ikke sker en væsentlig ændring af ejerforholdene, herunder i form af aftaler om stemmerettigheder med videre.

Operatørernes overdragelse af delaftaler

Operatørerne kan ikke helt eller delvist overdrage deres rettigheder eller forpligtelser i henhold til en Delaftale uden Leverandørens forudgående skriftlige accept. Et sådant samtykke kan dog ikke nægtes uden saglig grund.

Leverandørens overdragelse af Rammeaftalen eller Delaftaler

Leverandøren kan ikke uden Banedanmarks skriftlige samtykke overdrage sine rettigheder og forpligtelser ifølge Rammeaftalen eller en Delaftale til tredjemand. Banedanmark kan ikke nægte sådant samtykke uden saglig grund.

Stk. 2 Overdragelse af STM-DK

Kunderne kan frit overdrage STM-DK samt komponenter, jf. bilag 3a, idet det dog er en betingelse for at modtageren kan gøre eventuelle krav gældende overfor Leverandøren i henhold til nærværende Rammeaftale, at Kunden samtidig med overdragelsen giver Leverandøren meddelelse om overdragelsen med angivelse af erhververens kontaktoplysninger samt serienumrene på de pågældende STM-DK. Med undtagelse af Banedanmark må Kunden dog ikke erhverve STM-DK kun med henblik på kommercielt videresalg.

Ved meddelelsen om overdragelsen til Leverandøren indtræder erhververens i overdragerens retsstilling overfor Leverandøren i medfør af denne Rammeaftale.

Dette betyder blandt andet, at:

- modtagerens eventuelle erstatningskrav mod Leverandøren svarer til de krav overdrageren ville kunne have gjort gældende, jf. § 13 ovenfor.

§ 18 Ophævelse

Stk. 1 En Kunde er berettiget til at hæve en Delaftale helt eller delvist, såfremt Leverandøren væsentligt misligholder sine forpligtelser.

Stk. 2 Såfremt Leverandøren går konkurs, standser sine betalinger, åbner forhandling om akkord, eller Leverandørens formueforhold i øvrigt viser sig at være sådan, at Leverandøren må antages ikke at kunne opfylde en leverance, kan Kunden hæve en Delaftale i sin helhed for den del af leverances, som ikke er leveret på tidspunktet for ophævelsen.

Det samme gælder, såfremt Leverandøren ophører med den virksomhed, som en Delaftale vedrører, eller der indtræder andre omstændigheder, der bringer en Delaftales rette opfyldelse i alvorlig fare.

§ 19 Tvistigheder

Stk. 1 Uoverensstemmelser, som måtte udspringe af nærværende Rammeaftale, skal tilstræbes afgjort i mindelighed mellem Kunden og Leverandøren.

Banedanmark og Leverandøren kan ved enhver uoverensstemmelse vedrørende Rammeaftalen henvise spørgsmålet til parternes kontraktansvarlige, der da sammen afgør forholdet. Kan der ikke opnås enighed mellem parternes kontraktansvarlige, skal forhandlingerne søges løftet op på højere plan i parternes organisation.

Såfremt der opstår uenighed om ændring af prisen, jf. § 3, eller uoverensstemmelser i øvrigt mellem en Operatør og Leverandøren vedrørende Rammeaftalen, kan Banedanmark på vegne af og i samarbejde med de Operatører, der har anvendt Rammeaftalen, forsøge at få bilagt tvisten i henhold til proceduren i nærværende bestemmelse.

Stk. 2 Enhver tvist, som måtte opstå i forbindelse med denne Rammeaftale eller en Delaftale, herunder tvister vedrørende Rammeaftalens/Delaftalens eksistens eller gyldighed, der ikke har kunnet afgøres i mindelighed mellem parterne i henhold til bestemmelserne i stk. 1, afgøres ved Det danske Voldgiftsinstitut i København efter de af Voldgiftsinstituttet

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vedtagne regler herom, som er gældende ved voldgiftssagens anlæg.

Hver part udpeger én voldgiftsdommer som sammen udpeger voldgiftsrettens formand.

Ved mindre tvister, hvor sagsgenstanden er under 1.000.000 DKK, skal tvisten afgøres ved voldgift efter "Regler om forenklet voldgiftsproces ved Det Danske Voldgiftsinstitut".

Parterne kan aftale, at større tvister ligeledes behandles efter reglerne om forenklet voldgiftsproces.

Voldgiftsforhandlingerne og skriftvekslinger kan føres på såvel dansk som engelsk, og det forudsættes således, at voldgiftssagen kan gennemføres på disse sprog uden brug af tolke og oversættere.

Stk. 3 Bestemmelserne i nærværende aftale suppleres af dansk rets almindelige regler, idet dansk rets bestemmelser om lovvalg ikke finder anvendelse, såfremt de måtte føre til anvendelsen af et andet lands ret.

§ 21 Løbetid

Stk. 1 Denne rammeaftale træder i kraft ved parternes underskrift og den løber til den 31. december 2025, hvorefter den ophører uden yderligere varsel.

§ 22 Underskrift/Ændringer af Rammeaftalen

Stk. 1 Nærværende Rammeaftale underskrives i to identiske eksemplarer. Hver part modtager et underskrevet eksemplar med tilhørende bilag vedhæftede.

Stk. 2 Ændring af Rammeaftalen kan kun ske ved tillæg til aftalen underskrevet af begge parter.

Stk. 3 Kunden og Leverandøren kan foretage ændringer i en Delaftale af forhold, der er reguleret i Rammeaftalen.

For og på vegne af Banedanmark

Dato:

For og på vegne af

Siemens A/S

Dato:

Side 23 af 24

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.....
Jepser Hansen
CEO

.....
Steen Nørby Nielsen
CEO

.....
Morten Søndergaard
Programdirektør

.....
Hans Henrik Jensen
CFO

und signed by

PA LD
KRBL
PHN
GE

Bilag 1

[Sted], [dato]

Mellem

**Siemens A/S
Borupvang 3
2750 Ballerup
CVR nummer: 16 99 30 85
(i det følgende kaldet "Leverandøren")**

og

**Banedanmark
Amerika Plads 15
2100 København Ø
CVR nummer: 18 63 22 76
(i det følgende kaldet "Kunden")**

er i medfør af rammeaftale mellem Banedanmark og Siemens A/S indgået følgende delaftale om levering af STM-DK leverancer til mobile ETCS-anlæg mv. ("Delaftalen").

Kontrakt nr.:

INDLEDNING

Denne Delaftale er indgået i overensstemmelse med Rammeaftalen af 26. september 2011 mellem Leverandøren og Bandedanmark ("Rammeaftalen").

I henhold til Rammeaftalen har Kunden således ret til at bestille STM-DK på de vilkår, som fremgår af Rammeaftalen.

Rammeaftalens vilkår finder således anvendelse på nærværende Delaftale *mutatis mutandis* med mindre andet specifikt fremgår af denne Delaftale.

§ 1 Pris og antal

Stk.1	Antal	Stykpris (DKK)	Pris i alt (DKK)
Total			

Stk. 2 Kunden ønsker endvidere at bestille nedenstående reservedele:

Antal	Stykpris (DKK)	Pris i alt (DKK)
[Reservedele]		
Total		

De ovenfor anførte priser er i overensstemmelse med Leverandørens til enhver tid gæld

§ 2 Betaling og fakturering

Stk. 1 Betaling og fakturering skal ske i henhold til Rammeaftalens § 5.

Betalingen udgør i alt: **DKK [beløb.00]**

Stk. 2 Faktura fremsendes [DATO] (tidligst 12 måneder før leveringsdato)

Stk. 3 Faktura for Kundens køb i henhold til nærværende Delaftale sendes til:

[Kunden]
[Adresse]
[Postnummer] [By]
Att.: [Navn]
Reference:

Stk. 4 Leverandørens eventuelle garanti i henhold til Rammeaftalens § 5, stk. 3 fremsendes til:

[Kunden]
[Adresse]
[Postnummer] [By]
Att.: [Navn]

§ 3 Levering

Stk. 1 Levering finder sted i henhold til Rammeaftalens § 7 på nedenstående adresse:

[Kunden]
[Adresse]
[Postnummer] [By]
Att.: [Navn]
Reference[Angiv yderligere krav til følgeseddel]

Stk. 2 Levering er aftalt til [dato]

§ 4 Underskrift

Stk. 1 Hver af de underskrivende parter modtager et originalt eksemplar heraf.

**Dato:
For og på vegne af Siemens AS:**

Navn:
Titel:

Navn:
Titel:

Dato:
For og på vegne af [Kunden]:

Navn:
Titel:

Navn:
Titel:

