

Technical Offer Assessment Report of the ANTI-SUPERBUGS PCP's submitted offers

File number: 3020170339

GENERAL INFORMATION:

- **Procedure:** Pre-Commercial Public Procurement
- **Phase:** Phase II Prototyping
- **Tender budget:** 2,848,450.41 € (VAT excluded)
- **Maximum budget in the Phase "Phase II":** 360.803,72 € (VAT excluded)

BACKGROUND

The Envelope B ("Technical Offer") of the Phase II was opened by the Tendering Board on June 22nd, 2020.

In agreement with section 4.2.2.3 of the Request for Tender (file name: Administrative Clauses), once opened, each technical offer was reviewed all members of the Experts Board.

The Expert Board members were:

- Mr. Josep Trenado, Fundació Mutua de Terrassa (FMT).
- Ms. Olivia Balagna, Provincia Autonoma di Trento (PAT).
- Mr. Beniam Ghebremedhin, HELIOS Universitätsklinikum Wuppertal (HELIOS).
- Mr. Dave Partridge, Sheffield Teaching Hospitals NHS Foundation Trust (STH).
- Mr. Enric Limón Cáceres, Institut Català d'Oncologia (ICO/VINCat).
- Ms. Meike Bomhof (Independent Expert).
- Ms. Tram Trinh (Independent Expert).

The Expert Board adopts the following final assessment and scoring of the technical offers under the Criteria described in ANNEX VII.

RESULTS

The results are presented in two parts:

1. The Final Ranking scoring table
2. The technical offer assessment of each bidder
 - a. SENSE4CARE
 - b. CULTURE (Bahia- Gradient- INL)
 - c. BUGWATCHER
 - d. ASB-IMS2

Grant Agreement no.: 688878

1. The Final Ranking scoring table

		Technical feasibility	ASB: Viable: organic components de factor MUST DETECT the combinational colorations from Clostridium difficile Spores and/or microorganisms (more delectious considered of higher priority)	ASB: Viable: organic components de factor MUST DETECT the combinational colorations from Klebsiella pneumoniae O157 and/or Viable organic components colorations from MRSA	TECHNICAL PERFORMANCE INDICATORS	ASB: Viable: organic components de factor COULD DETECT the combinational colorations from Clostridium difficile Spores, Toxins A and B, and (if any) toxin (detritus)	ASB: Viable: organic components de factor COULD DETECT the combinational colorations from Klebsiella pneumoniae Carbapenem & ESBL production	ASB: Viable: organic components de factor COULD DETECT the combinational colorations from any additional Gram-negative agent or any additional resistance	ASB: ITS Solution COULD detect metabolic adduced detection of the colorations using non-invasive sampling	ASB MUST comprise a local Surveillance & Infection Control System of the target (microorganisms) able to store all the data and to export data out it	ASB MUST comprise an interoperable engine	ASB MUST comprise an alert system engine of generated alerts, based on the information received from the sensors, and (if appropriate) with existing technologies (product biopharmaceuticals development) able to assess the risks of infection (if any)	ASB COULD comprise existing technologies (product biopharmaceuticals) development able to assess the risks of infection	Quality Plan	Business model & Plan	Financial feasibility	Further Content (IPRs, ethics & security issues and % of R&D)	TOTAL (up to 85 points)
1	SENSE4CARE	43,86	10,20	9,60	6,91	0,50	0,50	0,50	0,55	3,40	6,30	4,50	0,90	9,58	5,83	5,83	1,75	66,86
2	CULTURE (Bahia-Gradient-INL)	34,04	7,80	6,60	2,64	0,40	0,35	0,40	0,00	3,80	6,65	4,50	0,90	9,58	7,50	7,08	1,92	60,12
3	BUGWATCHER	34,86	4,80	9,00	5,31	0,05	0,00	0,05	0,50	3,80	6,30	4,25	0,80	7,92	7,32	7,50	1,92	60,11
4	ASB-IMS'	36,80	10,20	10,20	3,70	0,20	0,30	0,60	0,10	3,40	4,90	2,50	0,70	7,32	5,42	6,67	1,75	58,55

