

Round 2 Questionnaire

The questions for the CHARM market consultation are divided into five different categories. In the first category we will ask for feedback on the Functional Specification taking into account the overall programme goals and the business specification. The second and third category will be focussed on products and support services respectively. *It must be noted that in these categories the word 'product(s)' will refer to both specific products and services.* The fourth category will address the options for any future procurement and the fifth and final category contains some additional questions. We would like to invite you to accompany all answers by references of actual implementation that will support the answers.

As this questionnaire is intended to explore the supplier market 'as-is', there can be no wrong or right answers. The answers you will provide will be used as input for our procurement strategy, which we will try to align with the market place as good as possible.

It is important to note that it is possible that not all questions/categories are relevant for you as a supplier. We value partial responses as much as responses on all questions. One reason you may have not answer all questions can be that you supply only solutions or that you supply only support services or any selection of the total package of services needed. Please answer all questions that are relevant to your line of business.

Category 1: Our proposed plans

Q1 Do you understand the goals of the HA/RWS and how CHARM aims to support these as described in the Business Specification? If not, what information is missing to understand them?

Q2 Do you understand how the Functional Specification supports the Business Specification? If not, what information is missing to understand it?

- Can you propose a better alternative (taking the CHARM goals into account) for the overall, or parts of the Functional Specification? If yes, could you explain the benefits of this alternative?

Q3 Are there any parts of the current Functional Specification that are unwise to include? Could you please explain why?

Category 2: Your (partial) solutions

Q4 *To answer this question you may optionally use the checklist in Annex B of this Questionnaire. Please provide additional information if possible.*

Which product(s) can you provide (or are you familiar with) that implement some or all functions (as discussed in the document 'Functional Specification – Paragraph 3.2')?

Q5 Which product(s) from other suppliers do you know that are able to cooperate/work together with these product(s) (given in question 4) thus enabling more of the functions described in the Functional Specification to be covered? Could you please explain which specific functions would be covered?

Q6 How much would these proposed product(s) (given in question 4) require customisation to satisfy our functionality?

Q7 To which standards do these proposed product(s) (given in question 4) comply?

Category 3: Support services

Q8 Could you provide details of your proposed product(s) with respect to the following aspects:

- Maturity
- Installed base
- Service Support Model

Q9 The following two sub questions refer to frameworks for services (infrastructure, application and business information management) such as ITIL, ASL and BISL:

- Are you familiar with these frameworks? And if yes, how do your services/processes align to them?
- Which processes within these frameworks are implemented by you?

Q10 What is your suggested migration or implementation strategy for your proposed product(s)?

Q11 Which supporting service(s) from your customer do the product(s) you propose require? (I.e. what does the customer has to provide?)

Q12 Which of the following category of suppliers (1, 2, 3, 4 and 5) is applicable to your organisation? Multiple answers are possible.

- **1) System Integrator:** Design, implementation, support
- **2) Full functionality provider:** Deliver complete system from specification, provides most of the functionality
- Partial functionality provider:
 - **3) Software product provider**
 - **4) Infrastructure service provider**
- **5) Consultant**

Category 4: Procurement options

Q13 Using your experience in contractual relations and using the goals set out, what would your observations/recommendations be on the following?

- Duration of the contract.
- Exit strategy upon ending the contract & migration to a new contract with new contract parties.
- Joint procurement by HA/RWS, or separate.
- Joint contract relationship HA/RWS acting as one customer, or separate.
- One contract (with one set of suppliers) for all traffic management centres, or one new contract for every new centre with potentially different suppliers.
- The optimum number and possibly kind of suppliers in the contractual relationship.
- The contract governance needed on the contract(s) you propose.
- Performance based contracting or contracting of services and products.

Would you please include relevant examples of contractual relations you are in (or have been in) that underline your answers.

Category 5: Others

Q14 Would you like to add anything relevant that we may have forgotten to ask?

Q15 What is your opinion on this market consultation process?

Q16 The CHARM programme is planning to set up a list of suppliers from within the technology market that are prepared to answer questions that are 1) relating to the CHARM project **and** 2) that have not been addressed during Round 1 and Round 2 of the Market Consultation.

We would like respondents to answer our questions as good as possible or indicate that the questions do not apply to your competences or line of business. Any suppliers can be added to the list or be removed from it at any point in time, at their request.
The suppliers on the list will be visible to all others by viewing the mailing list, along with the questions.

All questions will be published on the programme's website: www.rws.nl/charm in a complete question log.

