Birmingham City Council
Report to Cabinet

16 May 2023

Subject:	DIATOMIC (Digital Innovation Transformative Change) - Innovate UK funded West Midlands Innovation Accelerator project – Full business Case
Report of:	Peter Bishop, Director Digital & Customer Services
	Paul Kitson Strategic Director of Place, Prosperity and Sustainability
Relevant Cabinet Member:	Councillor Jayne Francis -Digital, Culture, Heritage and Tourism
	Councillor Yvonne Mosquito – Finances and Resources
Relevant O &S Chair(s):	Councillor Akhlaq Ahmed - Resources
	Councillor Saima Suleman - Economy and Skills
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Are specific wards affected? If yes, name(s) of ward(s):	☐ Yes	☒ No – All wards affected –
Is this a key decision? If relevant, add Forward Plan Reference: 010708/2023	☒ Yes	☐ No
Is the decision eligible for call-in?	☒ Yes	☐ No
Does the report contain confidential or exempt information? If relevant, state which appendix is exempt, and provide exempt information paragraph number or reason if confidential :	☐ Yes	☒ No

1   Executive Summary

1.1   The purpose of the report is to seek approval to the Full Business Case (FBC) for the DIATOMIC (Digital InnovAtion TransfOrMatIve Change) project and to accept

a revenue grant of £1.035m funded by Innovate UK West Midlands Innovation Accelerator to build the innovation capability and capacity to drive growth and prosperity in Birmingham, positioning Birmingham as a leading UK city in digital innovation and inclusive innovation.

1.2 The project will build a digital twin mirroring Birmingham. This is a virtual model of the physical world on a cloud-based data platform which will gather real time data such as pollution and traffic congestion. This will enable the twin to run simulations of local challenges, that accurately reflect the physical environment. This will study performance issues, generate possible improvements and valuable insights, which can then be applied back in real-life. This will provide access to data that will enable SMES and multi-sector organisations to access market opportunities primarily in the clean energy, retrofit and health innovation sectors. This will in turn enable them to access procurement opportunities and contribute towards creating Birmingham and the West Midlands' leading tech companies.

1.3 The project will galvanise innovation in BCC's procurement system and support Birmingham's Tech talent. By creating access to agile, smart, more efficient SMEs that respond to challenges identified above, BCC can actively support the scaling ambitions of local business. This could potentially also open up new international market opportunities for local SMEs through the global innovation city twin platform (described below). The pilot targets East Birmingham and is aligned to the East Birmingham Inclusive Growth Programme. It will open opportunities to the diverse base of SMEs and social businesses (traditionally attracting women and migrants) who represent the untapped economic potential of the region. It will establish the UK's first regional Inclusive Innovation Network (IIN) focussing on how we design, deliver and diffuse the benefits of innovation to the West Midlands region. All the outputs are designed and delivered to be inclusive, based around societal benefit and impact.

1.4 The project will establish a global innovation city twin platform (an online portal where cities involved in DIATOMIC post the challenges, they are looking to identify solutions for) and will form the basis for attracting global investors and businesses. It will establish a network of city-to-city collaborative partnerships and connectivity to global markets which will support knowledge exchange, access to skills and support scaling of new approaches and potential for foreign direct and capital investment.

1.5 In addition, the funding will deliver a PR, Communications and Dissemination work package to supporting the promotion of the DIATOMIC project locally, nationally and globally.

2   Recommendations

2.1   Approves the Full Business Case (FBC) for the DIATOMIC project as detailed in Appendix 1 for BCC to deliver the outcomes detailed in 1.2, 1.3,1.4 and 1.5 above.

2.2   For Cabinet to accept grant funding of £1.035m funding from Innovate UK to fully fund the DIATOMIC project and to enter into the associated funding agreement, subject to receipt of an offer letter.

2.3   Delegates authority to the Director Digital and Customer Services, Strategic Director of Place, Prosperity and Sustainability and Director of Public Health to manage and implement the project in line with the conditions of the grant funding agreement.

2.4   Delegates authority to the Director Digital Services, the Assistant Director Corporate Procurement or their delegate, in conjunction with the Chief Finance Officer or their delegate, and the City Solicitor or their delegate to approve the procurement strategy and selection of successful bidder(s) following the conclusion of the tender process and to execute the necessary contractual documentation to effect this outcome.

2.5   Authorises the City Solicitor (or their delegate) to execute and complete all the necessary legal documents to give effect to the above.

3   Background

3.1   In September 2022 Connected Places Catapult (CPC) approached Birmingham City Council and 5 other organisations to join a consortium to bid for Innovate UK Innovation Accelerator funding. A bid was submitted to the Innovate UK funded Innovation Accelerator programme in November 2022 and the team were notified that the bid was successful on 13th January 2023.

3.2   The total project value is £6.1m and this is apportioned across the following organisations: Birmingham City University; Aston University; University of Birmingham; the Greater Birmingham Chambers of Commerce, Connected Places Catapult (CPC) and BCC. The lead partner is CPC.

3.3   The project will contribute to the City Council Places, Prosperity and Sustainability East Birmingham Inclusive Growth Programme by supporting the development and growth of SMEs and the social economy, alongside the development of new products/services to tackle challenges identified by the Inclusive Innovation Network (IIN) and Innovative Procurement Programme and will be aligned to the City Council Digital City programme.

3.4   The project will also contribute to the Council's emerging Route to Zero (R20) work and seek synergy with other existing initiatives such as the Climate Emergency work.

3.5 Led by the City Council's Digital City and European and International Affairs Teams, the project is for 2 years and will commence 1st April 2023 and complete on 31st March 2025.

3.6 The Council will undertake several procurement exercises during the course of the DIATOMIC project. In total, the Council will procure a total of £0.285m procured services to include: £0.160m for Work Package (WP) 3 which will fund a £0.05m business engagement and advice programme; £0.05m challenge programme for impact entrepreneurs; £0.06m; first phase of the grant programme for health innovation involving social enterprises led by and creating employment for protected characteristics with a specific focus on launching or scaling up sustainable business ideas. Work Package 9 will procure £0.125 in total, £0.100m to fund an international city innovation network and £0.025m to fund global events.

