



Mark Project Final Report

Prepared by: Jenny Knowles and Yash Kumar

Date: 14 June 2024



Contents

1	Project Status and Summary	3
1.1	Overview of Project	3
1.2	Overview of Delivery	3
2	Risks	8
3	Issues.....	16
4	Positive Reflections	19
4.1	Legal and Finance Perspective	19
4.2	Delivery Perspective:	19
5	Reflections on Areas for Improvement	21
5.1	Bid Phase:	21
5.2	Legal and Financial Perspective.....	21
5.3	Delivery Focus	21
6	Lessons for Consideration	23
6.1	Bid Perspective	23
6.2	Delivery Perspective	23
6.3	Legal and Financial Perspective.....	23



1 Project Status and Summary

1.1 Overview of Project

The MarK project aimed to demonstrate how shared infrastructure and neutral hosting models could have enabled new commercial and community-based services, overcome current 5G deployment barriers, delivered enriched services, and improved customer choice. The technical capability would have been showcased at locations including Stadium MK, the 30,000-seat home to the MK Dons Football Club, and the Marshall Arena, a 5,000-seat indoor arena. The use cases would have included visitor voice and data services, event and Smart City operations management, CAV deployments, and live streaming services to the outside world, creating an enhanced and distinctive experience.

The project kicked off on 1st November 2023, with approval to work at risk, the end date fixed at 31st March 2025. The project was originally bid and awarded to MK CIC in June 2023. In September 2023, the Catapult was asked to assume the role of Prime and lead the existing consortium that had bid together. Catapult took the decision to accept the role of Prime to support the growth of UK industry and to ensure the project was able to continue. The project aligned with the Catapult's existing portfolio and provided an opportunity to further commercialise work in this domain and enabling UK industry to bring products and services to market, enabled by space technology.

The GFA was signed in January 2024 and the Collaboration Agreement was signed by 6 parties and was in the process of being signed by the remaining parties when first Atlas Edge withdrew from the consortium due to a change in corporate strategy and secondly Dell withdrew from the consortium for the same reason at the time of a significant reduction in headcount. This was a significant setback to the project, the Catapult rapidly engaged with multiple parties to act as a replacement and rescope the project accordingly but ultimately, it was concluded that we could not achieve the goals of the DSIT programme within the given time frame.

1.2 Overview of Delivery

Work Package 1 Definition, led by OU, was progressed 1st November through to 31st March. At this point we were due to progress to WP 2 Technology, commencing first with the Low-Level Designs however due to the challenges in the consortium we slowed the progress on this and revisited the schedule and deliverables to streamline the project.

The following deliverables were submitted:



Milestone	Deliverable	DSIT Feedback	Follow On Action taken
MS1 - User Requirements Capture	D1.1.1 Scenarios / Use case definition	Deliverable has been approved	No action required.
	D4.1.1 Quarterly Reporting	D4.1.1 and D4.1.2 were merged due to the contract delays. This document was submitted and along with the QRM presentation and accepted ahead of a review meeting.	Had the project progressed we would have conducted a quarterly review.
	D4.2.1 Draft Benefits Realisation Framework	Draft BR Framework submitted, though at the time we were unclear on Dell's intentions and thus had gaps in the benefits defined. Feedback provided and actions assigned.	We had good discussions with the DSIT team and had actions to take ahead of next submission - many were complete, some (Dell related) were not.
MS2 - Technical and Service Requirements Capture	D4.3.1 Security Strategy	<p>General view is that this is acceptable as a starting point, but the content contains guidelines, rather than more wholistic project-specific strategy that DSIT were requesting. This needs further review by the project and an iteration with either justification for not including the points below or further coverage.</p> <ol style="list-style-type: none"> The project has provided a thorough set of guidelines: Guidelines around setting up and maintaining testbed telecoms and IT infrastructure. A question was raised to the project in how much of this is based around an assessed threat and risk assessment around the project's specific use cases and telco infrastructure The security strategy should of course be tailored towards the project-specific needs. There was no evidence of a project-specific threat and risk assessment exercise, planned or 	<p>The points remained outstanding. many would have been resolved during the low-level design phase in WP2. The below is a summary of the status at the closure of the project:</p> <p>Point 1 & 2: Designing an end-to-end risk assessment around use case and infrastructure, requires all pieces of architecture to be in place and well defined. In our case apart from Dell/Atlas Edge we were missing the critical O-RAN software vendor as well as the 5G core. Unfortunately, at this stage this meant the strategy was based on guidelines.</p> <p>Point 5: update was in progress when we agreed to pause the project.</p> <p>Point 4: We had gathered input from other consortium members, but we were lacking detail from Atlas Edge and Dell which we had expected to support completion.</p>