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STM-DK purchase list

STM-DK component list

Bilag 1A

Order description	Order number	MTOE (Years)	Delivery time	Repair time	Quantity	Unit price, DKK	Total, DKK
STM-DK, 24 VDC, Initialset (and subsequent orders placed before 4th of April 2015)	G81002-E3134-H024	7,85	18 months *)	2-4 weeks		181.857	0
STM-DK, 110 VDC, Initialset (and subsequent orders placed before 4th of April 2015)	G81002-E3134-H110	7,85	18 months *)	2-4 weeks		181.857	0
STM-DK, 24 VDC, Øvrige led	G81002-E3134-H024	7,85	12 months *)	2-4 weeks		205.678	0
STM-DK, 110 VDC, Øvrige led	G81002-E3134-H110	7,85	12 months *)	2-4 weeks		205.678	0
On off cost for start-up by orders of less than 150 pcs	n/a	n/a	n/a	n/a		185.535	0
STM-DK Cubicle, 24 VDC, complete (w/ STM-DK 24 VDC, Conn. plate and TIU)	G81002-E3134-H024	Not yet calculated	12 months *)	1-2 months		269.883	0
STM-DK Cubicle, 72 VDC, complete (w/ STM-DK, 110 VDC, Conn. Plate and TIU)	G81002-E3134-H072	Not yet calculated	12 months *)	1-2 months		269.883	0
STM-DK Cubicle, 110 VDC, complete (w/ STM-DK 110 VDC, Conn. plate and TIU)	G81002-E3134-H110	Not yet calculated	12 months *)	1-2 months		269.883	0
STM-DK Cubicle, empty (w/o STM, Connector plate and TIU)	G81002-E3134-H350	n/a	3-4 months *)	1-2 months		21.925	0
Train Interface Unit (TIU) for STM-DK Cubicle, 24 VDC	G81002-E3134-H024	Not yet calculated	3-4 months	2-4 weeks		25.030	0
Train Interface Unit (TIU) for STM-DK Cubicle, 72 VDC	G81002-E3134-H072	Not yet calculated	3-4 months	2-4 weeks		15.030	0
Train Interface Unit (TIU) for STM-DK Cubicle, 110 VDC	G81002-E3134-H210	Not yet calculated	3-4 months	2-4 weeks		15.030	0
Connector plate incl. internal cables for STM-DK Cubicle	G81002-E3134-H300	n/a	3-4 months	2-4 weeks		12.250	0
Front door for STM-DK Cubicle	G81002-E3134-H360	n/a	3-4 months	2-4 weeks		8.598	0
Installation of customers own (new unused) STM-DK, 24 VDC, in STM-DK Cubicle, 24 VDC	G81002-E3134-H024	n/a	12 months *)	n/a		64.205	0
Installation of customers own (new unused) STM-DK, 110 VDC, in STM-DK Cubicle, 72 VDC	G81002-E3134-H072	n/a	12 months *)	n/a		64.205	0
Installation of customers own (new unused) STM-DK, 110 VDC, in STM-DK Cubicle, 110 VDC	G81002-E3134-H072	n/a	12 months *)	n/a		64.205	0
The three prices just above applies by orders of 1-50 pcs							
Price reduction by orders of 11-50 pcs							
Price reduction by orders of more than 50 pcs							
2x2-BGR, Grund Baugruppenrahmen						3.210	0
VEBA env. Temp. Verarbeitungseinheit 5 ADV						-6.421	0
SEINOS, Serielle Ein- und Ausgabe-BS	S25391-890-X23	n/a	8-10 months	4-6 months		13.579	0
PROFIS TCC, Profibus-BS	S25391-894-A2	60	8-10 months	4-6 months		17.824	0
SRAUSS 2AV, Sichere- Relais-Ausgabe-BG	S25391-898-A2	70	8-10 months	4-6 months		14.801	0
SRAUSS 110V, Sichere- Relais-Ausgabe-BG	S25391-892-A2	97	8-10 months	4-6 months		16.155	0
TRASSENS, Telegramm-Aufzeichnung-Sende-BG	S25391-892-A24	70	8-10 months	4-6 months		10.096	0
UEBSEMS, Überwachungs-Generator-BG	S25391-811-A2	110	8-10 months	4-6 months		30.096	0
SVS (24V), DC/DC-Wandler 2AV	S25391-811-A2	100	8-10 months	4-6 months		54.595	0
SVS (110V), DC/DC-Wandler 110V	V25515-84003-A3	26	8-10 months	4-6 months		54.595	0
ATC-antenna (Zugappelpol)	V25515-84003-A4	26	8-10 months	4-6 months		16.177	0
Fahrzeug Profiserv V.1 (Mobile Test Equipment for STM-DK, w/o odometer funktion)	S25441-401-A3	102	8-10 months	4-6 months		**	0
Total, DKK	G81002-C3110-H010	Not calculated	8-10 months	1-2 months		***	0

*) Total max. ca. 200/year
 **) Price according to Siemens actual pricelist (in 2015 = DKK 41.035,-)
 ***) Approx. DKK 222.000 / pcs - Price not yet fixed since the modules functions aren't finally agreed upon.

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Rammeaftale for levering af STM-DK
Bilag 2, Leverandørens forslag til indkøb af reservedele

Bilag 2

Leverandørens forslag til indkøb af reservedele

Til Rammeaftale for levering af STM-DK

Version: 2.1

Stand: 24.03.2015

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Rammeaftale for levering af STM-DK
Bilag 2, Leverandørens forslag til indkøb af reservedele

Forslag til indkøb af reservedele

STM-DK:

STM-DK forventes at fungere stabilt og pålideligt, når den først er installeret og idriftsat korrekt. Behovet for reservedele vurderes derfor at være lille. Det kan dog ikke udelukkes at der alligevel kan forekomme fejl i den daglige drift, f.eks. som følge af ydre påvirkninger (strømforsyning o.l.)

Det foreslås derfor at man indkøber minimum 1 styk mere, og ved større mængder ca. 5 – 10 % flere STM-DK, end man umiddelbart har brug for at installere.

Reservedele kan med fordel bestilles samtidigt med indkøbet af de STM-DK, som reservedelene skal kunne erstatte, jf. priserne angivet i Bilag 3a.

Øvrige komponenter:

Ud over selve STM-DK vil der også blive leveret skabe (eller cubicles) til disse. Skabene vil foruden STM-DK indeholde stikfelt med tilhørende intern fortrådning, samt Train Interface Units (TIU's), som vil indeholde hjælperelæer og sikringer.

Også disse komponenter forventes at ville fungere stabilt og pålideligt, hvorfor reservedelsbehovet også her forventes at være lille.

Det kan naturligvis ikke helt udelukkes at der kan opstå fejl under drift og det anbefales derfor, ligesom ved STM-DK, at man indkøber minimum 1 styk mere, og ved større mængder ca. 5 – 10 % flere TIU's, end man umiddelbart har brug for at installere.

MTBF-tider:

MTBF-værdier for STM-DK og øvrige komponenter er angivet i Bilag 1a, STM-DK Component list.

Rammeaftale for levering af STM-DK
Bilag 3, Leverandørens prisoversigt

Bilag 3

Leverandørens prisoversigt

Til Rammeaftale for levering af STM-DK

Version: 3.120

Stand: 24.033.20154

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1. Priser for STM-DK**a) Priser gældende for den første større samlede bestilling (Initialkøbet)**

Pris for hver STM-DK 24/110 VDC ved samtidig bestilling af minimum 300 stk.

DKK 181.857,79.267

b) Priser gældende for bestillinger afgivet efter initialkøbet

Engangsgebyr til produktionsopstart ved hver bestilling under 150 stk. DKK 1852.535893,-

Pris for hver STM-DK 24/110 VDC DKK 2052.678749,-

Cubicle, 24 VDC, fully equipped with STM-DK 24 VDC, Conn. Plate and TIU DKK 269.883,-

Cubicle, 72 VDC, fully equipped with STM-DK 11064 VDC, Conn. Plate and TIU DKK 269.883,-

Cubicle, 110 VDC, fully equipped with STM-DK 110 V. Conn. Plate and TIU DKK 269.883,-

2. Time satser

Project Manager (Projektledelse ifm evt. udvidelsesaftaler) DKK 1.28264,-
Serviceleder (Serviceledelse ifm evt. serviceaftaler) DKK 1.08570,-

Systemspecialist (Udviklingsopgaver, fejlsøgning, kursusafholdelse) DKK 1.28264,-
HW / SW ingeniør (- do -) DKK 1.28264,-
Systemsupport (- do -) DKK 1.28264,-

Reparationstekniker (Fejludbedring o.l på sikkerhedsudstyr) DKK 1.03045,-
Servicesupport (Telefonsupport o.l.) DKK 86755,-

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Ved arbejde uden for normal arbejdstid mandag til fredag 08:00-16:00 tillægges 50 % for de første 3 timer efter normal arbejdstid. For øvrige timer herefter samt for arbejde på helligdage samt på Siemens lukkedage (Grundlovsdag samt dagen efter Kristi himmelfartsdag) tillægges 100 %.

3. Afregning af Udlæg

Udlæg faktureres som følger:

Medarbejderes kørsel	Udgifter til tjenstlig befordring ved brug af eget befordringsmiddel godtgøres efter de for ansatte i staten gældende takster.
**Kørsel med Servicevogn	DKK 5,7466 pr. km
Kørsels- og rejsetimer	Iht. ovenstående timepriser.
Rejse og ophold	Netto efter regning + 10 % administrationstillæg.

**Kilometersatsen for kørsel er gældende fra underskrift af aftalen til den 31. december 2015. Efterfølgende reguleres kilometersatsen hvert år den 1. januar (første regulering 1. januar 2016).

4. Generelt

Priser for STM-DK samt timepriser, jf. punkt 1 og 2 ovenfor er baseret på omkostningsniveau pr 1. kvartal 2015 og reguleres en gang årligt i kontraktperioden, første gang 1. januar 2016.

Alle de timepriser og udlæg, jf. punkt 2 og 3 ovenfor, er baseret på omkostningsniveauet i 2010 og vil blive reguleret frem til leveringstidspunktet i henhold til den aftalte indeksprisregulering, jf. Rammeaftalens § 6.

Den første indeksregulering (1. januar 2016) vil ske på baggrund af det anførte basisindeks (LO) tilgængeligt pr 1. kvartal 2015 og det ændrede lønindeks ("LR") pr 3. kvartal i 2015.

I kontraktperioden vil de regulerede priser, jf. punkt 1 ovenfor, fremgå af bilag 1a, der opdateres af Leverandøren en gang årligt pr 1. januar.

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**Rammeaftale for levering af STM-DK
Bilag 3, Leverandørens prisoversigt**

Rammeaftalen, og de heri aftalte priser, omfatter ikke opdatering af allerede producerede og leverede foreløbige STM-DK (Baseline 2.3.0d) med eventuelle nye udgaver af software som måtte blive foreskrevet senere, f.eks. efter at UCAT- og Certificate of Conformity (CoC) er opnået for den endelige STM-DK (Baseline 2.3.0d og 3.0).

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Rammeaftale for levering af STM-DK
Bilag 3a, Reservedelspriser

Bilag 3a

Leverandørens reservedelspriser

Til Rammeaftale for levering af STM-DK

Version: 2.21

Stand: 2403.034.20154

Reservedelspriser for STM-DK

1. Priser for reservedele ~~som~~ printkort ~~o.l.~~

De følgende stykpriser gælder for de enkelte printkort og delkomponenter, som ~~forventes~~ at indgår i STM-DK.