3.7 The programme will deliver the following ouputs:

- a digital twin to drive data
- innovation in procurement to drive city challenges to SMEs focussing on enabling new solutions around Health Tech / Clean Tech and Med Tech with an inclusive innovation network to ensure all people, organisations and communities can contribute and take part in these challenges
- a global innovation twin, pairing cities and investors to invest in the region.
- In addition, the funding will deliver a PR, Communications and Dissemination work package to supporting the promotion of the DIATOMIC project locally, nationally and globally

In turn this will address the city's and region's challenges and deliver outcomes that:

- Support the data economy (the data economy will be supported by giving SMEs access to data to use in product development in response to the challenges that will be set through WP3 and WP4)
  - Double the spend with the social economy
- Embed entrepreneurship into the fabric of society
- Create international trade
- Generate bilateral innovative solutions that respond to local and global challenges

4 Options considered and Recommended Proposal

4.1 **Option 1 - Do Nothing**. This would result in Birmingham withdrawing from the partnership risking reputational damage which could impact on future funding opportunities and partnerships with Connected Places Catapult and Innovate UK funding. Domestic funding now represents the biggest opportunity to fund activity which complements the work of the City Council now that we have left the European Union.

4.2 **Option 2 - Approve the Full Business Case at a total cost of £1.035m and accept the grant award of £1.035m from the Innovate UK Innovation Accelerator Programme for the DIATOMIC Project**. This is the recommended

proposal as domestic funding is replacing funding we would previously have drawn from the European Union.

5 Consultation

5.1 The two-year project has been fully consulted with the city stakeholders participating in the project who have expressed their full support for the project.

6 Risk Management

6.1 Connected Places Catapult has developed a risk management register which will be reviewed regularly by the project board which will include representation from Birmingham City Council. A project governance structure has been identified to ensure risks are appropriately managed.

6.2 There is a risk around audit and potential clawback of the external funding on the basis of eligibility or poor document/data retention/failure to comply with the funding conditions. This risk will be mitigated as tried and tested policies and templates are in place which are already in use. The BCC project leads have extensive experience in managing multi-level complex projects and are able to mitigate against this through effective project management.

6.3 The biggest risks for the partnership are cost of development of digital twin outgrows budget; timely availability of the platform.; market opportunities change or are not accessible for businesses engaged on the programme. All these risks will be managed through regular project management meetings to monitor spend and progress. The last risk is that thorough and continued market research conducted throughout the duration of the programme. Support offered to businesses enables them to pivot and respond to emerging opportunities.

7 Compliance Issues:

7.1 How are the recommended decisions consistent with the City Council's priorities, plans and strategies?

7.1.1 The acceptance of the Innovate UK grant supports the updated Birmingham City Council Corporate Plan. This project aligns with four of the five grand challenges set out in this document. They are:

> **Employment, Skills and the local economy** – the project will develop an Inclusive Innovation Network (INN) and this will support the creation of jobs and SME growth through access to opportunities in the clean tech, health tech and med tech sectors in East Birmingham. Home to Tylesley Energy Park and the Heartlands hospital, both key assets, with data already held for this area. These anchor institutions offer opportunities for significant procurement challenges where SMEs can respond, and a place for investment.

> **Community resilience and cohesion** – The IIN will support the access of SMEs and social businesses (traditionally migrants and female led

businesses), an untapped economic potential in the region, to procurement opportunities in clean and sustainable energy market (linking to the WMCA's retrofit agenda and Tyseley Energy Park) and health tech opportunities. It will open opportunities to a diverse base of SMEs and social businesses (traditionally attracting women and migrants) who represent the untapped economic potential of the region. This links to the WMCA's pledge to double the social economy spend by 2030 and the work of WMCA's SE Task Group creating new social economy clusters and linking them with local innovation ecosystems and real market opportunities.

Health and wellbeing – The Innovation in Procurement programme will focus on identifying both Health Tech and Med Tech challenges and will then procure potential solutions from Birmingham's SME base.

Climate emergency – The West Midlands has a concentration of energy and utility firms, along with research assets like the Tyseley Energy Park and the academic research base. It also has manufacturing and engineering capabilities, including supply chains for wind, solar PV and biomass in the region. It also has a detailed blueprint for energy security for energy-intensive industry base through Repowering the Black Country project. In addition, the West Midlands has a Circular Economy Routemap with cases for industrial symbiosis programmes.

The project's approach to digital and data will create a competitive advantage for the region by improving the currently fragmented landscape and with better coordination we will create a market and attract SMEs who can create solutions benefiting from the open data. In fact, a key incentive for start-ups, disruptive entrepreneurs and innovators is access to free or readily available data. This removes a significant barrier to market.

7.2   Legal Implications

7.2.1   Under the general power of competence in Section 1 Localism Act 2011, the Council has the power to enter into the arrangements set out in this report and they are within the boundaries and limits of the general power of competence in Sections 2 and 4 of the Localism Act 2011.

7.3   Financial Implications

7.3.1   The total value of the DIATOMIC project proposal is £6.098 of which £1.0356m has been awarded to BCC in its role as project partner and will be claimed up to the project end date of 31st March 2025. The profile of the expenditure is set out below.

	Financial Year

	23/24	24/25	Total
REVENUE CONSEQUENCES			
Revenue cost during project delivery	517,801	517,801	**1,035,602**
FUNDING SOURCES			
Innovate UK	456,499	456,499	**912,998**
Match Funding BCC	61,302	61,302	**122,604**

7.3.2   On receipt of the funding agreement, a more detailed delivery plan will be established which sets out how the grant funding will be distributed between the BCC service areas to cover the costs detailed in the Full Business Case eg staffing, commissioning etc. This is still subject to further refinement and discussion. This will be part of the delegated authority to the appropriate service directors.

7.4 **Procurement Implications**

7.4.1   The Council will undertake several procurement exercises (this will involve building on the innovation in procurement methodology (Digital Innovation in Public Services) to ensure local organisations are supported to access procurement opportunities) during the course of the DIATOMIC project. In total, the Council will procure a total of £0.285m procured services to include: £0.160m for WP 3 which will fund a £0.05m business engagement and advice programme; £0.05m challenge programme for impact entrepreneurs; £0.06m; first phase of the grant programme for health innovation involving social enterprises led by and creating employment for protected characteristics with a specific focus on launching or scaling up sustainable business ideas. WP 9 will procure £0.125 in total, £0.100m to fund an international city innovation network and £0.025m to fund global events.