Milestone	Deliverable	DSIT Feedback	Follow On Action taken
		<p>otherwise. Although there is recognition of the benefit of following general best practices and this will support most of the security management across the environment, it is recommended to run a project-specific risk assessment to ensure that all security aspects of this bespoke project are considered and where specific risks are identified, these are noted and managed appropriately.</p> <ol style="list-style-type: none"> 3. No governance strategy presented- this should be defined to ensure appropriate security governance is put in place across the project, including: leadership structure, compliance, regular reviews and reporting, documentation development and repository. 4. Confirmation was requested that all parties input and agreed to the strategy 5. What documentation is available to support the guidelines mentioned? How will this be identified and be made available to the project to ensure that all have access to the documentation and that the documentation is appropriate for the requirements. <ol style="list-style-type: none"> a. There was no mention of project partner-specific policies, guidelines, procedures, etc. I would suggest that these are incorporated in some fashion or at least noted. This is where the 	<p>Point 5: Agree, if project had continued, we would have taken onboard the feedback and created the appropriate documentation including all software components and project partners.</p> <p>Point 6: The final MNO integration was not clear at this stage of the project, project was planning to have technical discussions around possible ways of MNO integration after the selection of the O-RAN vendor. There are couple of ways for integration such as MORAN / MOCN or shared RU architectures that require different security designs. Based on O-RAN vendor software features and the technical discussions with VMO2 the appropriate sharing infrastructure topology to support MarK use cases would have been chosen.</p>



Milestone	Deliverable	DSIT Feedback	Follow On Action taken
		<p>project-specific risk assessment comes into its own because if there is a specific threat identified, it could be noted that the risk mitigation is to have a specific process or procedure in place and this could already be defined in existing documentation.</p> <p>b. If documentation doesn't exist to support the guidelines, how will this be developed?</p> <p>6. MNO-integration ie. Neutral Host security requirements? Not mentioned but should be discussed as this is part of the networking model.</p>	
	D4.4.1 Draft Dissemination and Communications Plan	<p>The following items to be included in D4.4.2 Final Dissemination and Communications Plan:</p> <p>7. Details of social media/press release comms (from Gantt timeline)</p> <p>8. Implementation and a calendar of activities up until 2025.</p> <p>9. Budget, resources and risks.</p>	Progress to D4.4.2 Final Dissemination and Communications Plan.
	D1.1.2 User and Service Requirements Capture	<p>They are an excellent example of use case and technical requirements gathering and it's very positive to see a project going to these lengths and formalising this level of detail at this stage.</p>	No action required.
	D1.1.3 Technical Requirement Capture		No action required.
	D1.2 Initial Sustainability / Go to Market Plan	<p>The document presents a thorough overview of the market demand, in relation to the project's wider technical objectives.</p>	No action required.



Milestone	Deliverable	DSIT Feedback	Follow On Action taken
MS3 - High Level Planning	D1.3 Preliminary architecture description (HLD)	Reviewed and approved these two deliverables, comment: happy with how they cover the requirements set out for them as per the Annex 5.	Gaps left by Dell and AE withdrawal required addressing ahead of Low-Level Design.
	D1.1.4 Infrastructure deployment plan (initial)		
	D4.1.2 Quarterly Reporting	See D4.1.1.	No action required.



2 Risks

The table below is an extract of the Project Risk Register the point when Dell stated their change in strategy, and we were forced to slow delivery and replan/schedule the project during our effort to reconstruct a credible consortium.