Technical Offer Assessment - Summary

Bidder/s	Sense4Care	Overall Score (up to 85 points)	66,86
I. Technical feasibility		43,86 / 53 points	
ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from Clostridium difficile spores and/or microorganism (spore detection is considered of higher priority)			10,20 / 12 points
<i>In case of the microorganism detection the requirement is satisfactorily addressed: the proposed technological development is sufficiently aligned to the background the R&D will be based upon, to the current SoA and how it will go beyond of it; the proposal sufficiently explain how the MUST HAVE technical specifications and requirements and the use case scenarios will be addressed, as well as the description of the technological development plan and of the technological risk management.</i>			
<i>However, in the case of the spore detection, the proposed technological development is sufficiently aligned to the background the R&D will be based upon, but parts of the R&D they will perform are not sufficiently explained. This proposal is addressing this requirement in an equivalent way of one competing bidding proposal and better comparing with two of competing bidding proposals</i>			
ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from Klebsiella pneumoniae OR/AND ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from MRSA			9,60 / 12 points
<i>The requirement is satisfactorily addressed for one of two target microorganisms. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA and how it will go beyond of it is sufficiently described. In addition, it is well explained how the MUST HAVE technical specifications and requirements and the use case scenarios will be addressed, as well as the description of the technological development plan and of the technological risk assessment. On the other hand, it sufficiently described the alignment of the proposed technological development to the background the R&D will be based upon and to the current SoA. However, parts of the R&D they will perform are not sufficiently explained. The technological risk management in the case of Klebsiella detection is not sufficiently described. This proposal is addressing better this requirement in comparison with two of the competing bidding proposals, but worse than one of the competing bidding proposal.</i>			
TECHNICAL/PERFORMANCE INDICATORS			6,91 / 8 points
<i>The proposal demonstrates Bidder's understanding of ANTI -SUPERBUGS unmet needs & use case scenarios and its ability to achieve committed values. The technological feasibility analysis, development plan and risks management analysis are clear and comprehensive. This proposal is addressing better this requirement in comparison with the rest of the competing bidding proposals.</i>			
ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from Clostridium difficile Spores, Toxins A and B, and Binary toxin (transferase)			0,50 / 1 point
<i>The requirement that the detector COULD DETECT the contaminations/ colonisations from Clostridium difficile Spores, Toxins A and B, and Binary toxin (transferase) is not enough addressed. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA and how it will go beyond of it is sufficiently described but the explanation on how the MUST HAVE and NICE TO HAVE technical specifications and requirements and the use case scenarios will be addressed is not sufficiently described, specially for Toxins A and B, and Binary toxin (transferase). This proposal is addressing better this requirement in comparison with the rest of the competing bidding proposals.</i>			
ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from Klebsiella pneumoniae Carbapenem & ESBL production			0,50 / 1 point
<i>The requirement that the technology COULD DETECT the contaminations/ colonisations from Klebsiella pneumoniae Carbapenem & ESBL production is not enough addressed. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA and how it will go beyond of it is sufficiently described but the explanation on how the MUST HAVE and NICE TO HAVE technical specifications and requirements and the use case scenarios will be addressed is not sufficiently described. Still this proposal addresses the requirement better than the others.</i>			
ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from any additional Gram-negative pathogen or any additional resistance			0,50 / 1 point
<i>The requirement that the technology COULD DETECT the contaminations/ colonisations from any additional Gram-negative pathogen or any additional resistance is not enough addressed. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA and how it will go beyond of it is sufficiently described but the explanation on how the MUST HAVE and NICE TO HAVE technical specifications and requirements and the use case scenarios will be addressed is not sufficiently described. This proposal is addressing better this requirement in comparison with two of the competing bidding proposals, but worse than one of the competing bidding proposals.</i>			
ASB ICT Solution COULD detect nucleic acid-based detection of the target microorganisms using non-invasive sampling			0,55 / 1 point
<i>The requirement that the technology COULD detect nucleic acid-based detection of the target microorganisms using non-invasive sampling is not enough addressed. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA and how it will go beyond of it is sufficiently described but the explanation on how the MUST HAVE and NICE TO HAVE technical specifications and requirements and the use case scenarios will be addressed is not sufficiently described. Still this proposal addresses the requirement better than the others.</i>			
ASB MUST comprise a local Surveillance & Infection Control System of the target microorganism(s) able to store all the data and to export data sets			3,40 / 4 points
<i>The requirement that the solution MUST comprise a local Surveillance & Infection Control System of the target microorganism(s) able to store all the data and to export data sets technology COULD detect nucleic acid-based detection of the target microorganisms using non-invasive sampling is enough addressed although not totally satisfactorily. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA and how it will go beyond of it is sufficiently described, as well as the explanation on how the MUST HAVE and NICE TO HAVE technical specifications and requirements and the use case scenarios will be addressed. However, the description of the technological development plan and of the technological risk management could be better described, comparing with the rest of Bidder's description. This requirement is equivalently addressed by one competing bidding proposal and worse addressed comparing with two of the rest of competing bidding proposals</i>			
ASB MUST comprise an interoperability engine			6,30 / 7 points
<i>The requirement that the solution MUST comprise an interoperability engine is enough addressed although not satisfactorily. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA and how it will go beyond of it is sufficiently described, as well as the explanation on how the MUST HAVE and NICE TO HAVE technical specifications and requirements and the use case scenarios will be addressed. However, the description of the technological development plan and of the technological risk management is well addressed comparing to some of other bidding proposals, but still there is another proposal from a competing bidder that is better addressing this requirement although not satisfactorily. This requirement is equivalently addressed by one competing bidding proposal, better addressed comparing with one competing bidding proposal and worse addressed comparing with one of competing bidding proposals</i>			
ASB MUST comprise an alert system engine (it generates alerts, based on the information retrieved by the screening device, to be sent to the HIS/LIS/EHR/users and it interoperates with existing technologies/products/platforms/systems/developments capable to assess the risks of infection (if any))			4,50 / 5 points
<i>The requirement that the solution MUST comprise an alert system engine capable to assess the risks of infection is enough addressed although not satisfactorily. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA, overall system requirements, clinical insights for the relevant clinical processes/clinical situations is sufficiently described, as well as the explanation on how the proposal will address ASB -PERF-015 and ASB-PERF-022 together with the MUST HAVE/NICE TO HAVE technical specifications and requirements. However, this requirement is equivalently addressed by one competing bidding proposal and better addressed comparing with two of the rest of competing bidding proposals.</i>			
ASB COULD comprise existing technologies/products/platforms/systems/developments capable to assess the risks of infection			0,90 / 1 point
<i>The requirement that the solution COULD comprise existing technologies/products/platforms/systems/developments capable to assess the risks of infection is enough addressed although not totally satisfactorily. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA, overall system requirements, clinical insights for the relevant clinical processes/clinical situations is sufficiently described, as well as the explanation on how the proposal will address ASB -PERF-015 and ASB-PERF-022 together with the MUST HAVE/NICE TO HAVE technical specifications and requirements. However, this requirement is equivalent addressed comparing with one competing bidding proposal and better addressed comparing with two of the rest of competing bidding proposals.</i>			

