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Project details

Subsidy basis

Partner	Funding rules	
QUASISCIENCE LTD (Lead)	Subsidy control	View answers

Application team

QUASISCIENCE LTD

Organisation details

Type	Business
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Team members

Full name	Email	EDI survey
Marco Ghilardi	mghilardi@quasiscience.com	Complete

Application details

Competition name

AI Solutions to improve productivity in key sectors

Application name

Enabling Hyper-Personalized Experiences in Physical Spaces via Attention Tracking

When do you wish to start your project?

1 April 2024

Project duration in months

6 months

Innovation area

Creative industries

Research category**Selected research category**

Industrial research

Project summary

No feedback provided

Project summary

The project, named "KnoWhere," leverages the power of AI and computer vision to provide infrastructure which could help transform the way we understand and engage with physical spaces like museums and immersive experiences. Unlike existing solutions that often require intrusive wearables or cameras, KnoWhere promises seamless integration into existing environments. It aims to track user attention and emotion in real time, providing invaluable but private data points that can be used to adapt and personalise experiences. We believe this technology could significantly enhance visitor engagement and provide actionable insights for curators and designers. We intend to build and test the tracking infrastructure required to interact with steerable barrier lenticular displays. These displays allow stereoscopic light (depth perception) to be projected into the eyes of multiple observers, creating a unique and personal visual experience. The system supports productivity in creative industries introducing new and exciting modalities of narrative building, improving visitor experiences, and expanding the capacity and duration of designed educational and entertainment narratives. This new capability to personalise and constantly freshen exhibits could drive repeat visits, allowing world-class designers like our partner Immersive International to reduce redesign costs, and unlock new kinds of interaction.

Public description

No feedback provided

Public description**Revolutionize Creative Spaces with KnoWhere's Attention Tracking Technology!**

Have you ever wondered how you can make museums and exhibitions more engaging? Say hello to KnoWhere, the future of visitor experiences! Using state-of-the-art AI and computer vision, we are redefining how creative spaces engage

with their audience. And the best part? No wearables or intrusive cameras are needed!

See What's Never Been Seen Before!

Our cutting-edge technology tracks visitor attention and emotion in real time, providing actionable insights that can take your exhibition to the next level. Unlike existing solutions that require clunky hardware or violate privacy, KnoWhere offers a seamless and ethical approach to understanding your audience.

Unlock the Future of Interactive Exhibits!

Why settle for static displays when you can offer dynamic, personalized experiences? With KnoWhere, you're not just improving space utilization; you're opening the door to a whole new world of interactive storytelling and engagement. Plus, our technology makes redesigns a thing of the past, saving you both time and money!

Don't miss out on the revolution that's setting a new standard in the creative industries. Join us in making history with KnoWhere!

Scope

In scope 5/5

How does your project align with the scope of this competition?

Our Proposal

Our idea of creating a platform for creatives and museum curators to improve the quality and relevance of each visit by collecting positional, gaze, and emotional state is radically new. Other products and services available globally do not offer significant solutions and our technology stack will have to be different too: no proprietary sensors, and on-site hardware will guarantee complete anonymity and safety while allowing data collection to be fast and reliable.

Themes

Our project is in line with the scope for this funding round. We are developing AI capabilities to create a product that will substantially increase the productivity of designers of immersive experiences and curators of museums. Furthermore, our solution promises to enhance the user experience which is a mechanism for increased returns by itself. Our meetings with industrial partners and prospective clients have shown that the demand for our technology would be substantial.

Research Category

Our project work falls within the definition of Industrial Research. We currently have the capacity to connect with cameras in venues and extract information on

the position of users. We want to enhance our capabilities to add gaze direction and emotion tracking.

Assessor feedback

Assessor 1

The application seems to fit with the remit of the competition brief.

Assessor 2

Project is in scope because it addresses productivity in the creative industries, identifies users and engages with partners.

Assessor 3

The application meets the scope of the competition brief.

Assessor 4

The proposal aims to use AI methods so as to obtain positional, gaze, and emotional state of visitors, e.g., of museums. As a result, improved capabilities and services can be provided.

