



intended Invitation to Tender

Space Applications in Support of Future Cities



Workshop
Innovative space-based solutions for Future Cities
July 8-9, 2014 Vienna

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Background;

- > Today's level of urbanisation is unprecedented, with an upward trend,
- > This raises challenges for the future sustainability of living and working conditions in cities,
- > These challenges include aspects such as mobility, environment, energy, infrastructure,
- > To manage these challenges, information and communication plays a major role.

And

- > There is an considerable increase in the availability and quality of data and capabilities provided by satellites, including earth observation data, position and timing services and communication capabilities,
- > Spin off of technologies developed for human space offer solutions for remote and automated monitoring and operations.

Intended Invitation to Tender



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14.1AA.01

Title: FUTURE CITIES FS ARTES 20 SPACE APPLICATIONS IN SUPPORT OF FUTURE CITIES

Revision: 5

AO Number: 1-7974

Program ref.: ARTES 20 Phase II

Tender Type: C

Quarter: 143

Tender Status: INITIATED

Price Range: 200-500 KEURO

Budget Ref.: E/0520-01C - ARTES 20 Phase II

Proc. Prop.: DAC

Special Prov.: B+F+D+I+NL+E+CH+GB+IRL+A+N+FIN+POR+GR+LUX+CZ+DK+RO+PL

Establishment: ESTEC

Directorate: Directorate Telecom & Integrated Applica

Department: Integrated & Telecom-related Applica Dep

Division: Applications Demonstration Projects Offi

Responsible: Schoenberg, Andreas

Modern day levels of urbanisation are unprecedented and, according to the United Nations, the upward trend is set to continue. Globally, the level of ur

- > **To put forward solutions introducing the added value of space assets in support of developing sustainable services in support of future cities,**

- > **The objective of the feasibility study is to validate the proposed opportunity for an economically sustainable solution in support of Future Cities.**

- > **In support of this, the feasibility study shall**
 - demonstrate that the proposed solution is responding to real user needs, aligns with the vision and strategy of the future cities supporting the activity, and meets relevant constraints,
 - demonstrate that the proposed solution is technically feasible and is capable of interfacing with the existing or planned infrastructure of the future city as well as with the systems of its users and the application providers,
 - demonstrate that the proposed solution is socio-economically viable and can be deployed in multiple future cities.