II. Quality Plan

9,58 / 10 points

The Quality Plan is enough and almost satisfactorily addressed. The description of project governance, the project management and the change management is sufficiently described, as well as the description of quality aspects of the solution design and development, with special reference to the verification and validation of the proposed technology, the work planning, personal and material resources, and the identification and management of logistic, regulatory and legal aspects. The risk assessment and the risk mitigation strategy is enough described comparing to the rest of the bidders, but not completely sufficiently. However, this requirement is equivalently addressed comparing with one competing bidding proposal and better addressed comparing with two of the rest of competing bidding proposals.

III. Business model & Plan

5,83 / 10 points

The Business Plan is not enough addressed Business model definition (e.g.: analysis of the business model canvas, SWOT analysis, definition of the competitive advantage and value proposition) is sufficiently described but the preliminary business plan (including marketing & sales plans) that explains the proposed approach to commercially exploit the results of the PCP and to bring a viable product or service onto the market is not sufficiently described, as it covers target markets, customers and sales projections, detailed pricing strategy, but commercial alliances and distribution not described. However, this proposal is addressing this requirement better than one competing bidding proposal but worse than two of the rest of competing bidding proposals.

IV. Financial feasibility

5,83 / 10 points

The Financial Feasibility is not enough addressed. The description of the analysis of the research and development costs structure of the proposed solution, comparing the allocations of the different types of expenditures and investments, is sufficiently described. However, the description of the analysis of the business, marketing and sales plan costs structure is not sufficiently described as marketing and sales costs structure does not appear in the document. This proposal is addressing this requirement worse than all the competing bidding proposals.

V. Further Content

1,75 / 2 points

The IPRs, ethics, security issues and % of R&D are enough, almost satisfactorily, addressed. On the one hand, a list of the pre-existing rights (background) relevant to the tenderer's proposed solution are described. On the second, ethics protocol exists, but no description of how issues would be handled process wise. On the third, security issues protocol and self-assessment exists although there is no explanation on the potential approach in case there is a security issue during the PCP execution. Lastly, self-declaration but not thorough evidence of the value of phase 1, 2 details relatively to each other. However, this proposal is addressing this requirement in an equivalent way of one competing bidding proposal but worse than two of the rest of competing bidding proposals.