Assessor 5

The applicant has described an innovative technological project that complies with the set scope criteria for the competition round of funding.

Application questions

1. Applicant location (not scored)

No feedback provided

Applicant location

QuasiScience is a London-based company. Our business address is:

1A Greenberry Street,
London,
NW8 7AB

2. Permits and licences (not scored)

No feedback provided

Permits and licences

Yes, we have all the necessary licences needed for the project.

3. Need or challenge

Average score 5.0 / 10

What is the business need, technological challenge, or market opportunity behind your innovation?

The primary motivation for KnоЮhere is to enable world-class exhibition spaces to offer entirely new AI-enabled narrative engines for creatives and experience designers. Expectations around hyper-personalised data and real-time interaction are changing quickly in an AI-infused world, and it will be crucial to allow designers to integrate these exciting and expected modalities into large-scale spaces like museums and exhibitions. The current market offers limited solutions that are often intrusive, limited to small and discontinuous sub-sections of space, and do not provide real-time feedback into the overall experience. The technological challenge lies in the seamless integration of AI and computer vision technologies to provide a non-intrusive yet highly effective solution. This is recently possible for what we feel to be the first time thanks to advances in camera and compute systems. We have already conducted some development work and studies that underline the viability and urgency of this need thanks to our relationship with great partners like Immersive International and Badger & Coombs.

Assessor feedback

Assessor 1

The problem, the need and the challenges are not discussed in sufficient depth. Two partners are identified. No information presented on the competitive landscape.

Assessor 2

The technical challenge is clear. The business motivation is presented but lacks precision (or examples). The proposal does not avail itself of all available space to build a strong case.

Assessor 3

The business motivation for the project could be evidenced further through reference to recent relevant research. The nearest state-of-the-art available could be detailed further through reference to specific technologies and provisions. Further detail on the development work and studies undertaken to date could be used to highlight the demand for specific aspects of the project from specific target customer types.

Assessor 4

Making visitors, e.g., of museums, more engaged, by analysing the context of their visit has been an issue of R&D in the last decade for cultural institutions. The proposal focuses on issues that do not include concerns, e.g., position of the visitor, but it also considers analysis of their emotion and gaze, which raises concerns.

Assessor 5

The need for the proposed project has been clearly described. There is a good awareness of what is currently available and how the proposed product provides significant enhancements for the holistic user experience in venues such as museums

4. Approach and innovation

Average score 5.4 / 10

What approach will you take and where will the focus of the innovation be?

Our approach is to utilise very high-resolution machine vision cameras, high bandwidth connections to local GPU compute systems, and various machine learning tooling, to capture the following aspects of humans in the capture space:

- Location in the room (already developed internally)
- Pose (already developed internally)
- Body orientation (development in progress)
- Head gaze (within the scope of the project)
- Eye gaze (within the scope of the project)
- Emotional state (within the scope of the project)

In order to accomplish this demanding task we utilise state-of-the-art AI algorithms in conjunction with our proprietary cutting-edge computer vision techniques to capture and process data in real-time. The data is completely anonymised by design: each data processing step discards part of the data only retaining an aggregate vector that contains spatial coordinates and approximate descriptions of engagement and/or emotional state for all visible humans. This means that sensitive data is never stored because the data is captured "in transit". This allows generative AI within the designed space to engage with the attention of the visitors, without compromising on their privacy. The innovation lies in our ability to do this seamlessly without requiring visitors to wear any devices. This breakthrough is only possible in this moment thanks to breakthroughs in machine vision capture at these demanding resolutions. We think that this approach can optimise space allocation in very high footfall and throughput spaces, improve visitor engagement, drive visitor re-engagement, and reduce operational costs. Our system is designed with a strong focus on ethical AI use, ensuring data privacy and integrity.

[Application Details.pdf \(opens in a new window\)](#)

(</application/10101453/form/question/37542/forminput/103165/file/626492/download>).

Assessor feedback

Assessor 1

Process flow diagrams are included in the Appendix to explain the proposed innovation. Not enough effort has been put into explaining the proposed innovation in the body of the response. The scope of work has not been clearly identified.

