



## Purchase of IT services, components and infrastructure changes in connection with the upgrade of the S-bane signalling system from GoA2 to GoA4

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Descriere: By contract notice 2009/S 199-286829, Banedanmark put out to tender a contract for the delivery of a CBTC signalling system etc. for S-banen. As part of this, a contract on "Design, Building and Maintenance of a Signalling System and the Onboard Equipment for the S-banen" was signed between Banedanmark as customer and the consortium Siemens A/S and Siemens AG on 8 August 2011. The contract was previously transferred to Siemens Mobility GmbH and Siemens Mobility A/S due to a corporate reorganisation at Siemens, where Siemens' train division was separated into independent companies. The contract originally regarded the establishment of a GoA2 system (semi-automatic train operation) but the signalling system must be upgraded to GoA4 (driverless operation) in connection with DSB's Future S-Trains project, which will be introduced when the new S-trains are put into operation. Banedanmark will in this regard remain party to the contract for the parts related to GoA2 while DSB will become a new party to the contract for the parts related to GoA4. The reason for DSB becoming a party to the contract for the GoA4 upgrade is, that it has been politically decided that DSB from 2027 will take over the responsibility for the entire S-bane including the signaling system and that DSB will finance the upgrade to GoA4. Consequently, Banedanmark and DSB hereby announces their intention to enter into an agreement to amend the previously tendered CBTC contract. Banedanmark and DSB thus needs to make changes to the CBTC contract in order to implement the upgrade to a GoA4 system. Specifically, the changes relate to 1) development tasks in relation to the implementation of GoA4 (driverless operation), which includes software updates and calibration to implement GoA4 functions, including in relation to the control system, security systems and internal and external interfaces, including to enable the operation of a mixed GoA2 and GoA4 fleet of S-trains during a transition period, 2) software changes regarding changes to the configurations of stations to adapt to the new S-trains necessary for the implementation of the new driverless trains, 3) infrastructure changes regarding the movement and supply of new balises, 4) installation of axel counters and airlink radios, 5) supply, test and commissioning of axel counters, test track equipment and airlink radios, 6) updating documentation, training material etc., 7) installation, testing and commissioning regarding the software updates, 8) test and commissioning of the onboard equipment in the first 20 new S-trains, 9) test and commissioning of onboard equipment in trainset 21 and onwards including commissioning manuals and training, 10) assistance in obtaining the necessary safety approvals of the CBTC signalling system, 11) enhancement to the current maintenance services for the upgraded signalling system for 276 months, 12) DSB becoming a party to the part of the contract covering the GoA4 upgrade (the changes mentioned) alongside BDK and 13) a number of changes to the contractual terms and conditions of the existing contract which will only be applicable to the GoA4 upgrade. These changes include changes to clauses regarding the context in which the GoA4 upgrade will take place (primarily update to background, phases, scope, customer's environment and participation etc.). The changes also include adjusted responsibility for safety approval of GoA4, reliability demonstration tests and targets, commissioning and final acceptance. Further there are changes to clauses regarding prices (payment in Euro) and legal clauses regarding warranty in relation to design life, correction plan in case of breach by the supplier, compensation and liability of the supplier. The original estimated value of the S-bane contract was set out to be between 2 billion and 2,5 billion DKK which is around 269 million EUR to 336 million EUR in 2010 prices which amounts to 363 million EUR to 453 million EUR today after price indexation (May 2023 indexation).