7.5 **Human Resources Implications**

7.5.1 The roles and nature of the jobs are subject to the wider redesign of European and International Affairs and Business Development. These will be communicated at a later date. The Council will administer the BCC part of the project whilst the overall management will sit with Connected Places Catapult.

7.5.2 There are no TUPE implications.

7.6 Public Sector Equality Duty

7.6.1 Initial Equality Analysis (EQUA 1036) has been carried out in December 2022 (see Appendix 2) which takes into account equality measures in the day-to-day activities in assisting companies. No equality issues have been identified that could impact the project during its delivery time.

8 Appendices

- Appendix 1 Full Business Case

- Appendix 2 Equality Assessment

- NB No ESA is required at this stage, but upon receipt of funding and as projects progress an ESA will be completed for the next update to Cabinet

9 Background Documents

9.1 DIATOMIC application accepted by Innovate UK

9.2 Report to Cabinet of April 2022 – Digital City programme and Roadmap

FULL BUSINESS CASE (FBC)

A. GENERAL INFORMATION			
A1. General			
Project Title *(as per Voyager)*	**DIATOMIC (Digital Innovation Transformative Change)**		
Voyager code	TBC		
Portfolio /Committee	Digital, Culture, Heritage and Tourism/Finance and Resources	**Directorate**	Digital and Customer Services/ Place Prosperity and Sustainability
Approved by Project Sponsor	Waiting for approval by Innovate UK	**Approved by Finance Business Partner**	

A2. Outline Business Case approval *(Date and approving body)*
The project proposal has yet to be approved. It was submitted to the Innovate UK Innovation Accelerator Programme in November 2022. We are awaiting notification regarding whether funding will be awarded or not. We should know this on January 20th 2023.

A3. Project Description
[a focussed description which shouldn't generally exceed ½ page. An FBC for smaller, simpler projects should be shorter and simpler than for major complex projects]

The overall aim of the project is to build the innovation capability and capacity to drive growth and prosperity in Birmingham, positioning Birmingham as a leading UK city in digital innovation and inclusive innovation . It will achieve this by:

1. Building a digital twin mirroring Birmingham. This is a virtual model of the physical world on a cloud-based data platform which will gather real time data such as pollution and traffic congestion. This will enable the twin to run simulations of local challenges, that accurately reflect the physical environment. This will study performance issues, generate possible improvements and valuable insights, which can then be applied back in real-life. This will provide access to data that will enable SMES and multi-sector organisations to access market opportunities primarily in the clean energy, retrofit and health innovation sectors. This will in turn enable them to access procurement opportunities and contribute towards creating Birmingham and the West Midlands' leading tech companies.

2. Galvanising innovation in BCC's procurement system and support Birmingham's Tech talent. By creating access to agile, smart, more efficient SMEs that respond to challenges identified above, BCC can actively support the scaling ambitions of local business. This could potentially also open up new international market opportunities for local SMEs through the global innovation city twin platform (described below). The pilot targets East Birmingham and is aligned to the East Bham Inclusive Growth Programme. It will open opportunities to the diverse base of SMEs and social businesses (traditionally attracting women and migrants) who represent the untapped economic potential of the region. It will establish the

UK's first regional Inclusive Innovation Network (IIN) focussing on how we design, deliver and diffuse the benefits of innovation to the West Midlands region. All the outputs are designed and delivered to be inclusive, based around societal benefit and impact.

3. Establishing a global innovation city twin platform (an online portal where cities involved in DIATOMIC post the challenges, they are looking to identify solutions for) and will form the basis for attracting global investors and businesses. It will establish a network of city-to-city collaborative partnerships and connectivity to global markets which will support knowledge exchange, access to skills and support scaling of new approaches and potential for foreign direct and capital investment.

4. Establishing a global innovation city twin platform which will form the basis for attracting global investors and businesses that are keen to exploit and drive trade and investment. It will establish a network of city-to-city collaborative partnerships and connectivity to global markets which will support knowledge exchange, access to skills and support scaling of new approaches and investment.

A4. Scope

The project covers the following work packages:

WP0 Project Management (Steering Committee) (CPC Lead) M1-M24 which will ensure that the outputs and outcomes from the project are fully exploited and generate tangible economic/ wider benefits to Birmingham, the West Midlands and the UK. BCC will attend the project management steering committee.

WP1 Digital Twin for East Birmingham (UoB Lead): M1- M 12 which will deliver a digital twin as a digital asset for Birmingham and the West Midlands (WM) region. The platform will accelerate innovation within the city and region. (This will link to the work of Birmingham City Observatory and support the objective of making data readily available.)

WP2 West Midlands Innovation Centre of Excellence (CPC Lead) M2- M24 a physical CPC centre enabling collaboration between partners and local SMEs or innovation and growth in the three sectors -- MedTech, Health Tech, Clean tech

WP3 Inclusive Innovation Network (CPC Lead) M1-M24 will create a work programme and pilot activities with the first cohort of businesses and with excluded communities (both ethnic minorities and women) in the east of Birmingham. It will open procurement opportunities to the diverse base of SMEs and social businesses (traditionally attracting women and migrants) who represent the untapped economic potential of the region. It will focus on Inclusive Innovation in the region as well as linking into CPC's newly created national network. An inclusive innovation network will be established for the West Midlands. BCC will co-ordinate the engagement of city stakeholders and excluded groups in this network and will commission activity to support the inclusion of these groups in entrepreneurial activity.

WP 4 Accelerator (CPC Lead): M1-M10 – Three elements are included in this WP. A) BCU will deliver an open challenge programme to BCC colleagues to identify the most pressing challenges in directorates B) CPC will deliver a programme to procurers to help them to adopt innovation procurement methodology. C) A yet to be identified innovation accelerator will deliver a programme of scouting, selection, acceleration and funding of 12 UK-based SMEs to develop their business offerings to BCC challenges. (BCC will provide challenges for this activity and will be involved in selection of the businesses bringing forward solutions. Procurers will be supported in adopting the innovation in procurement methodology)

WP 5 Impact Assessment Toolkit (CPC Lead): M1--M8 - assessing programme impact and creating an Impact Toolkit to be shared with others across the region in support of investment decisions.

WP 6 Twinning (CPC Lead): M1-M9 - demonstrating that cities and regions can deliver on local, national and international agendas in an outcome- driven manner. Includes a Cross-city demonstrator (four SMEs receiving funding)

WP7 Global Investment programme (CPC Lead): M10-M14 - Creating SME investment strategy and UK and international collaboration programme

WP8 Global Accelerator (CPC Lead): M13-M24 - programme of scouting, selection, acceleration and funding of eight UK-based SMEs to develop business offerings for a selected global market, including travel and in country support.

