The European Commission's
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CHALLENGE

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Cork City: Intelligent City Transformation Overview

ICC Final Deliverable

September 2022

European Commission | The Intelligent Cities Challenge is funded by COSME, the EU programme for Competitiveness of Enterprises and SMEs

Executive summary

There is a clear commitment in Cork to the pursuit of a smart, sustainable, and inclusive city. In 2020, Cork City Council led the development of the first collaborative digital strategy for the City. The digital strategy vision is to make Cork the Connected City - Innovative, Inclusive and Inspiring. The ICC programme has helped to support the vision and the ambitions laid out in this strategy through the development of a number of collaborative projects in the areas of cybersecurity, open data, placemaking and ehealth.

Achievements through the ICC programme include:

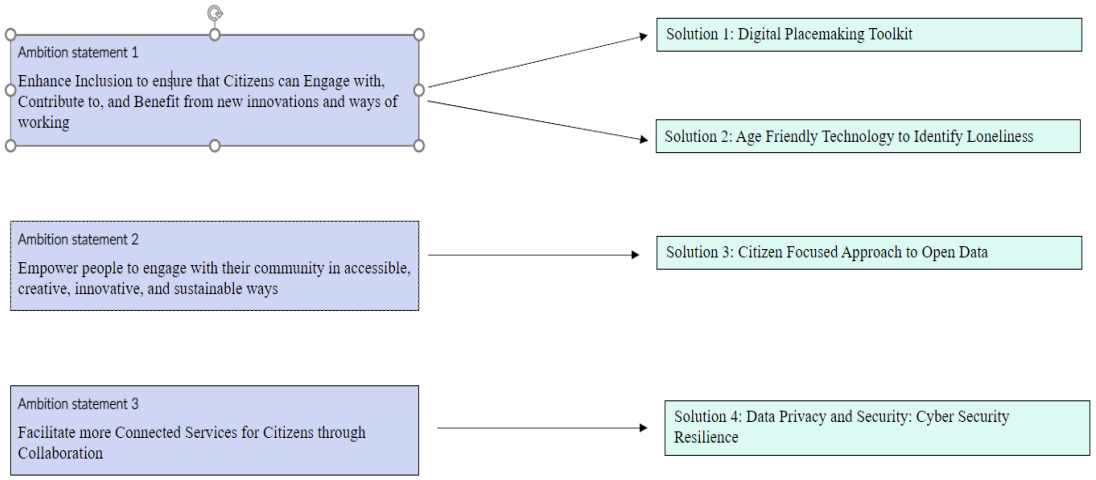
- Embedding of Cyber security on the corporate agenda in the city council, with events, training campaigns and technical implementations
- Development and awareness of open data at the Senior Management level as well as with our citizens through engagement workshops
- Collaboration with a local University to explore how wearable technologies could be used to predict and identify loneliness in older adults
- Further development of a Placemaking toolkit

Future Activities:

- Cork is one of the 100 Climate Neutral and Smart Mission Cities. We will utilise the learnings and networks gained through the ICC to help us achieve our Climate Neutral ambition
- Cork City Council aims to release High Value Datasets through our Open Data Portal
- Cork City Council will carry out annual Cyber security table top exercises to develop resilience and build on linkages and networks at a local, national and international level

To make Cork the Connected City – Innovative, Inclusive, and Inspiring

An internationally recognised city for innovation; where through collaboration Cork Citizens and Businesses can benefit from innovative approaches to enhance quality of life, participate in their city and communities' development and enable economic growth.



Mayor Foreword

Cork City Council is committed to making Cork a great place to live, work, visit and invest. To this end, Cork City Council has developed a smart agenda to drive economic growth, improve public services and promote better engagement with our citizens.

We are transitioning towards a smarter city where innovation and technology play a key role in enabling sustainable development. Cork City is very ambitious in this area and has invested significant resources in embedding smart solutions in our local authority activities which will ultimately benefit our citizens and improve their quality of life.

It is more important than ever to recognise that a smart city is an inclusive city. Rapid advancements in technology and the digitalisation of services have enabled more people to engage with city services online. However, we are also very cognisant that some of our citizens lack the digital skills and confidence to engage fully with these online services.

The ICC has helped us to develop activities that have improved engagement with our citizens. Through the ICC, we have developed projects that seek to better understand the needs of our citizens while also introducing them to new tools and solutions. Projects such as the placemaking toolkit and citizen centric open data workshops have helped in showing how innovative solutions can be accessible to everyone.

As the ICC comes to a close our efforts in this area are just beginning. We will continue to work to harness the benefits of digital advancement in a safe and secure manner for our citizens and businesses.

Cllr. Deirdre Forde
Lord Mayor, Cork City

ICC Project Timeline

Overview to the city's journey and structure of this document

1 Preparation & assessment

5 months:
September 2020 – January 2021

2 Ambition & roadmap

3 months:
February 2021 – April 2021

3 Implementation

15 months
May 2021 – July 2022

4 Review & way forward

2 months
August 2022 – September 2022

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Section

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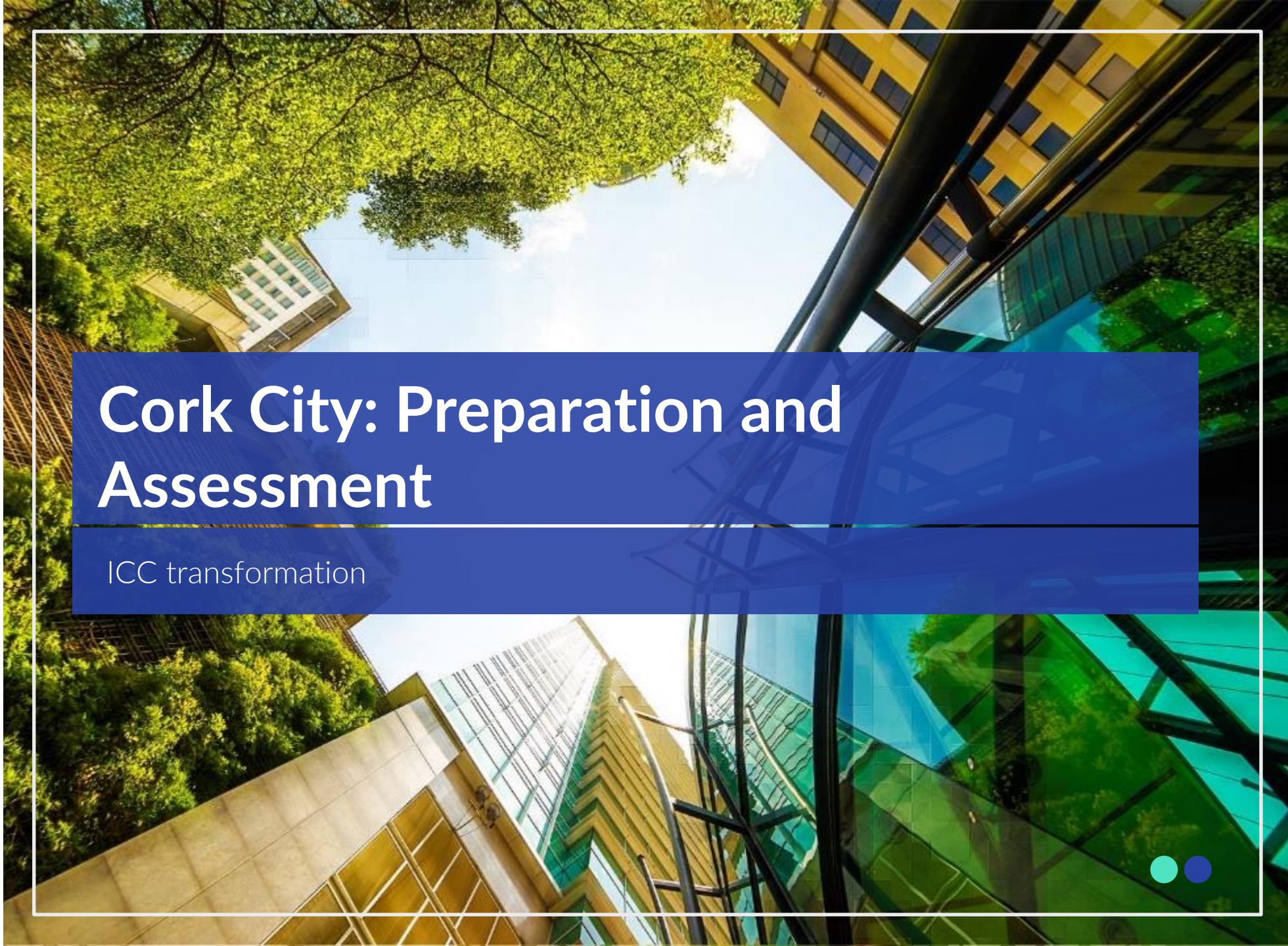


Cork City: Preparation and Assessment

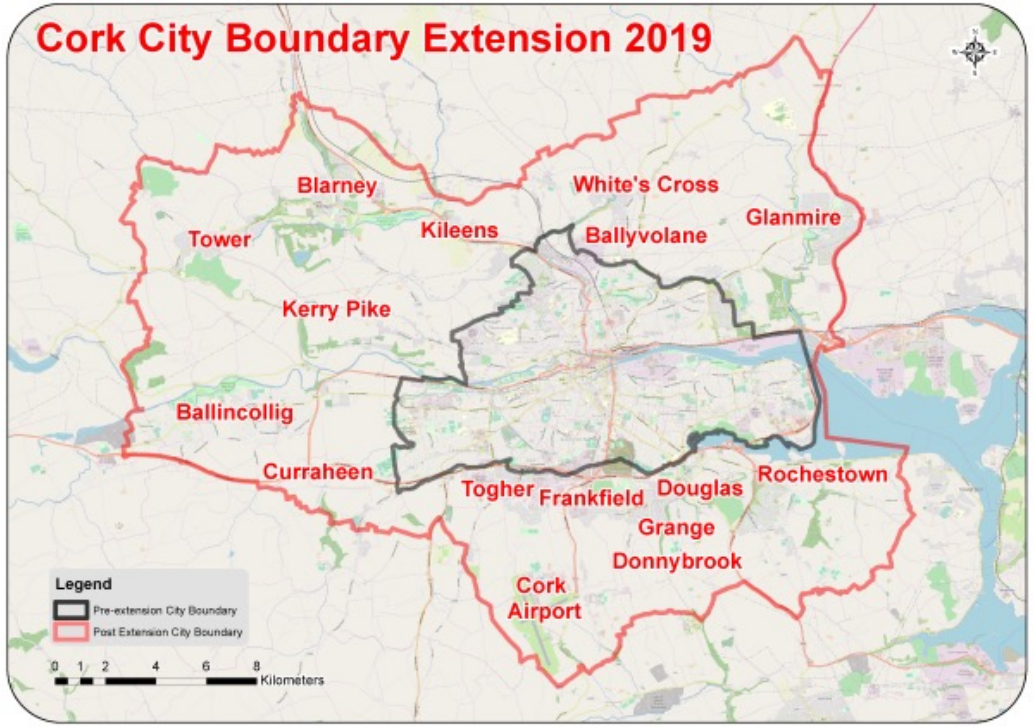
ICC transformation

September 2020 to January 2021

European Commission | The Intelligent Cities Challenge is funded by COSME, the EU programme for Competitiveness of Enterprises and SMEs