Assessor 2

There is a gap in the proposal between what they are trying to achieve and the backend computational approach. Both of these are clear enough, but while the proposal says that customer/users won't have to wear anything, there is no

information on how they will enjoy an immersive experience, nor how their emotional state will be determined.

Assessor 3

The technical approach outlined could be more explicitly related to specific needs identified for specific target customers, audiences, or other beneficiaries. A point-by-point competitor comparison could be used to highlight specific areas of differentiation in specific use contexts that have the potential to give rise to competitive advantage. Freedom to operate could be more explicitly considered here.

Assessor 4

The approach includes many problematic issues: 1\). Capturing eye & head gaze (in faces) and emotional state of visitors in museums requires that they are asked/give their permission for this; the proposal does not discuss the feasibility, i.e., if/how this is obtained. Data are anonymised (while the visitors' faces are processed! who ensures this)? . Emotion analysis requires psychological and AI models (not described) - a general pipeline with a 'sentiment' block is only included. Additionally, very high-resolution cameras, local GPU systems, ML tools are assumed to exist; how will their cost be covered by the local Museum?

Assessor 5

The applicant has detailed the main innovative elements of the proposed project and described how it will address the need as stated in Q3 and also how it differentiates with existing offerings. No information has been provided in this section in relation to freedom to operate

5. Team and resources

Average score 5.2 / 10

Who is in the project team and what are their roles?

Marco Ghilardi is our project lead and software development expert for AI systems. Marco, has been developing AI models in highly competitive industries like Formula One and Aerospace. More recently, he has been supporting AI implementations in the Fashion Industry.

John O'Hare is our large-scale immersive systems expert and has considerable experience in high-throughput GPU systems. His connections to the media and exhibition industries have enabled us to build a strong path to market from the start of the project.

The team consists of specialists in AI, computer vision, data engineering, and project management, ensuring a comprehensive skill set for the project's multifaceted demands. We have access to high-end computing resources, necessary for the data-intensive tasks involved. Each team member has been carefully selected to ensure that the overall team has a comprehensive skill set. Furthermore, the team dynamic has been already tested: we have already worked on other successful projects in the past.

Our key external partners have also agreed to lend us their expertise on a broad number of topics and validate the project's industry relevance.

- **Immersive International** will advise us on the requirements for experience designers. Our tight partnership with Immersive International will help us achieve a product-market fit in the shortest possible time.
- **Badger and Coombs** offered to advise on the project.
- **Media City UK Technology Innovation Hub** has offered to support our research efforts and possibly to make space available for us to test our technology in the field.

[team.pdf \(opens in a new window\)](#)

(</application/10101453/form/question/37543/forminput/103171/file/626196/download>).

Assessor feedback

Assessor 1

Two team members have been identified. Their CVs are included in the Appendix. No recruitment needs have been identified. No organisation chart has been included.

Assessor 2

This team of two is not likely to cover any business aspects of the project. The specifics of each person's role is not presented.

Assessor 3

Project team biographies could be more explicitly related to specific roles and responsibilities in the project activities and work packages. Plans to obtain the necessary resources, equipment, and facilities could be detailed further here.

Further detail on the relevant track record of all the project partners could be considered here.

Assessor 4

A good team with three external partners. However, a clear collaboration with a University research group in affect and visual analysis through AI/ML methods would be beneficial.

Assessor 5

The applicant refers to a 'team' and names the roles within that team which are relevant to the delivery of the project however has only provided the details of two of the key persons. It is therefore not possible to assess the skills and experience and make a judgement on their capability to deliver or commercially exploit the described project

6. Market awareness

Average score 5.8 / 10

What does the market or markets you are targeting look like?

The primary target market for KnoWhere is the creative industries. More specifically, museums, exhibitions, theme parks, and immersive experience centers. The UK is at the forefront of these industries, making it the ideal beachhead market for us. Over the last 12 months, we have reached out to many experience designers and media experts and conducted interviews to better understand the market needs and how our solution can help with existing pain points. These conversations have also led us to identify our three key partners who offered non-financial support in our journey to complete the development of our technology.