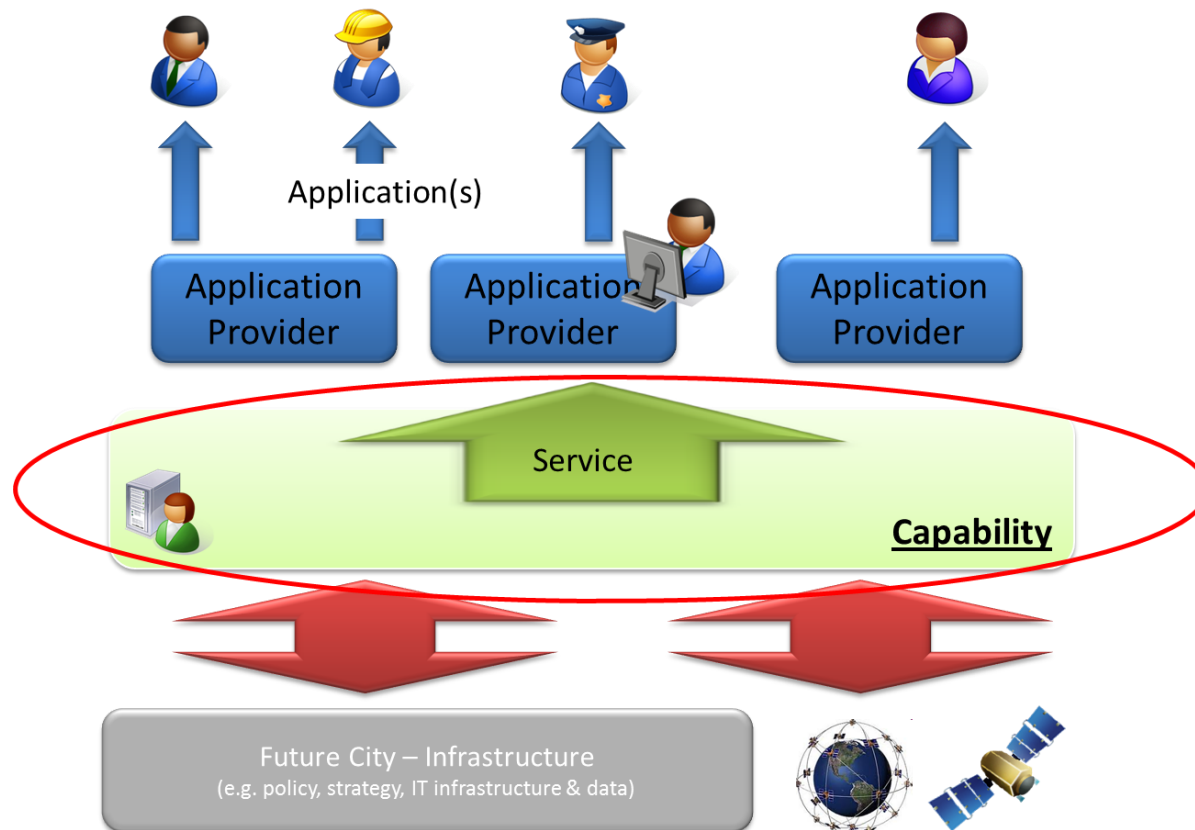
- > The system defined and evaluated in the Feasibility Study and the services provided by the system shall be driven by the user (pull)
- > The proposed solution shall answer to a compelling need and will therefore most likely translate into an economic benefit for both the user(s) and the service provider(s),
- > The proposed solution shall combine (or 'integrate') data from at least two existing and different space assets, such as Satellite Communication, Earth Observation, Satellite Navigation, Human Spaceflight technologies and others.

The use of space assets as part of the integrated solution is not limited to ESA missions only, it can also include non – ESA missions and satellite assets.

- > ARTES 20 IAP activities are user driven. As such, it is required to involve users of the proposed solutions as well as the cities in which the solution is deployed.
 - ❖ The user may be part of the bidding team as subcontractor or external service or involved as advising partner.
 - ❖ If involved as an advising partner (in-kind contribution)
- > Origin of the users is **not** limited to ESA member states **unless** they are a sub contractor.
- > User contribution would typically include;
 - ❖ definition of key performance indicators and success criteria to be achieved at the end of the feasibility study,
 - ❖ identification of current operational processes and their issues,
 - ❖ support to definition of user scenarios/processes,
 - ❖ validation of user requirements,
 - ❖ identification of expected benefits and financial constraints,
 - ❖ support with validation of the Proof of Concept,
 - ❖ indication of interest in a potential follow-up Demonstration Project,
 - ❖ towards the end of the feasibility study, information on the user role for the potential follow-on Demonstration Project and planned contribution,
 - ❖ support to promotion of the targeted services.