WP9 PR and Dissemination (BCC Lead): M1-M24 - supporting the promotion of DIATOMIC locally, nationally and globally, enhancing the profile of the city-region and positioning it as a leader in city-diplomacy and city-to-city diplomacy

A5. Scope exclusions

The focus of the project is East Birmingham. There is no plan to develop digital twins for the other Birmingham areas. Notwithstanding this, it is expected that wider Birmingham and the West Midlands will benefit from the activity of the project. Indeed, we will support knowledge sharing on these innovations in public sector practices with policymakers across the West Midlands. Challenge-led procurement identifies shared global city challenges, and the city twin platform forms the basis for attracting global investors and businesses that are keen to exploit it and drive trade and investment.

B. STRATEGIC CASE
This sets out the case for change and the project's fit to the Council Plan objectives

B1. Project objectives and outcomes
The case for change including the contribution to Council Plan objectives and outcomes

[bullet points will be fine]

There will be an impact assessment toolkit to measure the impact of all elements of DIATOMIC. The project will contribute to the Council's 5 grand challenges in the following way:

1. **Employment, Skills and the Local Economy** – Birmingham is the place for everyone to benefit from its economy and prosperity. The project will benefit East Birmingham through the activity of the IIN to level up economic prosperity. The pilot programme will support women and ethnic minorities to engage in social businesses and SMEs. This enables income generation, ensures growth, encourages social and technical innovation and breaks grant dependency. Tyseley Energy Park will link local SMEs, specifically those ethnic minority and women-led with the University's business incubation platform. The project will also benefit local SMEs included in the Accelerator (WP 4) who will respond to Council departments health tech and clean tech challenges and be included in an innovative procurement. The digital twin will provide access to data. By improving the currently fragmented landscape and with better coordination the project will create a market and attract SMEs which can create solutions benefiting from the open data.

- The proposed projects have the potential to increase gross domestic product by approximately £145m-436m over the project period by improving access to, and availability of, data in the city. The project will result in increased attractiveness for inward investment,* start-ups and innovation, better access to data increase business/commercial attractiveness and lower costs/barriers to entry for new firms to emerge through coordinated data sharing and the digital twin. This intervention could have a profound effect on Birmingham's attractiveness as a location for inward investment. Access to high-quality data sources enabled through data sharing could act to induce investment from data-intensive, high-growth, high-value businesses.

2. **Community Resilience and Cohesion** – As noted above, the activity of the IIN will bring benefit to E Birmingham's social and SME businesses. This will bring investment to the locality and promote greater resilience and cohesion. The challenge identification will address both health and clean tech. Inclusion and sustainability will be promoted by enabling wider community involvement in big data and its management in Birmingham through the implementation of a Data Charter. The Data Charter could embed social inclusion and sustainability at the heart of big data in Birmingham.

3. **Health and Wellbeing –** One of the sectors we are looking to work with is health innovation. This has been chosen because of the specific need for innovation in the sector and the existing contracting opportunities available from the NHS and the local authority social care. BCC is already working with social economy consortia that hold these contracts and who are seeking new partners (Living Well UK Consortium and Forward Carers CIC).

4. **The Climate Emergency** One of the sectors we are looking to work with is the clean and sustainable energy market (specifically linking to the WMCA's retrofit agenda and the business incubator programme from Tyseley Energy Park). This has been chosen because of the specific need for innovation in the sector. Tyseley Energy Park will link local SMEs, specifically those ethnic minority and women-led with the University's business incubation platform.

B2. Project Deliverables
These are the outputs from the project eg a new building with xm2 of internal space, xm of new road, etc

[again, this should be focussed, and a list of bullet points will be fine]

- WP0 Project Management
- WP1 Digital Twin for East Birmingham
- WP2 West Midlands Connected Place Innovation Centre of Excellence
- WP3 Inclusive Innovation Network
- WP4 UK-based Accelerator
- WP5 SME Impact Assessment Toolkit
- WP6 City Twinning
- WP7 Global Investment programme
- WP8 Global Accelerator
- WP9 PR and Dissemination

B3. Project Benefits
These are the social benefits and outcomes from the project, eg additional school places or economic benefits.

Measure	Impact
*List at least one measure associated with **each** of the objectives and outcomes in B1 above*	*What the estimated impact of the project will be on the measure identified – please quantify where practicable (eg for economic and transportation benefits)*
0. Project Management (WP1)	Project is delivered on time and in accordance with plan. This will result in an effectively delivered project meeting the objectives and impacts for each of the work packages
1. Digital Twin for East Birmingham	The digital twin will provide access to data – traditionally a barrier to market for SMEs as entry costs will be lower as a result. By improving the currently fragmented landscape and with better coordination we will create a market and attract

	SMEs who can create solutions benefiting from the open data.
2. West Midlands Connected Place Innovation Centre of Excellence	A physical CPC centre enabling collaboration between partners and local SMEs or innovation and growth in the three sectors -- MedTech, Health Tech, Clean tech.
3. Inclusive Innovation Network	A work programme and pilot activities with the first cohort of businesses and with excluded communities (both ethnic minorities and women) in the east of Birmingham.
4. UK-based Accelerator	Both SMEs and social businesses will have access to procurement opportunities that previously would not have been accessible.
5. SME Impact Assessment Toolkit	This will collect data from the project to demonstrate how regional economies drive the national agenda around transformative innovation, further supporting the business case to national government for greater funding and expanded competence. This places the West Midlands at the heart of an international movement for cities as innovation actors and thus elevates Birmingham as a global leading city for innovation.
6. City Twinning	This will pair cities and investors to invest in Birmingham and the West Midlands. It is expected that there will be 3 cities that will be paired with Birmingham including Ulsan in South Korea. The city twin platform forms the basis for attracting global investors and businesses that are keen to exploit it and drive trade and investment.
7. Global Investment programme	This will create an SME investment strategy and UK and international collaboration programme
8. Global Accelerator	This is a programme of scouting, selection, acceleration and funding of eight UK-based SMEs to develop business offerings for a selected global market, including travel and in-country immersion support. SMEs will each receive £20k passthrough + travel for in-country immersion. This supports the internationalisation of SME agenda.
9.PR and Comms	This supports the promotion of DIATOMIC locally, nationally and globally, enhancing the profile of the city-region and positioning it as a leader in city-diplomacy and city-to-city innovation.