1 Introduction: A period of change for Cork City

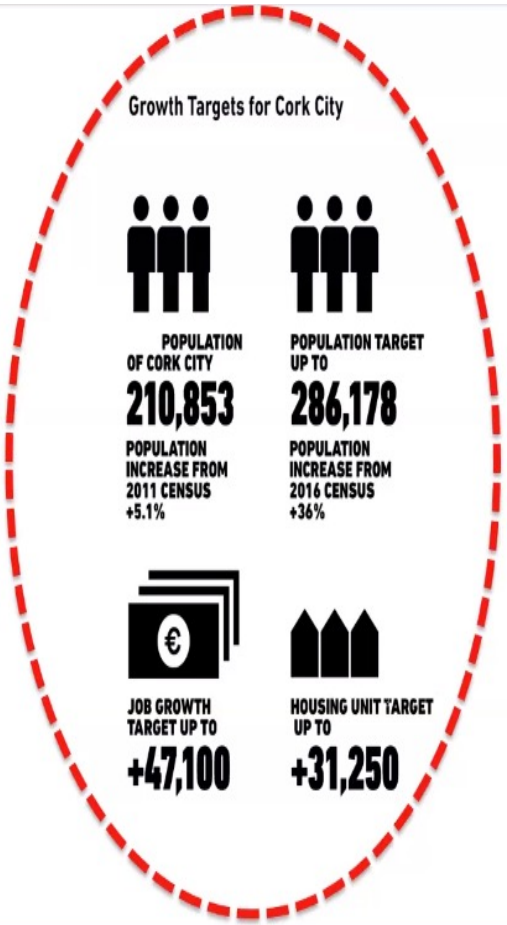
- Cork is the second city in Ireland
- The geographic and administrative boundary of Cork City was extended in 2018 resulting in a 5 fold increase in the area of the city and an increase in the population from 125,000 to 211,000 people
- Cork is a World Health Organisation Healthy City and a UNESCO Learning City
- Industry clusters in the areas of Technology, Energy, Cybersecurity and Maritime
- Cork is home to two universities, University College Cork and the Munster Technological University and several International Research Centres
- Cork has a strong Technology cluster, an entrepreneurial culture and prominent FDI sector
- 150 overseas companies employ 30,000 people including Apple, EMC, Dell, IBM, Boston Scientific, Pfizer, Amazon, Johnson Controls.
- Connectivity – International Port/ International Airport/ Tier 1 subsea cable
- Ranked the small European city with the most economic potential in 2022 (fDi Intelligence European Cities and Regions)



1 Introduction: A period of change for Cork City

Ambitious City Development Targets to Achieve:

- + 125,000 by 2040
- 3,000 houses p/a
- 4,000 jobs p/a



By 2031

Opportunities:

- Cork will be the fastest growing city in Ireland over the next 20 years
- Planned implementation of a €3.5bn Cork Metropolitan Area Transport Strategy (CMATS)
- Development of the City Docklands, which will ultimately host 20,000 new homes and almost 25,000 jobs
- Participating City in the 100 European "Mission" cities targeting carbon neutrality and smart cities

Challenges:

- Social Inequality across city with some pockets of very disadvantaged areas and correlating lower employment rates
- Social and private housing provision
- Skills shortage in certain high-tech areas
- Resilience of the city to absorb shocks, economic, social and environmental
- Global challenges including Covid 19, Brexit, energy price rise, inflation

2 City needs: State of the City: Citizen Participation

Citizen participation has always been a priority of Cork City Council. The emergence of Covid-19 required the City Council to find new and innovative mechanisms to engage with and support our citizens and communities in very challenging times.

Cork City Council's ambition to become climate neutral by 2030, under the 100 Climate Neutral and Smart Cities programme will only be made possible by engaging communities and citizens in achieving this goal.

Creative placemaking is a mechanism that can be explored to increase citizen participation in the reimagining of the city and communities within the city.

The delivery of these ambitions must be underpinned by a secure and resilient city infrastructure, to allow online engagement with citizens and provision of open data to help solve city challenges. This can only be achieved through use of modern technologies and as a city council we have a responsibility to ensure that the benefits of technologies can be realised by our citizens in a safe and secure manner.

Key insights from city performance analysis

Higher performance observed	Lower performance observed
1 Provision of Digital Services and companies engaged in tech	1 Contribution to Open Data
2 Availability of mobile internet coverage across the city	2 Availability of suitable devices for online home schooling
3 Innovative approach to upskilling and wide availability of upskilling opportunities	3 Skills gap still exists for some sectors
4 Strong community links and community support structures are in place	4 Covid 19 brought with it a challenge to support citizen engagement with local services online
5 Community Response Forum, public participation network and other community networks including learning neighborhood's established	5 Challenge to target the unheard voices and diverse groups using digital tools. Covid-19 enhanced digital divide

2 City Needs: State of the city – detailed analysis: Lower Performance Areas

Key insight	Data points	Interpretation	So what?
Engaging with our citizens and communities to help to develop and reimagine our city is more important than ever due to the impact of Covid-19, Brexit, inflation and invasion of Ukraine. Engaging with our citizens and with the unheard voices in our city can help the city council to make better policy decisions and achieve strategic objectives. Online service provision in a secure and resilient environment.	Cork City is expected to be the fastest growing city in Ireland, growing from around 210,000 people in 2016 to 289,000 people by 2031. 5 Rapid Areas of deprivation in the city identified that need additional support where labour force participation rates are 53.8% below the state average of 61.4% Open Data Portal with limited three-star datasets	Cork City is set for significant development over the coming years. Engaging with our citizens and city stakeholders is crucial to reflect their views and lived experiences in our changing city. Cork City Council will need to consider appropriate tech and non-tech mechanisms to ensure that all our citizen's voices can be heard in an inclusive and secure manner. Exploring the role that Open Data can play in informing our citizens also needs to be considered.	Through the ICC the team will explore solutions to help address the areas of concern outlined including: • Digital Placemaking • Citizen Centric Open Data • Use of Technology to identify isolation • The role of cybersecurity in protecting our city and city services.

2 City Needs: State of the city – detailed analysis Higher Performance Areas

Key insight	Data points	Interpretation	So what?
Excellent networks exist across Cork City's Communities. A community response forum was established to coordinate a response to the Covid-19 pandemic. This is now being used to support the Ukranian refugees and we would like to utilise it further to support engagement with our citizens. Good digital and internet connectivity exists across the city. Infrastructure for Open Data exists but is underutilised.	Good Collaboration exists between stakeholders in the quadruple helix. 16 Community response forum areas and 5 Learning Neighbourhoods 90% penetration of smart phones in Ireland and good broadband is accessible across the city. Young Population – 50% under 35 years.	Good foundations exist to build upon through the ICC programme. Pre-existing relationships can be leveraged to ensure added value. ICC can support the exploration and further development of existing and new ideas. Appropriate infrastructure already exists which can be built on.	Further engagement with stakeholders in required to better consider how we prioritise and implement the solutions we are considering Solutions that will be explored include: Digital Placemaking Citizen Centric Open Data Use of Technology to identify isolation The role of cybersecurity in protecting our City Council and our city services.

3 City ecosystem

Diverse Ecosystem with **culture of collaboration**

Strong FDI: **150 overseas companies employ 30,000 people** including Apple, EMC, Dell, IBM, Boston Scientific, Pfizer, Amazon, Johnson Controls. Industry clusters in the areas of Technology, Energy, Cybersecurity and Maritime.

30,000 students study at two Universities (University College Cork and the Munster Technological University).

Well-developed business start-up ecosystem supported by **accelerator and incubator programmes** through the Local Enterprise Offices, Rubicon, Ignite programme.

CoderDojo and IWISH (encouraging female students to STEM careers) both originated in Cork

Engaged **community sector and Public Participation Network** established. Coordinated approach to community development.

We are Cork.

3 City ecosystem: Stakeholder Engagement

Approximately 30 Stakeholders engaged in the needs assessment process. Engagement was facilitated through one-to-one interviews and through the needs assessment workshop.

Shared aspirations and vision

A number of one-to-one meetings held with key senior stakeholders across the City Council helped to identify Citizen Participation theme and subthemes of placemaking, digital divide and greater participation in local decision making.

What we bring and how we work together – Strong history of collaboration. Link between community groups and community culture and placemaking department with Smart Cities team adds an element of innovation.

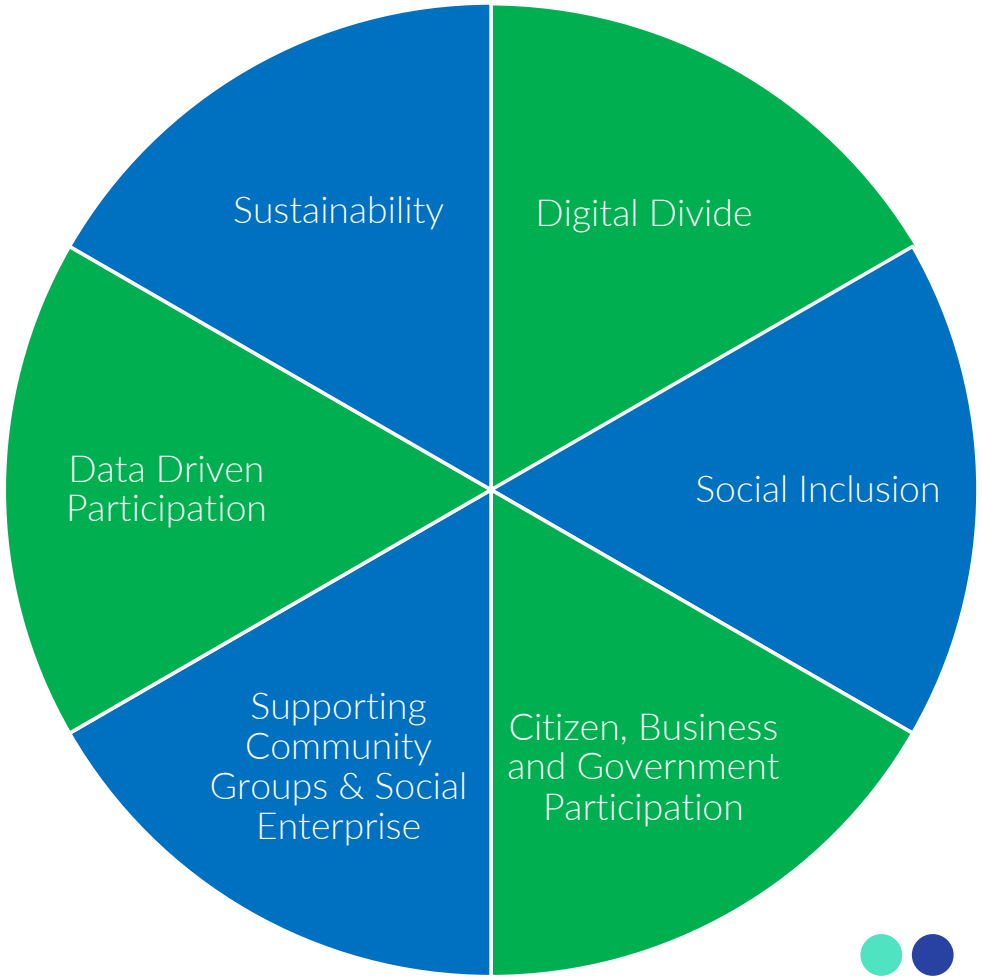
Urban resources for transformation – A lot of the enablers exist for a coordinated approach e.g. community response forum, PPN, Learning neighbourhoods. Challenge will be to get buy in from a sector already under pressure and a challenge with resources.

City ecosystem: Initial topics explored as part of the Needs Assessment Workshop

Workshop Objectives

Explore	Explore inspirational solutions
Understand	Understand our city and citizen's challenges
Consider	Consider opportunities and solutions that can have a positive impact on our city and our citizen's quality of life
Identify	Identify priority areas to address and key stakeholders

Topics discussed during first workshop



Summary of findings from the stakeholder engagement and needs assessment workshop

- Strong **consensus** by the group around the importance of citizen participation as the focus for the ICC.
- Clarity of **challenges affecting citizens** in particular around the topic of the digital divide, engagement between citizens and local government and social inclusion.
- Interest in using **data** as a enabler and support mechanism as opposed to an end goal
- **Common external stakeholders** for a number of the areas explored
- **Placemaking** emerging as a critical topic to encourage participation and that requires participation
- **New ways of engagement** highlighted as the traditional face to face mechanisms not feasible due to Covid-19.
- Concern about the increasing **digital divide** as a result of Covid-19.
- **Innovation is a priority for the stakeholders**. We need to adapt in terms of the solutions that are considered
- **Collaboration is key** to any successful engagement. Existing relationships and groups could be leveraged.