These are some of the important takeaways from our conversations and studies:

- Non-interactive museums have seen footfall decreasing in recent years due to changing market dynamics and competition from immersive exhibitions.
- Designers of exhibitions do not have a way to collect information on how the space is used and the experience is perceived by the visitors.
- Increased demand for personalised and accessible cultural experiences will be a driver for growth.
- There is an expectation of AI technologies to open new possibilities for personalisation of experiences.

The global market for exhibitions was valued at \$60 billion in 2022 and it is expected to grow at 5% CAGR until 2029. Our conservative estimates, taking into account only the biggest venues (premier destinations), highlight that our initial beachhead market size could be around £200 million.

With immersive experiences still being an emerging field, the exact market size may be challenging to pinpoint. However, your project's focus on AI-enabled narrative engines could open up new market segments within the broader immersive tech space.

To explore this market's potential, strategic partnerships, direct sales to institutions, and a licensing model can be employed. Knowhere's approach aligns with the increasing demand for personalised, immersive experiences, suggesting a significant opportunity for growth and market penetration.

References:

- Li, J., Ochiai, Y., Wider, W., & Fauzi, M. A. A Bibliometric Analysis of Immersive Technology in Museum Exhibitions: Exploring User Experience. *Frontiers in Virtual Reality*, 4, 1240562.
- <https://www.precisionbusinessinsights.com/market-reports/exhibition-market/>

Assessor feedback

Assessor 1

The applicant demonstrates some understanding of the market. No information is shared on the competitive landscape or how the proposed innovation differs from incumbents.

Assessor 2

General dynamics of the wider market are understood, but the proposal lacks a strategy to get to their £200M "beachhead" market. The list of museums, theme parks etc needs to be thinned down and a first market identified.

Assessor 3

The global exhibitions market is defined and a beachhead market size is estimated: this could be refined further through a TAM SAM SOM approach, or a similar method. Some market drivers are identified and their relevance to the project could be more explicitly considered. Barriers to market entry could be identified and addressed appropriately.

Assessor 4

A general market description is provided. No specific attention is given to AI regulatory forthcoming issues, Personalisation is said to be targeted, without however considering the related ethical issues. It is doubtful that a robust emotion detection model can be derived in this project.

Assessor 5

The applicant has provided information demonstrating a good awareness of the target market. The data provided is referenced. There are several routes to market detailed and being considered. It is note that there are Partner organisations involved but it is unclear what services they may be providing and how this may impact on any developing IP ownership.

7. Outcomes and route to market

Average score 6.2 / 10

How are you going to grow your business and increase long term productivity as a result of the project?

The project aims to establish KnoWhere as a leading solution in the creative industries, particularly in museums, exhibitions, and immersive experiences. Our target customers are venue owners and experience creators who can benefit from real-time data analytics to improve visitor engagement and optimize space utilization.

Our go-to-market strategy involves a three-pronged approach:

1. Strategic partnerships with experience design agencies like Immersive International (<https://immersive.international>) to integrate our technology into their museum and exhibition projects, and guide our design choices.
2. Strategic partnerships with media production agencies. For instance, Badger and Coombs (<https://bcombes.com/>), affiliated with the University of Salford and the Media City UK (<https://www.mediacityuk.co.uk/innovation/>) home of the BBC and ITV, is interested in our attention-tracking technology.
3. Investigate direct sales to major venues and institutions like The British Museum, Tate Galleries, the Natural History Museum, and the Imperial War Museum North with whom we have already discussed this technology and have received positive feedback.

4. A licensing model for smaller venues, galleries, and pop-up experiences, making the technology accessible to a broader range of customers.

We aim to target experience creators, curators, venue directors, and marketing managers who are looking to take their offerings to the next level through immersive personalisation. KnoWhere promises up to 30% increased visitor engagement based on our research on traffic between immersive exhibitions and traditional museums (see reference). Our partnership with leading designers (both in exhibitions and media space) provides validation and an initial, reliable client base.