For major projects and programmes over £20m:
A detailed Benefits Register is attached at G5 below.
N/A

B4. Benefits Realisation Plan
Set out here how you will ensure the planned benefits will be delivered

The overall management of the project will be undertaken by the CPC. Agile management methods and collaborative working practices will be used throughout the project with the consortium. The Monitoring Officer will receive quarterly reporting on progress, deliverables, milestones, decisions, issues and risks. The PM will track project status, direct the non-technical aspects of the project, make timely and informed

decisions and regularly update the overall gantt chart, work breakdown structure and risk register. The PM will maintain a joint project schedule containing dates, tasks, deliverables, milestones and dependencies. Regular reporting will be agreed upon between partners using appropriate collaborative working toolsets (e.g. MS Teams or Zoom) and a shared data repository. Periodic face-to-face meetings (within safety guidelines) will be held within Work Package elements. A detailed work plan will be drafted if the project is approved.

Evidence of delivering similar project

BCC have delivered a number of relevant national and international projects that demonstrate our place-based approach to working with partners across the city, region and globally. Below is a list of relevant research, development and innovation activities that exemplify our ability to deliver on our ambitions and are thematically, related to the DIATOMIC project.

- Birmingham Digital Partnership - Set and championed Birmingham's ambition as a digital city and promoted Digital Birmingham nationally and internationally, attracting investment and support from business and government
- Smart Routing – Innovate UK
- Horizon 2020 City4Age: The EU-supported City4Age project developed a 'social prevention model' of elderly care, utilising 'ambient' ICT tools and services.
- Interreg Europe: Better - Stimulating Regional Innovation through Better e-Government Services which aims to deliver an increase in innovation by 10% at the end of 2023. This has included a focus on better support for SMEs by connecting them with innovation and digital solutions.
- ERDF Big Data corridor – Using data to create new businesses and products through an innovative approach.
- H2020 Pulse project – Data-driven project for how you capture data on air quality and how you devise interventions. To accomplish the transformation of public health systems, and stimulate the development of intersectoral policy in cities, PULSE has leveraged large amounts of data from city governments, health systems, and citizens (via sensing technologies and social media).
- Urban Innovative Actions USE IT project - combining research and social innovation.
- West Midlands Innovation Fund – Digital Innovation In Public Services which aims to remove the procurement barriers for locally based digital SMEs to accessing public sector contracts.

B5. Stakeholders

A stakeholder analysis is set out at G4 below. A summary of consultation responses is in the covering Executive report.

C. ECONOMIC CASE AND OPTIONS APPRAISAL
This sets out the options that have been considered to determine the best value for money in achieving the Council's priorities

C1. Summary of options reviewed at Outline Business Case
(including reasons for the preferred option which has been developed to FBC)
If options have been further developed since the OBC, provide the updated Price quality matrix and recommended option with reasons.

No prior Council Outline Business Case has been brought forward for approval. This report therefore seeks approval to progress with the project as detailed within this Full Business Case (FBC) and to accept the offer of grant funding.

The project provides the council with the opportunity to build on projects that have already been trialled in the council, namely the Use IT (Unlocking Social and Economic Innovation Together) project and the DIPS (Digital Innovation In Public Services) project. DIATOMIC is fully funded by Innovate UK and will not require any council funding for the delivery of any of the work packages.

C2. Evaluation of key risks and issues
The full risks and issues register is included at the end of this FBC

[drawing attention to the biggest items only]

Connected Places Catapult has developed a risk management register which will be reviewed regularly by the project board which will include representation from Birmingham City Council. A project governance structure has been identified to ensure risks are appropriately managed.

1.There is a risk around audit and potential clawback of the external funding on the basis of eligibility or poor document/data retention/failure to comply with the funding conditions. This risk will be mitigated as tried and tested policies and templates are in place which are already in use. The BCC project leads have extensive experience in managing multi-level complex projects and can mitigate against this through effective project management.

2.The biggest risks for the partnership are cost of development of digital twin outgrows budget; work to develop themes progresses too slowly to deliver solution within time fame; market opportunities change or are not accessible for businesses engaged on the programme all these risks will be managed through regular project management meetings to monitor spend and progress. The last risk is thorough and continued market research conducted throughout the duration of the programme. Support offered to businesses enables them to pivot and respond to emerging opportunities.

3.The biggest risk for the BCC elements of the project is that covid restrictions are reintroduced making it difficult to engage with social economy and SMEs more difficult in East Birmingham.

C3. Other impacts of the preferred option
Describe other significant impacts, both positive and negative

[bullet points are ok]

Connected Places Catapult calculated the potential value of project activity as described below:
- Clean Tech in West Midlands Is an exciting growth opportunity: a further £420m to £470m of output and 4,400 to 4,900 jobs will be created by matching the growth trajectory of the leading UK region for similar clusters.
- Health Tech and Med Tech in West Midlands show additional growth opportunities: a further £400m to £430m of output and 5,300 to 5,900 jobs by matching the growth trajectory of the leading UK region for similar clusters.
- Embracing digital and open data within our projects also creates impact to drive markets. The proposed projects have the potential to increase gross domestic product by approximately £145m-436m over the project period by improving access to, and availability of, data in the city.
- The pilot will be delivered in East Birmingham and aligned to the East Birmingham Inclusive Growth Programme. It will open opportunities to the diverse base of SMEs and social

businesses (traditionally attracting women and migrants) who represent the untapped economic potential of our region. This links to the WMCA's pledge to double the social economy spend by 2030 and the work of WMCA's SE Task Group creating new social economy clusters and linking them with local innovation ecosystems and the real market opportunities.

The project will link to the following BCC policies and strategies:
- East Birmingham Inclusive Growth Strategy – through the development of a new Inclusive Innovation Network and resulting opportunity for women led and ethnic minority led enterprise.
- Route to Zero Clean Air Zone – providing business solutions to reduce carbon emissions through the city challenges
- Everyone's Battle Everyone's Business – by supporting social businesses and SMEs in E Birmingham to take part in a business acceleration programme.
- Birmingham's City Observatory – by supporting the city through the work of the digital twin to provide access to open data in the themes of health tech and clean tech.