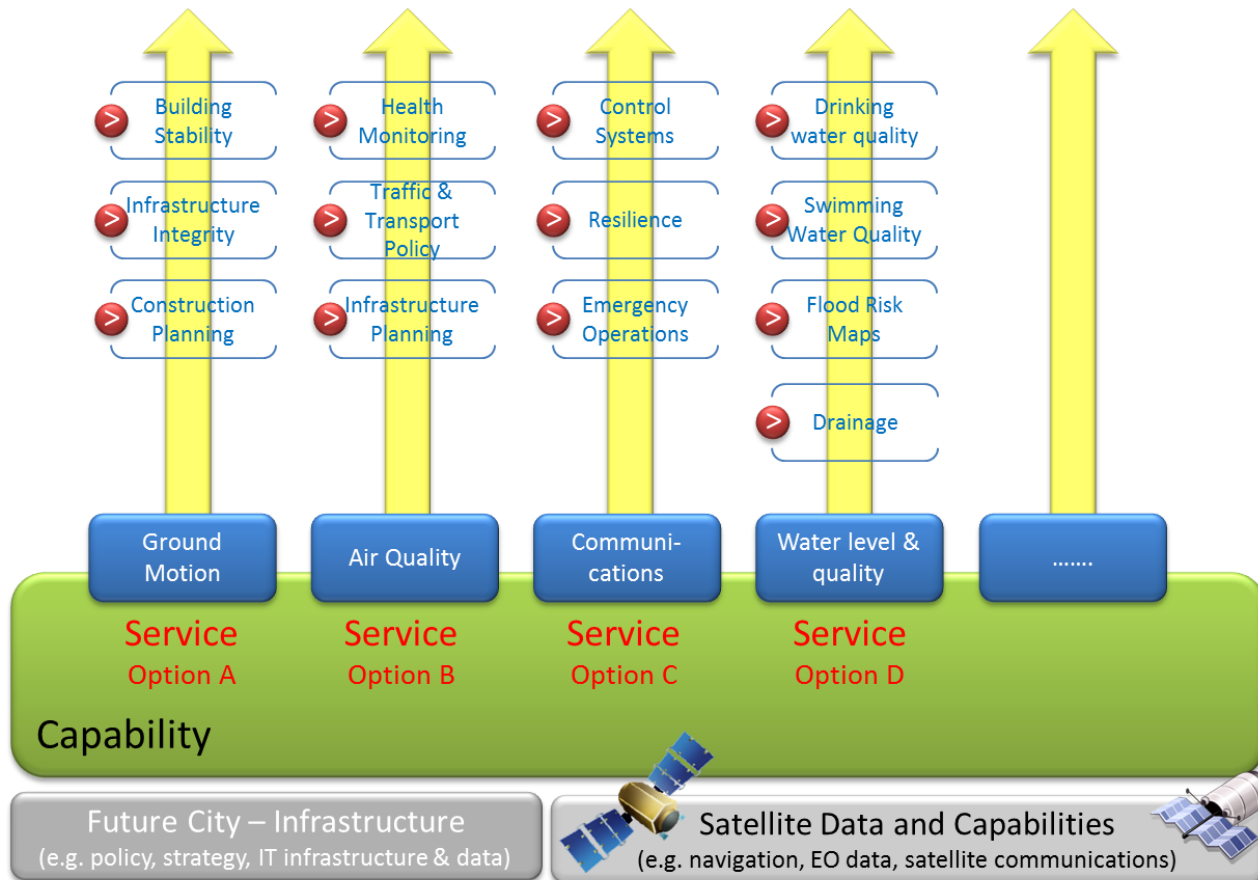
Scope of the Solution - 1

The study shall focus on the pro-active development and use of so-called "smart" capabilities that introduce methodologies and services to measure, manage and improve the infrastructure and networks of existing cities through the inclusion and integration of space capabilities

