Anti-SUPERBUGS
Pre-Commercial Procurement

A PCP for smart ICT solutions against Multi-resistant microorganisms

SMART CITY EXPO, Barcelona, 14/11/2018

Agència de Qualitat i Avaluació Sanitàries de Catalunya

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The Consortium

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General Objectives

The ANTISUPERBUGS PCP buyers group challenges the market to develop **novel technologies aimed to upgrade and strengthen current Surveillance & Infection Control Systems of patients and environment enabling real time prevention, real time reporting and prompt intervention**

Thanks to these novel technologies ANTISUPERBUGS PCP buyers group will:

- **improve the quality of care processes in hospitals**
- **reduce both the costs and the operational impact resulting from infections caused by Multi-Drug Resistant Organisms** (MDROs, otherwise known as Superbugs)
- **improve the appropriateness of antimicrobial medicine usage**
- **reduce the community and social care impact of MDROs acquired in hospital**

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Specific Objectives

- **Improvement of the quality** and **reduction of the costs** of the collateral effects of the care process in hospitals
- Creation and consolidation of an **pan-European network of procurers**
- Definition of the cross-border and joint **pre-commercial public procurement** procedure
- **Mutual learning, knowledge sharing and transferring** within a **multidisciplinary consortium**

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One joint PCP
6 Commisioning Authorities

Agència de Qualitat i Avaluació Sanitàries de Catalunya
AGENCY FOR HEALTH QUALITY AND ASSESSMENT OF CATALONIA

PROVINCIA AUTONOMA DI TRENTO

ICO Institut Català d'Oncologia

Helios

Hospital Universitari MútuaTerrassa

UNIKLINIK RWTH AACHEN

Sheffield Teaching Hospitals NHS
NHS Foundation Trust

AQuAS will act as **procuring entity** on behalf of the buyers group

The total jointly committed Budget : **€3 millions** for the PCP

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From the Idea to the Solution

Challenge :
Surveillance &
Infection Control
System:
Prevention
Reporting
Prompt intervention

Common Needs
Analysis and
Functional
Requirements

€3 million
total Award
to winners during the
PCP to help bring
product to market

Feasibility Check
with the potential
suppliers on the unmet
Needs to adjust the
Business case design

Assesment of
best bids for
participation in
the PCP process

Procurers buys R&D
from several suppliers in
parallel in a competitive
evaluating progress.
The risks and benefits of R&D
shared with suppliers.

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WHAT ARE THE NEEDS

ACCURATE High sensitivity and specificity of micro-organism identification

AFFORDABLE cost effective compared to current practices.

RAPID Real time alert System. Continous or High Frequency surveillance

CONNECTED Integration with PHRs, using *interoperability standards (HL7 etc)*

EASY TO USE To be deployed/installed into existing healthcare environments. Minimally invasive for patients