D. COMMERCIAL CASE
This considers whether realistic and commercial arrangements for the project can be made

D1. Partnership, Joint venture and accountable body working
*Describe how the project will be controlled, managed and delivered if using these arrangements*

The project is a partnership of 6 organisations including BCC, 3 universities, Greater Birmingham Chambers of Commerce and Connected Places Catapult.

A Project Board will be formed including representatives of all organisations and led by the Lead Partner Connected Places Catapult (Accountable Body).

Each of the work packages will have a steering group led by the assigned organisation. BCC is responsible for WP 9 PR, Communications and Dissemination.

The complete management structure is shown in this diagram.
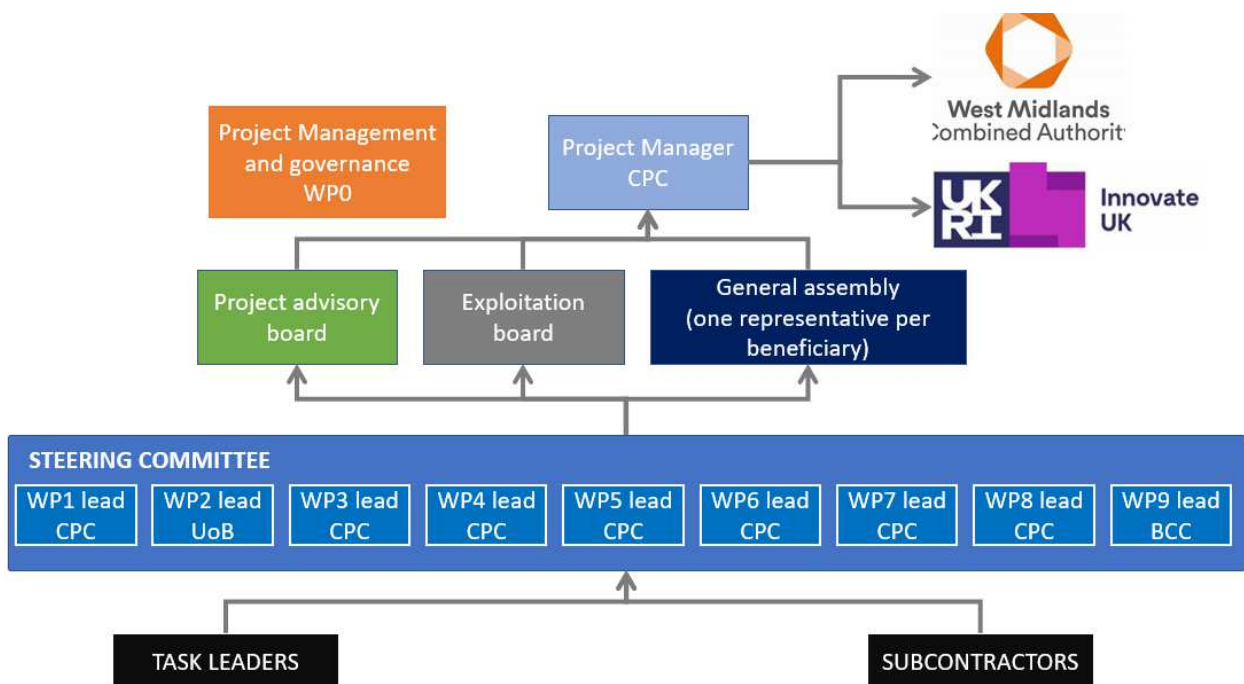
D2. Procurement implications and Contract Strategy:

What is the proposed procurement contract strategy and route? Which Framework, or OJEU? This should generally discharge the requirement to approve a Contract Strategy (with a recommendation in the report).

The Council will undertake several procurement exercises during the course of the DIATOMIC project. In total, the Council will procure a total of £0.285m procured services to include: £0.160m for WP 3 which will fund a £0.05m business engagement and advice programme; £0.05m challenge programme for impact entrepreneurs; £0.06m; first phase of the grant programme for health innovation involving social enterprises led by and creating employment for protected characteristics with a specific focus on launching or scaling up sustainable business ideas.

WP 9 will procure £0.125 in total, £0.100m to fund an international city innovation network and £0.025m to fund global events.

The value of this procurement activity is above the £0.2m limit where the Birmingham Business Charter for Social Responsibility applies. The proposed procurement will ensure that the Living Wage Policy is applied as appropriate.

D3. Staffing and TUPE implications:

The roles and nature of the jobs are subject to the wider redesign of European and International Affairs and Business Development. These will be communicated at a later date. The Council will administer the BCC part of the project whilst the overall management will sit with Connected Places Catapult.

There are no TUPE implications.

E. FINANCIAL CASE
This sets out the cost and affordability of the project

E1. Financial implications and funding

Financial Year:	20xx/yy £000	20xx/yy £000	20xx/yy £000	later £000	Total £000
Capital code:					
CAPITAL EXPENDITURE					
Capital costs already incurred					0.0
					0.0
Other costs to complete:					
Fees					0.0
Land acquisition					0.0
Works					0.0
[please itemise other costs]					0.0
					0.0
Contingencies					0.0
Total capital expenditure	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL FUNDING:					
Development costs funded by:					
[please itemise]					0.0
					0.0
Other costs funded by:					
[please itemise]					0.0
					0.0
					0.0
Total capital funding *must fund all the costs*	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

	2022/2023	2023/2024	Total
REVENUE CONSEQUENCES			
Revenue cost during project delivery			
BCC	£517,801.60	£517,801.60	£1,035,603.20
Operating period expenditure	£0.00	£0.00	£0.00
Less Income			
Innovate UK Funding			
Salaries	-£230,615.22	-£230,615.22	-£461,230.44
Overheads	-£58,383.60	-£58,383.60	-£116,767.20
Commissioning	-£142,500.00	-£142,500.00	-£285,000.00
Materials	-£25,000.00	-£25,000.00	-£50,000.00
Net Revenue Consequences	£61,302.78	£61,302.78	£122,605.56
REVENUE FUNDING			
Current Buget Provision (BCC)	£61,302.78	£61,302.78	£122,605.56
Total Revenue Funding	£61,302.78	£61,302.78	£122,605.56

On receipt of the funding agreement, a more detailed delivery plan will be established which sets out how the grant funding will be distributed between the BCC service areas to cover the costs detailed in the Full Business Case eg staffing, commissioning etc. This is still subject to further refinement and discussion. This will be part of the delegated authority to the appropriate service directors.