ID	Date Identified	Description and impact of risk	Impact	Prob	Risk	Current Risk Mitigation Actions	Response	Risk Status
R1	04/09/23	"[Threat/Opportunity] [Risk] There is a risk that we will be unable to demonstrate procurement rules have been followed. [Cause] This is due to SAC inheriting decisions made at bid stage and therefore not having been in meetings or progressed the documentation that would support evidence. [Impact] The impact is our inability to demonstrate we have adhered to the procurement clauses in the GFA.	5	3	15	This has been shared with DSIT and MK CIC. We have 2 options: Clarify the position with DSIT around the 2 suppliers named in the bid with the technical and commercial reasoning for selection. Issue SOW and go to market, include the tech and commercial requirements that led to selection of the 2 suppliers.	Avoid	Closed
R2	04/09/23	"[Threat/Opportunity] [Risk] There is a risk that SAC will be unable to demonstrate Conflict of Interest rules have been followed within the current consortium. [Cause] This is due to inheriting the consortium decisions made at bid stage. [Impact] The impact is our inability to demonstrate that conflict of interest has been adequately considered in the decision making at bid stage.	4	3	12	SAC will conduct due diligence on each partner and subcontractor and request statements from each on conflict of interest SAC will implement a register for interests outside of the consortium to be captured, maintained and reviewed throughout the project. This has been shared with DSIT and MK CIC.	Avoid	Closed



ID	Date Identified	Description and impact of risk	Impact	Prob	Risk	Current Risk Mitigation Actions	Response	Risk Status
R3	04/09/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that installation of the system onto the shuttle bus has not been fully considered and scoped.</p> <p>[Cause] The potential cause is each consortium member involved considered it another partners responsibility.</p> <p>[Impact] The impact is inability to upload the system or additional work for a partner to take on this task.</p>	4	3	12	<p>Identify how the system is to be uploaded - Ian to provide. Confirm with partners who is undertaking this work.</p> <p>This has been shared with DSIT and MK CIC.</p>	Reduce	Closed
R4	04/09/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that there are gaps in the technical delivery.</p> <p>[Cause] This is due to lack of definition or responsibilities identified within the work packages at bid or post bid stage.</p> <p>[Impact] This could lead to failure of the project to succeed or additional work being required.</p>	4	3	12	<p>WP descriptions, schedule and deliverable success criteria have been defined and shared with the consortium. Responsibilities within this are also defined and shared.</p>	Reduce	Closed
R5	04/09/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that there is duplication in effort or procurement.</p> <p>[Cause] This is due to lack of definition or responsibilities identified within the work packages.</p> <p>[Impact] This could lead to underspend in project delivery.</p>	4	3	12	<p>1/ WP descriptions, schedule and deliverable success criteria have been defined and shared with the consortium. Responsibilities within this are also defined and shared.</p> <p>2/ following the procurement process has led us to review and thoroughly consider the requirement and engage with partners. This has supported resolution of this risk.</p>	Reduce	Closed



ID	Date Identified	Description and impact of risk	Impact	Prob	Risk	Current Risk Mitigation Actions	Response	Risk Status
R6	11/09/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is risk that we will have challenges working with Dell.</p> <p>[Cause] This is due for potential disorganisation in their project team with decisions, finances, marketing having to be flowed through the US rather than the UK. They also bring US lawyers into the consortium.</p> <p>[Impact] This could bring delays and extended durations for decision making.</p>	4	3	12	We have seen a change in the way they work since their main tech lead has returned from sick leave. This is an improved situation.	Reduce	Open
R7	15/09/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that the supplier quote will be higher than anticipated.</p> <p>[Cause] This is due no quotes being sought during bid/post bid stage.</p> <p>[Impact] The previous quotes totalled £659k, we are estimating £500k and therefore there is a £159k risk.</p>	4	4	16	<p>The solution and therefore requirement, has been simplified to require less equipment and therefore less support to meet the scope of work.</p> <p>Competitive tender was run and the total value of quotes were £433k.</p>	Avoid	Closed
R8	15/09/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that the consortium are not sufficiently responsive when being asked to complete Pre GFA inputs.</p> <p>[Cause] The cause is unclear. There seems to be an expectation set by the original prime that there was nothing further to be complete, however none of the partners had generate their commercial finance forms, submitted their financial information or completed the due diligence form fully.</p> <p>[Impact] The impact is that we will run into issues during delivery with responsiveness to reporting and claim information.</p>	4	3	12	Collab Agreement is to specify timescales and impacts for late delivery of reporting and claim information.	Reduce	Closed