Urban resources for transformation

- Cork City is fortunate to have access to **skilled labour force**. It is well served by key Higher Education Institutes and a number of internationally renowned research centres.
- Cork has a very open, engaged and **collaborative stakeholder ecosystem** across public sector, private sector, academic and research sector and community sectors.
- The success of Cork City is characterised by the strong **inter-agency collaborative partnerships**, the robust triple helix working relationships that exist and the cross community collaboration.
- Cork City Council's **Corporate plan lists a people centric approach and innovation** as two of its core values and also commits to provide high quality services and address peoples' needs in a manner that is both inclusive and equitable.
- Key **challenges exist in the form of available resources**. The staff and community groups who are best placed to support meaningful transformation in this area are already stretched in terms of capacity
- Access to **key human resources in addition to financial resources** are a challenge for the implantation of transformative projects.
- **Openness to new ideas** and critical thinking is demonstrated. Cork is a UNESCO Learning City and a WHO Healthy City.

2 ICC strategy: Vision and ambition statements

To make Cork the Connected City – Innovative, Inclusive, and Inspiring

An internationally recognised city for innovation; where through collaboration Cork Citizens and Businesses can benefit from innovative approaches to enhance quality of life, participate in their city and communities' development and enable economic growth.

Ambition statement 1

Enhance inclusion to ensure that citizens can engage with, contribute to, and benefit from new innovations and ways of working

Ambition statement 2

Empower people to engage with their community in accessible, creative, innovative, and sustainable ways

Ambition statement 3

Facilitate more connected services for citizens through collaboration

Ambition Statements and City Solutions

Ambition statement 1

Enhance Inclusion to ensure that citizens can engage with, contribute to, and benefit from new innovations and ways of working

→ Solution 1: Digital Placemaking Toolkit

→ Solution 2: Age Friendly Technology to Identify Loneliness

Ambition statement 2

Empower people to engage with their community in accessible, creative, innovative, and sustainable ways

→ Solution 3: Citizen Focused Approach to Open Data

Ambition statement 3

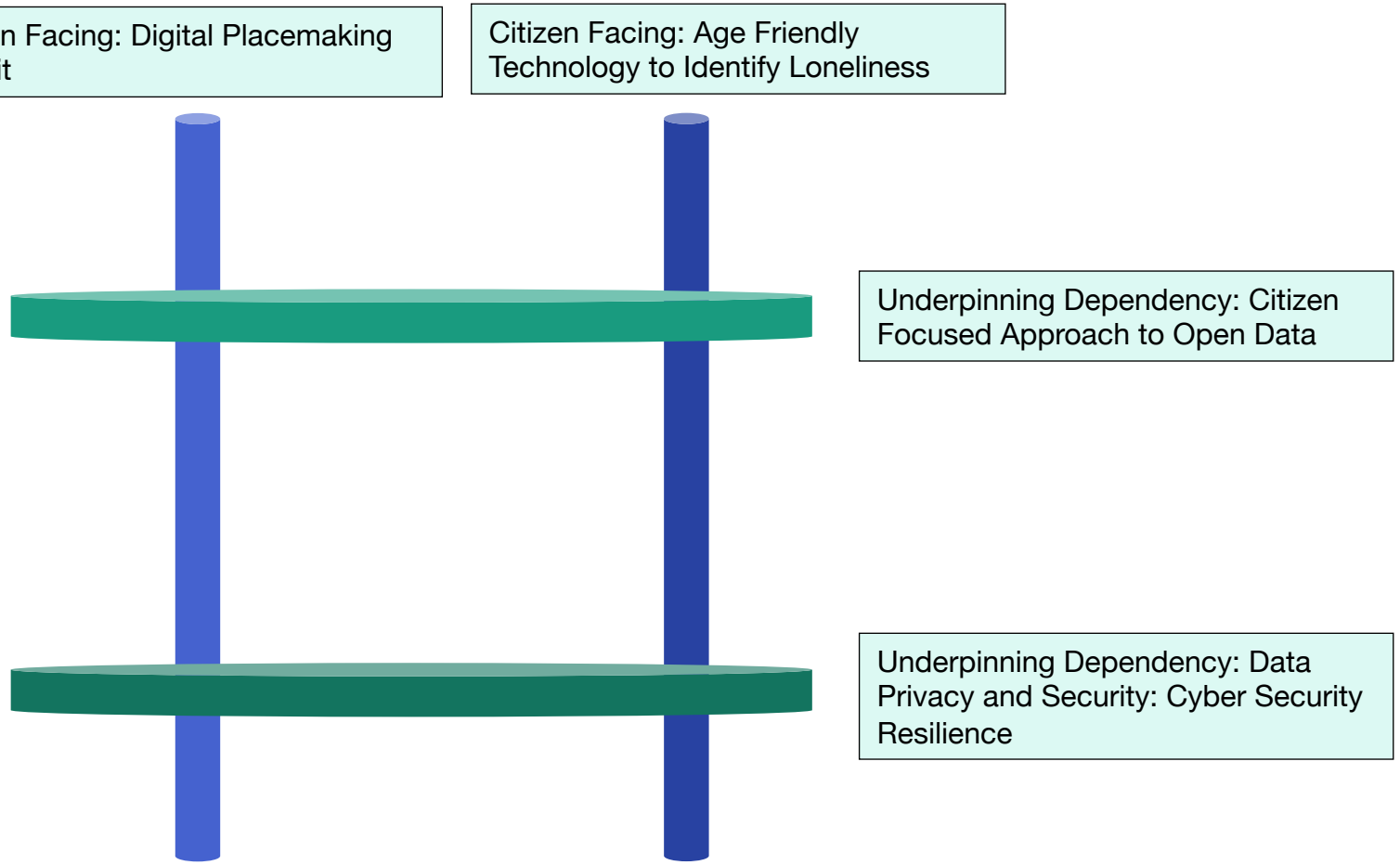
Facilitate more connected services for citizens through collaboration

→ Solution 4: Data Privacy and Security: Cyber Security Resilience

Interrelationship Between Citizen Facing Services and Underpinning Dependencies

This diagram shows the interrelationship between the solutions explored by Cork City as part of the ICC programme.

The 4 solutions can be divided into citizen facing services and projects that creative supportive foundations for citizen facing services



City Strategy Justification

Strategy Drivers

- The strategy is focused on the safe and inclusive implementation of citizen participation solutions in the era of Covid-19 and acknowledged the role of collaboration and iteration in implementing successful solutions.
- The solutions seek to learn from our citizens and acknowledge that our citizens are the experts in terms of planning for the areas in which they live and work.
- The strategy acknowledges that a smart and connected city needs to be secure and place cybersecurity and privacy at the heart of decision making

Strategy Success Factors

- Enabling better citizen participation in a safe and secure manner
- Collaboration across the city council, community networks and other external stakeholders including academic and private sector stakeholders
- Opening data that is relevant and useful for our citizens
- Iterative approach to implementation – space for development, test and reiterate based on feedback.

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Section

2

Cork City: Ambition and roadmap

ICC Transformation

February 2021 to May 2021

European Commission | The Intelligent Cities Challenge is funded by COSME, the EU programme for Competitiveness of Enterprises and SMEs

1 Initiative charter (Citizen facing) Digital Placemaking Tool

Strategy

Description

This initiative seeks to empower local placemaking activities

A digital placemaking toolkit aims to make placemaking more accessible. The solution will support and empower local communities to reimagine their local spaces.

Link to ambition statement

Link to Ambition Statement 1: Enhance Inclusion to ensure that Citizens can Engage with, Contribute to, and Benefit from new innovations and ways of working

This initiative will empower local communities to reimagine their local areas in an innovative and collaborative way

Expected impact and timing

The toolkit aims to enable communities to reimagine their own location by following a best in practice step by step placemaking toolkit.

Stakeholders involved

Solution lead: Cork City Council

Solution working team: Placemaking working group lead by Community Culture and Placemaking Department in Cork City Council

Contributors: Munster Technological University

Local Community Groups

Risks and mitigation

Risks include investing in a technical solution that isn't suitable or sustainable.

To mitigate these risks the placemaking working group is taking an iterative approach and testing and codesigning the toolkit with placemaking practitioners as well as with community groups and other end users.

Inputs, outputs, outcomes and impacts

Solution maturity outputs

Testing with community groups is ongoing. Feedback is being sought from end users to update the toolkit in advance of the webpage going live

Workshop with a thought leader in placemaking and Senior management team is being organized to inform and engage all departments in the City Council

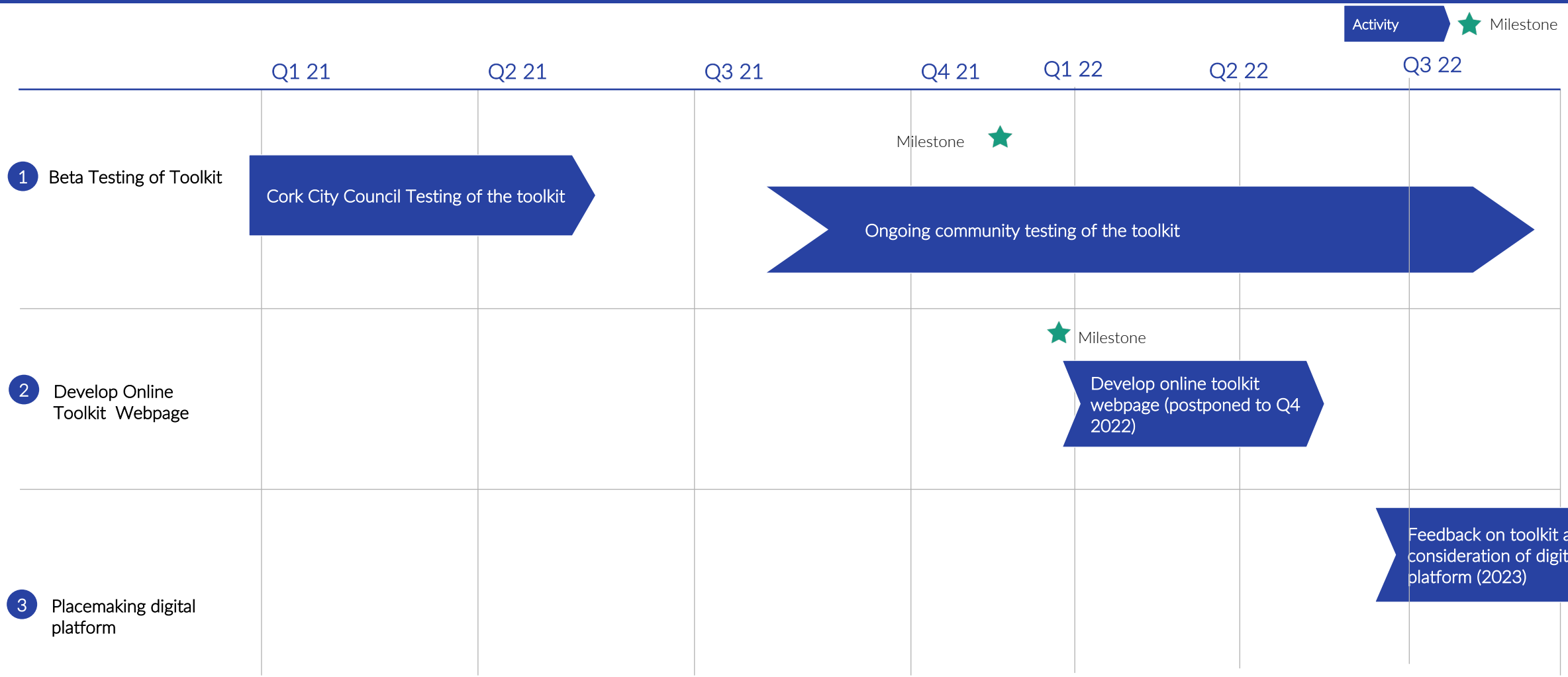
Project progression has been slowed as the team involved were coordinating the Ukrainian response effort for the city. Project activities will continue in q4 2022