Technical Offer Assessment - Summary

Bidder/s

CULTURE (Bahia-Gradient-INL)

Overall Score (up to 85 points)

60,12

I. Technical feasibility

34,04 / 53 points

ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from Clostridium difficile spores and/or microorganism (spore detection is considered of higher priority) 7,80 / 12 points

The requirement that the technology MUST DETECT the contaminations/ colonisations from Clostridium difficile spores and/or microorganism is enough but not satisfactorily addressed. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA and how it will go beyond of it is sufficiently described. However, the detection of spores is referred to only once and the likelihood of success of this technology in detecting spores is not well defined. It is unclear how a clinically meaningful threshold for VOCs will be arrived upon. This proposal is addressing better this requirement in comparison with one of the competing bidding proposals, but worse than two of the competing bidding proposal.

ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from Klebsiella pneumoniae OR/AND ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from MRSA 6,60 / 12 points

The requirement that the technology MUST DETECT the contaminations/ colonisations from Klebsiella pneumoniae OR/AND ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from MRSA is enough addressed but not satisfactorily. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA and how it will go beyond of it is sufficiently described. However, the explanation on how the MUST HAVE technical specifications and requirements and the use case scenarios will be addressed, together with the description of the technological development plan and of the technological risk management, are not sufficiently described compared to the rest of the bidders.

TECHNICAL/PERFORMANCE INDICATORS

2,64 / 8 points

The proposal does provide information but serious concerns exist about the Bidder's understanding of ANTI -SUPERBUGS unmet needs & use case scenarios and its ability to achieve committed values. The technological feasibility analysis, development plan and risks management analysis are not clear enough and are not sufficiently comprehensive. This proposal is addressing this requirement worse than any competing bidding proposals.

ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from Clostridium difficile Spores, Toxins A and B, and Binary toxin (transferase) 0,40 / 1 point

The requirement that the solution COULD DETECT the contaminations/ colonisations from Clostridium difficile Spores, Toxins A and B, and Binary toxin (transferase) is poorly but yet not enough addressed. Although the alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA and how it will go beyond of it is sufficiently described, it makes little attempt to detail the challenges posed by spore and toxin detection and the way in which the R&D phase of development of the product will address them. This proposal is addressing better this requirement in comparison with two of the competing bidding proposals, but worse than one of the competing bidding proposal.

ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from Klebsiella pneumoniae Carbapenem & ESBL production 0,35 / 1 point

The requirement that the solution COULD DETECT the contaminations/ colonisations from Klebsiella pneumoniae Carbapenem & ESBL production is more than poorly addressed but still not enough. There is a commitment to the detection of all Cl. difficile -related compounds and a guarantee that the device will be able to detect them, especially with the integration of machine learning. However, no further information is given. This proposal is addressing better this requirement in comparison with two of the competing bidding proposals, but worse than one of the competing bidding proposal.

ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from any additional Gram-negative pathogen or any additional resistance 0,40 / 1 point

The requirement that the solution COULD DETECT the contaminations/ colonisations from any additional Gram -negative pathogen or any additional resistance is more than poorly but still not enough addressed since there is no clear indication in the proposal suggesting feasibility of the product to distinguish resistant from susceptible strains. This proposal is addressing better this requirement in comparison with one of the competing bidding proposals, but worse than two of the competing bidding proposal.

ASB ICT Solution COULD detect nucleic acid-based detection of the target microorganisms using non-invasive sampling 0,00 / 1 point

The proposal does not provide any information and/or insufficient information provided to demonstrate that the Bidder has the relevant understanding of this requirement and/or insufficient information provided to demonstrate that the Bidder has the relevant ability to achieve what proposes and/or what proposed does not demonstrate a clear step forward in comparison with the state of the art and/or there is little or no evidence to support the response.

ASB MUST comprise a local Surveillance & Infection Control System of the target microorganism(s) able to store all the data and to export data sets 3,80 / 4 points

The requirement that the solution MUST comprise a local Surveillance & Infection Control System of the target microorganism(s) able to store all the data and to export data sets is almost satisfactorily addressed as it contains sufficient information on the local Surveillance and Infection Control System especially on the background R&D, the current State of the Art and how it will go beyond it. It also explains how the proposal will address the MUST HAVE technical specifications and requirements, the NICE TO HAVE technical specifications and requirements (in case the Bidder commits to address any of them) and the use case scenarios. Lastly, the description of the technological development plan and of the technological risk management is not fully described. However, this requirement is equivalent addressed comparing with one competing bidding proposal and better addressed comparing with two of the rest of competing bidding proposals

ASB MUST comprise an interoperability engine 6,65 / 7 points

The requirement that the solution comprise an interoperability engine is almost satisfactorily addressed as it contains sufficient information on the local Surveillance and Infection Control System especially on the background R&D, the current State of the Art and how it will go beyond it. It also explains how the proposal will address the MUST HAVE technical specifications and requirements, the NICE TO HAVE technical specifications and requirements and the use case scenarios. Lastly, the technological development plan and of the technological risk management is not fully described. This proposal is addressing this requirement better than all the competing bidding proposals.