Pos 1	<u>2v2-BGR</u> , Grund Baugruppenrahmen 2v2-BGR	DKK 13.573.380,-
Pos. 2	<u>VE5A erw. Temp.</u> , Verarbeitungseinheit 5 ADV <u>VE5A erw. Temp</u>	DKK 17.824.570,-
Pos. 3	<u>SERIO5</u> , Serielle Ein- und Ausgabe-BG <u>SERIO5</u>	DKK 14.801.590,-
Pos. 4	<u>PROFIS TCC</u> , Profibus-BG <u>PROFIS TCC</u> 1615.155925,-	DKK
Pos. 5	<u>SRAUSS 24V/110V</u> , Sichere- Relais-Ausgabe-BG <u>SRAUSS 24V/110V</u>	DKK 109.099.9652,-
Pos. 6	<u>TASSE5</u> , Telegramm-Aufzeichnungs-Sende-BG <u>TASSE5</u>	DKK 543.595818,-
Pos. 7	<u>UEBG5</u> , Überwacher-Generator-BG	DKK 543.595818,-
Pos. 8	<u>SV5 (24V/110V)</u> , BG- C A5E02140233 DC/DC-Wandler <u>(24/110V)</u>	DKK 165.177.947,-

2. Priser på øvrige reservedele

STM-DK cubicle, empty <u>(w/o STM, Connector plate and TIU)</u>	DKK	21.925,00
Train Interface Unites (TIU) for STM-DK Cubicle, 24 VDC	DKK	15.030,00
Train Interface Unites (TIU) for STM-DK Cubicle, 72 VDC	DKK	15.030,00
Train Interface Unites (TIU) for STM-DK Cubicle, 110 VDC	DKK	15.030,00
Connector plate incl. internal cables for <u>SIAM-DK</u>	DKK	12.250,00

Bilag 3a, version 2.2

Dokumentation dateret 24-03-2015

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Rammeaftale for levering af STM-DK
Bilag 3a, Reservedelspriser

Front Door for STM-DK Cubicle	DKK	8.598,00
Installation of STM-DK of customers own,(new unused), 24 VDC in STM-cubicle, 24 VDC	DKK	64.205,00
Installation of STM-DK of customers own,(new unused), 11072 VDC in STM-cubicle, 72 VDC	DKK	64.205,00
Installation of STM-DK of customers own,(new unused), 110 VDC in STM-cubicle, 110 VDC	DKK	64.205,00

Ovennævnte priser under punkt 2 er baseret på omkostningsniveauet 2015. Priserne reguleres årligt med første regulering den 1. januar 2016 i henhold til punkt 3 nedenfor.

3. Generelt:

De ovennævnte priser er baseret på omkostningsniveauet i 2014 og vil blive reguleret frem til leveringstidspunktet i henhold til den aftalte prisregulering (jf. Rammeaftalens § 6)
Ovennævnte priser er baseret på omkostningsniveau pr 1. kvartal 2015 og reguleres en gang årligt i kontraktperioden, første gang 1. januar 2016, i henhold til den aftalte indeksregulering, jf. Rammeaftalens § 6.

Den første indeksregulering (1. januar 2016) vil ske på baggrund af det anførte basisindeks (LO) tilgængeligt pr 1. kvartal 2015 og det ændrede lonindeks ("LR") pr. 3. kvartal i 2015.

I kontraktperioden vil de regulerede priser anført i nærværende bilag, fremgå af bilag 1a, der opdateres af Leverandøren en gang årligt pr 1. januar.

Rammeaftalen, og de heri aftalte priser, omfatter ikke opdatering af allerede producerede og leverede foreløbige STM-DK (Baseline 2.3.0d) med eventuelle nye udgaver af software som måtte blive foreskrevet senere, f.eks. efter at UCAT- og Certificate of Conformity (CoC) er opnået for den endelige STM-DK (Baseline 2.3.0d og 3.0).

Rammeaftale for levering af STM-DK
Bilag 4, Leverandørens forslag til uddannelsesprogram

Priseksemplerne er baseret på omkostningsniveauet i 2015⁵⁰. Timesatsen vil blive reguleret som nævnt i Bilag 3.

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Rammeaftale for levering af STM-DK
Bilag 5, Tidsplan

Bilag 5

Tidsplan

Til Rammeaftale for levering af STM-DK

Version: 2.0

Stand: 2419.03.20154

Side 1 af 2
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Rammeaftale for levering af STM-DK
Bilag 5, Tidsplan

Initialkøbet, if. Rammeaftalens § 4 stk. 1, blev bestilt den 04-04-2014 og levering af sidste delleverance omfattet heraf vil finde sted den 04-04-2017.

Såfremt Leverandoren modtager yderligere ordre fra en kunde, der bestilles senest 12 måneder før levering af sidste delleverance i initialkøbet (04-04-2016), er Leverandoren forpligtet til at levere disse delleverancer på tilsvarende vilkår som initialkøbet, if. Rammeaftalen § 7 stk. 2, 3. afsnit. > Her indsættes Siemens leveringstidsplan for initialkøbet <

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ANFORDRINGSGARANTI

På foranledning af
Siemens A/S
Borupvang 3
2750 Ballerup
CVR nummer: 16 99 30 85

bekræfter ((garantistiller)) herved overfor [KUNDEN], CVR nr. [xxxx] uigenkaldeligt og ubetinget at garantere for et beløb stort DKK [købesummen] (skriver [xxxx] danske kroner) inkl. VAT..

Garantibeløbet skal tjene til skadesløs sikkerhed for opfyldelse af ethvert krav, som [KUNDEN] har eller senere måtte få mod ((garantirekvirent)) i forbindelse med dennes forpligtelser over for [KUNDEN] i henhold til delaftale nr. [xxx] indgået mellem [KUNDEN].

Siemens A/S betaler omkostningerne i forbindelse med garantistillelsen.

Garantibeløbet udbetales til [KUNDEN] ved dennes første skriftlige påkrav til ((garantistiller)) med tilkendegivelse om, at det krævede beløb tilkommer [KUNDEN], idet Siemens A/S ikke har opfyldt sine forpligtelser i henhold til ovennævnte rammekontrakt.

- Garantien udbetales på anfordring uden nogen prøvelse eller øvrig dokumentation for kravets berettigelse. Udbetaling sker senest 7 dage efter modtagelsen af påkrav fra [KUNDEN]. Såfremt betalingspåkrav ikke efterkommes, uanset grunden, er ((garantistiller)) forpligtet til at betale morarenter i henhold til renteloven fra betalingspåkravet til betaling sker.

Garantien gælder fra dags dato og er gyldig, indtil [KUNDEN] skriftligt meddeler ((garantistiller)), at garantien er frigivet.

[KUNDEN] kan give ((garantirekvirent)) henstand og indgå aftale med ((garantirekvirent)) om ændringer i ovennævnte kontrakt, uden at det påvirker nærværende garantis gyldighed.

Nærværende anfordringsgaranti er undergivet dansk lov og ret.

[KUNDEN] tilbagesender den originale garantierklæring til ((garantistiller)) med påtegning om frigivelse, så snart garantien er frigivet.

[sted og dato]

((garantistiller))

[KUNDEN]

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The Signalling Programme

Lending Agreement ERTMS-/STM-
equipment

Annex 3 – Contact persons

Udlånsaftalebilag 3 - Kontaktpersoner

banedanmark



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**Signalling Systems
Fjernbane Onboard**

**Banedanmark
Carsten Niebuhrs Gade 43
1577 Copenhagen
Danmark**

**Forfatter: Fjernbane
Onboard Projektet
Telefon: +45 8234 0000**

**Fjernbane Onboard
Annex 3 - Contact persons**

www.banedanmark.dk

Annex 3 – Contact persons/ Kontaktpersoner

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3	Attachments	7

1 Change Log

Version	Date	Status
1.0	12.06.2019	Updated with BDK's contact persons.
2.0	12.11.2019	Final version as issued to Stakeholder.

2 Contact Persons/ Kontaktpersoner

In connection with the execution of the Lending Agreement the Stakeholder and Banedanmark have appointed the following contact persons.

I forbindelse med indgåelsen af udlånsaftalen har Jernbanevirksomheden og Banedanmark udpeget nedenstående kontaktpersoner.

For the Stakeholder / For Jernbanevirksomheden:

Arriva Tog A/S
 Skøjtevej 26
 DK-2770 Kastrup

Name / Navn	Title/ Titel	E-mail	Phone / Telefon
Lars Ditlevsen	Technical Manager	lars.ditlevsen@arriva.dk	+45 20 92 02 57

For Banedanmark:

Name / Navn	Title/ Titel	E-mail	Phone/ Telefon
Damien Dréano	Implementation Manager	xdadr@bane.dk	+45 28 87 81 24
David Jacques Gaston Chabanon	Projektleder	xdcn@bane.dk	+45 31 61 96 10
Henrik Rostgaard Andersen	Kontraktholder, Onboard	hram@bane.dk	+45 20 14 04 84
Henrik Lund Olesen	Teamleder	hlo@banc.dk	+45 29 28 39 68

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3 Attachments

Att. no.	Att. ID
	Non/Ingen



The Signalling Programme

Lending Agreement ERTMS- and STM-
equipment

Annex 4 – Valuation of The Loaned and
depreciation model

Udlånsaftalebilag 4 - Værdifastsættelse af
det Lånte og afskrivningsmodel

banedanmark



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**Signalling Systems
Fjernbane Onboard**

**Annex 4
Initial price on equipment
and depreciation model**

**Banedanmark
Carsten Niebuhrs Gade 43
1577 Copenhagen
Danmark
www.banedanmark.dk**

**Forfatter: Fjernbane
Onboard Projektet
Telefon: +45 8234 0000**

Annex 4 - Value of the Loaned and depreciation model

Udlånsaftalebilag 4 - Værdi af det Lånte og afskrivningsmodel

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1 Change Log

Version	Date	Status
1.0	26.10.2012	Sendt til Jernbanevirksomhed
1.1	15.01.2013	Lejeaftale ændret til udlånsaftale
1.2	18.03.2014	Sidste opdatering inden endelige fremsendelse til Jernbanevirksomhed
1.3	31.01.2015	Afskrivningsmodel ændret fra serie til lineær
1.4	31.01.2015	English version
1.5	18.03.2015	Updated according to new Att 1 price information
1.6	27.03.2015	Danish version added
1.7	07.11.2017	Changes added after the Danish Ministry of Transport has ordered BDK to make a revised value estimation of the Loaned.
2.0	12.11.2019	Final version as issued to Stakeholder.

2 Valuation of the Loaned and depreciation model

According to the Lending Agreement, cl. 20.2 the Operator is obliged to keep the Loaned insured against fire and theft. The insured value must minimum be the residual value of the Loaned (based value assessment of the Loaned, cf. attachment 1).

Furthermore the Operator has the right to buy the Ledend Equipment by termination of the Lending Agreement. The purchase price will be determined in accordance with the Lending Agreement section 26.2. This means that as a starting point the price will equal the residual value at the time of the purchase, cf the depreciation model below, unless Banedanmark requests that a independent value assessor must estimate the value of the part of the loaned equipment which Stakeholder wants to buy.

The depreciation begins at the time when the Lending Agreement begins for the specific ERTMS-DK/STM-DK. If the depreciation according to this model begins during a calender month the technical depreciation however begins at the end of the following month.

Example: if Handback is obtained 15 May , the depreciation will begin 1 June. The first year of depreciation will be completed 31 May.