By providing our technology platform as a service, we expect a substantial portion of our revenue to be recurring. Our projections suggest that 60% of our turnover will be recurring by Q2 2025 and the remaining 40% to come from consulting, setup, and maintenance activities.

Reference: Li, J., Ochiai, Y., Wider, W., & Fauzi, M. A. A Bibliometric Analysis of Immersive Technology in Museum Exhibitions: Exploring User Experience. *Frontiers in Virtual Reality*, 4, 1240562.

Assessor feedback

Assessor 1

Route to market has been explained with current and potential partners. No pricing or revenue projections have been disclosed.

Assessor 2

Target customers are described. It's not obvious how the technological intervention is going to provide the benefits described. The information about revenue is not detailed enough. A company with only two employees is likely to be over-stretched if looking to work on three prongs and develop the technology.

Assessor 3

Specific target customers are identified and value propositions are outlined. A range of different value propositions could be expressed from the perspective of different target customer types/market segments. The business projections referenced here could be detailed further in order to more clearly demonstrate the potential for significant sustainable impact. Dissemination could be more explicitly considered here.

Assessor 4

The ability to implement the presented route to market heavily depends to the quality of the project outcomes. There are many concerns on the presented accomplishments.

Assessor 5

Target customers have been identified by the applicant and the value proposition detailed. The routes to market have also been described and projected percentage turnover increases provided

8. Wider impacts

Average score 5.0 / 10

What impact might this project have outside the project team?

Beyond the immediate financial gains, KnoWhere is positioned to offer significant economic benefits by boosting the productivity of creative industries. It aligns well with government priorities related to technological innovation and economic growth. Environmentally, the project is designed to be sustainable, using minimal hardware and avoiding a large cloud computing footprint. The regional impacts include job creation and setting the UK as a leader in creative technology.

Regionally, we plan to dual site our R&D center in London and Manchester, creating high-skilled jobs and positioning the North West as a hub for immersive technologies. With an initial team of 5 expanding to 20 by 2025, we will create new employment and training opportunities in AI and computer vision.

We also aim to support charities and social enterprises through discounted licensing rates. Initiatives like hospital VR experiences and mindfulness exhibits can benefit greatly from our technology.

Assessor feedback

Assessor 1

Not sufficient discussion has been provided under wider impacts. However, job creation has been quantified.

Assessor 2

Some reference to social benefits, but mostly focussed on economic. Some aspects of the response seem to be some way in the future (eg discounted licensing rates and hospital VR). Generally, rather low on detail.

Assessor 3

Positive impacts could be explored further through closer consideration of potential impacts on supply chains. This consideration would benefit from the use of success criteria, measurable targets, timelines for benefits realisation, and an assessment of appropriate methods of both quantitative and qualitative evaluation. Potential negative impacts could be identified and mitigated where appropriate.

Assessor 4

Due to the expressed concerns no significant wider impact is foreseen.

Assessor 5

There is an awareness of the potential wider impacts that may be realised from the successful development of the project. There is consideration of how this may benefit third sector organisations and social enterprises showing a willingness to be inclusive. No negative impacts have been described.

9. Project management

Average score 5.2 / 10

How will you manage your project effectively?

Key work packages:

System Setup: Jointly managed by Marco Ghilardi (MG) and John O'Hare (JOH). Involves getting the hardware needed for the testing and setting up the physical space.

AI training in AWS environment: Led by MG. The goal is to train and refine the algorithms responsible for measuring eye gaze direction and emotion detection. This phase will also involve the implementation of bias mitigation measures and an AI safety review.

AI System Integration: Led by MG. During this phase, we need to optimise the performance and scheduling of the AI processes on the hardware to eliminate bottlenecks and lower the resource requirements for future versions. This means that future implementations will be much cheaper.

Validation and Testing: Jointly managed by MG and JOH. This phase will involve further testing and optimisation of the software and hardware integration and testing in a small exhibition space. At the conclusion of this phase, we would be only a few months away from bringing the product to the market.

Approach to Project Management:

We'll adopt a Lean Price2Agile methodology, which combines the principles of Lean and Agile to efficiently manage resources and adapt to changes. We'll use Kanban boards to visualize work, manage flow, and optimize the lead time between task identification and completion. Tools like Jira will be employed for issue and project tracking, while Git will be used for version control.