ASB MUST comprise an alert system engine (it generates alerts, based on the information retrieved by the screening device, to be sent to the HIS/LIS/EHR/users and it interoperates with existing technologies/products/platforms/systems/developments capable to assess the risks of infection (if any)) 4,50 / 5 points

The requirement that the solution MUST comprise an alert system engine is almost satisfactorily addressed. The alignment of the proposed technological development to the background the R&D will be based upon, to the current SoA, overall system requirements, clinical insights for the relevant clinical processes/clinical situations is sufficiently described. Despite the fact that the alert system's ability to manually modify alert algorithms is desirable, the mechanism and process of alert generation and communication is not fully described. However, this requirement is equivalently addressed by one competing bidding proposal and better addressed comparing with two of the rest of competing bidding proposals.

ASB COULD comprise existing technologies/products/platforms/systems/developments capable to assess the risks of infection 0,90 / 1 point

The requirement that the solution COULD comprise existing technologies/products/platforms/systems/developments capable to assess the risks of infection is almost satisfactorily addressed given designed connectivity of product. The assessment of the risk of infection and its consecutive measures is based upon various sources, among which the local detection and surveillance system and the Explainable Artificial Intelligence technology. The way the machine-learning engine will be trained and validated could be better described. However, this requirement is equivalent addressed comparing with one competing bidding proposal and better addressed comparing with two of the rest of competing bidding proposals.

II. Quality Plan

9,58 / 10 points

The Quality Plan is almost satisfactorily addressed. The description of quality aspects of the solution design and development, with special reference to the verification and validation of the proposed technology, the work planning, personal and material resources, and the identification and management of logistic, regulatory and legal aspects are sufficiently described, as well as the description of the project management, the change management and the risk assessment and mitigation strategy. On the other hand, the project governance could be better detailed. However, this requirement is equivalent addressed comparing with one competing bidding proposal and better addressed comparing with two of the rest of competing bidding proposals.

III. Business model & Plan

7,50 / 10 points

The business plan is enough addressed although not satisfactorily described. The investments that were made so that the project can be commercialized are well described, but it is somewhat incomplete regarding the value proposition and targeted go to market (customer segments, channels and relationships) along with the future activities of the entity. The analysis of the exploitability of costs is presented in sufficient detail. It lacks however information on some aspects (e.g cost for the protection of IPRs). A SWOT analysis is present. The offer presents a business model definition that is based on a SWOT analysis containing sufficient detail. There is also a thorough business plan that explains how the innovative solution will be commercialized. Risk management in case the investment is not accomplished would be necessary. This proposal is addressing better this requirement in comparison with two of the competing bidding proposals, but worse than one of the competing bidding proposal

IV. Financial feasibility

7,08 / 10 points

The Financial Feasibility is almost enough addressed. The offer contains sufficient explanation on the different types of expenditure stressing that staff costs will be the main category of expenditure. Work management from each partner is well established. It is highlighted the amount of the activities that will be focused on R&D services. The SWOT, market potential, sales forecasts and selling offer are described but the business model value proposition and targeted go -to market (customer segments, channels and relationships) along with the future activities of the future entity are incomplete. This proposal is addressing better this requirement in comparison with two of the competing bidding proposals, but worse than one of the competing bidding proposal.

V. Further Content

1,92 / 2 points

The IPRs, ethics, security issues and % of R&D requirements are satisfactorily addressed as the four elements to assess are sufficiently addressed and described. In addition, the assessment of CRO eligibility and costs is advanced and seems realistic. On the other hand, there is no self -declaration as requested by the tender documents. However, this proposal is addressing this requirement in an equivalent way of one competing bidding proposal and better than two of the rest of competing bidding proposals.