At time of signature of the Lending Agreement the Loaned has the initial price (PL2017) as listed in Attachment 1 Prisinformation / Price information For the ERTMS-equipment (incl. possible STM-units)

The ERTMS-equipment will be depreciated linear over 25 years as listed in the table below.

I henhold til Låneaftalen, afsnit 20.2 er Stakeholder forpligtet til at forsikre Det Lånte i forhold til brand og tyveri. Forsikringssummen skal minimum være restværdien for det Lånte (baseret på værdifastsættelsen af Det Lånte, cf. attachment 1).

Endvidere har Jernbanevirksomheden ret til at købe Det Lånte ved udlånsaftalens ophør. Købsprisen vil skulle fastsættes i overensstemmelse med Udlånsaftalens afsnit 26.2. Dette betyder, at prisen som udgangspunkt vil være den restværdi, der er gældende på købstidspunktet, jf. modellen nedenfor, med mindre Banedanmark kræver, at en uafhængig vurderingsmand skal lave en værdifastsættelse af den del af det lånte udstyr, som Jernbanevirksomheden ønsker at købe.

Afskrivningen starter på tidspunktet, hvor Udlånsaftalen starter for den enkelte ERTMS-DK/STM-DK. Hvis afskrivningen efter denne model starter i løbet af en måned, starter den tekniske afskrivning dog først den første i den efterfølgende måned.

Er der sket Handback den 15. maj, vil afskrivningen af ERTMS-enheden først starte den 1. juni. Det første afskrivningsår vil være afsluttet året efter den 31. maj.

Ved Udlånsaftalens indgåelse har Det Lånte de nypriser (PL2017) som fremgår af Attachment 1 Prisinformation for ERTMS-udstyrspakkerne (incl. evt STM-moduler).

En ERTMS-udstyrspakke vil blive afskrevet efter en saldoafskrivningsmodel over 25 år som nævnt i tabellen nedenfor.

<p>STM-equipment will be depreciated linear from Handback of the Rolling Stock in which the STM-DK is installed until the point in time where Banedanmark phases out the use of STM in Denmark.</p> <p>If the Lending Agreement is terminated in the middle of a depreciation year a proportional depreciation will be made for the residual value equivalent to the number of months the Operator has used the Lended Equipment in the depreciation year.</p>	<p>STM-udstyr vil blive afskrevet lineært fra Handback af toget, hvori STM-DK sidder og indtil tidspunktet, hvor Banedanmark afvikler brugen af STM i Danmark.</p> <p>Ophører udlånsaftalen midt i et afskrivningsår, vil der blive foretaget en forholdsmæssig afskrivning af restværdien for Det Lånte svarende til antallet af måneder, som Jernbanevirksomheden har lånt Det Lånte i i det pågældende afskrivningsår.</p>
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<p><u>Linear Depreciation for ERTMS-DK Equipment</u></p> <p>Depreciation period – 25 year</p>	<p><u>Linjær afskrivning for ERTMS-DK udstyr</u></p> <p>Afskrivningsperiode – 25 år</p>
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Age of the equipment after beginning of the depreciation	Residual value	Alder på udstyret efter start på afskrivningen	Rest værdi
0 Year (=initial price)	100	0 År (=inital pris)	100
1 Year	96	1 År	96
2 Years	92	2 År	92
3 Years	88	3 År	88
4 Years	84	4 År	84
5 Years	80	5 År	80
6 Years	76	6 År	76
7 Years	72	7 År	72
8 Years	68	8 År	68
9 Years	64	9 År	64
10 Years	60	10 År	60
11 Years	56	11 År	56
12 Years	52	12 År	52
13 Years	48	13 År	48
14 Years	44	14 År	44
15 Years	40	15 År	40
16 Years	36	16 År	36
17 Years	32	17 År	32
18 Years	28	18 År	28
19 Years	24	19 År	24
20 Years	20	20 År	20
21 Years	16	21 År	16
22 Years	12	22 År	12
23 Years	8	23 År	8

Age of the equipment after beginning of the depreciation	Residual value	Alder på udstyret efter start på afskrivningen	Rest værdi
24 Years	4	24 År	4
25 Years	0	25 År	0

<u>Linear Depreciation for STM-DK Equipment</u>	<u>Lineær afskrivning for STM-DK udstyr</u>
<p>Example of depreciation of a STM-DK:</p> <p>Handback of a Rolling Stock is done on 3 August 2018. The depreciation period starts on 1 September 2018. STM is phased out in December 2023.</p> <p>The total depreciation period will be 4 plus 60 (5x12) months. This means that the STM-DK will be depreciated with 1/64 every months.</p>	<p>Eksempel på afskrivning af STM-DK:</p> <p>Handback af et tog sker den 3. august 2018. Afskrivningsperioden starter 1. september 2018. STM udfases i december 2023.</p> <p>Den samlede afskrivningsperiode vil være fire plus 60 (5x12) måneder. Dette betyder, at STM-DK vil blive afskrevet med 1/64 hver måned.</p>

3 Attachments

Att. no.	Att. ID
1	Value assessment of the Loaned/Værdifastsættelse af Det Lånte



Aftale om udlån af ERTMS-DK
Udlånsaftalebilag 4, att. 1
Værdifastsættelse af Det lånte

Lending Agreement regarding ERTMS-DK
Annex 4, att. 1 - Value Assessment of the of
the Loaned



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Basisdata

FiL Værdifastsættelse, 20022018 v16

Basis

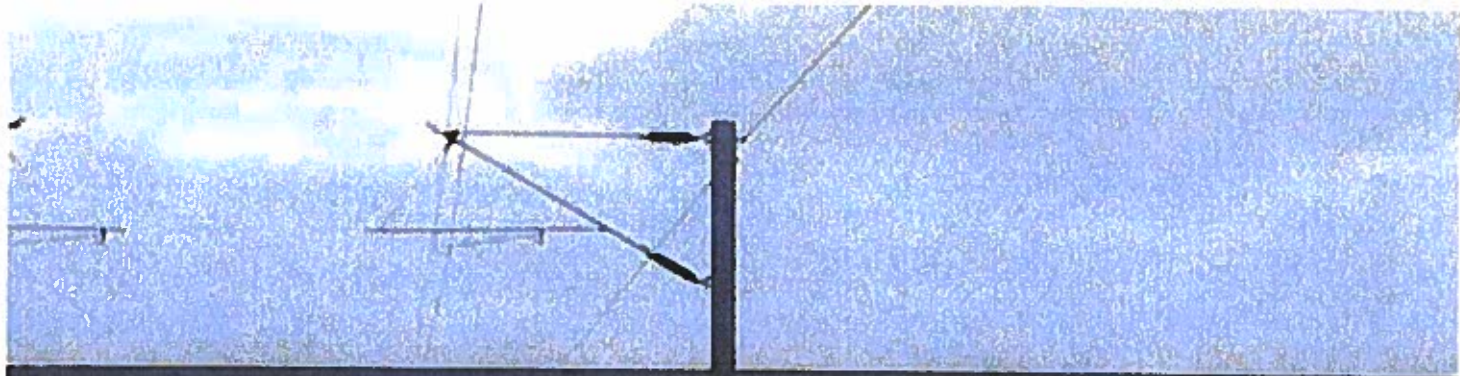
FiL ERTMS Lending Agreement Annex 4 and 5 attachment 1 - Value assessment of the Loaned, v3

Pivot der er baseret på fil ovenfor

PK LD

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- 2. Scope
- 3. Methodology
- 4. Data Sources
- 5. Results
- 6. Conclusion
- 7. Appendix
- 8. References
- 9. Glossary
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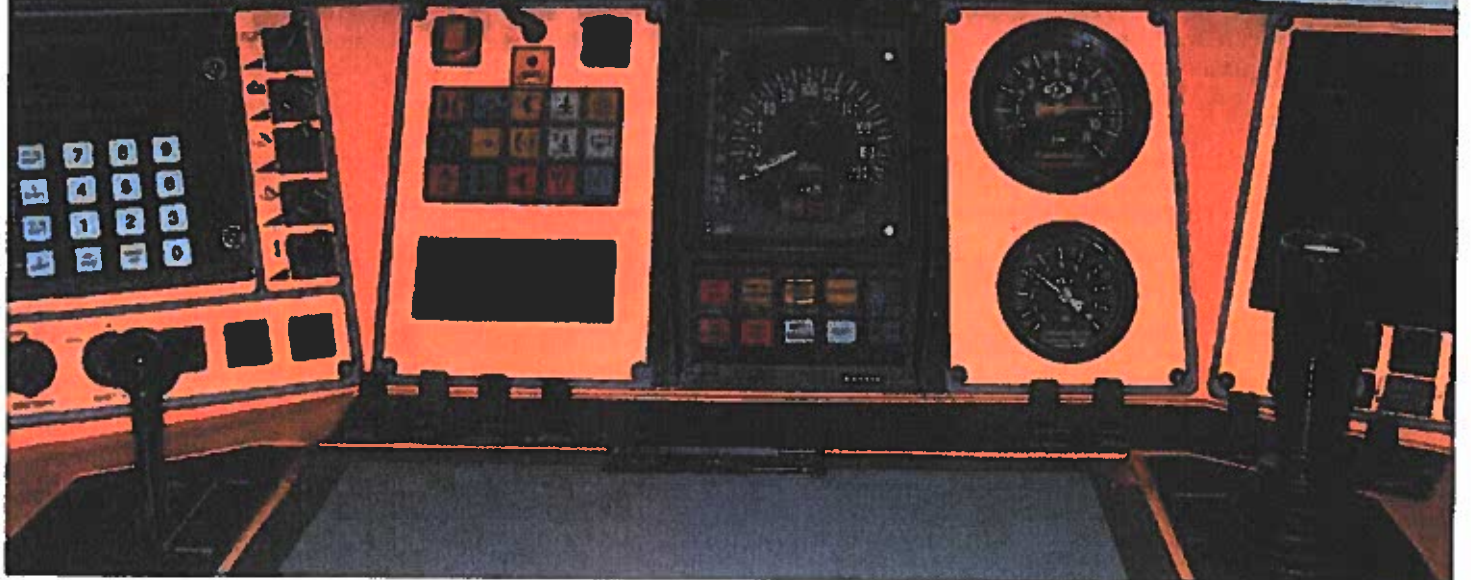
Signalling Program - Lending Agreement regarding ERTMS- and STM-DK (Onboard)

Annex 5 – Rental payment for the use of the Loaned for runs not included in the Traffic Contract ("free traffic")


Udlånsaftalebilag 5 - Lejebetaling for brug af det Lånte til kørsel, som ikke er inkluderet i Trafikkontrakten ("fri trafik")



banedanmark



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	<p>Signalling Systems Fjernbane Onboard</p>	<p>Banedanmark Carsten Niebuhrs Gade 43 1577 Copenhagen Danmark www.banedanmark.dk</p>	<p>Author: Fjernbane Onboard Project</p>
	<p>Annex 5 Udlånsaftalebilag 5</p>		

Udlånsaftalebilag 5 – Lejebetaling for brug af Det Lånte til kørsel ikke omfattet af Trafikkontrakten ("fri trafik")
Annex 5 – Rental payment for the use of the Loande for Performance not included in the Traffic Contract ("free traffic")

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1 Change Log

Version	Date	Status
1.0	10.02.2015	Sendt til Jernbanevirksomheden
1.1	18.03.2015	Document updated with information from Attachment 1
1.2	26.03.2015	Document updated with both English and Danish version
1.3	27.03.2015	Document updated with depreciation for STM
1.4	27.03.2015	Terminology changed to match the Lending Agreement
1.5	01.09.2015	Document updated with updated calculation for STM price for cubicle according to updated Frameagreement april 2015
1.6	01.09.2015	Grammatical changes added
1.7	22.02.2018	Revised version made in relation to the revised value assessment of the Loaned
1.8	21.03.2018	Updated with train kilometers for 2017 from DSB and minor change regarding the total value assessment for the Loaned.
2.0	12.11.2019	Final version as issued to Stakeholder. Updated with BDK's new address.