Management Reporting Lines:

JOH reports directly to MG. Each work package leader will present bi-weekly updates to MG, who will then compile a comprehensive monthly report for stakeholder review.

Project Plan Details:

Our Gantt chart illustrates the project timeline, dependencies, and milestones. For instance, "Bandwidth Stress Testing" can only commence after "Hardware Deployment and Integration" is complete. This ensures that we have the necessary infrastructure to carry out the tests. Similarly, "Data Distribution" is dependent on the successful completion of "Capture Parameter Adjustment," to ensure that the data being distributed is of high quality.

This clear and comprehensive approach to project management, supported by clear reporting lines and a detailed project plan, positions us strongly for a successful and innovative project outcome.

[gantt.pdf \(opens in a new window\)](#)

([/application/10101453/form/question/37547/forminput/103195/file/622792/download](#)).

Assessor feedback

Assessor 1

A very simple Gantt Chart has been included. Work packages are not identified with associated costs. Approach to the project has been highlighted.

Assessor 2

The gantt is a waterfall that rapidly moves through several important phases of tech development. There is no mention how the AI or computer vision will be undertaken, and no mention of data to train the models. It's not clear if the AI is the computer vision or if it doing something different. NB the gantt is in very small font.

Assessor 3

The approach to project management is broadly appropriate for work of this kind; further consideration of how the project is designed to meet the objectives efficiently and realistically would be appropriate. The project work packages would benefit from further detail, including the total cost for each one and a consideration of milestones, links, and dependencies. The role of the project partners could be more detailed here.

Assessor 4

A normal project management approach is presented. A vague statement on the training/refinement of algorithms (which ones?) is only given including bias mitigation measures and AI safety review (?)

Assessor 5

A hybrid project management methodology is proposed. The work packages have not been described in much detail and the extremely high level Gantt chart would benefit from more description. Costings for each of the work packages would also be beneficial

10. Risks

Average score 7.0 / 10

What are the main risks for this project?

Managing risks effectively is critical to the success of the KnоЮhere project, not least because of the powerful AI systems involved. Our comprehensive risk register can be found in the appendix and outlines potential challenges across various aspects of the project. Each section proactively identifies, assesses, and attempts to mitigate risks in a structured manner.

We recognize that risk management is an ongoing process, requiring regular review and adaptation. As such, we have a review frequency in place for every risk factor.

Our commitment to transparency and accountability is reflected in the clear design choice to strip out and discard almost all of the data. With a robust reporting and monitoring system in place, we maintain a clear oversight of risk statuses, enabling proactive adjustments to our strategies as required.

Our extensive investigation of risks was performed together with our corporate partners to de-risk the project as much as possible from day one.

Here we outline the main mitigation strategies to ensure that our AI solution is ethical and has low bias:

- Utilize diverse and representative data sets for model training and testing: Ensuring the data reflects diverse demographics and scenarios can help minimize biases. Our partners have agreed to help us collect the data needed from different existing installations around the world. This will also be a source of competitive advantage for us!
- Algorithmic auditing techniques: Methods like testing model performance across different demographic groups allow for detecting biases and uneven outcomes.
- Establish human-in-the-loop review processes: Having human experts periodically review samples of model outputs can identify biases that automated methods may miss.
- Consider a bias bounty program with clients: Rewarding external researchers who find biases incentivizes rigorous third-party auditing for blindspots.
- Build bias benchmarking tests: Proactively create test cases that expose potential issues, testing aspects like race, gender, age, and other attributes.
- Practice dataset minimization: Reduce risks of misuse by only retaining essential data for bias checking, and deleting non-critical data.
- Make fairness metrics transparent: Publicly share ongoing evaluation results on aspects like statistical parity, equality of odds, etc.
- Continuously update the bias detection framework: Regularly incorporate advances in techniques and community feedback to improve over time.

[riskRegister.pdf \(opens in a new window\)](#)

(/application/10101453/form/question/37548/forminput/103201/file/622822/download).