City performance outcomes and impacts

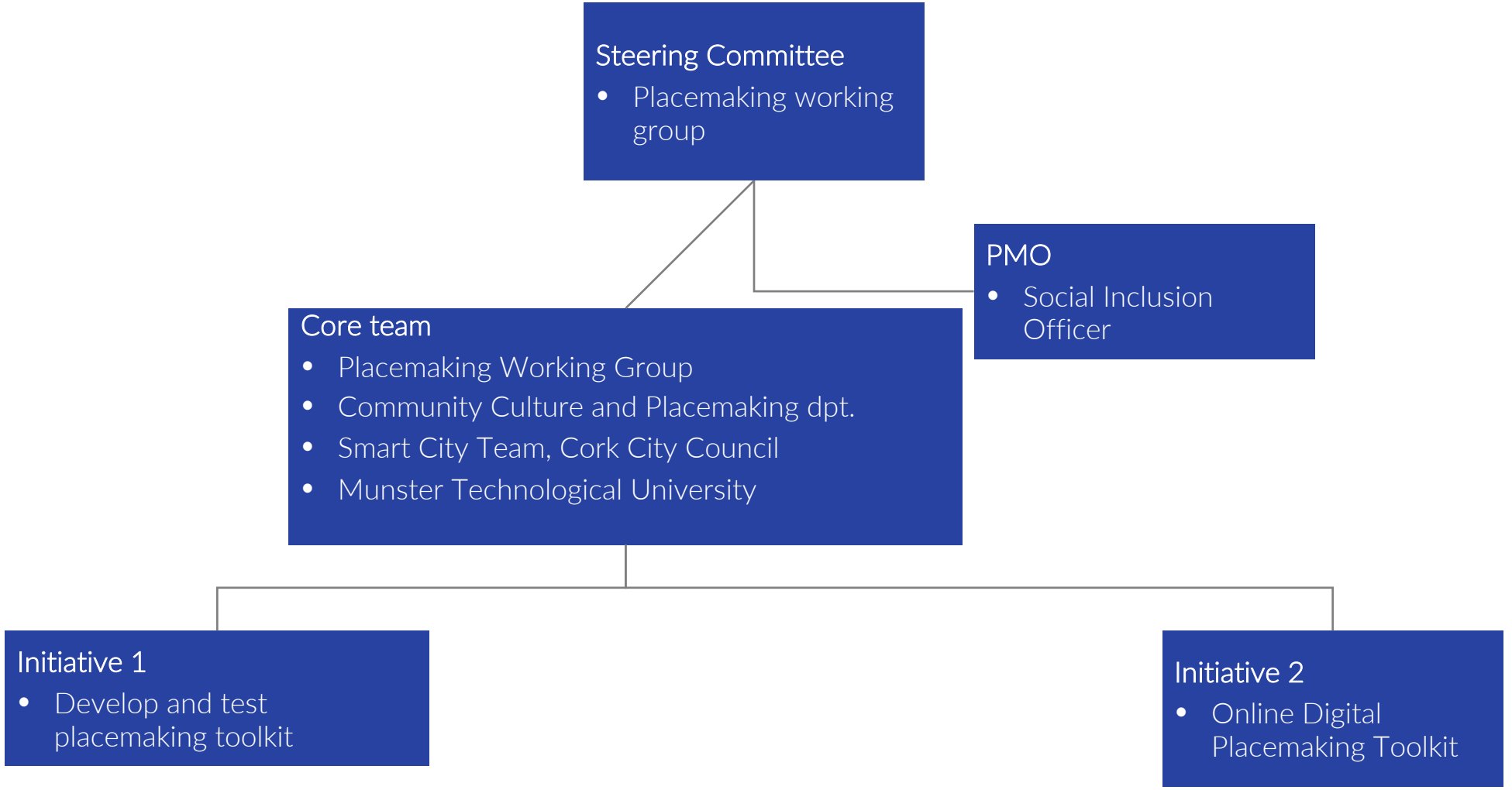
Beta testing with the internal working group, thought leaders and community groups.

Activities include the Design and Development of Placemaking Webpage to include the toolkit.

High level implementation roadmap for Digital Placemaking Toolkit



Governance structure for roadmap implementation - Digital Placemaking Tool Kit



Key Performance indicators –Overview Placemaking

Solution	Activities – Inputs and actions	Solution Maturity - outputs	City performance – outcomes and impacts
Beta Testing of Toolkit	Beta testing of Toolkit with CCC and community group.	Number of people engaged in the beta testing process	Total number of people participating Consistency of representation across city and community groups
Develop Online Toolkit Webpage	Design and Development of Placemaking Webpage	Design, develop and write content for the digital toolkit	Proxy for citizen engagement Number of users using the Digital Toolkit Webpage
Placemaking digital platform	Review feedback from online tool and look at progressing the solution to be more participatory and explore the development of a digital placemaking platform	Define the main features and design of the platform	TBC if the team requires this solution
City Council engagement with providing solutions to placemaking submissions	Engage with other cities to look at internal structures to support participatory placemaking with engagement across the City Council in response to community feedback	Mechanism to review and address placemaking requirements when suitable	Responses to placemaking submissions

2 Initiative charter: (Citizen Facing) Using technology to identify loneliness in young and older people

Strategy

Description

This initiative explores the use of wearable technologies to see if they can assist in identifying isolation and loneliness in older adults and explore how technology can be used to predict and prevent feelings of isolation and loneliness in this group compared to a group of younger adults.

Timely identification of loneliness is important in preventing chronic loneliness thus reducing the risk of serious adverse health and wellbeing outcomes linked to loneliness.

This is an ongoing collaborative project which has employed co-design mechanisms with older people and other community stakeholders. The project organised workshops with older people to discuss loneliness in Cork and identify key factors relevant to loneliness.

A proof-of-concept study with 60 individuals is currently in the recruitment phase.

Link to ambition statement

Link to Ambition Statement 1: Enhance Inclusion to ensure that Citizens can Engage with, Contribute to, and Benefit from new innovations and ways of working

This initiative will explore how technology can help identify loneliness in older adults

Stakeholders involved

Solution lead: University College Cork

Solution working team: Cork City Council and University College Cork

Contributors: Age Friendly Alliance

Risks and mitigation

Challenges include recruiting a representative group of older persons to engage with the research as the target age group are not digital natives and could be wary of using technology and the safety of engaging with technology.

Mitigating measures include engaging with older people through the city council and the age friendly alliance who have built trusted relationships with many older persons groups.

Inputs, outputs, outcomes and impacts

Solution maturity outputs

Collaboration agreed between UCC and Cork City Council. The team has also engaged with the Age Friendly Alliance.

The team has engaged with a participatory group to co-design the study with older people through the Age Friendly Alliance which has helped to design an appropriate system and develop the proof-of-concept study.

Ethics approval for co-design study with older people through the age friendly alliance has been granted.

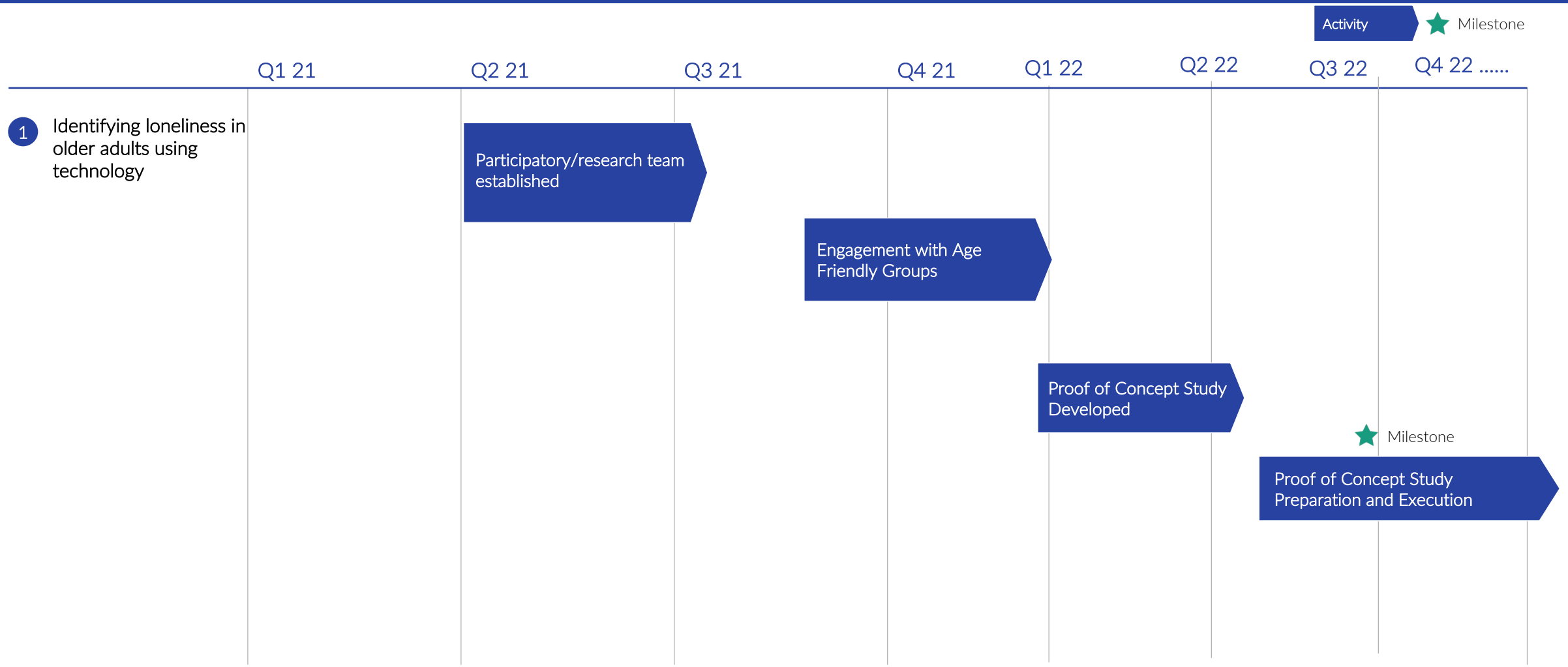
The team is in the process of recruiting and testing volunteers in the proof-of-concept study

City performance outcomes and impacts

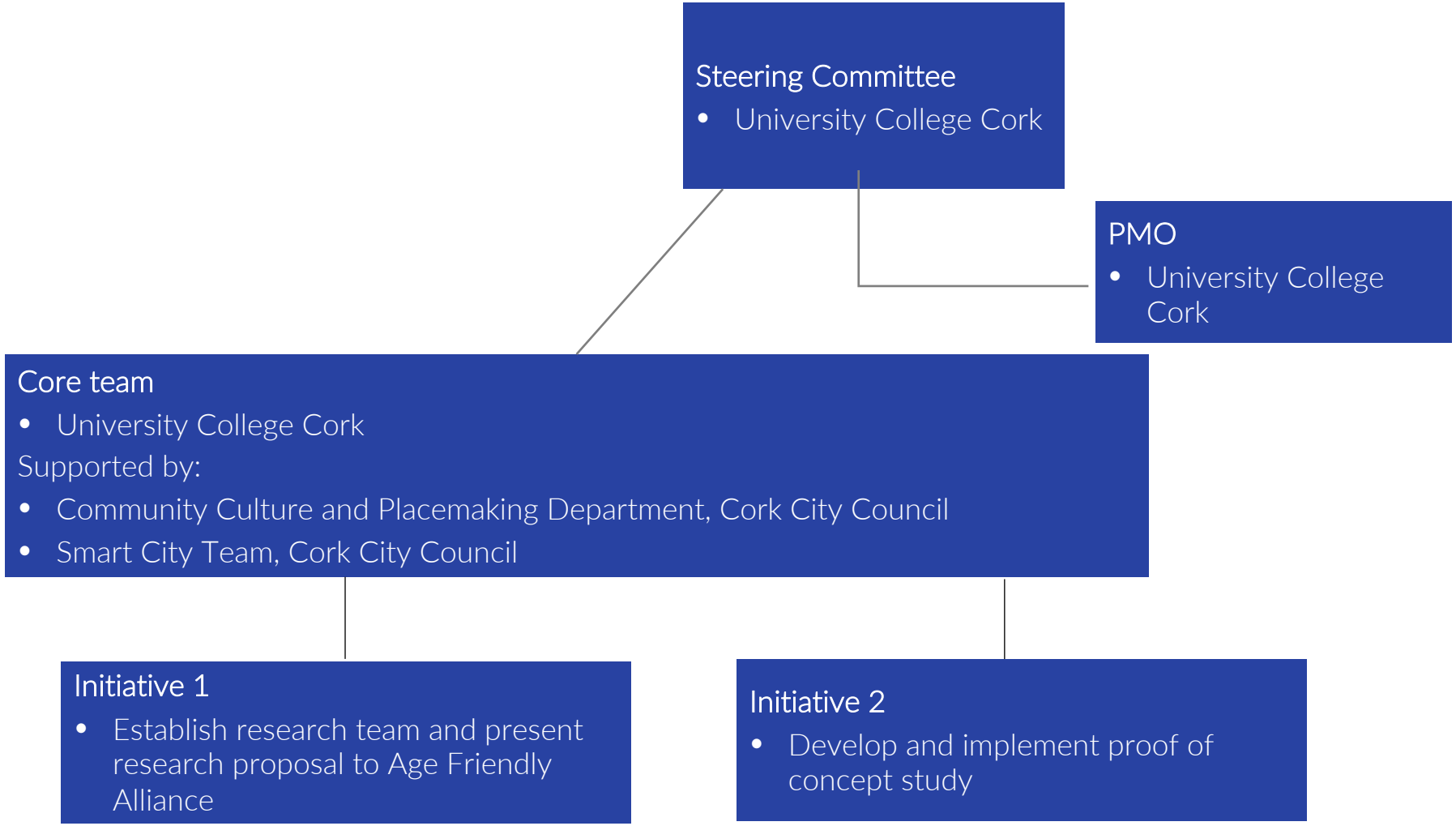
This is a digital health project that has civic and economic city benefits as social isolation and loneliness are often precursors for more severe, potentially longer-term mental health problems.