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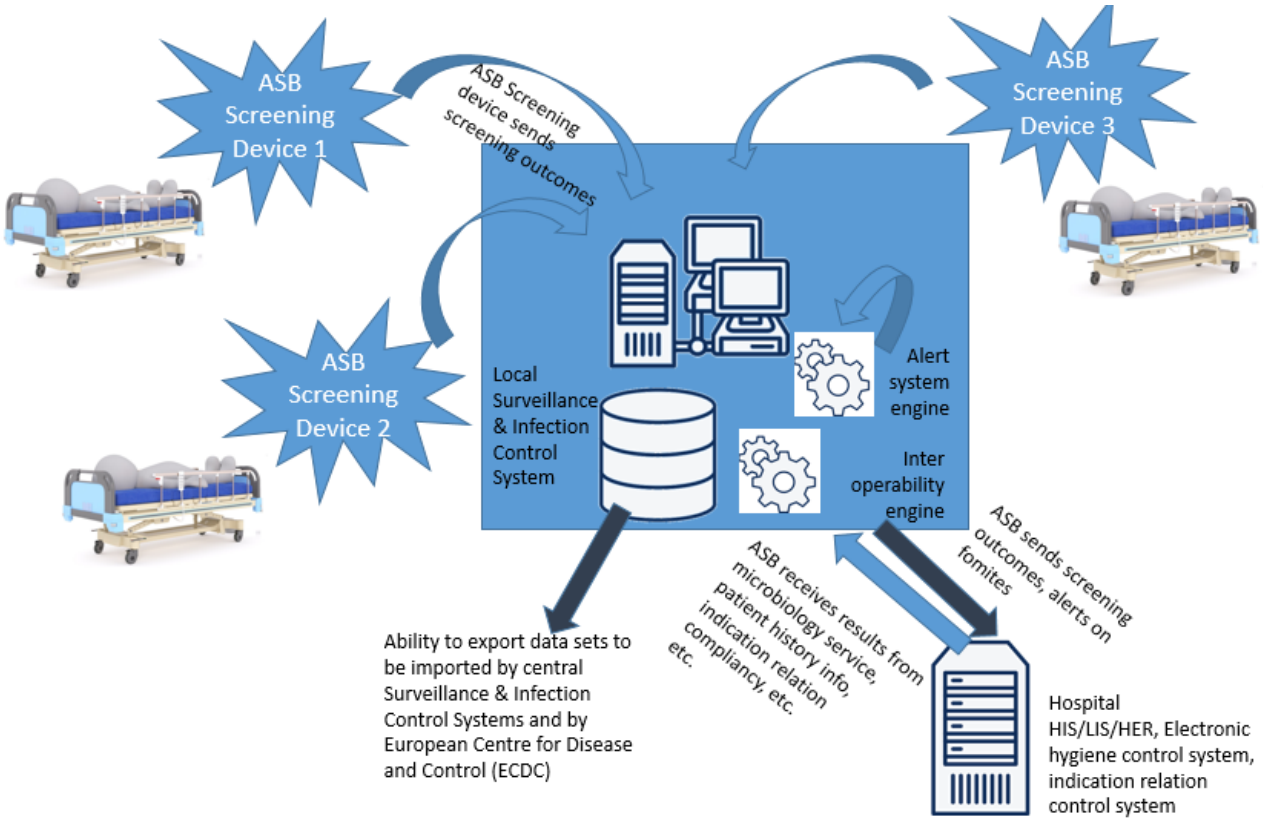
Challenge Brief



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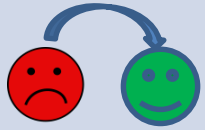
Challenge Brief – New approach

Requirements/characteristics	Microbiology Laboratory	PCRs	ASB
High sensitivity			
High specificity			
Environmental detection (no physical sample from the patient)			
Distant detection (enabling automatic and continuous detection with no user intervention)			
Real time (immediate/short turn-around time of test)			

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Red = not feasible right now

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Use cases

USE CASE SCENARIO 1

Nowadays: Unconscious patient with fever is admitted in the emergency room. Blood sample and microbiological samples are sent to the lab, and first results are reported to the clinician within 30 min. Later, patient is transferred to the ICU. On the second day patient presents with fever, headache and nausea. The doctor started calculated treatment with antibiotics. Additional lab results reported – patient's situation worsens and receives reserved antibiotics.

Future: The new ASB* system detects on arrival of the patient by use of non-invasive sampling that there is a colonisation/contamination with Clostridium difficile.

Thanks to this detection and the patients health conditions, the physician decides which antibiotics are to be prescribed to the patient and whether isolation or cohort-isolation is needed

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Use cases

USE CASE SCENARIO 2

Nowadays: Mrs. M. is hospitalized in the ward. The professional enters the room and preforms the usual interventions. While doing that the professional has contacted the patient and surface. The professional then leaves the room. The next day the professional is not feeling well and it will be identified that he was carrying MRSA. Another 24h later, the patient Mrs. M. is having symptoms of respiratory infections (e.g. coughing). Additional lab results reported – patient's situation worsens and receives reserved antibiotics.

Future: The new ASB-system detects on arrival of the patient by use of non-invasive sampling that there is a colonisation/contamination with either Klebsiella pneumonia or Acinetobacter baumannii.