2 Method for calculating fee for using the Loaned to Runs not included in the Traffic Contract ("free traffic")/ Metode for beregning af afgift for anvendelse af Det Lånte til kørsel ikke omfattet af Trafikkontrakten ("fri trafik")

As a consequence of ERTMS being implemented on the Danish Railways operated by Banedanmark all Stakeholders must install Onboard equipment (ERTMS- and eventually STM equipment and GSM-R voice radios) which allow them to operate on the network.

The Danish Parliament has with the adoption of relevant documents - decided to compensate all passenger railway undertakings, who has a Traffic Contract in Denmark, for the cost of installing this equipment. However, potentially some of these railway undertakings will also use the Loaned for runs not included in the Traffic Contract and thus this will be distortive competition (compared to the freight railway undertakings). To counteract this, Stakeholder must in such cases pay a fee to Banedanmark.

A model has been established that defines how this fee shall be calculated.

Som en konsekvens af implementering af ERTMS på det danske jernbanenet, skal alle operatører have installeret ombordudstyr (ERTMS- og evt. STM-udstyr samt GSM-R radioer), der sætter operatørerne i stand til at anvende nettet.

Folketinget har – med vedtagelse af relevante aktstykker – besluttet at kompensere alle passageroperatører, der har en Trafikkontrakt i Danmark, for udgiften til at installere dette udstyr. Imidlertid vil nogle af disse operatører potentielt også anvende udstyret til kørsel, som ikke er omfattet af Trafikkontrakten og således vil ske på konkurrenceforvridende vilkår (i forhold til godsoperatørerne). For at modvirke dette, skal de kompenserede operatører i sådanne tilfælde betale en afgift til Banedanmark.

Der skal således udarbejdes en model, efter hvilken afgiften kan beregnes.

Description of the model parameters and assumptions	Beskrivelse af modellens parametre og forudsætninger
<p>The fee is calculated separately for:</p> <p>2.1 ERTMS equipment</p> <p>2.2 STM-DK equipment</p>	<p>Afgiften beregnes særskilt for</p> <p>2.1 ERTMS-udstyr</p> <p>2.2 STM-DK-udstyr</p>
<p>The fee for GSM-R Voice is calculated separately in an annex to the lending agreement regarding GSM-R Voice radios.</p>	<p>Afgiften for GSM-R Voice beregnes særskilt i et bilag knyttet til udlånsaftalen for GSM-R Voice radioerne.</p>
<p>In the last chapter (2.3) a calculation of an example of the total cost in connection with a specific run under free traffic is made.</p>	<p>Afslutningsvis (i pkt. 2.3) udføres et eksempel på en beregning af de samlede afgifter i forbindelse med specifik kørsel under fri trafik.</p>
<p>See Attachment I "Value assessment" for the inputs used in the calculation model.</p>	<p>Se Attachment I "Værdifastsættelse" som input til beregningsmodel.</p>
<p>According to the ERTMS/STM Lending Agreement clause 4.2 Banedanmark is entitled to require a recalculation of the unit price (price pr. kilometer), if the assumption for the calculation of the rental amount are changed so that the continued use of The Loaned for commercial purposes may involve state aid.</p>	<p>I henhold til ERTMS/STM Udlånsaftalens pkt. 4.2 er Banedanmark berettiget til at kræve en ny beregning af enhedprisen (prisen pr. kilometer), hvis forudsætningen for beregningen af lejebeløbet ændres, så den fortsatte brug af Det Lånte til kommercielle formål måske indebærer statsstøtte.</p>

2.1 Calculation of fee for ERTMS equipment / Beregning af afgift for ERTMS-udstyr

<p>First the parameters and assumptions for the calculation of the fee are described and hereafter follows the exact calculation.</p>	<p>Først beskrives parametre og forudsætninger til beregning af afgiften; dernæst foretages den faktiske beregning.</p>
---	---

Description of parameters for calculating the fee for ERTMS equipment / Beskrivelse af parametre til beregning af afgift for ERTMS- udstyr

Parameter/ assumption	Description	Parameter/ forudsætning	Beskrivelse
Cost basis	The total value estimate for ERTMS equipment in trains where ERTMS is to be installed by	Omkostningsgrundlag	Den samlede værdifastsættelse for ERTMS udstyr i tog, hvor ERTMS skal installeres af

Parameter/ assumption	Description	Parameter/ forudsætning	Beskrivelse
	<p>Banedanmark covers:</p> <ul style="list-style-type: none"> Number of trains to be fitted with ERTMS by Banedanmark per traintype * the total value assessment of one train under the type of train <p>The average value estimate per train is hereafter calculated as:</p> <p><u>Total value estimate for ERTMS equipment in trains where ERTMS is to be installed by Banedanmark</u></p> <p>Total number of trains where ERTMS equipment is to be installed by Banedanmark</p>		<p>Banedanmark udgør:</p> <ul style="list-style-type: none"> Antal tog, der skal udstyres med ERTMS af Banedanmark i den pågældende togtype * den samlede værdifastsættelse pr. tog for den pågældende togtype <p>Den gennemsnitlige værdifastsættelse pr. tog beregnes herefter som</p> <p><u>Samlet værdi for ERTMS udstyr i tog, hvor ERTMS skal installeres af Banedanmark</u></p> <p>Samlet antal tog, hvor ERTMS udstyr skal installeres af Banedanmark</p>
Depreciation period	<p>The contract with Alstom contains a maintenance period of 25 years.</p> <p>The same period is used to calculate the yearly depreciations for ERTMS (based on a linear depreciation)</p>	Afskrivningsperiode	<p>Kontrakten med Alstom indeholder en vedligeholdelsesperiode på 25 år.</p> <p>Tilsvarende tidslængde anvendes til beregning af de årlige afskrivninger for ERTMS (baseret på lineær afskrivning)</p>
Cost for maintenance	<p>Since this cost is held by the railway undertakings, this is not included in the calculation model.</p>	Omkostning til vedligeholdelse	<p>Da denne omkostning afholdes af operatørerne selv, medtages den ikke i beregnings-modellen.</p>
Estimate on how many	<p>DSB has in connection with DSB Timetable 2017</p>	Estimat over hvor mange	<p>DSB har i forbindelse med DSB Køreplan</p>

Parameter/ assumption	Description	Parameter/ forudsætning	Beskrivelse
kilo-meters all train types run per year	<p>informed about the number of train kilometer per train type.</p> <p>The other railway undertakings have – in connection with the creation of the tender material for the ERTMS-Supplier – informed about number of train unit kilometers. Unfortunately it is not possible to make a calculation between the relation of train kilometers and train unit kilometers.</p> <p>For the calculation of train kilometers for the remaining types of train/ Stakeholders the average DSB's train kilometers have been used.</p>	kilometer samtlige togtyper kører per år	<p>2017 oplyst antal togkilometer pr. togtype.</p> <p>De øvrige operatører har – i forbindelse med udarbejdelse af grundlag for kontrakten med ERTMS-Leverandøren – oplyst togsætkilometer. Imidlertid er det ikke muligt på baggrund af togsætkilometer at kalkulere togkilometer.</p> <p>Til beregning af togkilometer for de resterende klasser/operatører anvendes derfor gennemsnittet på de af DSB oplyste togkilometer.</p>
Number of kilo-meters included in free traffic	In the calculation of number of "free traffic train kilometers" empty running operation is also included, if it is necessary in order to be able to fulfill the planned "free traffic".	Antal togkilometer omfattet af fri trafik	I beregning af antal "fri trafik togkilometer" indgår også tomkørsel, der er nødvendig at køre for at gennemføre den planlagte "fri trafik".
VAT	The cost have been presented excluding VAT.	Moms	Den anførte omkostning er udregnet excl. moms.

