Project Specification

Tender details – the opportunity

Company name	Blum Health Ltd
Company address	Waterloo Buildings, 21 - 23 Bridge Street, Birkenhead, England, CH41 1AS
Description of company activity/SIC code	Digital Health Software Design and Development
Objective of the proposed innovation project– this MUST involve activity that results in the development of or introduction to the market of a new product or service (max 300 words)	We have designed a four-module software system to improve the endoscopy journey for all key stakeholders which includes: automated triage service (CareGO), optimised booking system (CareFLOW), seamless bowel preparation delivery (CareAUTO) & eLeaflet and enhanced patient feedback (CareKNOW).
	There are currently 2 million colonoscopies in the UK yearly, each one requiring 15-20 manual steps: giving rise to a high probability of human error and time delays. 22% of colonoscopies fail due to poor bowel preparation as the patients are expected to self-administer the preparation kit and are expected to understand and anticipate the side effects from nothing more than a paper leaflet. This can lead to multiple issues such as toileting accidents, worry about taking the kit, and under prepared bowel which can result in a repeat test later down the line, thus contributing to more NHS cost and time burdens. Each NHS trust has multiple Band 5 nurses to ensure patients are suitable for colonoscopies procedures through triage, taking time from their other nursing duties. As a result of these inefficiencies, a more innovative solution needs to be introduced to overcome these problems which our product provides.
	With no existing streamlined platforms such as CareGO currently in use and with no known product like such under development, this is truly an innovative project in a commercial aspect. Such products developed are single module, which solves only one part of a multistep process. In each hospital, vast options are available for each singular solution which causes contrasting differences across the NHS. CareGO offers a complete

	modernised product which encapsulates a whole system solution to endoscopy procedures and the patient's journey through them.
	This opportunity will increase the efficiency and effectiveness of colonoscopy procedures within the NHS and as part of the bowel cancer screening programme. Thereafter, CareGO could be used to address similar issues within European health care and beyond. Once the software is created, there will also be an opportunity to utilise it in other departments such as dietetics and physiotherapy.
Company's current situation – existing project team and innovation project development stage (max 400 words)	Finalising the ideation phase of this project currently, the software design is currently underway. We are beginning to explore the art of the possible with data analytics and machine learning.
	Today we have the validated concept with the software design and project mapping completed. The route to market starts with a pilot trial use in local trust. After a successful trial then we aim to integrate into neighbouring trusts,
	The next phase of the project is development and implementation, which will require the additional resource that KEEP+ would be important in providing. We are hoping that many of the processes within CareGO will be enhanced or automated through data analysis and Artificial Intelligence / Machine Learning capabilities. This is currently a skill gap within the team and as such we are looking for academic support.
	The existing project team consists of: Michael Watts, James Loman, Micah Weightman. Michael Watts is a medical doctor with serval years' experience now turned healthcare technology innovator. James Lomas is a solution architect and UI/UX design specialist. Micah Weightman is our senior software developer and solution architect.
Business need – what expertise and support is required from a Knowledge Base to reach the objective(s) above? (max 400 words)	It is hoped that the knowledge base and associate graduate will fill the knowledge gap of data analytics, statistics, and applied Artificial Intelligence / Machine learning that is required to take the CareGO project to the next level. They would also support with feasibility studies with the NHS Trust.