Thanks to this detection and the patients health conditions, the physician decides which antibiotics are to be prescribed to the patient and whether isolation or cohort-isolation is needed

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Use cases

USE CASE SCENARIO 3

Future: On admission at the hospital, all patients are scanned by the ASB system, that monitors regularly the patients to detect the presence of Clostridium difficile and either Klebsiella pneumonia or Acinetobacter baumannii or both. A continuous monitoring system that is connected to a hospital information system. As soon as either Clostridium difficile or Klebsiella pneumonia or Acinetobacter baumannii is detected, the ASB system alerts the hospital control and surveillance centres and the proper protocols are triggered.

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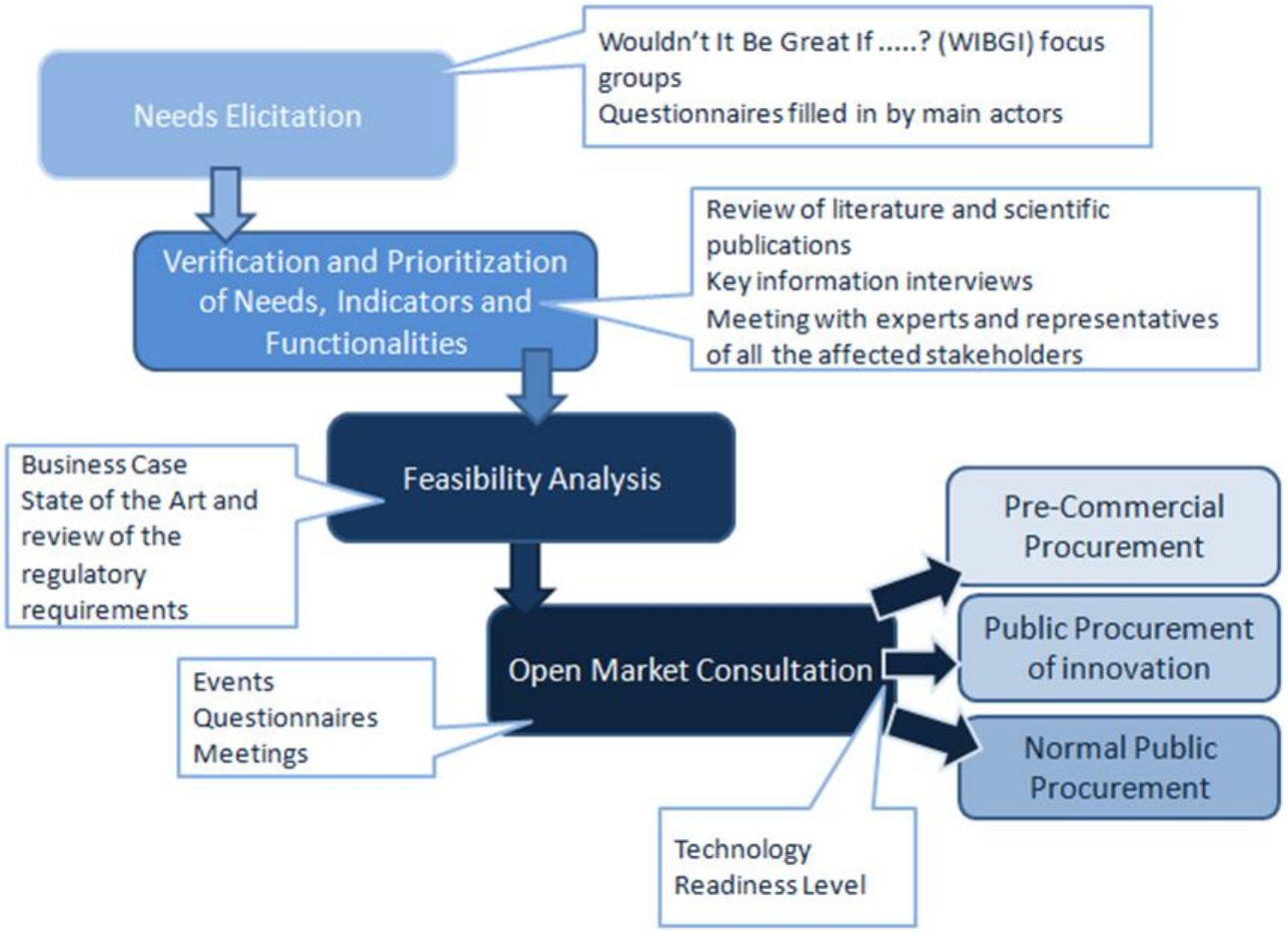
Methodological approach