ID	Date Identified	Description and impact of risk	Impact	Prob	Risk	Current Risk Mitigation Actions	Response	Risk Status
R9	05/10/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that a partner could request to exit the consortium or we are required to terminate a partners membership during the life of the project.</p> <p>[Cause] This could be caused by insolvency, inability on the partner to meet requirement or a change of company control</p> <p>[Impact] The impact of losing a partner would be inter-project dependencies could fail to be delivered, we could have to seek a replacement which could impact delivery timescales (the timescales of the project are fixed), the scope of the project could be impacted.</p>	5	1	5	<p>Review finance dd results</p> <p>Prepare comms to be used in this event.</p> <p>Prepare impact assessment / contingency / what if planning for exit of each consortium member.</p> <p>Define any confidential info which would need to be returned.</p>	Accept	Open
R10	06/10/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that IP landscape (current and future) is not fully understood</p> <p>[Cause] This is due to this not being considered in detail during bid/post bid stage.</p> <p>[Impact] The impact would be work on the project to resolve and time/cost to reach agreement</p>	5	3	15	<p>Engage with technical teams to understand likely scenarios</p> <p>Steer project to avoid complexity like joint IP</p> <p>Define / find bid IP strategy highlighted by Kieran</p>	Reduce	Open
R11	13/10/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that one of the Consortium member's attitude towards the Catapult will impact the consortium and undermine the Catapult's ability to prime this project.</p> <p>[Cause] This is due to pre-bid discussions on a 3% payment to the previous Prime which the Catapult did not proceed with on becoming Prime.</p> <p>[Impact] The impact will be to the team working together and achieving the requirements.</p>	5	3	15	<p>Reduced risk by PM being clear as to the rules set out in the GFA. DSIT have supported this at the KO meeting.</p> <p>Other partners have demonstrated support of our position.</p>	Reduce	Open



ID	Date Identified	Description and impact of risk	Impact	Prob	Risk	Current Risk Mitigation Actions	Response	Risk Status
R12	13/10/2023	<p>[Risk] There is a risk that the reduction in schedule from 18 months to 17 months will impact our ability to deliver the aims.</p> <p>[Cause] This is due to the change in prime delaying the start of the project. The Project has to end on 31st March 2025 so if we work to a WAR start date of 1st November, we have only 17 months.</p> <p>[Impact] The impact could be inability to deliver everything to the quality planned at bid stage.</p>	4	5	20	The team have reviewed the solution and simplified the architecture (and therefore subsequent detailed design, implementation and test requirements. This should mean the overall objective is still achievable.	Reduce	Closed
R13	03/11/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that Consortium members are unable to work at risk.</p> <p>[Cause] This is due to a delay in securing the GFA with DSIT and agreeing Collaboration Agreement with members</p> <p>[Impact] The impact would be a delay in commencing the deliverables and compressed timescales to meet outputs of WP1</p>	4	3	12	All partners have been asked to confirm whether they are able to work at risk to understand the level of risk Accelerate the GFA and CA to an agreeable position to minimise risk	Reduce	Closed
R14	03/11/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that SAC is unable to agree terms with DELL in the CA</p> <p>[Cause] This is due to feedback from DELL on the IP terms proposed in the CA and that they would need to see a revision before proceeding to signature</p> <p>[Impact] The impact would be a delay in signing the CA and commencing the project</p>	3	3	9	<ol style="list-style-type: none"> 1. consider internally whether we have any room to move 2. Engage DELL to discuss a pragmatic way forward 	Reduce	Closed
R15	23/05/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that the project solution is the victim of a cyber- attack.</p> <p>[Cause] This is due to current threats to technology and connectivity.</p> <p>[Impact] The impact would be loss control over personal data, core/radio networks and services/applications.</p>	5	3	15	<p>Use of industry-standard multi-layered controls, including highly secure network protocols and other security measures</p> <p>In-project partner expertise and independent advice from HMGCC</p>	Avoid	Open