The project also looks at quality of life indicators including social inclusion and it may also increase the reach of civic groups that aim to support older adults.

High level implementation roadmap for using technology to identify loneliness in older adults



Governance structure for roadmap implementation - Using technology to identify loneliness in older people



Key Performance indicators –Overview Technology to identify Loneliness

Solution	Activities – Inputs and actions	Solution Maturity - outputs	City performance – outcomes and impacts
Establish research team and develop proposal	Established participatory/research team Presented research proposal to Age Friendly Alliance	Collaboration agreed between UCC and Cork City Council. Presentation at the Age Friendly Alliance Meeting by UCC research group, facilitated by Cork City Council.	Established the participatory research group.
Develop and implement proof of concept study	2022 organised co-design workshops. Developed mixed methods study and larger pilot study to be developed in 2022	Ethical approval for co-design study with older people through the age friendly alliance, and the first proof-of-concept study . Recruiting and testing volunteers for the study	No impacts on city performance yet. This is a digital health project that potentially has both a civic and economic city benefits as social isolation and loneliness are often precursors for more severe, potentially longer-term mental health problems. The project also looks at quality of life indicators including social inclusion and it may also increase the reach of civic groups that aim to support older adults.

3 Initiative charter: Citizen focused Open Data

Strategy

Description

Cork City Council (CCC) is active in the open data space and has an open data portal at data.corkcity.ie. An open data dashboard that visualised data was also developed by Maynooth University as part of a 'building city dashboards initiative' funded through Science Foundation Ireland.

Through the ICC, the team aimed to explore the demand and use cases for open data from our citizens and community groups. The team also wanted to explore the need for a data portal and a data dashboard and look at the viability of maintaining both.

The team wanted to learn from other cities who are more advanced on their open data journey to better understand how other cities structured their open data activities. The team was interested in looking at best practice examples of governance structure, policies and resourcing with a view to better understand how we can support open data across the City Council and with our stakeholders.

Link to ambition statement

Link to Ambition Statement 2: Empower people to engage with their community in accessible, creative, innovative, and sustainable ways

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Stakeholders involved

Solution lead: Cork City Council

Solution working team: NUI Maynooth, CSO

Contributors: Local Community Groups, Citizen Representatives, Senior Staff at Cork City Council

Risks and mitigation

Risks include the engagement of citizens without the resources and ability to release all the data that has been deemed a priority.

Implementation challenges include not owning all the priority datasets and not having the skills in house to release available datasets.

Mitigating measures include engagement with GIS officer to release datasets and showing other staff members how to release data to encourage additional data releases.

Inputs, outputs, outcomes and impacts

Source of funding and estimated cost

Internal funding is being used to develop the existing open data portal to enable and train other individuals to update the datasets.

The open data workshops were funded by a National Open data Engagement Fund.

No funding identified for further events. Private funding was sought for the maintenance of the Dashboard but not enough was secured.

Solution maturity outputs

Increase of 9 datasets on the open data portal and 5 additional staff trained to update the portal.

Development of a Draft Open Data policy for Cork City Council including proposed governance structure and resourcing needs.

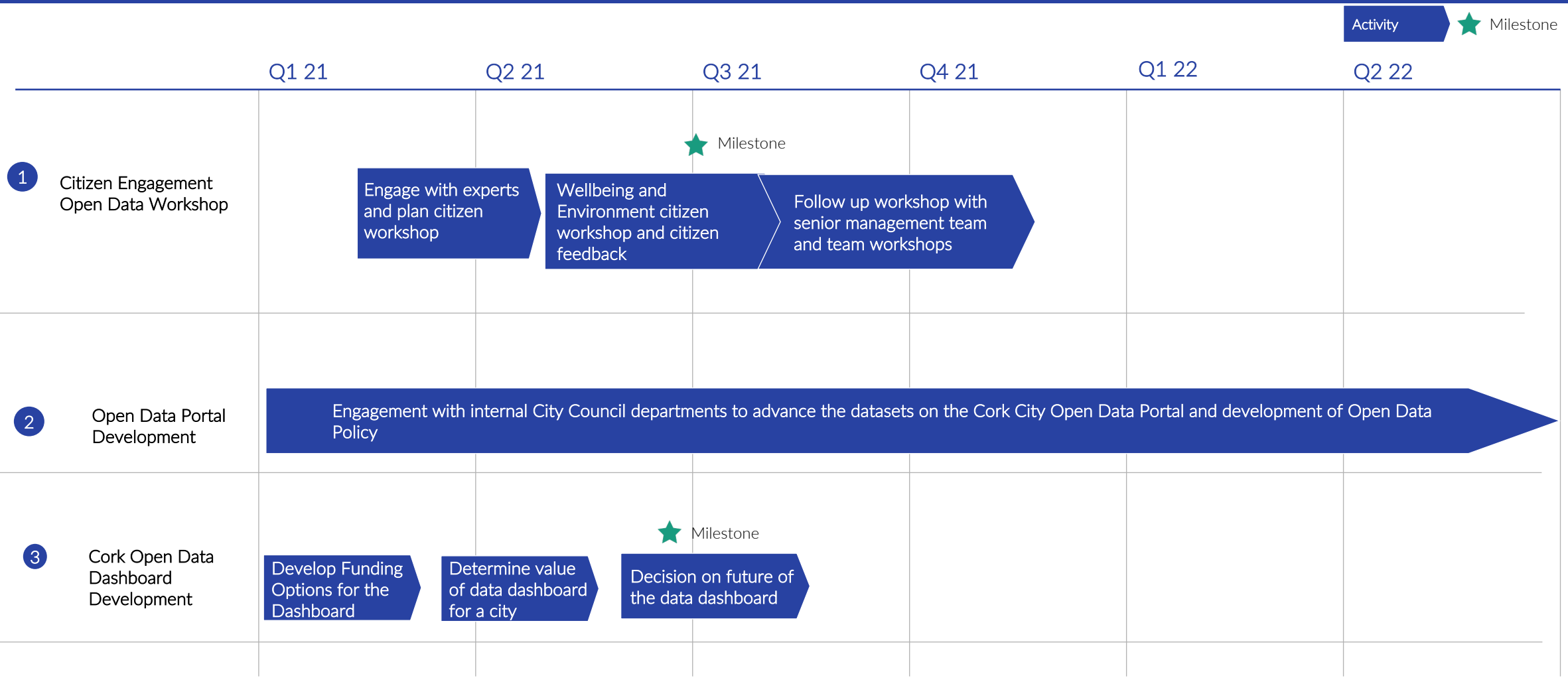
Private funding was south to support Data Dashboard, but we were unable to find enough support and a decision to focus on the open data portal and not the dashboard was agreed.

City performance outcomes and impacts

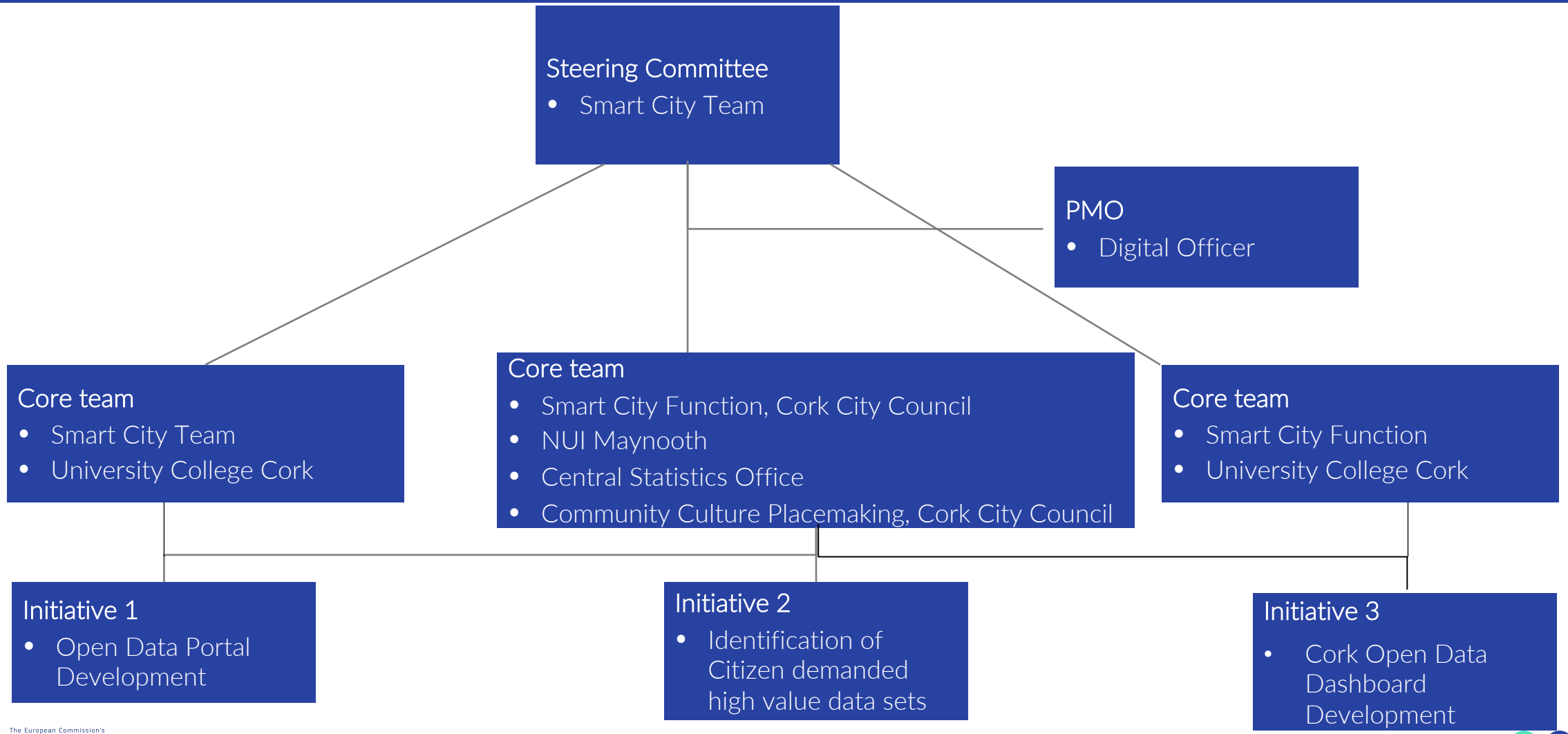
Engagement with approximately 50 stakeholders from public, academic and private sector through workshops and presentations. Identification of 35 priority datasets and additional 9 datasets published on open data platform.