Assessor feedback

Assessor 1

A risk assessment has been conducted and a risk analysis is included. Key risks are further discussed.

Assessor 2

All the risks presented in the form are technological. The applicant underestimates how difficult it is to collect and then label data ready for training. Other risks are in the appendix which is pretty comprehensive (and may infringe competition rules for its length)

Assessor 3

The risk register identifies several key risks and brief mitigation is proposed. The risks relating to poor market reception and poor use by designers could be mitigated further through the clear involvement of an appropriate range of customer types, end-users, and beneficiaries throughout the project. Plans for ongoing risk identification, management, and mitigation are considered.

Assessor 4

Many risks and mitigation strategies are described. However, trustworthiness of any AI system requires explainability, trust, responsibility, fairness. What are the associated risks and how are they mitigated? If the emotion estimation is wrong, this will have a very bad effect on the effectiveness of the system. Since nothing is mentioned about the methods used for this, there is great risk for such cases.

Assessor 5

The applicant has provided a detailed risk register in which key risks have been identified and the mitigations detailed. It is clear that a project such as this requires specifically skilled staff and the risk of staff recruitment and retention has not been included and may be something that they may consider adding. There is also no mention relating to the risk/protection of any IP in development of the project.

11. Added value

Average score 6.2 / 10

How will this public funding help you to accelerate or enhance your approach to developing your project towards commercialisation?

The main impact of public funding in the short term would be to accelerate the research and development efforts and allow us to bring the product to market more rapidly. As explained in other areas of the application, our efforts will be targeted towards AI development and hardware fine-tuning to give us a really strong competitive advantage giving our company really strong future prospects. Public funding is also going to protect the funding team as the company's growth materialises: we can keep investing in product improvement and business development without being rushed by private investors with a short-term view.

Together with our first partners, having public backing will help our organisation in non-financial ways: the endorsement will mean that we will be able to limit the Marketing spending for a long time with respect to our current estimates. This will further improve the viability of our business and allow us to potentially reach new clients more easily.

If awarded the funding, we will be able to use the current cash flow to increase our R&D team size in 2024, therefore cutting down our time-to-market by 6 months. Our best-case scenario shows that, with public funds, we could bring KnoWhere to market within 6 months from the end of the programme. This acceleration is due to the fact that we can bring forward the pilot testing.

As a result of Innovate UK's backing, we believe that our Series A fundraising round would be able to attract higher-quality investors and more capital. Our advisors also believe that the additional product development and team size at the time of the capital raise, will increase the company valuation (roughly £2 million more). The extra capital will positively impact our capacity to grow our Engineering and Business Development functions.

Assessor feedback

Assessor 1

No information has been shared on external investors approached. The applicant discusses about raising Series A funding by passing pre-seed and seed funding stages.

Assessor 2

Arguments for public funding are good but could have provided more information on alternative funding.

Assessor 3

The primary argument for public funding is based on time to market. Activities undertaken to evaluate alternative sources of support and/or funding could be detailed here, including rationales for discounting them or involving them in the ongoing funding strategy. Further detail on specific post-project R&D activities, by all project partners, that would be catalysed by public funding of the project could be provided here.

Assessor 4

The project can have good added value for the company, if successful.

Assessor 5

The justification for public funding is reasonable. It has not been stated whether alternative funding for this project have been considered but is implied in the response. There is a clear commitment to further R&D and a faster project delivery should funding be made available.

12. Costs and value for money

Average score 6.0 / 10

How much will the project cost and how does it represent value for money for the team and the taxpayer?

The cost for the project is budget at £69,294. This includes the cost of developing and testing the innovative gaze and emotion-tracking AI capabilities. This project cost does not include any upfront investments for developing the rest of the architecture. Part of these costs have been already absorbed by the company and we estimate that we will invest roughly £35,000 more before the start of the project to improve the performance of the software.

During the project, part of the costs (around £7,000) will cover the expenses for testing the AI solutions in a realistic setting. We are also factoring in £3,000 to cover the cloud costs for training our algorithms, testing, and validation. Our largest cost driver is labor: with 2 engineers working on this full-time for 6 months.