ID	Date Identified	Description and impact of risk	Impact	Prob	Risk	Current Risk Mitigation Actions	Response	Risk Status
R16	23/05/2023	"[Threat/Opportunity] [Risk] There is a risk that equipment required will be unavailable or delivered late. [Cause] This is due to limited supply chain capacity, shipment customs. [Impact] The impact would be delays to the project of workarounds being developed.	4	3	12	Early deliveries for critical path components with option to multi-source Establishment of UK-based supply chain with credible partners	Reduce	Open
R17	23/05/2023	"[Threat/Opportunity] [Risk] There is a risk that there will be legislative changes during the project. [Cause] This is due to possible change of political administration (national or local), changes to policy during the project that mean assumptions made are incorrect. [Impact] The impact would be re-work/planning with DSIT.	3	3	9	Close and proactive working with key stakeholders to both assess and inform potential changes, using insight and learning from the project and wider industry insights from partners Ongoing risk assessments in relation to policy, regulatory or legislative change	Accept	Open
R18	23/05/2023	"[Threat/Opportunity] [Risk] There is a risk that the project will be unable to deliver a product that can be commercialised. [Cause] This is due to high cost/low demand or MNO reticence to move to share infrastructure, neutral host and Open RAN models. [Impact] The impact would be a technically viable solution with work required to move it towards commercialisation.	3	3	9	Active regulatory, customer and supply chain engagement as part of go-to-market plan Support from two UK-based MNOs as part of the project Technical Advisory Board forms part of a wider engagement strategy	Reduce	Open



ID	Date Identified	Description and impact of risk	Impact	Prob	Risk	Current Risk Mitigation Actions	Response	Risk Status
R19	23/05/2023	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that a public health emergency will impact the project team, supply chain, shipping, service operations, trials etc.</p> <p>[Cause] This is due to the raised awareness of the potential for lockdowns especially in countries who are key to the supply of specific materials.</p> <p>[Impact] The impact would be delays, impact to quality and requirement for workarounds.</p>	3	2	6	Collaboration tools to support remote working; safe-working practices and guidance <ul style="list-style-type: none"> • Multi-partner, multi-vendor, multi-sourcing approach across different geographies • Each partner can call on a wider resource base if an individual is impacted 	Reduce	Open
R20	23/05/23	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that the wider stakeholder perception and societal acceptance of technology is negative.</p> <p>[Cause] This is due to safety and technology concerns from members of the public and possibly MNOs.</p> <p>[Impact] The impact would be potential for negative media coverage and lack of support for the outputs.</p>	2	2	4	Active, multi-channel stakeholder engagement and outreach as part of overall communications plan <ul style="list-style-type: none"> • High levels of technology acceptance well established within Milton Keynes • Proactive industry engagement, dissemination, learning and outreach as part of project 	Avoid	Open
R21	10/01/24	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that we could experience delays to the deliverable schedule.</p> <p>[Cause] This could be due to multiple factors - issues within the consortium, complexity that was unexpected and challenges to be resolved.</p> <p>[Impact] The impact would potentially be delays to quarterly claims, impact to the relationship with DSIT and impact to items in the schedule dependent on those deliverables. .</p>	4	2	8	1/ Ensure good communication from the partners to share issues they are having with deliverables to allow us to get support from the wider team and DSIT as required. 2/ Good reporting and updates as issues arise to ensure that DSIT are aware of what is going on. 3/ Ensure the partners understand the impacts to claims if the deliverables are delayed at quarter end.	Reduce	Open



ID	Date Identified	Description and impact of risk	Impact	Prob	Risk	Current Risk Mitigation Actions	Response	Risk Status
R22	16/01/24	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that with of confusion of requirements, aims and solutions between MarK and other projects .</p> <p>[Cause] This is due to a number of similar projects with the same consortium taking place in parallel.</p> <p>[Impact] The impact would be errors and disjointed communications leading to delays.</p>	3	4	12	<p>Start each email with 'Mark'.</p> <p>Start all meetings by stating the project.</p> <p>Pick up on and question if someone is on the wrong track to correct quickly.</p>	Avoid	Open
R23	05/01/24	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that there will be underspend in FY.</p> <p>[Cause] This is due to slow start due to lack of contract and forecasting being too optimistic when produced.</p> <p>[Impact] The impact would be loss of any funds not spent in FY.</p>	5	5	25	<p>DSIT have confirmed no funds can be carried forward into next FY.</p> <p>Team and consortium to look at any costs that can be bought forward and make those purchases this FY.</p> <p>JK to review cash flow with each partner to see what action can be taken to resolve/mitigate this.</p>	Reduce	Open
R24	29/02/24	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that another partner will withdraw from the consortium.</p> <p>[Cause] This is due to uncertainty and continuation of WAR.</p> <p>[Impact] The impact would be a further gap in the scope of work and additional work to be done to resolve this. This would further delay the contract and impact further the schedule and other partners.</p>	5	2	10		Avoid	Open
R25	19/03/24	<p>"[Threat/Opportunity]</p> <p>[Opportunity] There is an opportunity to bring another company into the consortium as a partner to replace AE</p> <p>[Cause] This is due to AE dropping out of the consortium</p> <p>[Impact] The impact could bring some really interesting ideas to the project, not just about edge technology but also with environmental/cost saving opportunities.</p>	5	3	15	<p>This will bring us back to project scope.</p> <p>This will bring follow on opportunities and impact.</p>	Accept	Open