E2. Evaluation and comment on financial implications:

The total project cost is £6.2m. The project is split across 2 financial years, ending in 2024/25.

The split across the individual expenditure categories for the project is also shown in a separate table above

The City Council element of the overall programme totals £1.035m. An analysis by expenditure category is shown above.

The City Council's match contribution to the project of £0.122mconsists of staff costs (East Birmingham Inclusive Growth staff).

Grant conditions will be detailed in the Partnership Agreement between Connected Places Catapult and the City Council and based on the activities described in the project application.

Innovate UK may seek to clawback funding if expenditure is ineligible or if funding is claimed for activities/outputs that did not take place.

This project is an innovative project designed to test new approaches to boost innovative entrepreneurship. It is also linked to the delivery of East Birmingham Inclusive Growth Strategy and as such is seen as part of the EBIGS portfolio of projects. Any financial implications arising from the transfer of best practice will be covered by subsequent Cabinet Reports linked to EBIGS

E3. Approach to optimism bias and provision of contingency

[E3 and E4 should require only a few lines each]

The project will be fully evaluated and approved by Innovate UK and supported by the WMCA. No optimism bias or provision of contingency has been designed because this is an innovative project and it is expected that even a failure is a learning outcome providing that sufficient analysis has been conducted and lessons drawn. The European and International Team have substantial experience in managing research and innovation projects. The risk factor linked to experimentation inherently present in all innovative projects will be utilised for the benefit of the project to enrich its learning and test some non-standard approaches.

E4. Taxation
Describe any tax implications and how they will be managed, including VAT

Tax will be deducted from the yearly financial claims submitted to the Accountable Body.

F. PROJECT MANAGEMENT CASE
This considers how project delivery plans are robust and realistic

F1. Key Project Milestones	Planned Delivery Dates
The summary Project Plan and milestones is attached at G1 below	
Planned start date for delivery of the project	1st April 2023
Xxx Survey /Planning approval etc complete (as appropriate)	n/a
Main contract award	2nd April 2023
Practical completion	31st March 2025
Date Project operational	2nd April 2023
Date of Post Implementation Review	31st March 2025

F2. Achievability
Describe how the project can be delivered given the organisational skills and capacity available

Tried and tested policies and templates are in place which are already in use on several projects, and the Project Leads within European and International Affairs and Digital and Customer Services have experience in successfully managing similar funded projects over the years. WP 3 and WP4 are based on projects that have already been successfully delivered with the City Council. WP4 is based on the Use IT project methodology which was managed by Karolina Medwecka in E&IA and WP 4 will expand the Digital Innovation In Public Services (DIPS) model which was trialled with council colleagues in 2022.

F3. Dependencies on other projects or activities

The project will link to work which is currently being pursued in the city council including the Data Observatory and the Route to Zero.

F4. Officer support

Project Manager: Mark Reed
Mark.Reed@birmingham.gov.uk
Tel: 07917445066

Project Accountant: Rob Pace
Rob.Pace@birmingham.gov.uk
Tel: 0121 303 3817

Project Sponsor:

F5. Project Management
Describe how the project will be managed, including the responsible Project Board and who its members are

The accountable body for the project is Connected Places Catapult. This partner will convene a project board which is made up of representatives from the partnership.

Connected Places Catapult – Luciano Falco,
luciano.falco@cp.catapult
170 Midsummer Boulevard, Milton Keynes, United Kingdom, MK9 1BP

University of Birmingham – Martin Freer
M.Freer@bham.ac.uk
Edgbaston, Birmingham, West Midlands, B15 2TT

Birmingham City University – Martin Weston
martin.weston@bcu.ac.u k
University House, 15 Bartholomew Row, Birmingham B5 5JU

Aston University – Paul Knobbs
P.R.KNOBBS@aston.ac. UK
Aston University, Aston Triangle, Birmingham, West Midlands, B4 7ET

Birmingham City Council – Mark Reed
Mark.Reed@birmingham. gov.uk
Council House, Victoria Square, Birmingham, United Kingdom, B1 1BB

Greater Birmingham Chamber of Commerce and Industry – Sunny Claire
s.claire@birmingham- chamber.com
75 Harborne Road, Edgbaston, Birmingham B15 3DH

G. SUPPORTING INFORMATION
(Please adapt or replace the formats as appropriate to the project)

G1. PROJECT PLAN
Detailed Project Plan supporting the key milestones in section F1 above

A detailed project plan will be provided once the project is approved and second level planning has taken place.

G2. SUMMARY OF RISKS AND ISSUES REGISTER			
Risks should include Optimism Bias, and risks during the development to FBC			
Grading of severity and likelihood: High – Significant – Medium - Low			
		Risk after mitigation:	
Risk or issue	mitigation	Sever-ity	Like-lihood
There is a risk around audit and potential clawback of the external funding on the basis of eligibility or poor document/data retention/failure to comply with the funding conditions.	This risk will be mitigated as tried and tested policies and templates are in place which are already in use. The BCC project leads have extensive experience in managing multi-level complex projects and are able to mitigate against this through effective project management.	High	Low
The biggest risk for the BCC elements of the project is that covid restrictions are reintroduced making it difficult to engage with social economy and SMEs more difficult in East Birmingham.	This risk will be mitigated as we have existing links with the social economy via city council networks and civil society. Online methods of working have been adopted during lockdowns and these will be reinstate in this instance.	Medium	Low
Cost of development of digital twin outgrows budget	Regular project management meetings to monitor spend and the examination of budget flexibility and descope options.	High	Low
market opportunities change or are not accessible for businesses engaged on the programme meaning the access to real market opportunities determine the longitudinal success of the programme as it guarantees further income for businesses engaged in the programme	Regular project management meetings with clear monitoring of progress and planning for descoped options	Medium	Low
Timely availability of the platform meaning Delay in being able to use the base framework for the digital twin	The twin will be developed as an executable prototype ready for deployment. If the platform is late then this will not prevent the case study impact being delivered. Begin procurement before project start	High	Low

G3. EXTERNAL FUNDING AND OTHER FINANCIAL DETAILS
Description of external funding arrangements and conditions, and other financial details supporting the financial implications in section E1 above (if appropriate)

The total project costs of £1.035m will be 88% grant funded as 12% match funding is required for the City Council in this Innovate UK project.