Technical Offer Assessment - Summary

Bidder/s	BUGWATCHER	Overall Score (up to 85 points)	60,11
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I. Technical feasibility	34,86 / 53 points
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ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from Clostridium difficile spores and/or microorganism (spore detection is considered of higher priority)	4,80 / 12 points
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The requirement of a VOC compound detector is more than poorly but still not enough addressed for Clostridium difficile spores or any other microorganism. There is no specific information proving that the proposed techniques will be working with bacteria. We do not see any primary data or experience associated with the technology that the proposal will use. This proposal does not cover this requirement as extensively as the other presented offers.

ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from Klebsiella pneumoniae OR/AND ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from MRSA	9,00 / 12 points
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The requirement of a VOC detector for all microorganisms requested by the PCP will be monitored, according to this proposal, by a system based on two mechanisms of detection it would be possible for this offer to analyze both the air and direct samples from patients, and detect the two microorganisms. According to the offer, the two mechanisms will be cross-checked for every sample, meaning there will be a need for a technical healthcare worker to be able to collect the sample, analyze it, interpret it and report it. This technological development plan and the risk mitigation description are satisfactorily addressed, well structured and described, as well as the risk mitigation description. On the contrary, the use case scenarios are not sufficiently described for MRSA. This proposal is addressing this requirement satisfactorily and better in comparison with one of the competing bidding proposals, but worse than two of the competing bidding proposal

TECHNICAL/PERFORMANCE INDICATORS	5,31 / 8 points
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The proposal demonstrates but not yet full Bidder's understanding of ANTI-SUPERBUGS unmet needs & use case scenarios and its ability to achieve committed values. The technological feasibility analysis is not yet excellent but still clear and comprehensive, the development plan and risks management analysis are clear and comprehensive. However, there is insufficient information about maximum distance of detection and there are a lack of precise information for the different microbes. This proposal is addressing this requirement better in comparison with two of the competing bidding proposals, but worse than one of the competing bidding proposal

ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from Clostridium difficile Spores, Toxins A and B, and Binary toxin (transferase)	0,05 / 1 point
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The offer provides insufficient information on how it might detect Cl. difficile toxins or spores. This proposal does not cover this requirement as extensively as the other presented offers.

ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from Klebsiella pneumoniae Carbapenem & ESBL production	0,00 / 1 point
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The proposal does not provide any information on the detection of the contaminations/ colonisations from Klebsiella pneumoniae Carbapenem & ESBL production.

ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from any additional Gram-negative pathogen or any additional resistance	0,05 / 1 point
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The offer does not mention any type of possibility to detect additional resistances or, specifically, any extra gram-negative microorganisms. However, the Consortium does provide insufficient information indicating that it will be able to include new pathogens (bacterial, viral and fungal). This proposal does not cover this requirement as extensively as the other presented offers.

ASB ICT Solution COULD detect nucleic acid-based detection of the target microorganisms using non-invasive sampling	0,50 / 1 point
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The proposal provide not enough information to address the requirement and on the how it will perform Nucleic acid-based detection using non-invasive sampling. This proposal is addressing this requirement better in comparison with two of the competing bidding proposals, but worse than one of the competing bidding proposal

ASB MUST comprise a local Surveillance & Infection Control System of the target microorganism(s) able to store all the data and to export data sets	3,80 / 4 points
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The requirement of the Surveillance and Infection Control System are satisfactorily addressed description. The data are storable and exportable. Aspects of encryption, data security, cloud based data storage and multi-language platform are mentioned. This requirement is equivalently addressed by one competing bidding proposal and better addressed comparing with two of the rest of competing bidding proposals

ASB MUST comprise an interoperability engine	6,30 / 7 points
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The requirement is satisfactorily addressed (integrating technologies in clinical environments is sufficiently described, HIS/LIS/EHR integration is sufficiently described, The inclusion of third-party data is sufficiently described) This requirement is equivalently addressed by one competing bidding proposal, better addressed comparing with one of the rest of competing bidding proposals and worse addressed comparing with one of the rest of competing proposal.

ASB MUST comprise an alert system engine (it generates alerts, based on the information retrieved by the screening device, to be sent to the HIS/LIS/EHR/users and it interoperates with existing technologies/products/platforms/systems/developments capable to assess the risks of infection (if any))	4,25 / 5 points
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The requirement is satisfactorily addressed (integrating technologies in clinical environments is sufficiently described, HIS/LIS/EHR integration is sufficiently described but is the alarm system is not sufficiently described. This proposal is addressing this requirement worse in comparison with two of the competing bidding proposals, but better than one of the competing bidding proposal