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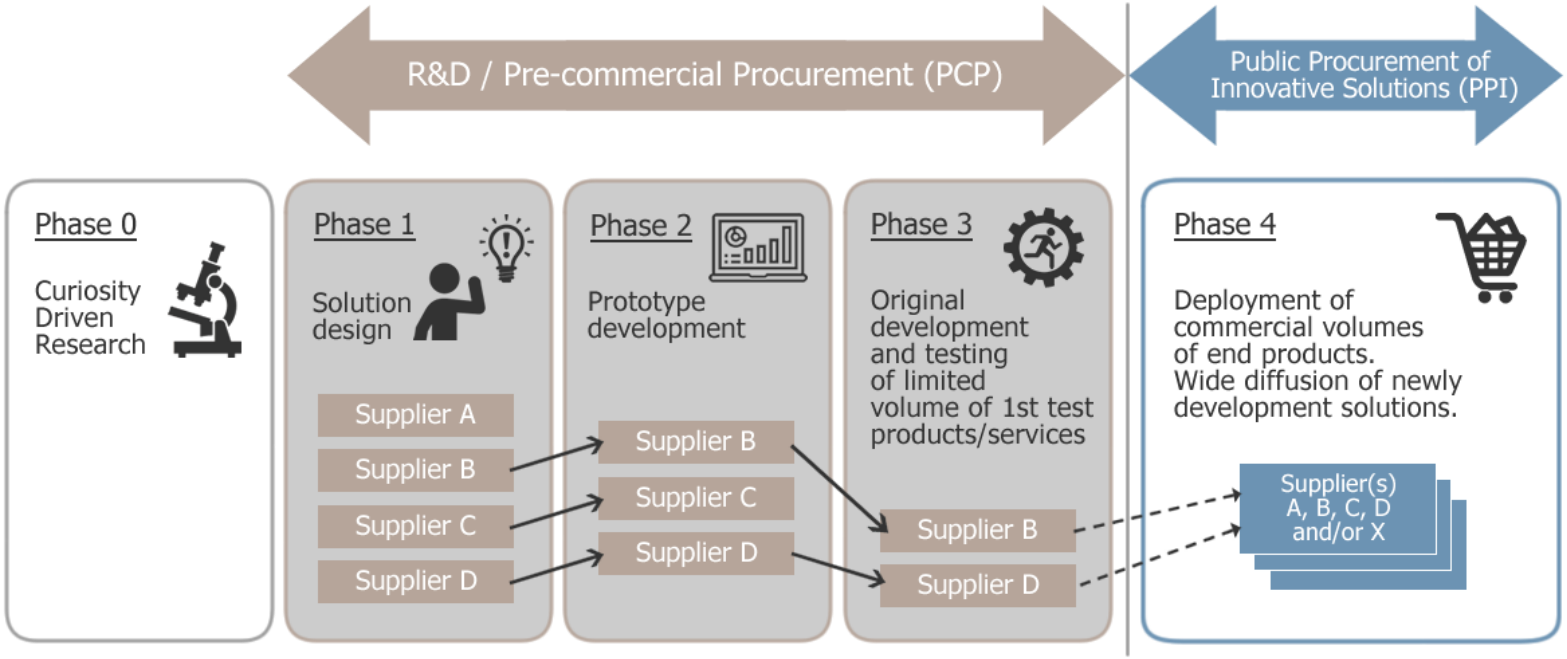
Description of the procurement



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	Phase 1 Solution design	Phase 2 Prototyping	Phase 3 Original development and validation & testing of a limited set of prototype devices or prototype services within the contracting authorities
Maximum number of selected Bidders	5	4	2
Maximum budget per phase (Euros)	380K	Approx 1,3M	Approx 1,75 M
	approx. 3,4M		
Duration (months)	3	6	9
Regulation	Phase 1 Contract	Phase 2 Contract	Phase 3 contract
	Call for Tender/Invitation To Tender Challenge Brief Framework Agreement		

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Thank you

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