Legal and compliance issues associated with the Innovation Accelerator grant and the project will be delivered within funding conditions set out in the standard grant agreement issued by the Innovate UK Secretariat.
Terms and Conditions have been reviewed and agreed by Legal Services and, in the context of the project, they are not deemed onerous and are acceptable to the Council.

BCC officers in charge of the project have a comprehensive understanding of and are content with the terms and conditions outlined in the grant agreement and have the necessary measures in place to ensure compliance. Robust management and monitoring processes will be put in place to ensure compliance as per other externally funded projects the teams delivered to date.

G4. STAKEHOLDER ANALYSIS		
Stakeholder	Role and significance	how stakeholder relationships will be managed
University of Birmingham	Is responsible for providing a use case for the digital twin and is the main lead with Siemens who will develop the physical infrastructure for the Digital Twin. Leads on WP 1.	Will be managed by the accountable body Connected Places Catapult
Birmingham City University	Is responsible for providing a use case for the digital twin and will deliver the workshops for work package 4	Will be managed by the accountable body Connected Places Catapult
Aston University	Is responsible for providing a use case for the digital twin and will be co-delivering work package 3	Will be managed by the accountable body Connected Places Catapult
Greater Birmingham Chambers of Commerce	Will feed into work package 7 and 8 by providing access to global networks and innovators.	Will be managed by the accountable body Connected Places Catapult
Connected Places Catapult (CPC)	CPC is the accountable body for the project and the lead on all work packages with the exception of work package 9 (BCC responsible for this) and work package 1 (University of Birmingham responsible for this).	Is the accountable body for the project

Measure	Annual value	Start date	Impact
*List at least one measure associated with **each** of the outcomes in B1 above*			*What the estimated impact of the project will be on the measure identified*
(a) Monetised benefits:	£		
(b) Other quantified benefits:			
(c) Non-quantified benefits:	n/a		

G5. BENEFITS REGISTER
For major projects and programmes over £20m, this sets out in more detail the planned benefits. Benefits should be monetised where it is proportionate and possible to do so, to support the calculation of a BCR and NPSV (please adapt this template as appropriate)

Other Attachments *provide as appropriate*	
• Eg. Outcome of consultation • Technical Feasibility Assessments • Site plans and drawings • Summary of Impact assessments • External Funding and Partnership agreement implications	
•	
•	
•	

FBC template 2019 02 20

Title of proposed EIA	Diatomic (Digitial Innovation Transformative Change)
Reference No	EQUA1036
EA is in support of	Amended Policy
Review Frequency	Two Years
Date of first review	31/03/2025
Directorate	Inclusive Growth
Division	European and International Affairs
Service Area	European and International Affairs
Responsible Officer(s)	☐ Heather Law
Quality Control Officer(s)	☐ Janet L Hinks
Accountable Officer(s)	☐ Lloyd Broad
Purpose of proposal	To build the innovation capability and capacity to drive growth and prosperity in Birmingham.
Data sources	
Please include any other sources of data	Innovate UK project (Innovation Accelerator)

ASSESS THE IMPACT AGAINST THE PROTECTED CHARACTERISTICS

Protected characteristic: Age	Not Applicable
Age details:	Not Applicable.
Protected characteristic: Disability	Not Applicable
Disability details:	Not Applicable.
Protected characteristic: Sex	Service Users / Stakeholders
Gender details:	Focus on including women in Innovative Entrepreneurship.
Protected characteristics: Gender Reassignment	Not Applicable
Gender reassignment details:	Not Applicable.
Protected characteristics: Marriage and Civil Partnership	Not Applicable
Marriage and civil partnership details:	Not Applicable.
Protected characteristics: Pregnancy and Maternity	Not Applicable
Pregnancy and maternity details:	Not Applicable.
Protected characteristics: Race	Service Users / Stakeholders
Race details:	Ethnic minorities.

Protected characteristics: Religion or Beliefs	Not Applicable
Religion or beliefs details:	Not Applicable.
Protected characteristics: Sexual Orientation	Not Applicable
Sexual orientation details:	Not Applicable.
Socio-economic impacts	Placing the innovation accelerator project in East Birmingham and linking it to the East Birmingham Inclusive Growth Programme specifically opens the opportunities to the diverse base of SMEs and social businesses (traditionally attracting women and migrants) who are the untapped potential of our city.
Please indicate any actions arising from completing this screening exercise.	None identified at this stage.
Please indicate whether a full impact assessment is recommended	NO
What data has been collected to facilitate the assessment of this policy/proposal?	
Consultation analysis	Not Applicable.
Adverse impact on any people with protected characteristics.	None
Could the policy/proposal be modified to reduce or eliminate any adverse impact?	Not Applicable.
How will the effect(s) of this policy/proposal on equality be monitored?	By assessing the number of ethnic minority and women businesses supported.
What data is required in the future?	Numerical businesses led by women and ethnic minorities.
Are there any adverse impacts on any particular group(s)	No
If yes, please explain your reasons for going ahead.	Not Applicable.
Initial equality impact assessment of your proposal	The benefits of diversity in new business growth and entrepreneurial ship have been clearly articulated and accepted in the Rose Review (Gender) and McGregor review (Race), millions would be added to the economy. Innovate UK itself only sees 1 in 7 applications from women and estimate that if the number of women led businesses were representative then an additional £180bn could be added to

the economy. This is an assessment of the national level which will need to be reduced in line with the Birmingham population total.

Consulted People or Groups	Aston University (CREME), i-SE (Initiative for Social Entrepreneurs), BSSEC, Living Well Consortium, Forward Carers Consortium and University of Birmingham Tyseley Energy Park.
Informed People or Groups	Not Applicable at this stage.
Summary and evidence of findings from your EIA	A full assessment is not required.

QUALITY CONTORL SECTION

Submit to the Quality Control Officer for reviewing?	Yes
Quality Control Officer comments	Proceed for final approval.
Decision by Quality Control Officer	Proceed for final approval
Submit draft to Accountable Officer?	Yes
Decision by Accountable Officer	Approve
Date approved / rejected by the Accountable Officer	
Reasons for approval or rejection	
Please print and save a PDF copy for your records	Yes

Content Type: Item
Version: 3.0
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Last modified at 13/12/2022 02:44 PM by Workflow on behalf of ☐ Sukhi Kaur

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