Two Open Data workshops with the Cork City Council Senior Management Team. Two workshops with individual departments in Cork City Council around the open Data Offering

High level implementation roadmap: Citizen focused Open Data



Governance structure for roadmap implementation - Citizen focused Open Data



Key Performance indicators –Overview Citizen Focused Open Data

Solution	Activities – Inputs and actions	Solution Maturity - outputs	City performance – outcomes and impacts
Citizen Engagement Open Data Workshop	Citizen Engagement Open Data Workshop. Senior Management Team Workshop to share outputs and plan next steps.	Number of people engaged in the workshop	Presence of participatory mechanisms to invite feedback from citizens and community groups
Open Data Portal Development	Development of an internal data catalogue Programme of Internal Council engagement to determine the value of progressing the Cork Open Data increase data sets on the Cork Open Data Platform. Support from CCC for an Urban Environmental Monitoring Testbed project application to share validated data via open data portal.	Increase in Open Data Portal Datasets	Transparency of City Council information through open data sets
Cork Open Data Dashboard Development	Research and engagement phase to identify best practice international open data practices Preparation of proposal to industry party for financial support for Open Data Dashboard	Decision on further Dashboard Development	Transparency of City Council information through open data visualisation

4 Initiative charter: Underpinning Dependency: Cyber Resilience

Strategy

Description

Cybersecurity Resilience (Data and Services)

The provision of e-Government services and use of citizen engagement hinges on the securing of Cork City Council's infrastructure against of cyber threats e.g. malware, ransomware. In order to reinforce our network security, Developing resilience against cyber threat helps protect citizen data while improving reliable access to online services.

The key activity for this project is to undertake a IT major Incident (Cyber) training exercise to test the robustness of the IT Major Incident Response Policy and SOP put in place and tested,

Link to ambition statement

Link to ambition Statement 3: Facilitate more Connected Services for Citizens through Collaboration

As more connected services are developed and promoted, ensuring the security of these services and the city council's data is paramount

Stakeholders involved

Solution lead: ICT Dept is the project champion with project management assigned to the SMART and Compliance Team

Solution working team: The working team comprises the CIO, ICT Operations, ICT Smart & compliance team. The Emergency response (Fire officer) and reps form other internal Depts.

Contributors: Key stakeholders include CE, Senior Management Team members, Emergency services, Comms team.

Risks and mitigation

Need to consider the supporting documentation and plans as live documents and keep the dialogue current reflecting cyber trends and new attack agents. This is a risk in terms of finding a funding model for developing a cyber security programme of events going forward to offset the financial implications.

Mitigation will include widening knowledge transfer across the council network, thereby learning form other bodies experiences also.

Inputs, outputs, outcomes and impacts

Source of funding and estimated cost

The source of funding is ICT core funding. The cost will be significant going forward. 2022 & annually thereafter: annual corporate tabletop exercise (TTX) event, training and development of BCP's for the organisation to deal with a cyber event

Solution maturity outputs

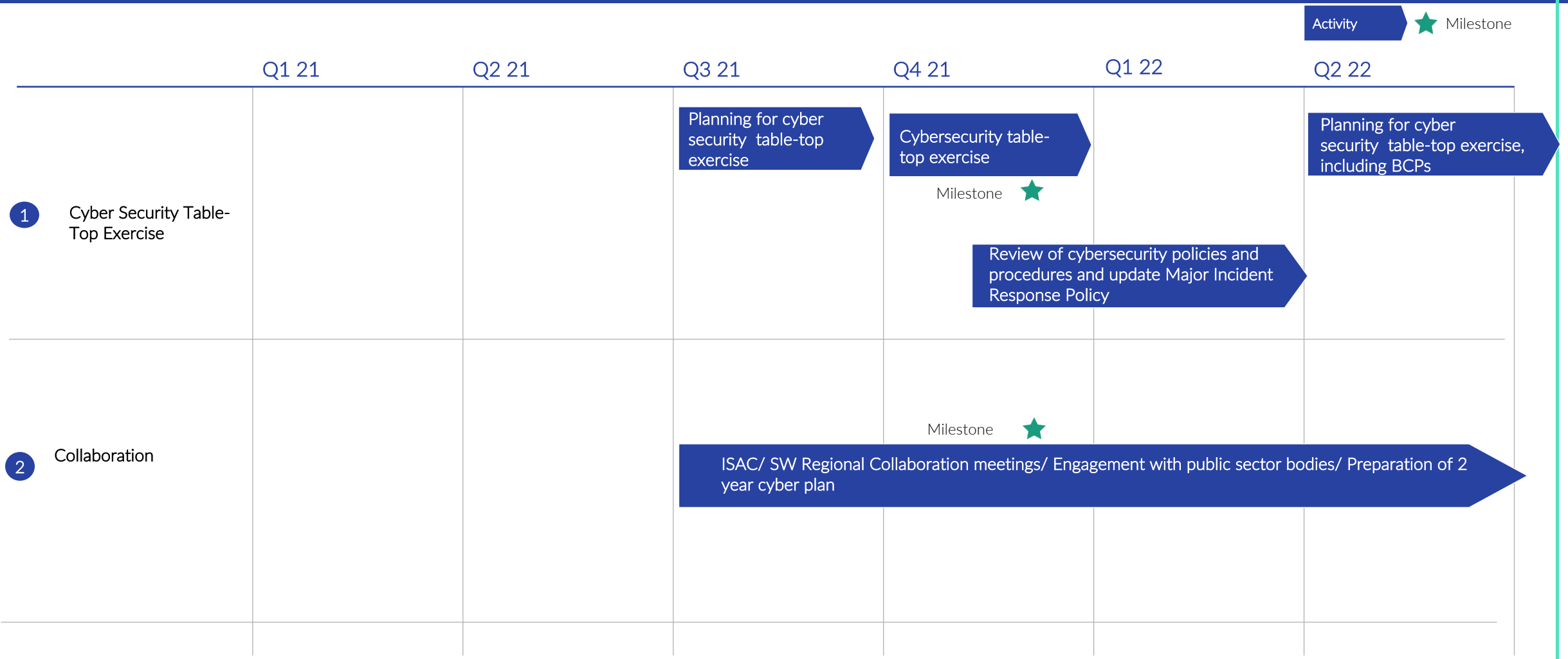
The City Council is currently undertaking a suite of activities to shore up the posture to cyber risk. These include alignment of policies with ISO 27001 standards; the preparation and rollout of training on cyber risks to all staff via an online learning solution; the updating of BCP planning and DR plans; the implementation of a cyber committee and the engagement of third-party security experts; implementation of security audits and actioning of key findings.

City performance outcomes and impacts

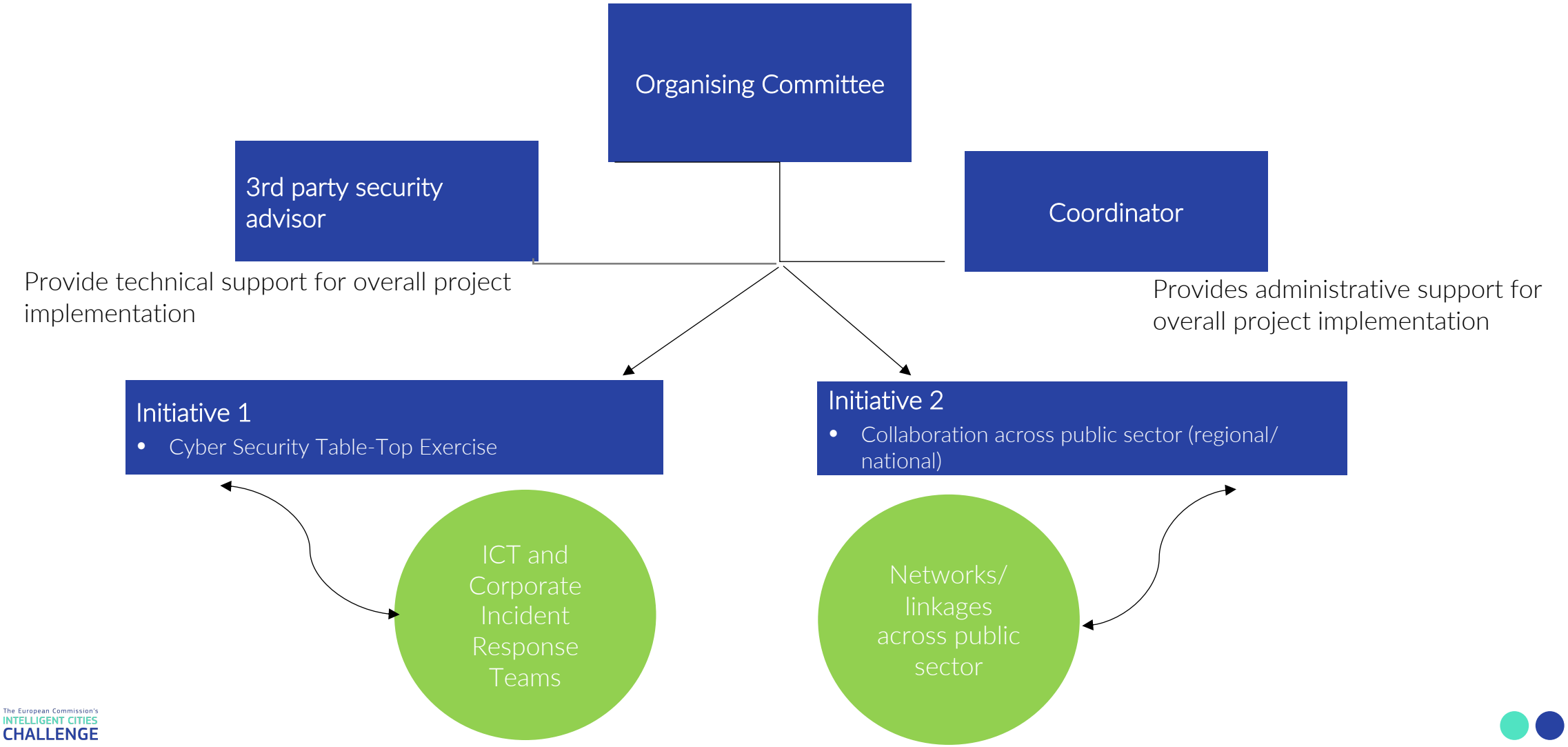
A number of recommendations were made as a result of the tabletop exercise by the cyber security third parties. Recommendations include further tabletop exercises, training, development of area expertise, knowledge transfer, dissemination and reaching out to other networks operating in this space.

Next steps include reaching out across ICC and other networks to other cities on cyber security resilience activities

High level implementation roadmap for Cyber Resilience solutions



Governance structure for roadmap implementation – Cyber Resilience



Key Performance indicators – Cyber Resilience

Solution	Activities – Inputs and actions	Solution Maturity - outputs	City performance – outcomes and impacts
Cyber Security Table-Top Exercise	Research and engagement with thought leaders to prepare table-top exercise	Completion of multi stakeholder tabletop exercise (TTX) Implementation of key findings & recommendations Review and update of core documentation Incident Response Policy & Procedure	Follow up TTX (2022) and development of 'Business Continuity Plan' for Council Training for key roles
Collaboration across public sector (regional and national)	Establishment of Local Government sector of an ISAC for sharing expertise and knowledge transfer in cyber security. Formation of Regional collaboration working group Establish links across Public sector	Knowledge transfer on running TTX Shared policy and procedure documentation	Best practice: sharing and learning opportunities

Key Performance indicators - Cross cutting indicators

Cross cutting indicatrs
Total number of people participating in participation offerings
Consistency of representation across citizen groups
Citizen engagement proxies e.g. Open Data portal and Website views
Number of data sets identified as a result of citizen engagement
Number of citizens participating in workshops and codesign opportunities

The European Commission's
INTELLIGENT CITIES
CHALLENGE

Section

3+4

Cork City: Impact

ICC Transformation

February 2021 to May 2021

European Commission | The Intelligent Cities Challenge is funded by COSME, the EU programme for Competitiveness of Enterprises and SMEs

Impact executive summary

Cork City's ICC journey has occurred during a time of intensive change. The thematic area addressed of citizen engagement and digitisation of services became even more important as the ICC programme developed due to the Covid 19 pandemic. The activities that were originally planned as part of this programme were significantly impacted by the restrictions put in place around social distancing, and the team was required to become more innovative and creative in response. Despite the challenges that Covid 19 presented, the team managed to work collaboratively with internal and external stakeholders and develop projects across four key areas including Open Data, Cyber Security, Placemaking and e-health.