	We desire training and access to a high performance cluster (HPC) within a cloud setting to enable development of analysis of real time data. The cluster will provide tools for data collation, preparation, analysis and visualisation of results. Analysing the real time data via HPC will enhance application of developed models and thus improve expediency of patient outcomes.
	Using data management methodologies, the associate graduate should be able to firstly determine business objectives. From setting objectives, producing the project plan and creating the business success criteria. Many factors come into this from the inventory of resources, risks, contingencies and costs/benefits. Before gaining any data, an understanding of the data that will be listed in the project resources needs to be completed, especially if from multiple data sources.
	It is also hoped that the associate graduate will also provide expertise in Machine Learning (ML) and Mathematical Modelling of data collected, using modelling and rules adhering to GPDR. Ensuring all prioritisation criteria at the CareGO system are fairly designed, implemented and tested.
	Post the final evaluation the associate graduate will carry out Data Analysis of input and collected patient data and independent module process data. They will use any expertise in ML to highlight opportunities of improving the data collection mechanism and the data interpretation and manipulation processes across the modules. The statistics of the bowel preparation delivery system could be analysed to investigate any errors in the system and the time scale from order to final delivery. Analysis of the data collected can provided valuable insight into how successful the project will be through the use of patient feedback.
Please list six key words that describe your potential project, i.e. ICT, engineering, biotech etc.	Innovation, MedTech, Endoscopy, Health, Software, Data
Required timescales (if any) for Project Start and duration, and if applicable anticipated product launch date	1st August 2021 to 1st August 2022 for project with anticipated NHS rollout in July 2022 or sooner

Optional - company budget available to match fund KEEP+ grant (if known) please see 'Further details' for maximum funding amounts	
Company Contact for further information	Dr Michael Watts (Michael.watts@blumhealth.co.uk) Managing Director and Co-founder
Required tender response date (min 20 working days from posting of advert)	2 August 2021

Responses are sought from organisations classified as Knowledge Bases, defined under the ERDF Definition of the Knowledge Base: Higher Education, Further Education and Research Entities which are: UK Public Sector Research Establishments, Research and Development Organisations, Research and Technology Organisations.

The Company is seeking a Knowledge Base partner to work with them to develop a project which, dependent on a successful Grant Application, will be supported by the KEEP+ ERDF project using one of the two types of intervention described below. Please also see KEEP+ website – www.keepplus.co.uk

In Stage 2, if the grant application to KEEP+ is successful, the Company requires the expertise of the Knowledge Base partner, to work with them to deliver the solution i.e. the project intervention supported by the KEEP+ grant.

Criteria for Decision making	Assessment criteria are as follows
	• Expertise fit 50%
	• Timing fit 25%
	• Suitability of proposed methodology 25%
Date for Contract Decision	Minimum of 20 working days from date of advertisement
Tender response templates	Please approach the company for the exact format of your response.

Further details for potential respondents

You are responding to a tender for an activity which is eligible for part funding by the European Regional Development Fund, specifically under the KEEP+ Programme.

The KEEP+ Programme aims to support SMEs to develop new products and services by fostering long term collaborative relationships between Knowledge Bases – Universities and research institutions – and SMEs who need expertise and support for innovation.

Please see KEEP+ website for further information www.keepplus.co.uk or contact the KEEP+ project team 0845 196 4207 julie.benabdeljelil@anglia.ac.uk or 0845 196 4985 kayleigh.parkes@anglia.ac.uk

KEEP+ provides maximum allowable grants for its specific types of intervention. Those intervention types and maximum grant levels are as follows;

- KEEP Knowledge Exchange Embed Partnership (typically 12 months' duration) - this intervention involves a graduate working on a mid- to long-term activity with the support of a specific academic staff member, the graduate is based within the beneficiary company - grant allowance 50% of eligible costs and £10,000 capital.

- KEEP Research and Innovation Collaboration (no fixed duration) this intervention involves an academic colleague working on a short- to long-term activity, they are based at the Knowledge Base but with regular face-to-face interaction with the beneficiary company - grant allowance 50% of eligible costs plus a strict maximum of £10,000 capital.

The following is a guide to the types of cost that you should expect to occur should your application be successful;

- KEEP Knowledge Exchange Embed Partnership (typically 12 months' duration) – project development, associate wage, academic wage, administrative support, training and travel (on the part of the knowledge base employees), minor equipment (please note there is a potential separate grant for major capital purchases), recruitment

- KEEP Research and Innovation Collaboration (no fixed duration) – project development, academic wage, administrative support, consumables (please note there is a potential separate grant for major capital purchases)