ID	Date Identified	Description and impact of risk	Impact	Prob	Risk	Current Risk Mitigation Actions	Response	Risk Status
R26	03/04/24	<p>"[Threat/Opportunity]</p> <p>[Risk] There is a risk that we will be unable to maintain the schedule due to the consortium still working at risk whilst we resolve Dell and a potential other company's involvement.</p> <p>[Cause] This is due to AE withdrawing and Dell change in strategy resulting in a significant reduction (yet to be determined) in their involvement.</p> <p>[Impact] The impact is that the project will need to be de-scoped and whilst Dell and the other company are finalising their involvement we will fail to make sufficient progress to maintain schedule.</p>	5	4	20	We will re-scope to reduce the complexity of the project, aligning with the reduced budget available as a result of project underspend in FY23/24. We will work with the company and Dell to support their process to get their scope confirmed.	Reduce	Open

3 Issues

Below is an extract from the Issue List up to the point Dell first confirmed their change in strategy.

ID	WP	Category	Date Identified	Owner	Description and impact of Issue	Expected Impact			Action
						Time	Cost	Quality	
I1	All	Financial	07/09/23	JK	<p>[Issue] The original Prime advised the consortium that they were able to WAR and the costs expended would be eligible from July 23 onwards.</p> <p>[Impact] JK has advised the consortium that this is against DSIT rules around eligibility of cost and also that DSIT have not yet committed to place the contract so could walk away.</p>	1	5	1	<p>Previous Prime maintains they have written evidence to support this position and will raise it in the next discussion with DSIT (13/09/23) for confirmation.</p> <p>SAC have clarified this point with DSIT and shared the response, which is clear.</p>



ID	WP	Category	Date Identified	Owner	Description and impact of Issue	Expected Impact			Action
						Time	Cost	Quality	
12	All	Operational	15/09/23	JK	<p>[Issue] The consortium are not sufficiently responsive when being asked to complete Pre GFA inputs.</p> <p>[Impact] The impact is delays to contract award and subsequent claims. There is also a risk that we will run into issues during delivery with responsiveness to reporting and claim information.</p>	5	5	5	Engage through meetings and email communication to clearly define the requirements and the impact to non-delivery.
13	All	Operational	09/02/24	JK	<p>[Issue] Atlas Edge have pulled out of the consortium.</p> <p>[Impact] GFA needs a CCN and the CA needs changing and resigning. This means the Consortium are still not on contract and we have a technical delivery gap in the project. We will also lose the AE budget assigned this FY.</p>	5	5	5	<ul style="list-style-type: none"> - Kieran to engage with potential replacements. - JK to pursue a CCN to the GFA. - Partners to submit cashflows to support this CCN. - In parallel JK to set up a meeting with AE to see if they will sign the existing CA (to enable them to claim costs incurred and the consortium to get on contract) then immediately withdraw.
14	All	Operational	09/02/24	JK	<p>[Issue] Lack of updated cashflows from partners is impacting our ability to identify and initiate recovery action for the underspend this FY.</p> <p>[Impact] We will see a reduction in our budget of anything underspent this FY. This will in turn impact our ability to deliver.</p>	5	5	5	- Partners to submit cashflows.