The collaborative teams had several successes during the ICC journey including the first online citizen engagement open data workshop. This workshop delivered a list of priority datasets as requested by the citizens and community groups who participated. Subsequent workshops with internal staff and Senior Management in Cork City Council have been very useful in advancing our open data activities which we will continue to develop. The rapid digitisation of services over the last two years has emphasised the importance of Cyber security and data protection. The team successfully ran a Cyber Security tabletop exercise to test our Cyber Resilience as part of the ICC. Cork City Council will continue to keep the safety of citizens and security of our online services at the top our agenda.

The team also experienced some challenges along the way including the postponement the digital placemaking toolkit due to staff redeployment to the community response effort for Covid-19 and then subsequently to coordinate the local response to the invasion of Ukraine. The activity in this area is expected to recommence in Q4 2022.

The ICC has helped the team to progress a number of project activities, but this work does not end with the conclusion of the ICC. Cork City Council, along with our stakeholders will continue to progress the ICC project areas and explore new and better ways to encourage real citizen participation in the development of a smart, sustainable and inclusive city.

Key Performance indicators

Solution	Initiative	City performance – outcomes and impacts	Targets	Link to SDGs (optional)
Digital Placemaking Toolkit	Beta Testing of Toolkit	Total number of people participating Consistency of representation across city and community groups	40 people	Goal 11: Sustainable Cities and Communities
Digital Placemaking Toolkit	Develop Online Toolkit Webpage	Proxy for citizen engagement Number of users using the Digital Toolkit Webpage	500 views of the site	Goal 11: Sustainable Cities and Communities
Digital Placemaking Toolkit	City Council Cross Department Engagement	Responses to placemaking submissions	Cross departmental group established to review placemaking submissions	Goal 11: Sustainable Cities and Communities
Age Friendly Technology	Age Friendly Technology Research Project	Number of people engaged in co design of solution	30 younger adults (18-50 years old), 30 older adults (65 years or older)	Goal 11: Sustainable Cities and Communities
Age Friendly Technology	Age Friendly Technology Research Project	Number of people engaged in pilot study	60-70	Goal 11: Sustainable Cities and Communities

Key Performance indicators

Solution	Initiative	City performance – outcomes and impacts	Targets	Link to SDGs (optional)
Citizen Engagement Open Data	Citizen Engagement Open Data Workshop	Presence of participatory mechanisms to invite feedback from citizens and community groups	3 Workshops	Goal 4: Quality Education Goal 11: Sustainable Cities and Communities
Citizen Engagement Open Data	Open Data Portal Development	Transparency of City Council information through open data sets	Increase in number of data sets by 100%	Goal 4: Quality Education Goal 11: Sustainable Cities and Communities
Citizen Engagement Open Data	Cork Open Data Dashboard Development	Transparency of City Council information through open data visualisation	TBC if the decision is made to progress the development of the data dashboard	Goal 4: Quality Education Goal 11: Sustainable Cities and Communities
Cyber Resilience	Cyber Security Table-Top Exercise	Number of people trained during Cyber TTX	26	Goal 11: Sustainable Cities and Communities
Cyber Resilience	Training for security roles	Number of training held for key roles (e.g. Incident Response Manager)	3	Goal 11: Sustainable Cities and Communities
Cyber Resilience	Training for security roles	Number of recommendations implemented	6	Goal 11: Sustainable Cities and Communities

Open Data

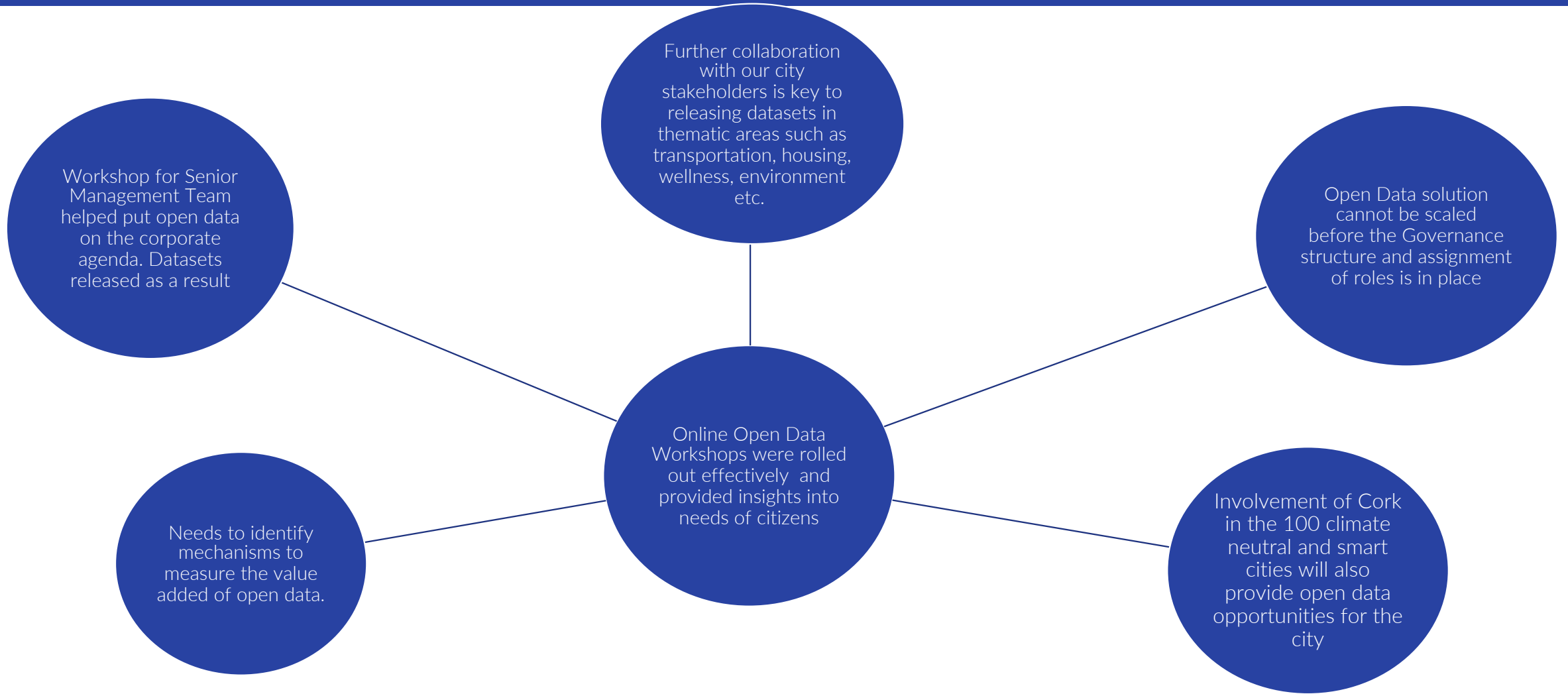
Assessment of city performance – Open Data discussion

- Unforeseen factors that impacted our KPI's:
  - Covid-19 demanded a change in focus of the team and key stakeholders which impacted the timelines and methods of engagement.
  - The impact of Covid –19 meant that the workshop with citizens was held online.
  - A follow up online workshop for Senior Management in Cork City Council was delivered and acted as an impetus to each Business Dept to further engage.
  - Activity and skills need to be embedded across the business units to ensure continuity of service.
  - There has been a reassessment of the value of a city dashboard over and beyond an Open Data portal.
  - Realignment of focus to progress policy and data strategy development across the organisation at a high level to promote the principles of Open Data release across the City Council
- Impact of the solutions:
  - Workshops have sparked internal engagement in a number of business units and additional datasets have been released.
  - Focus on embedding open data into the culture of the business units will be required to ensure data sets are maintained.
  - This activity has not resulted in a marked increase in the amount of views that the open data portal is receiving. A method of measuring quality of engagement could be useful.
  - The Open Data Directive is helping to focus the organisation on policy and further governance necessary for Cork City Council.

Assessment of city performance - progress against Open Data KPIs

City performance	Where we started	Final results
1 Number of data sets released	14 data sets on data.corkcity.ie	24 datasets released on data.corkcity.ie
2 Number of people trained in using the open data portal	2 staff trained to use data.corkcity.ie	7 staff trained to use data.corkcity.ie
3 Number of high value datasets identified by our stakeholders	N/A	35 High Value Datasets identified through the Citizen Engagement Workshop
4 Number of people engaged in workshops	N/A	Over 50 people engaged in the open data engagement workshops

Assessment of solution maturity – Open Data discussion



Assessment of city ecosystem and activities – discussion Open Data

Local Ecosystem

- Engagement with local stakeholder ecosystem has been successful through the workshops. Further collaboration with city stakeholders and internal stakeholders will be key to the progression of our deliverables. Moving from engagement to implementation.
- Long term progress will be underpinned by the quality of our engagement and development of our networks across key stakeholders
- Identification of High Value Datasets and publication of datasets which can be verified and kept current is fundamental.

National Ecosystem

- Engagement with other Local Authorities has been very beneficial to share experiences and learning
- Central government currently engaging all public bodies and subject matter experts to help develop a National Open Data strategy.
- Availability of National Framework for procuring Open Data goods & services is timely.
- Development of Service Catalogue at national level and support in training in Open Data is useful

International Ecosystem

- Engagement with international Local Authorities has been very beneficial to share experiences and learning
- We would see a benefit in future collaboration opportunities with international cities facing similar challenges.

Cyber Resilience

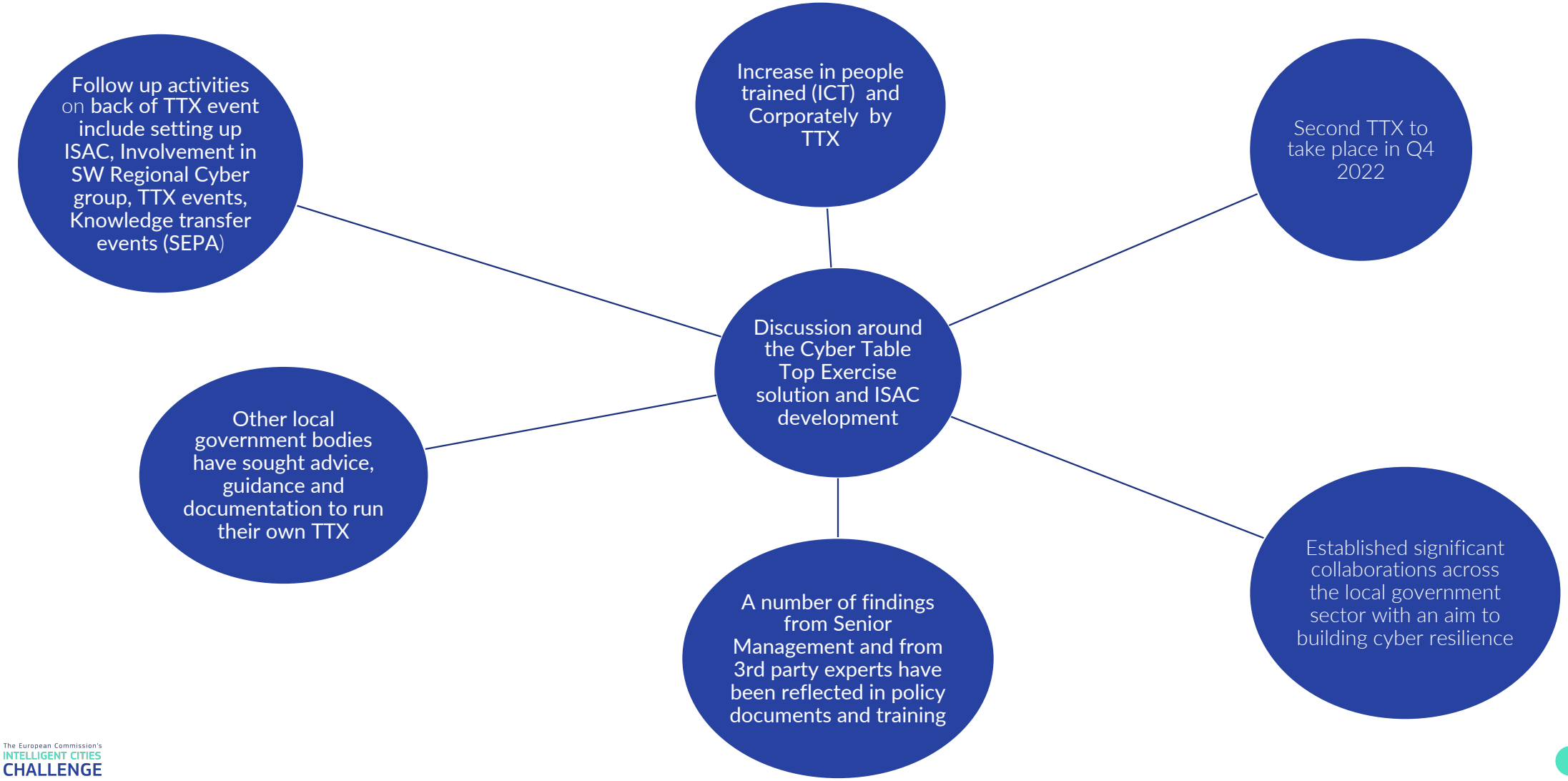
Assessment of city performance – Cyber Resilience discussion