It should be noted that *answers* will not be shared with any other supplier. If, however, we consider that an answer needs to be shared for clarification purposes, we will discuss this with the responding supplier prior to the publication of the answer.

Are you prepared to participate and be included on the list of respondent suppliers as referred to above? If yes, can you provide your email address for posting of questions?

Annex A - CHARM Goals

The CHARM programme goals are mentioned below. These will be refined during this year but are provided as an indication of the CHARM ambitions.

CHARM goals	
Flexible	The control room systems need to be flexible so that they can operate their road networks in order to provide 24/7 operation for 365 days of the year and provide resilience in the event of any control system not being operational and passing its authority to another control system.
Scalable	The control room system must be able to cope with current volumes of data created by thousands of roadside assets across thousands of kilometres of road network. Any schemes to be delivered within a 3 year horizon should be included. The data volume could also potentially increase with developments in in-car technology.
Cost Effective	There is a requirement to significantly reduce the whole life costs of control systems, through increasing competition for their supply, reducing the need for maintenance, allowing changes to be made quickly and efficiently.
Continuity of service	There should be a seamless transition/migration of the new system at the beginning, during and end of the service that will allow operation of the network to be unaffected.
Easily configured	The control room system must be safely, easily and quickly configured (e.g. to adjust for changes in the roadside systems algorithms) by operators without the need for external contracted support.
Easy to do business with	Interfacing with the control system should be open to all other technology and third parties (internal and external) who we may provide or receive information from.
Adaptable	The control room system must be adaptable to accommodate new technology or techniques.
No technology or vendor lock in	The control room system must not be dependent on any proprietary technology hardware, platform, or software. The system needs to be portable and transferable to other future technology as it develops.
Ergonomic Design	Current control room systems have evolved over a number of years which has resulted in operators having to interact with several systems, most of which have their own operator interface. There is a requirement to streamline and integrate the design of these operator interfaces ensuring that it is ergonomic and allows business processes to be completed efficiently.

Annex B – Checklist Question 4

The following checklist is an extract of the Functional Specification (Paragraph 3.2). For the full context and definitions, please see the full document.

Checklist functional areas			
Name	Deliverable? (Y/N)	Product details	Implementation example
EXTERNAL INTERACTION			
Internal user interaction			
Dissemination of information			
Traffic System and Objects interaction			
Sensors and actuators interaction			
Internal resources interaction			
DATA STORAGE AND RETRIEVAL			
Manage storage of incident data			
Manage hazardous goods, locations and rules data			
Monitor weather conditions			
Manage environmental conditions data store			
Manage inter-urban static road data			
Manage inter-urban traffic data			

Mange emergency event data			
Manage lanes in the inter-urban road network			
Provide inter-urban ramp metering			
Manage inter-urban traffic commands and messages			
Manage inter-urban road network speeds and headways			
Manage demand management data store			
Manage traffic prediction data store			
Output inter-urban traffic data			
Output inter-urban traffic commands and messages			
Output demand management information			
EVENT DETECTION AND HANDLING			
Analyse environmental data and implement actions			
Decide hazardous location			
Decide hazardous goods			
Classify and identify events			
Report event analysis data			
Validate event information			
Detect events from data			

Plan emergency event intervention			
Process emergency event progress reports			
Identify and classify emergencies			
Allocate resource			
Allocate time slot			
Deploy resource			
De-allocate resource			
PREDICTION			
Create traffic predictions with simulation methods			
Predict environmental conditions			
Predict short and medium term inter-urban conditions			
Process road traffic data			
Process traffic predictions results			
SCENARIOS			
Define scenario			
Manage planned inter-urban traffic strategy change			
Assess events and devise responses			
Provide event mitigations to traffic management			

DEMAND			
Analyse data to find demand management scenario			
Receive information on travel factors			
Simulate demand management scenario			
Review demand management scenario effects			
Produce demand management scenario			
Demand management scenario implementation			
PERFORMANCE			
Report network performance data			
Gather network performance data			
Compare network performance data			
Process network performance data			
EXTERNAL CONTACTS			
Planned Road Works Event			
Forecast Crowd Generating Event			
Forecast Weather Event			
Event Details			
Environmental Information			

Traffic information			
Traffic Control System			
Tunnel Control System			
Bridge Control System			
Roadside Emergency Resources			
Emergency Service Control System			
Barriers			
Signs and Signals			
Lighting			
Ramp Metering			
Traffic Monitoring			
Camera Images			
Camera Control			
Fog Data Collection			
Digital Maps Updates			
Other Stakeholders			
Emergency Contact			