ID	WP	Category	Date Identified	Owner	Description and impact of Issue	Expected Impact			Action
						Time	Cost	Quality	
I5	All	Operational	28/02/24	KA	<p>[Issue] The re-organisation in Dell leading to allocation of a new Dell team and potential delay in this allocation of team members to the project.</p> <p>[Impact] This could impact the quality of deliverables and lead us to deliverable updates (Arch Design will be missing Dell inputs) until the Dell team are in place, this will also impact the Press Release and Website publication.</p>	3	3	5	<ul style="list-style-type: none"> - Kieran has met the HoD for Dell TSB dept who are taking on this project and has reached out to stress the importance of progressing quickly on specific item (listed in slide 6) - JK to maintain delivery and comms with DSIT and the consortium to update progress. - Engage with Dell and support where we are able to bring the new team up to speed. - Investigate hosting a networking event to share the projects aims with interested stakeholders at MK Stadium. This will mitigate our delays in sharing info on the project.



4 Positive Reflections

4.1 Legal and Finance Perspective

- a) Major reduction in risk of inherited items ensuring compliance and avoiding any breaches.
 - a) 3% of project budget that was previously discussed in the bid stage to go to MKCIC was not something we could support when we were Prime.
 - b) In our early due diligence, we spotted and avoided common directors between the ex-prime and one of the organisations originally proposed to be a subcontractor by the previous prime. MKCIC elected to withdraw from the consortium.
 - c) Undertook further due diligence on quotes from Accelleran and IS Wireless – these had been handed over to Catapult to take on. We found no procurement process had been followed (there was no Statement of Work or formal quote from one of the ‘suppliers’). This was promptly rectified with savings realised.
 - d) There was a suggestion that the previous prime could be a subcontractor to us. We explained this was not possible because the procurement process would have to be followed (it could not be assumed they would win) and also it would have seen us breach the 30% limit for Government Funded organisations.
- b) We immediately clarified the Work At Risk position when we took responsibility for Prime ensuring the consortium knew that they had not been authorised to WAR from 1st July 23.
- c) When we took on the Prime responsibility, we were able to mobilise, address concerns, add clarity and progress quickly. Early and close working with our legal team to understand the risks and processes in our new role as Prime and apply mitigations.
- d) We identified, recorded, reported and managed risks and issues, developing strategies to address those from the start.
- e) Dell were really engaged to understand the financial processes and looking to find solutions within their organisation.
- f) Establishing a relationship with DSIT finance (pre GFA stage) was incredibly helpful for moving forward. We were better able to support and advise the consortium as a result of this.
- g) Good relationship built by PM and DSIT teams made the complications and eventual withdrawal less transactional. This relationship and team approach is reflected in letters, meetings and emails.
- h) Consortium reflected that we brought a different approach as Prime to the original prime - more organised with the ability to move GFA forward and provide definition as to the project delivery.
- i) The way the Catapult progressed finances/claims by setting up the team to support are positive lessons to be taken forward to other projects.
- j) Procurement process was followed, and the result was we procured what was required (though we were unable to progress with the contract). The Catapult team did a great job in defining the requirement and reviewing submissions. Time pressures on these key team members when they were also progressing the replanning activity added a challenge.
- k) DSIT supporting us with official comms to get the partners ‘motivated’ to fulfil their responsibilities made a positive impact.

4.2 Delivery Perspective:

- a) Consortium engagement from our Catapult team was strong, sadly many consortium members were not as engaged as we would expect but with some improvement over time.
- b) Important work by the Catapult Technical Lead and Project Architect to provide definition to the work packages allowing the SA Catapult team to produce a realistic and achievable schedule and milestone delivery plan when we took responsibility for Prime.



- c) Our team and along with the consortium delivered excellent deliverables (very positive feedback), our outputs and our quality review process were well received and continued on all projects.
- d) Kick off meeting had some of the consortium presenting on what they are bringing to the project.
- e) Communication with DSIT was open and always felt positive, allowing us to develop a good relationship with the DSIT team.
- f) OU led WP1 well to delivery. Engagement was good and the deliverables were to a good quality.