- Impact of the solutions:
  - Successful Cyber Security table top exercise leading to a demand from the organisation for a second Cyber Security table top exercise for senior staff across the organisation.
  - Funding identified for first national Cyber ISAC (Information and Analysis Centre)
  - Cork City Council is also engaged with an international Cyber Security ISAC
  - Additional ICT staff engaged in Cyber Security
  - Cybersecurity policy and procedure developed

Assessment of city performance - progress against Cyber Resilience KPIs

City performance	Where we started	Final results
1 Number of people trained during Cyber TTX	n/a	26
2 Number of public bodies engaged with	n/a	10
3 Number of training held for key roles (e.g. Incident Response Manager)	n/a	TBC (ongoing process)
4 Number of key recommendations implemented	n/a	3
5 Develop business continuity plan for cyber security for the organisation and for each business directorate	n/a	Ongoing

Assessment of solution maturity – areas for discussion Cyber Resilience



Assessment of city ecosystem and activities - discussion

Local Ecosystem

- Engagement with local stakeholder ecosystem has been successful through the TTX. Further collaboration with city stakeholders and internal stakeholders will be key to improving the cyber resilience across the city.
- Established a collaborative response at regional level which will enhance our resilience and our ability to respond to cyber events

National Ecosystem

- Engagement with other Local Authorities has been very beneficial to share experiences and learning
- The TTX is a resilience activity which IS aligned to the cyber security Irish Baseline Security Standards set out by the Irish Government as per NIST
- The CIO represents the sector on a new established cross public and civil service cyber forum chaired by National Cyber Security Council - Government Cyber Security Coordination and Response Network
- Cork City Council has secured an innovation fund to set up and coordinate a cyber security ISAC across all 31 Local Authorities in Ireland to develop expertise and promote best practice and knowledge transfer across the sector.

International Ecosystem

- Engagement with the EU ISAC on Cybersecurity (linked with Major Cities of Europe)

Placemaking Toolkit

Assessment of city performance – Placemaking Toolkit discussion

- Unforeseen factors that impacted our KPI's:
  - This solution was being developed with the social inclusion team in Cork City Council's Community, Culture and Placemaking Department
  - The progress of this solution was initially slowed due to the Community Covid 19 response which was coordinated by this team
  - The team subsequently were required to coordinate the City's response to the invasion of Ukraine and this lead to the suspension of the placemaking working group and the pausing of the project except for the beta testing by the Community Groups.
  - It is intended to restart the Placemaking group and activities in Q4 2022

- Impact of the solutions:
  - Testing of the tool kit has been completed by the City Council Staff and a variety of departments have been engaged in the placemaking activity
  - Testing of the toolkit has been completed by one community group and generally positive feedback has been received. Feedback from the group will be reflected in the toolkit development

Project is still ongoing

Assessment of city ecosystem and activities – Placemaking Toolkit

Local

Ecosystem

- Cork City Council Placemaking working group established across a number of city council departments
- Beta testing of the toolkit completed by city council staff and by one community group. Testing underway by a second community group
- Community networks in place were utilised as part of this initiative to co-create the final version of the toolkit

National

Ecosystem

International

Ecosystem

- Cork City Council Placemaking group have engaged with a Scottish thought leader in this area who will present to Cork City Council Senior Management team to share their experiences

Using technology to identify loneliness in older people

Assessment of city performance – Using technology to identify loneliness in older people

- Unforeseen factors that impacted our KPI's:
  - Slow recruitment of participants, especially for the older adults' group

- Impact of the solutions:
  - Collaboration agreed between UCC and Cork City Council. Presentation at the Age Friendly Alliance Meeting by UCC research group, facilitated by Cork City Council.
  - Ethics approval for co-design study with older people through the age friendly alliance.
  - Ethical approval for the proof-of-concept study has been granted
  - Currently recruiting volunteers for the study – aiming to get at least 30 younger adults and 30 older adults

This project is still ongoing.

Assessment of performance: Using Technology to identify loneliness in older adults

City performance	Where we started	Final results
1 Number of People engaged in co-creation of pilot study	3 professionals working with older people and 3 representatives of the community	The advisory group provided significant input in the design of the study, and it helped to identify barriers for the study and how to overcome them
2 Number of volunteers recruited for study	10 younger adults and 1 older adult	This study is in progress and currently at the recruitment stage

Assessment of city ecosystem and activities – Technology to identify lonliness discussion

Local

Ecosystem

- Engagement between Cork City Council ICT and Community Culture and Placemaking Department established
- Engagement with the Age Friendly Alliance to co-create the solution with older people
- Recruitment of volunteers to participate in study through Cork City Council and UCC networks

National

Ecosystem

- The project will be presented in national events, including plenary meetings of research centres, such as the CONNECT centre which is funded through Science Foundation Ireland.

International

Ecosystem

- Scientific publications and conference presentations will be performed in international journals and conferences.

Concluding Remarks

5 key lessons

Lesson	Reflections
1 Collaboration is key	Collaboration with different stakeholders has created more valuable projects locally. The ICC encouraged the smart cities team to develop new collaborative relationships with other team in the City Council to achieve a mutual goal.
2 Utilise available city networks	International collaboration facilitated through the ICC programme ahs been useful in sharing challenges and discussing possible solutions. Peer to peer learning opportunities have been useful
3 Flexible approach means you can pivot quickly	Taking an iterative approach and being flexible in the process has been useful. A number of initial project objectives and goals have changed over the course of the ICC process. During the ICC the team had to react to external events including the pandemic, war in Ukraine, increased cyber attacks and digital transformation demands.
4 Importance of ongoing citizen participation	Through the ICC and given external events the ongoing engagement with citizens has proved valuable to respond to ongoing stresses such as the energy crisis and climate crisis in addition to more immediate shocks including the Covid-19 response.
5 Role of in person meetings	The majority of the meetings and workshops for the ICC we conducted online due to covid-19. There were two in person activities which yielded more interaction and engagement than any of the online events. A mix of online and in person events would have been more beneficial.

Reflections on city collaborations

The engagement opportunities offered through the Intelligent Cities Challenge were quite varied and there was a good opportunity to engage with other cities. We had a presentation slot at the launch event and as part of one of the Open Data sessions and the marketplace session. This provided a good opportunity for us to disseminate our experiences and engage directly with cities through the Q&A session. We participated in the peer-to-peer sessions also which was useful to gain an understanding of what other cities were doing. These were most useful in the thematic area grouping and we learned a lot from the participating cities. The cities involved in the 'city themed' groupings changed at every ICC lab and this made it difficult to develop a good working relationship with them or to follow their progress.

We also engaged separately with cities outside of these formal events. We had several more focused meetings around the topics of open data with other cities that we met through the ICC.

The Cork ICC team embraced opportunities to engage with cities outside of the ICC during the programme. During these engagements we shared the progress of the solutions being developed as part of the ICC journey. Such engagements included ones at a national level with other Irish Cities and with international cities from Belgium, Lithuania, Finland and China.

We are also participating in an upcoming online workshop on the topic of citizen engagement, open data and online portals for public administration with cities from Spain and Poland. This workshop will be facilitated by Arup and will focus on knowledge exchange and solutions, as well as discussing common challenges.

Commitments

Commitments to on-going resources

- Open Data commitment to continue to harness opportunities across the organisation including the 100 climate neutral and smart cities
- Significant impetus for the resourcing of cyber initiatives will result in further opportunities locally, nationally and internationally
- Placemaking is a key component of the Cork City Development Plan and will be utilised in the development of the Climate Action Plan
- E-health project completion is a priority of UCC and the collaboration with Cork City Council will continue

Commitments to on-going collaboration

- Continue to seek collaborative opportunities with open data stakeholders locally and internationally
- Cork City Council are seeking further collaborative engagements at EU level to promote the sharing of knowledge and expertise in Cyber Security. Cork City Council is involved in a national and international cyber security ISAC.
- Cork City Council and UCC will continue to engage on smart city projects through the regional Cork Smart Gateway Initiative.

Commitments to on-going KPIs

- Cork City Council is committed to the Open Data Directive and implementing the recommendations and deliverables scheduled as per the Open Data Strategy.
- Our activities over the last 12 months will be further embedded in the Cork City Council's IT agenda going forward to improve our posture in Cyber Security Resilience.
- Climate Action and our ambition to become a climate neutral city under the 100 climate neutral and smart cities programme will ensure we are committed to releasing high value climate data.

3 Year plan - ambitions

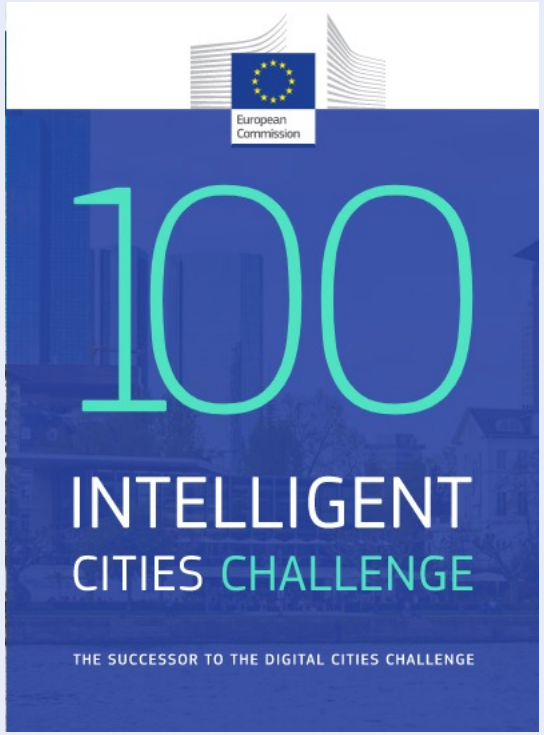
Building on the ICC, what would will the city aim to achieve in 3 years time?	All data open by default where appropriate To have a fully developed and resourced digital placemaking toolkit that links the community ambitions with the right operational departments and funding mechanisms To expand cyber awareness across our staff, city stakeholders and citizens. Continue to engage and collaborate with Higher Education Institutes across the city to build networks and new and innovative city solutions
What steps will you take over the next 3 years to achieve these goals?	Continue to work with our staff to facilitate open data and cyber awareness. Embed cyber awareness and open data and their strategic development in the culture and operations of the City Council. Implement our Open Data Policy aligned with training plan for staff. Continue to engage in knowledge sharing with other local authorities through ISAC's or other mechanisms. Continue to collaborate with internal and external stakeholders Continue to seek innovative ways to better engage with our citizens and encourage real citizen participation in the development of our city

Next steps: 100 Climate Neutral & Smart Cities

100 Climate Neutral and Smart Cities by 2030

Cork is participating in the 100 Climate Neutral and Smart Cities by 2030 Mission.

The ICC has given Cork City Council a solid basis for further innovation around citizen engagement.

Social innovation including new methods of citizen engagement and building citizen participation is a core part of the 100 Climate Neutral and Smart Cities programme. In particular, two ICC projects will be carried forward to support Cork's participation in the 100 Climate Neutral and Smart Cities programme.

- Online placemaking tool. This tool could be used as the basis for further experimentation and testing around engaging communities around new climate interventions (e.g. active travel measures).
- Open data platform and procedures. The open data platform will provide a mechanism for releasing data relating to the 100 Climate Neutral and Smart Cities programme and enabling conversation with citizens around progress and actions.