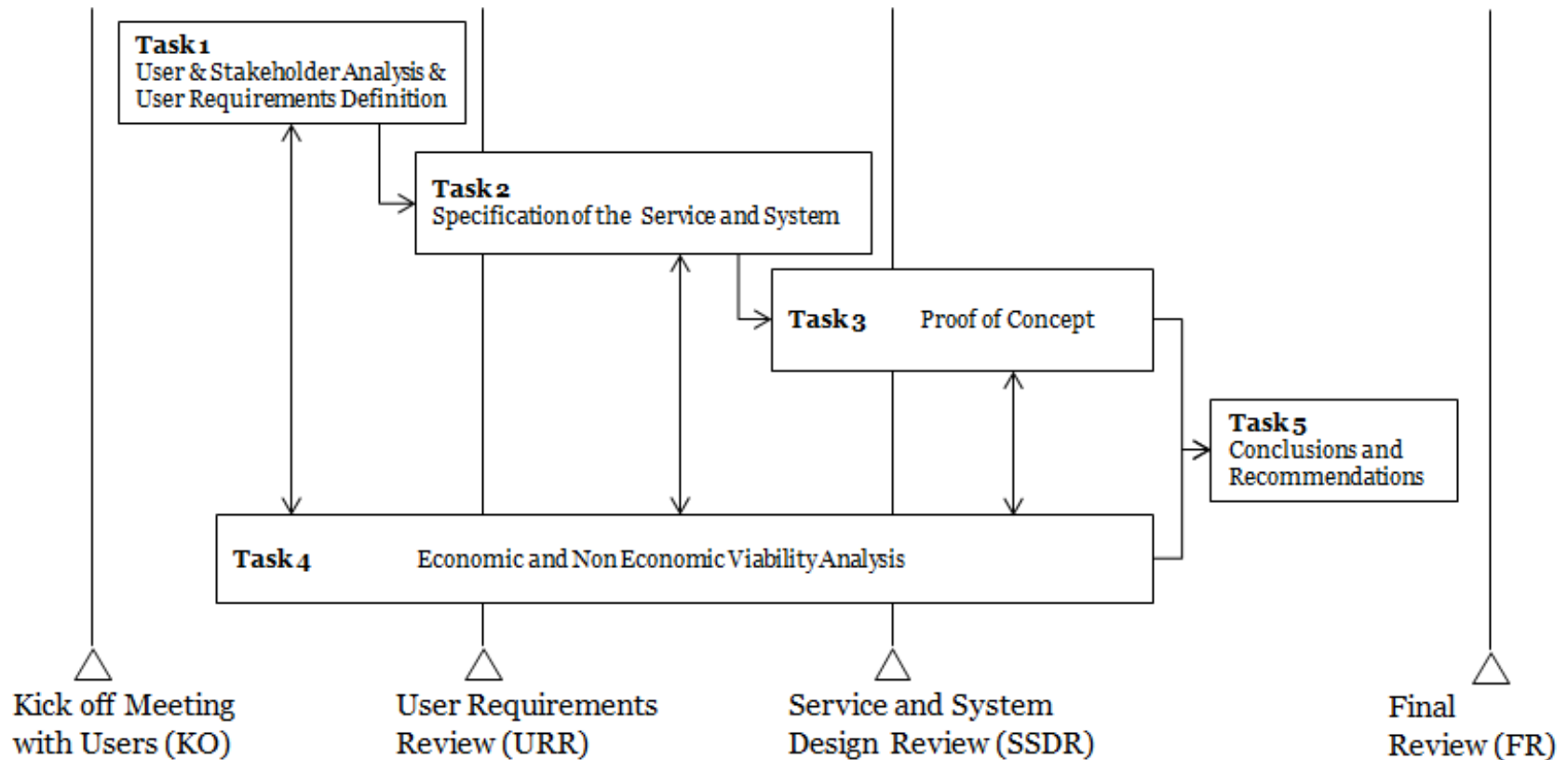


Scope of the Solution - 2

The proposed solution shall be a capability providing an information service in support of multiple future city applications.



Study Tasks and Activities



- > **Invitation to Tender is expected to be published soon, emits.esa.int**

- > Preliminary information can be found on
 - The intended Invitation to Tender is published emits.esa.int,
 - The Management Requirements for ARTES Feasibility Studies in Direct Negotiations are published on emits.esa.int, ref. AO6124. This document describes the scope of work, the planning of the activities (review meetings), the scope of the deliverables, management and reporting of an ARTES 20 Feasibility Study.
 - On the ARTES Applications web portal, <http://artes-apps.esa.int/>, you will find the ARTES 20 IAP Proposal Guide

- > The Invitation to Tender is open for industries from ESA Member States participating to ARTES Element 20 Phase II.
 - ❖ These countries are B+F+D+I+NL+CH+GB+IRL+A+N+FIN+POR+LUX+CZ+DK+RO+PL.
- > a **Letter of Support** from the related National Delegation to ESA is **mandatory**. Proposals which comprise participants from more than one participating ESA Member State will require a Letter of Support from each of the respective National Delegations.
- > Consortium composition.
- > Once the ITT is published all communication (questions, request for clarification) with ESA shall be in writing to the Contracts Officer. Questions and answers will be published on EMITS (no indication of origin of question is published).
- > Prime Contractor and Sub Contractors shall be registered as an ESA tenderer
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Thank You for your Attention