5 Reflections on Areas for Improvement

5.1 Bid Phase:

- a) Satellite Applications Catapult were invited to join the consortium at bid stage at late notice, given the deadline for the bid submission. We acknowledged that a degree of scoping and some checks were not as we would usually undertake had we been Prime. Our approach was to work with the Prime and consortium post-bid submission but prior to contract signatures to ensure the necessary detail was underpinning the proposed project.
- b) We supported the overall concept proposed by the Prime and welcomed the opportunity to work with the consortium.
- c) Our internal processes were followed to ensure checks and governance, particularly on financials.
- d) The bid written by the Prime, with some inputs from the partners (including the Catapult) was to our mind compelling and a strong response, noting that some questions were conceptual regarding alignment to the funding call and therefore warranted a high-level response.
- e) The Catapult's role at bid stage was costed accurately based on the role proposed in the project, however we acknowledged that during engagements with the consortium that there was a risk that partners had not done the same. The previous Prime had supported a top-down approach to finances, to agree budgets that aligned to how they proposed the financial make-up of the consortium should look, and we didn't have full comfort were backed up by detailed planning.
- f) We have noted that even when not the Prime at bid stage that more consideration is required to which consortiums we join, and when asked to work at pace to gather bid inputs that we need to consider if we can mitigate the risks appropriately.

5.2 Legal and Financial Perspective

- a) Our procurement specification could have been a little tighter to reduce the clarification questions. This can be hard to spot until we receive responses. Clarifications were good and timely.
- b) The Collaboration Agreement was not fully signed – Dell legal, after considerable work, approved to go to signature but the organisation withdrew
- c) The 2 largest commercial organisations in the consortium changing corporate strategy just prior to signature of Collaboration Agreement had a significant impact on the programme.
- d) Despite requesting financial POC, setting deadlines and communicating etc the consortium still submitted their claim 1 three months late. Having a dedicated finance POC was really helpful in our engagement with MK Stadium and had other consortium members had this it would have been useful.

5.3 Delivery Focus

- a) Picking up a project that has been 'shaped' by an external organisation without knowledge of the quality or steps taken then required significant effort from the Catapult to reshape.
- b) Project had a lot of assumptions due to poor definition at bid stage, leading to risk and uncertainty.
- c) There are several existing projects with similar set up (delivery, consortium etc) which created confusion and distraction in the MarK meetings and in deliverables, claims and reporting.
- d) Work Package and Task leads were in place, but it still felt like the Catapult team were going to be relied upon to lead on the delivery, shape of the deliverables, chasing for inputs.
- e) Our relationships and relationship management were hinged on just a few individuals within each consortium organisation. Some members of the consortium were very engaged and responsive, however this was not the case across the whole consortium,



- f) Due to lack of clarity and depth of thought at bid stage, a lot of confusion existed around the contribution/ expectation/ role from each partner. This consumed a lot of effort from tech lead (Juan) to assemble all the parts to build a reference picture for delivery



6 Lessons for Consideration

6.1 Bid Perspective

- a) If approvals are sought from Finance for items that are 'non-standard' then the Commercial/Legal team should also be consulted in the decision-making process.
- b) We should have a member of BD having oversight even if not deeply involved in all bids. This will support the bid managers and act as another set of eyes in decision making.

6.2 Delivery Perspective

- a) When priming we should kick off meetings should include inputs/presentations from partners on what they are bringing to the project. This adds ownership from the start.
- b) Consortium members providing regular written/presented reports (would have been part of Mark once on contract for 6 weekly meetings with DSIT where partners would present their progress).
- c) Need for greater openness and sharing internally when it comes to stakeholder relationship management to mitigate risks (when overloaded/unavailable/etc).

6.3 Legal and Financial Perspective

- a) As Prime (and as a Catapult) keep in mind the consideration of the SMEs to ensure their needs are met.
- b) Maintaining good relationships and open communication is key when issues arise, as demonstrated in this project.
- c) In the contracting phase it is crucial to ensure commercial and finance are engaged early.
- d) We did not appreciate how much time it would take to re-shape the project e.g. pre GFA information, scope of work, schedule, procurement. When we took it on, we were assured that progress had been made since the bid was submitted, this was not the case and required significant effort to produce.
- e) When joining as a consortium member we must always conduct extra Due Diligence on the Prime ensuring they have the right skills/processes to ensure a successful programme.
- f) Assessing the consortiums as to their degree of experience in working in UK govt consortia.
- g) If we were bidding as Prime, we should establish commercial and finance points of contact at bid stage to take through to delivery. Org chart for each member of the consortium - signatory, finance, legal, project, technical etc.