Calculation of fee for ERTMS equipment / Beregning for afgift for ERTMS udstyr

Explanation/formula	Result DKK	Forklaring/formel	Resultat DKK
<p>1. Calculation of average værdi for ERTMS equipment in all train, where ERTMS is to be installed by Banedanmark:</p> <p><u>Value estimate for ERTMS DK:</u></p> <p><u>Total value estimate for ERTMS equipment in trains where ERTMS is to be installed by Banedanmark (= DKK 501,106,692¹⁾)</u></p> <p>Total number of trains expected to be installed with ERTMS by Banedanmark(= 308²⁾)</p> <p>Value assesment per train:</p> <p>¹⁾ The value assessment of each installed ERTMS comes from Annex 4, Att. 1 "Value assessment of ERTMS og STM-DK"</p> <p>²⁾ According to the roll out plan established in connection with the Signalling Programme's meeting with the political transport spokesmen in November 2017.</p>	<p>DKK 1,626,969.78</p>	<p>1. Beregning af gennemsnitlig værdi for ERTMS i det samlede antal tog, hvor ERTMS skal installeres af Banedanmark:</p> <p><u>Værdifastsættelse for ERTMS:</u></p> <p><u>Den samlede værdifastsættelse for ERTMS i tog, hvor ERTMS udstyr skal installeres af Banedanmark(= DKK 501.106.692¹⁾)</u></p> <p>Det samlede antal tog, hvor ERTMS skal installeret af Banedanmark (= 308²⁾)</p> <p>Værdi pr. tog</p> <p>¹⁾Værdifastsættelsen af hvert installeret ERTMS udstyr fremgår af Annex 4, Att 1 "Værdifastsættelse af ERTMS og STM-DK"</p> <p>²⁾I henhold til udrulningsplanen fastlagt i forbindelse med Signalprogrammets møde med de politiske transportordførere i november 2017.</p>	<p>DKK 1.626.969,78</p>

<p>2. Calculation of annual value (linear depreciation):</p> <p>For ERTMS DK the depreciation period is 25 years</p> <p><u>Total annual value (annual depreciation):</u></p>	<p>DKK 65,078.78</p>	<p>2. Beregning af den årlige værdi (linear depreciation)</p> <p>ERTMS DK afskrives over 25 år.</p> <p><u>Samlet årlig værdi (årlig afskrivning):</u></p>	<p>DKK 65.078,78</p>
<p>3. Calculation of annual value per train kilometer (fee per trainkilometer run as free traffic):</p> <p>Annual value for the ERTMS equipment (annual depreciations) / Annual average number of trainkilometers (Baseline = DSB Timetable 2017) ³⁾</p> <p>³⁾ = 177,952</p>	<p>DKK 0.37</p>	<p>3. Beregning af den årlige værdi pr. togkilometer (afgift pr. togkilometer kørt som fri trafik):</p> <p>Den årlige værdi af ERTMS udstyr (årlige afskrivninger) / De gennemsnitlige årlige antal togkilometer (Baseline = DSB Køreplan 2017) ³⁾</p> <p>³⁾ = 177.952</p>	<p>DKK 0,37</p>

2.2 Calculation of fee for STM-DK equipment / Beregning af afgifter for STM-DK udstyr

<p>First the parameters and assumptions for the calculation of the fee is described and hereafter follows the exact calculation.</p>	<p>Først beskrives parametre og forudsætninger til beregning af afgiften; dernæst foretages den faktiske beregning.</p>
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Description of parameters for calculating the fee for STM-DK / Beskrivelse af parametre til beregning af afgift for STM-DK:

Parameter/ assumption	Description	Parameter/ forudsætning	Beskrivelse
Costbasis	The total value estimate for STM-DK equipment in trains where STM-DK is to be installed by	Omkostningsgrundlag	Den samlede værdifastsættelse for STM-DK udstyr i tog, hvor STM-DK skal installeres af

Parameter/ assumption	Description	Parameter/ forudsætning	Beskrivelse
	<p>Banedanmark covers:</p> <ul style="list-style-type: none"> Number of trains to be fitted with STM-DK by Banedanmark in each traintype to be fitted with STM-DK by Banedanmark * the total value assessment of one train under the respective type of train <p>The average value estimate per train is hereafter calculated as: <u>Total value estimate for STM-DK equipment in trains where STM-DK is to be installed by Banedanmark.</u> Total number of trains where STM-DK equipment is to be installed by Banedanmark.</p>		<p>Banedanmark udgør:</p> <ul style="list-style-type: none"> Antal tog, der skal udstyres med STM-DK af Banedanmark i hver togtype, der skal udstyres med STM-DK af Banedanmark * den samlede værdifastsættelse pr. tog for den pågældende togtype <p>Den gennemsnitlige værdifastsættelse pr. tog beregnes herefter som: <u>Samlet værdi for STM-DK udstyr i tog, hvor STM-DK skal installeres af Banedanmark.</u> Samlet antal tog, hvor STM-DK udstyr skal installeres af Banedanmark.</p>
Depreciation period	<p>According to a recommendation from KPMG the depreciation of a STM-DK unit shall be finalized on the point in time where Banedanmark phases out the use of STM in Denmark. For STM-DK the average depreciation periode is calculated to be 8.93 year pr. STM-DK.</p>	Afskrivningsperiode	<p>Ifølge en anbefaling fra KMPG skal afskrivningen af en STM-DK enhed være afsluttet på tidspunktet, hvor Banedanmark udfaser brugen af STM i Danmark. For STM-DK er den gennemsnitlige afskrivningsperiode beregnet til at være 8,93 år for hver STM-DK.</p>
Cost for maintenance	<p>Since this cost is held by the railway undertakings, this is not included in the</p>	Omkostning til vedligeholdelse	<p>Da denne omkostning afholdes af operatørerne selv, medtages den ikke i</p>

Parameter/assumption	Description	Parameter/forudsætning	Beskrivelse
	calculation model		beregningsmodellen
Estimate on how many kilometers all train types run per year	Same principles apply as is used in the calculation of the fee for ERTMS equipment	Estimat over hvor mange kilometer samtlige togtyper kører per år	Der anvendes samme estimat som til beregning af afgift for ETMS-udstyr.
Number of kilo-meters included in free traffic	In the calculation of number of "free traffic train kilometers" empty running operation is also included, if it is necessary in order to be able to fulfill the planned "free traffic"	Antal togkilometer omfattet af fri trafik	I beregning af antal "fri trafik togkilometer" indgår også tomkørsel, der er nødvendig at køre for at gennemføre den planlagte "fri trafik".
VAT	The cost have been presented excluding VAT.	Moms	Den anførte omkostning er udregnet excl. moms

Calculation of fee for STM-DK equipment / Beregning af afgift for STM-DK radioer:

Explanation/formula	Result DKK	Forklaring/formel	Resultat DKK
<p>4. Calculation of average værdi for STM-DK equipment in all train, where STM-DK is to be installed by Banedanmark:</p> <p><u>Value estimate for STM-DK:</u></p> <p><u>Total value estimate for STM-DK equipment in trains where STM-DK is to be installed by Banedanmark (DKK 93.537.567 ¹⁾)</u></p> <p>Total number of trains expected to be installed with STM-DK by</p>	DKK 443,306	<p>4. Beregning af gennemsnitlig værdi for STM-DK i det samlede antal tog, hvor STM-DK skal installeres af Banedanmark:</p> <p>Værdifastsættelse for STM-DK:</p> <p><u>Den samlede værdifastsættelse for ERTMS i tog, hvor ERTMS udstyr skal installeres af Banedanmark(DKK 93.537.567 ¹⁾)</u></p> <p>Det samlede antal tog, hvor skal installeret af</p>	DKK 443,306

Explanation/formula	Result DKK	Forklaring/formel	Resultat DKK
<p>Banedanmark(211 ²⁾)</p> <p>Value assesment per train:</p> <p>1) The value assessment of each installed ERTMS comes from Annex 4, Att. 1 "Value assesment of ERTMS og STM-DK"</p> <p>2) Total number of trains expected to be installed with STM-DK by Banedanmark according to the roll out plan established in connection with the Signalling Programme's meeting with the political transport spokesmen in November 2017.</p>		<p>Banedanmark (211 ²⁾)</p> <p>Værdi pr. tog:</p> <p>1) Værdifastsættelsen af hvert installeret ERTMS udstyr fremgår af Annex 4, Att 1 "Værdifastsættelse af ERTMS og STM-DK".</p> <p>2) Det samlede antal tog, hvori STM-DK skal installeret af Banedanmark i henhold til udrulningsplanen fastlagt i forbindelse med Signalprogrammets møde med de politiske transportordførere i november 2017.</p>	
<p>5. Calculation of annual value (linear depreciation):</p> <p>For STM-DK the depreciation period is 8.93 years</p> <p><u>Total annual value (annual depreciation):</u></p>	<p>DKK 49,642.33</p>	<p>5. Beregning af den årlige værdi (linear depreciation)</p> <p>STM-DK afskrives over 8,93 år.</p> <p><u>Samlet årlig værdi (årlig afskrivning):</u></p>	<p>DKK 49.642,33</p>
<p>6. Calculation of annual value per train kilometer (= fee per trainkilometer run as free traffic):</p> <p>Annual value for the STM-DK equipment (= annual depreciations) /</p>	<p>DKK 0.28</p>	<p>6. Beregning af den årlige værdi pr. togkilometer (= afgift pr. togkilometer kørt som fri trafik):</p> <p>Den årlige værdi af STM-DK udstyr (= årlige afskrivninger) /</p>	<p>DKK 0,28</p>

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Explanation/formula	Result DKK	Forklaring/formel	Resultat DKK
Annual average number of trainkilometers (Baseline = DSB Timetable 2017) ³⁾		De gennemsnitlige årlige antal togkilometer (Baseline = DSB Køreplan 2017) ³⁾	
³⁾ = 177,952		³⁾ = 177.952	

2.3 Example of Calculation of total cost regarding free traffic / Eksempel på beregning af de samlede afgifter i forbindelse med fri trafik

The total fee per trainkilometer is calculated as:		De samlede afgifter pr. togkilometer vil udgøre:	
Type of fee	Fee DKK	Afgiftsområde	Afgift DKK
ERTMS equipment	0.37	ERTMS-udstyr	0,37
STM-DK equipment	0.28	STM-udstyr	0,28
Total fee per train kilometre	0.65	Samlet afgift pr. togkilometer	0,65

<p>When calculating the fee for free traffic the distance is calculated (in train kilometres) based on the distance which have been covered.</p> <p>The fee will be calculated as:</p> <p><u>Annual value per train kilometre (ERTMS and STM) * number of train kilometre in free traffic</u></p> <p>Example</p> <p>The Stakeholder's drivers from station A to B which accumulates to 175 train kilometres.</p> <p><u>Fee is calculated: (0.37 DKK + 0.28 DKK) * 175 train kilometres = DKK 113,75</u></p>	<p>Ved beregning af afgiften af fri trafik udregnes afstanden (i togkilometer) på den strækning, som skal tilbagelægges.</p> <p>Afgiften vil således udgøre:</p> <p><u>Årlig værdi per togkilometer for (ERTMS- og STM-udstyr) * antal togkilometer fri trafik</u></p> <p>Eksempel</p> <p>Jernbanevirksomheden kører fra station A til B, hvilket er opgjort til 175 togkilometer.</p> <p><u>Afgiften beregnes således til: (DKK 0,37 + DKK 0,28) * 175 togkilometer = DKK 113,75</u></p>
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Invoicing of the fee	Opkrævning af afgiften
<p>The Stakeholder shall establish a list (eg annually) over the extent of free traffic in the form of one of the two options:</p> <ul style="list-style-type: none"> • the duty timetable (if it is a regular train running every day) • A train order (if it is a single event) <p>List must contain a specification per train run as above:</p> <ul style="list-style-type: none"> • Train order number / Duty timetable version in use • Train running number • Declaration of distances (from-to) • Number of train kilometers • Fee per train kilometer • Total fee <p>Banedanmark will verify/ check the calculated fees according to train orders or duty timetables.</p>	<p>Jernbanevirksomheden udarbejder en oversigt (f.x. årligt) over omfanget af fri trafik i form af en af følgende to muligheder:</p> <ul style="list-style-type: none"> • tjenestekøreplanen (hvis det er en fast tog, der kører hver dag) • en toganmeldelse (hvis det er en enkeltstående begivenhed) <p>Oversigten skal indeholde en specifik opgørelse per kørsel over:</p> <ul style="list-style-type: none"> • Toganmeldelsesnummer/Tjenestekøreplansversion • Tognummer • Angivne strækninger (fra-til) • Antal togkilometer • Afgift per togkilometer • Samlet afgift <p>Banedanmark verificerer/kontrollerer de udregnede afgifter i henhold til tjenestekøreplan/ toganmeldelse.</p>