QuasiScience will finance £20,788 (30%) of the cost of the project using the cash flow generated by current business activities: sales of internally developed software and consulting. We seek funding of £48,506 (70%) to be able to shift more internal resources to this promising project without affecting our risk of

default. Without the funding, we would risk exhausting our capital reserves very quickly. Furthermore, Innovate UK's 70% funding for the R&D elements, enables us to dedicate more internal funds and investor capital to commercialisation activities.

The public funding also de-risks the R&D phase and validates the technology's potential, making the project more appealing for private investors. This cost-sharing represents strong value for money for the taxpayer as our project's success has many positive externalities. For instance, museums will offer much more relevant experiences and this will promote the diffusion of Arts and Culture. The potential of our new platform technology will attract many creatives and result in new job opportunities and positive economic impact.

Assessor feedback

Assessor 1

Source of match funding identified. Value for money is not quantified.

Assessor 2

The costs are reasonable. However, it's not clear who the salaries are for, since the two personnel are not named and hence unlikely to be the two members of the Team from an earlier section, yet no other team members were mentioned in that section.

Assessor 3

The project costs could be justified in more detail through reference to fully costed work packages. Further detail on steps taken to ensure quality and value for money in all purchasing and procurement would be appropriate here. Arguments for positive externalities could be detailed further through reference to a more in-depth analysis of potential wider impacts.

Assessor 4

Since the company has not developed, or collaborated with a Research Group with expertise in affect analysis, the project underestimates the cost of developing and testing innovative gaze and emotion-tracking AI capabilities, at a level that will be effective and trustworthy.

Assessor 5

The project costs are reasonable for a project as described. The match-funding element and cash-flow have been secured.

Application score: 57.0%

The finances of all project partners are included in this summary.

	Total costs (£)	Funding level (%)	Funding sought (£)	Contribution to project (£)	Other public sector funding (£)
QUASISCIENCE LTD Organisation	69,294	70.00	48,506	20,788	0

Funding breakdown

	Total	Labour (£)	Overheads (£)	Materials (£)	Capital usage (£)	Subcontracting (£)	Travel and subsistence (£)	Other costs (£)
QUASISCIENCE LTD Organisation View finances (/application/10101453/form/FINANCE)	£69,294	46,112	9,222	9,800	1,420	0	1,200	1,540

Supporting information

Project impact

Understanding the benefits of the projects Innovate UK supports

Partner	Status
QUASISCIENCE LTD (Lead)	Complete

Terms and conditions

Award terms and conditions

Partner	Funding rules	Terms and conditions
QUASISCIENCE LTD (Lead)	Subsidy control	<u>Innovate UK - Subsidy control (/application/10101453/form/terms-and-conditions/organisation/102596/question/37068)</u>

Assessor feedback

Assessor 1

Responses are weak and short. No financial projections are shared. Competitive landscape has not been discussed specially how the innovation differs. Route to market identified.

Assessor 2

There is a substantial disconnect between what the proposal says the project will do and the technology described to do it. The early part of the proposal mentions a special form of display but this doesn't form part of the innovation disclosure. There are questions over the size of team.

Assessor 3

The business case could be developed further through the use of recent relevant research and further detail on the work undertaken to date by the applicant. The project would benefit from further attention to human-centred design, including design for EDI. With this in mind, further detail on the involvement of a sufficiently broad and representative range of potential customers, end-users, and beneficiaries throughout the discovery, design, and testing activities of the project plan could be considered. The market analysis and the consideration of wider impacts would benefit from further attention.

Assessor 4

The project targets outcomes which need the state-of-the-art of developments in human computer interaction and affect analysis. Only vague description is given on how these will be implemented. There are also major concerns following AI regulatory prospects and implementation strategies.

Assessor 5

This is a very innovative project which has the potential to make significant improvements in the creative industries sector. The application lacked sufficient detail in the project planning response but provided a really comprehensive response in relation to risk management. The business models being considered are also looking to be able to provide some additional

support to enable the third sector and social organisations to benefit from the results of the proposed project.