ASB COULD comprise existing technologies/products/platforms/systems/developments capable to assess the risks of infection	0,80 / 1 point
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The solution will receive the screening device's outcome and its timestamp of all the measures gathered, including the type and location of the infection and reporting to the HIS in real time. It also allows the option of manual data entry to register infection episodes. While the concept to deploy the system right before hospital admission is to be welcomed, the management of the risk of infection in different hospital premises should have been better detailed. This proposal is addressing this requirement worse in comparison with two of the competing bidding proposals, but better than one of the competing bidding proposal

II. Quality Plan	7,92 / 10 points
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Sufficient detail on the work plan. In addition, risk assessment and risk mitigation are described sufficiently in the proposal. However, risk concerning of the analytical aspects of the work are not well covered. This requirement is equivalently addressed by one competing bidding proposal and worse addressed comparing with two of the rest of competing bidding proposals.

III. Business model & Plan	7,92 / 10 points
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Business model definition is addressed sufficiently (including SWOT and business model canvas). The exploitability costs are poorly described. A precise description of the /alliance/partnership between the three companies is unclear. This proposal is addressing this requirement better in comparison with the rest of the competing bidding proposals.

IV. Financial feasibility	7,50 / 10 points
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Points 1 and 2 are sufficiently described. The offer clearly states that there is no need for extra funding to execute the marketing and sales plan. It does not however provide information on the financing plan of the developed during the PCP solution (the plan that is necessary to bring the solution to the market). The offer manages to cover its costs via companies already developing technology in the same area and that are interested in solving the clinician's needs. This proposal is addressing this requirement better in comparison with the rest of the competing bidding proposals.

V. Further Content

1,92 / 2 points

The requirements for all the elements are well addressed, although information is missing on regulatory and R&D. Detailed info on pre-existing rights and security. This requirement is equivalently addressed by one competing bidding proposal and better addressed comparing with two of the rest of competing bidding proposals

Technical Offer Assessment - Summary

Bidder/s	ASB-IMS ²	Overall Score (up to 85 points)	58,55
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I. Technical feasibility

36,80 / 53 points

ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from Clostridium difficile spores and/or microorganism (spore detection is considered of higher priority) **10,20 / 12 points**

The requirement is satisfactorily addressed. Specific details are provided for the C. difficile spores detection. The proposed technology is based on the detection of the target microorganism and VOC detection as requested by the call for tender. However, the statement of the possibility of detection is not followed by further description regarding the use of a particle detector to detect said spores. This proposal is addressing this requirement in an equivalent way of one competing bidding proposal and better comparing with two of competing bidding proposals

ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from Klebsiella pneumoniae OR/AND ASB Volatile organic compounds detector MUST DETECT the contaminations/ colonisations from MRSA **10,20 / 12 points**

The requirement is addressed satisfactorily for both Klebsiella pneumoniae and MRSA. The proposal describe how the technology will address the must have tech specifications and requirements. It is specified which kind of volatile organic compounds will be detected for each microorganism. However, the detail of description of Klebsiella use case scenario is not sufficiently described. This proposal is addressing this requirement better in comparison with the rest of the competing bidding proposals.

TECHNICAL/PERFORMANCE INDICATORS **3,70 / 8 points**

Estimated turn around time is clearly reported and is of interest for the ASB applications. However, sensitivity, specificity and accuracy are not stated, either it is the maximum distance to detection. The proposal does provide information but serious concerns exist about the Bidder's understanding of ANTI-SUPERBUGS unmet needs & use case scenarios and its ability to achieve committed values. The technological feasibility analysis, development plan and risks management analysis are not clear enough and are not sufficiently comprehensive. This proposal is addressing this requirement better in comparison with one of the competing bidding proposals, but worse than two of the competing bidding proposal.

ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from Clostridium difficile Spores, Toxins A and B, and Binary toxin (transferase) **0,20 / 1 point**

The offer ensures the device will detect these via NA integrated particle detector but no further information is given on this. During Phase 2, mVOC databases will be created using the device in order to make these detections, which are only possible due to the integrated particle detector. The proposal provide insufficient information to demonstrate that the Bidder has the relevant understanding of this requirement and insufficient information to demonstrate that the Bidder does not demonstrate a clear step forward with insufficient evidence to support the response. Still this proposal is addressing this requirement better in comparison with one of the competing bidding proposals, but worse than two of the competing bidding proposal.

ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from Klebsiella pneumoniae Carbapenem & ESBL production **0,30 / 1 point**

This requirement is poorly and yet not enough addressed. The technology appears to be suitable to be extended to the detection of these potential multidrug resistant microorganisms, but poor detail is provided on how this requirement will be addressed by the bidder and it is not clear how they could meet the MUST HAVE and NICE TO HAVE technical specifications and requirements. This proposal is addressing better this requirement in comparison with one of the competing bidding proposals, but worse than two of the competing bidding proposal.