3 Attachments

Att. no.	Att. ID
	Non/Ingen

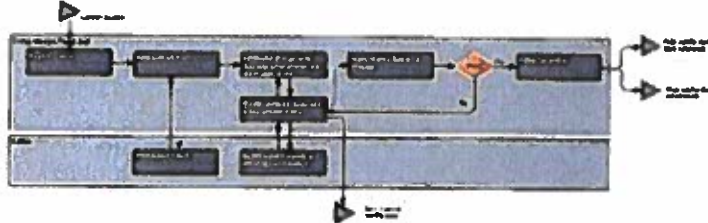
Udlånsaftalebilag 5 - Lejebetaling for brug af Det Lånte til kørsel ikke omfattet af Trafikkontrakten ("fri trafik")
Annex 5 - Rental payment for the use of the Loande for Performance not included in the Traffic Contract ("free traffic")

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Ikke gældende udgave

	I-6.2.10.1 Contract Management		
	Type WorkflowDiagram	Proces ejer Områdechef - Signalprogrammet Planlægning	Procesansvarig Tracéredaktør - Signalprogrammet
	Status Approved	Sidst ændret 2019 01 10 16 12 42	Sidst ændret af Thilde Restorff Pedersen

1. I-6.2.10.1 Contract Management



Beskrivelse:

The purpose of this process is to ensure smooth and efficient management of the major supplier contracts

Scope:

All signalling system contracts.

Definition:

Major supplier: Supplier providing goods / services under the K02 contracts awarded by the S-bane, Fjernbane and On-board projects.

Registre/løjer:

MoM according to I-6.2.5.2.1 Minutes of Meeting

Mails and documents are recorded on the projects/sections relevant site/library according to HTL 50e14ae4-8333-4ab6-b15f-622e4642a840 1825caec-31de-4d69-b0b8-bad70da97dad da-DK Signalling Programme Document Manual

Reviews are recorded according to I-6.2.5.1.2 Reviewing a document

Recordings must be kept for the remainder of the Signalling Programmes lifetime.


Kriterier

The Signalling Programme has four main contracts. Each contract is located under each project own contract area on SharePoint. Only employees with proper authorization can access the contract areas.

- HTL 018818-a8b0-45e7-8011-73cc63690ed 76d85257-4d8-4c28-b4db-0582a0441495 da-DK Signalling Programme Contract Area Common appendices
- HTL a1769a5-8ed5-4ca5-b78a-7d1c03cc2cf 88847c54-b9bc-44e9-816d-6c71884d333c da-DK Signalling Programme Contract Area S-bane Cost sensitive appendix 12
- HTL 0e578325-e654-4632-8303-800412b9f e22342eb-e228-4323-b370-19848b72b3d4 da-DK Signalling Programme Contract Area West
- HTL a358c818-8d1a-4f92-8683-8861d5459d9 983a0d88-2481-4484-8adc-0d03b8523ab3 da-DK Signalling Programme Contract Area East
- HTL 74168157-8046-47a7-b6db-3b5504819876 6388076-ed53-41e3-81ab-a028b0e5e35 da-DK Signalling Programme Contract Area Onboard

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Ikke gældende udgave

	I-6.2.10.1 Contract Management		
	Type WorkFlowDiagram	Proces ejer: Områdechef - Signalprogrammet Planlægning	Procesansvarlig: Tracédaktør - Signalprogrammet
	Status: Approved	Sidst ændret: 2019 01 10 16:12:42	Sidst ændret af: Thilde Restorff Pedersen

1.1 Contract awarded

Links to:

Thilde Restorff Pedersen (TRPE)

1.2 Register contract

Beskrivelse:

For approved contracts:

The Contract is archived:

- Contracts in the contract library
- ATRs in the ATR library
- Contract informations are added to the list "Approved contracts" located on SharePoint - PMO.

Links to:

Thilde Restorff Pedersen (TRPE)

1.3 Administer contract

Beskrivelse:

Establish governing regulations supporting the management of the contract between the project and the supplier e.g. But not exclusively: Communication lines and relevant organization Modes of reporting (time tables, schedules and format) Meeting structure timetable and format

Links to:

Thilde Restorff Pedersen (TRPE)

1.4 Administer contract

Beskrivelse:

Establish a reporting and meeting regime with the Project

Agree on the CR- and notice process with the Project

1.5 Administer change order, contracts amendments and claim applications

Beskrivelse:

Administer change order, contracts amendments, claim applications and secure project and supplier are complied with their obligations.

Keep the contract in good shape to secure it is manageable by Follow up on scope changes, ensure proper contract documentation. i.e. contract changes and amendments, follow up on and track contract milestones to ensure proper claim process.

According to I-6.2.10.2 Contract Change Management

Links to:

I-6.2.10.2 Contract Change Management

Thilde Restorff Pedersen (TRPE)

1.6 Submit monthly reports and attend agreed meetings

Links to:

Thilde Restorff Pedersen (TRPE)

1.7 Assess whether contract is complete

Beskrivelse:

Ensure that the contract scope is delivered and that all payment milestones has been invoiced

1.8 Input to project monthly report

Beskrivelse:

Deliver monthly status of the contract (to SP Management)

1.9 Pass?

Links to:

Thilde Restorff Pedersen (TRPE)

1.10 Close out contract


Beskrivelse:

Delivery according to I-6.1.5.2 Teknisk og økonomisk afslutning af projekt

Links to:

I-6.1.5.2 Teknisk og økonomisk afslutning af projekt

Ikke gældende udgave

	I-8.2.10.1 Contract Management		
	Type WorkFlowDiagram	Proces ejer Områdechef - Signalprogrammet Planlægning	Proces ansvarlig Tracédaktør - Signalprogrammet
	Status Approved	Sidst ændret 2019 01 10 18:12:42	Sidst ændret af Thilde Restorff Pedersen

Thilde Restorff Pedersen (TRPE)

1.11 Monitor progress, costs and scope against contract**Beskrivelse:**

Exercise the contract and thereby secure the agreements made by. Follow up on contract milestones, ensure Supplier deliverables are within scope and time, ensure proper invoicing according to the contract

Links to:

Thilde Restorff Pedersen (TRPE)


1.12 Major supplier contract close out process**Beskrivelse:**

Document closure of the contract between Supplier and Project

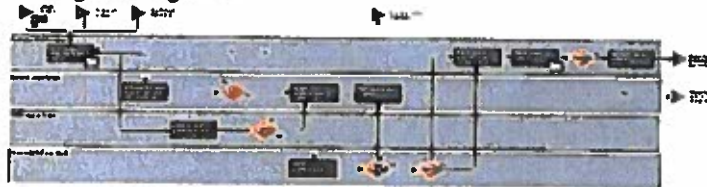
1.13 Major supplier close out certificate**Links to:**

Thilde Restorff Pedersen (TRPE)

Ikke gældende udgave

	I-6.2.10.2 Contract Change Management		
	Type WorkflowDiagram	Proces ejer Områdechef - Signalprogrammet Planlægning	Processens ansvar Tracéredaktør - Signalprogrammet
	Status Approved	Sidst ændret 2019 01 10 16:13:28	Sidst ændret af Thilde Restoft Pedersen

1. I-6.2.10.2 Contract Change Management



Beskrivelse:

The purpose of this process is to establish an overview for the entire Change Process, and secure the steps from when a change is identified until a change request is implemented or rejected, and documented.

The scope of the Contract Change Management process is all changes to contracts and BIB contracts in the Signalling Programme. This being a change to a contract that BDK has with a supplier or a BIB stakeholder agreement.

There must be a Change Log for all contracts that BDK has with a supplier accessible on SharePoint incl. the BIB agreements. The Project Manager for each project is responsible for maintaining a Change Log for any contract that falls within the scope.

A Change Request has to be raised when there is a change to a signed external contract or external BIB contract. Contract Changes can be only agreed by following this process.

The process has three stages and the Central Change Board (CCB) must approve the Change request at each stage. The stages contains the following 1) the initial request, 2) the cost estimate, and 3) the final proposal and cost and are all reflected in the process.

Roller:

The Project/Section Manager is the Change Owner for changes to contract within the scope of the Programme.

The CCB Secretary is responsible for the administrative control of all Changes that is sent to CCB.

Chairman of Central Board is personified by Områdechef Signalprogrammet Programme Manager or Områdechef Teknik System & Signal depending on the change request.

Registreringer:

Change requests are recorded on the Change logs for the 4 main contract areas on relevant SharePoint site

MetM according to I-6.2.5.2.1 Minutes of Meeting

Meetings and documents are recorded on the projects/sections relevant SharePoint library according to HTL [66e14ae4-6333-4ab5-b15f-632e4842a846 1825ccc4-144e-4dd9-b0b8-bad06e07dad4e-DK - Signalling Programme Document Manual](#)

Reviews are recorded according to I-6.2.5.1.2 Reviewing a document

Recordings must be kept for the remainder of the Signalling Programmes lifetime.

Kriterier

The Signalling Programme has four main contracts. Each contract is located under each project own contract area on SharePoint. Only employees with proper authorization can access the contract areas.


Links to contract areas for Fjernbane East, Fjernbane West, Onboard and S-Bane can be found through the process in I-6.2.10.1 Contract Management

Other references:

HTL [61a7e1ab-45e9-4941-b71e-9c233eccc0ba e68e0500-96a1-4d16-8771-e78b488b0c06 de-DK - Signalling Programme Principle Document for Minor Changes](#)

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Ikke gældende udgave

	I-6.2.10.2 Contract Change Management		
	Type: VærkFlowDiagram	Proces ejer: Områdechef - Signalprogrammet Planlægning	Procesansvarlig: Tracéredaktør - Signalprogrammet
	Status: Approved	Sidst ændret: 2019-01-10 10:13:28	Sidst ændret af: Thilde Restøfte Pedersen

1.1 Change identified

Links to:

Hesse Petersen (HPET)

1.2 Supplier cost estimate

1.3 SP document

Links to:

Signalling Programme Contract Change Request Template

1.4 Final Proposal from supplier

1.5 Ready for next stage in the process

Beskrivelse:

The process has three stages containing the following 1) the initial request, 2) the cost estimate, and 3) the final proposal and cost. These stages must be completed in the aforementioned order before the next stage can be started.

If the recommendation and approval hereof concerns the stages 1) the initial request and 2) the cost estimate, stakeholders will be informed of approval status and the next stage in the process can be initiated.

1.6 Identify, analyse, decide and document Changes

Beskrivelse:

The process has three stages containing the following 1) the initial request, 2) the cost estimate, and 3) the final proposal and cost. These stages must be completed in the aforementioned order before the next stage can be started.

When initiating a change the change must be registered in the relevant Change Log and using the Signalling Programme Contract Change Request Template. This is the responsibility of the Project Manager. The Project Manager can delegate the work activities to the Contract Manager.

A change can be initiated by either the supplier or BDK. The change is initiated by completing the Initiating Request in the Change Request Template which is included as a link in the Change Log and forwarded to the "opposing" contracting party. CCD approves the initiation to the Supplier.

In this step of the process the initiating of the request is prepared or handled in the Project. The Change Request can also be initiated from Teknisk.

The Change Request can also be initiated from Supplier and in this case the Change Owner needs to provide approval or rejection in accordance with mandate and following the Change Process.

If Stakeholders are involved/part in the Change, the Change must be accepted by the involved Stakeholders.

All Initiating Requests must be reviewed by the Programme Contract Manager and the Programme Engineer Manager (System Integration Architect). Review must be completed before approval. Ensure with SP Finance that the change is in the budget and has an economic approval.

Supplier provides cost of preparing solution proposal and solution proposal.

The input supplier cost estimate and Final Proposal from supplier triggers stage 2 and 3 of the process.

Links to:

Signalling Programme Contract Change Request Template

1.7 Ensure review Change Request correctness and cost estimate

Beskrivelse:

The Programme Contract Manager must review the Initiating Request in order to ensure the general quality of the Change Request and ensure that it is in accordance with the procurement rules.

Furthermore, the Programme Contract Manager must also ensure that the Change Request is handled according to the governance of the Programme (approval at mandate level) and ensure lessons learned between the projects for changes related to similar issues.

According to I-6.2.5.1.2 Reviewing a document.

Links to:

I-6.2.5.1.2 Reviewing a document
Thilde Restøfte Pedersen (TRPE)

1.8 Ensure review of engineering matters and cost estimate

Beskrivelse:

The System Integration Architect must review the Change Request as regards to engineering matters, alignment of the solution and compliance with common engineering rules and processes.

Furthermore, the System Integration Architect must also ensure lessons learned between the projects for changes related to similar issues and review the Initiating Request in order to ensure the general quality (in terms of comprehension) of the Change Request. If needed, clarifying questions will be handled with the Project.

The right stakeholders must be involved in the process if they are affected by the solution.


According to I-6.2.5.1.2 Reviewing a document.

Links to:

I-6.2.5.1.2 Reviewing a document

1.9 OK?

Ikke gældende udgave

	I-6.2.10.2 Contract Change Management		
	Type: WorkFlow Diagram	Processer: Områdechef - Signalprogrammet Planlægning	Processansvarig: Tracédaktør - Signalprogrammet
	Status: Approved	Sidst ændret: 2019 01 10 16.13 26	Sidst ændret af: Thilde Restolte Pedersen

Links to:

Thilde Restolte Pedersen (TRPE)

1.10 OK?

Links to:

Thilde Restolte Pedersen (TRPE)

1.11 Prepare recommendation for Central Change Board

Links to:

Thilde Restolte Pedersen (TRPE)

1.12 Approve recommendation**Beskrivelse:**

The CCB or Programme Board must approve the initial request, the cost estimate and the final proposal and cost of the change. Documentation for approval must be in place before cost spending is initiated e.g. by archiving email with approval or MoM.

MoM is according to I-6.2.6.2.1 Minutes of Meeting

The process has three stages containing the following: 1) the initial request, 2) the cost estimate, and 3) the final proposal and cost. These stages must be completed in the aforementioned order before the next stage can be started.

If the recommendation and approval hereof concerns the stages 1) the initial request and 2) the cost estimate, stakeholders will be informed of approval status and the next stage in the process can be initiated.

If the recommendation and approval concerns the final proposal, both an approval and rejection hereof will be handled by the Project Manager. The Project Manager can delegate the work activities to the Contract Manager.

Links to:

I-6.2.6.2.1 Minutes of Meeting

1.13 Inform stakeholders on status**Beskrivelse:**

Relevant stakeholders will be informed of approval status from the CCB meeting and the next stage in the process can be initiated.

There is no official format for the information.

1.14 Final Proposal?

Links to:

Thilde Restolte Pedersen (TRPE)

1.15 Approve?**1.16 Handle Change Request towards Supplier or Project****Beskrivelse:**

Based on the decision on the CCB the supplier is updating the Change Request with either Solution Cost Estimate.

The Change Request must be signed physically according to mandate. Mandate must be according to the mandate related to the total contract which means that a Change Request to a contract signed by Programme Director must be signed by Project Manager and Programme Director. Directly below the signature the full name of the signer must be stated in print or capital letters.

Purchase order must be created on Change Requests when the Change estimate cost is approved according to MoM from CCB.

1.17 Close Change Request**Beskrivelse:**

Based on the decision from CCB the Change Request is either rejected or approved.

When approved the Project Manager must ensure that the change is implemented according to the implementation check list in the Signalling Programme Contract Change Request Template.

If the change is rejected the change will be closed and reason updated in the change log.

Links to:

Signalling Programme Contract Change Request Template


1.18 Rejected?

Links to:

Thilde Restolte Pedersen (TRPE)

1.19 Implement Change Request

Ikke gældende udgave

	1-8.2.10.2 Contract Change Management		
	Type: WorkFlowDiagram	Processejer: Områdechef - Signalprogrammet Planlægning	Procesansvarlig: Træcedirektor - Signalprogrammet
	Status: Approved	Sidst ændret: 2019 01 10 16.13 28	Sidst ændret af: Thilde Restorff Pedersen

Beskrivelse:

The Contract Manager is responsible for initiating the update of the Checklist "Change Implementation" in the Change Request when the change to the contract has been implemented.

1.20 Change request implemented and documented

Links to:

Thilde Restorff Pedersen (TRPE)

1.21 Change log updated and change closed

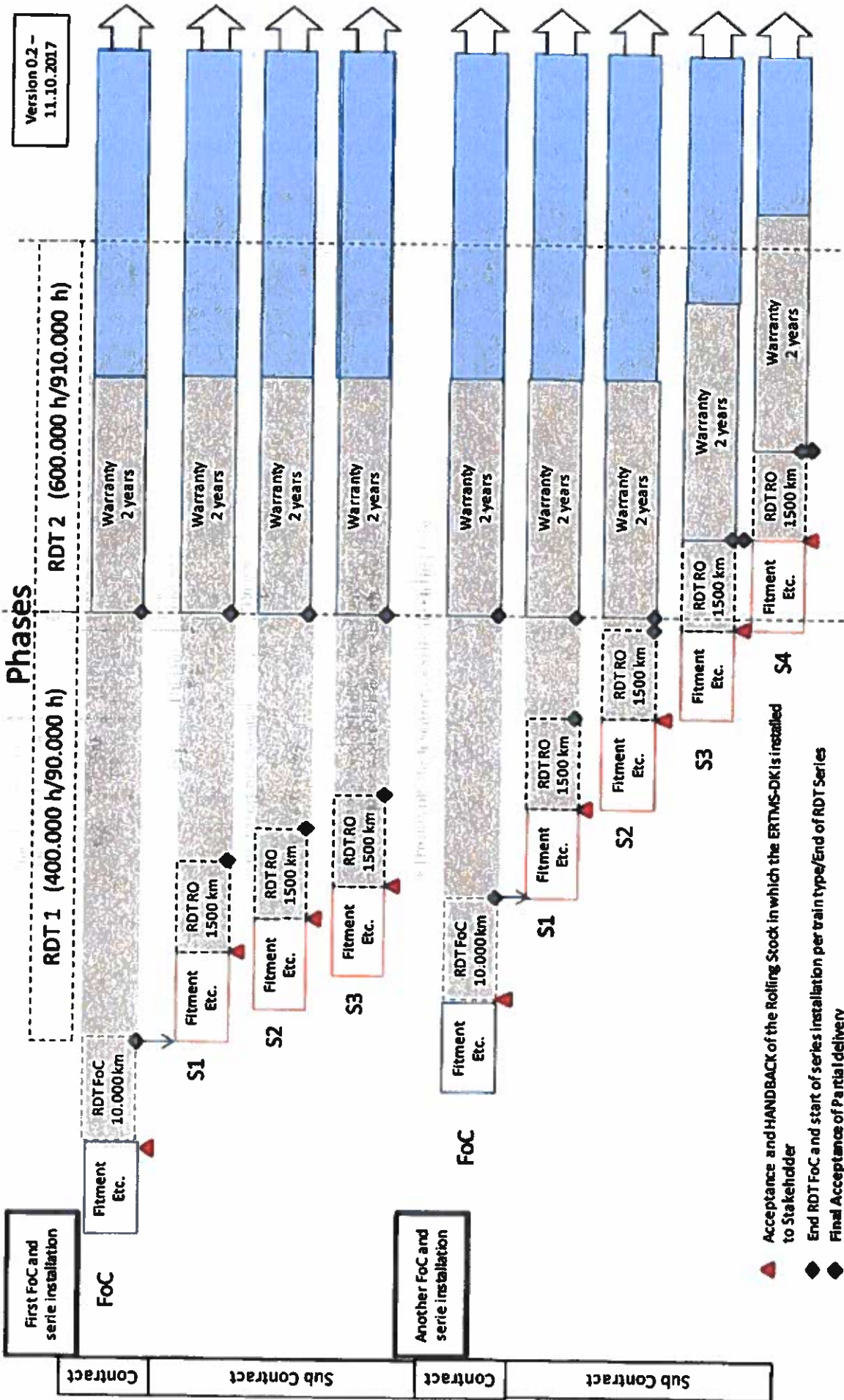
Links to:

Thilde Restorff Pedersen (TRPE)

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Annex 8 - Maintenance Responsibility Regarding ERTMS-DK During Different Phases

Version 0.2 - 11.10.2017



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