ASB Volatile organic compounds detector COULD DETECT the contaminations/ colonisations from any additional Gram-negative pathogen or any additional resistance **0,60 / 1 point**

This requirement is not enough addressed. The technology is suitable to the extension of other potential multidrug resistant microorganisms: Great number of bacteria are specified, because characteristic mVOC patterns have been identified in previous studies, but with a different experimental setup. On the contrary, it is not clear whether this will be pursued in Phase 2 or Phase 3, and it is not clear whether this is considered a part of the project or is just a statement of what the technology will be able to do. This proposal is addressing better this requirement in comparison with the rest of the competing bidding proposals.

ASB ICT Solution COULD detect nucleic acid-based detection of the target microorganisms using non-invasive sampling **0,10 / 1 point**

Nucleic-acid based detection is considered a possibility via one statement in the whole offer. It does not seem to be a priority of this bidder to make it happen, though the detection method used could, potentially, make detections using this substrate. Insufficient information is provided. This proposal is addressing better this requirement in comparison with one of the competing bidding proposals, but worse than two of the competing bidding proposal.

ASB MUST comprise a local Surveillance & Infection Control System of the target microorganism(s) able to store all the data and to export data sets **3,40 / 4 points**

The infection prevention surveillance requirement is sufficiently described, the ability to store and export relevant data sets is well described, but the validation of the integration of the hygiene and IPSS core modules could be better detailed. This requirement is equivalently addressed by one competing bidding proposal and worse addressed comparing with two of the rest of competing bidding proposals

ASB MUST comprise an interoperability engine **4,90 / 7 points**

The interoperability of the solution with LIS, EHR and HIS is foreseen although the technological detail is scarce and there is a lack of risk management development. This proposal is addressing worse this requirement in comparison with the rest of the competing bidding proposals.

ASB MUST comprise an alert system engine (it generates alerts, based on the information retrieved by the screening device, to be sent to the HIS/LIS/EHR/users and it interoperates with existing technologies/products/platforms/systems/developments capable to assess the risks of infection (if any)) **2,50 / 5 points**

Intuitive user interface, with minimal training requirements. Solid alert system based on detection of pathogen, hygiene measures and internal rules. The way the alarm management is handled (time to resolve an alarm, way to measure effectiveness, etc.) could be better described. Overall, this proposal is addressing worse this requirement in comparison with the rest of the competing bidding proposals.

ASB COULD comprise existing technologies/products/platforms/systems/developments capable to assess the risks of infection **0,70 / 1 point**

Good infection prevention module, based on hand hygiene tracking solution, and tracking of staff involvement. Includes detection of intruders for highly sensible areas. On the other hand, risk of infection is not contemplated by this technology. Overall, this proposal is addressing worse this requirement in comparison with the rest of the competing bidding proposals.

II. Quality Plan

7,92 / 10 points

Risk assessment is well covered, as well as the project governance description. On the contrary, deployment of the four prototypes (2 fixed ones and 2 mobile ones) may be insufficient for a validation in 3 hospital environments This requirement is equivalently addressed by one competing bidding proposal and worse addressed comparing with two of the rest of competing bidding proposals.

III. Business model & Plan

5,42 / 10 points

The foreseen business plan is a good start but seems too optimistic, since it does not foresee discount ratios based on higher production nor geographic areas. The effort to obtain the medical device certification seems underestimated and market authorization procedures are not well described. Overall, this proposal is addressing worse this requirement in comparison with the rest of the competing bidding proposals.

IV. Financial feasibility

6,67 / 10 points

Although the amount of R&D is reasonable, the resources to be committed are roughly described (lack of detailed costing) and the cost to subcontract a CRO seems underestimated. This proposal is addressing better this requirement in comparison with one of the competing bidding proposals, but worse than two of the competing bidding proposal.

V. Further Content

1,75 / 2 points

Resources to be committed to R&D sufficient and good detail to qualify the effort as R&D tasks has been provided. Good detail of the preexisting know-how and eventual protection assets have been provided. This requirement is equivalently addressed by one competing bidding proposal and worse addressed comparing with two of the rest of competing bidding proposals.

This report is approved and signed by all Expert Board members:

Enric Limón	Josep Trenado
Beniam Ghebremedhin.	Dave Partridge
Olivia Balagna	Meike Bomhof
Tram Trinh	