









Future Proofing Dublin

"New technologies are continuing to have major impacts on economy, society and the workplace and are fundamentally changing many traditional industries, processes and modes of communication. Being aware of and ready to take advantage of new trends in technology is essential.

Delivering a dynamic, sustainable city that is future ready

Future is happening now in our cities and towns!







AN INITIATIVE OF THE **FOUR DUBLIN LOCAL AUTHORITIES** TO ENGAGE WITH TECHNOLOGY PROVIDERS, RESEARCHERS AND CITIZENS TO SOLVE CHALLENGES AND IMPROVE QUALITY OF LIFE.



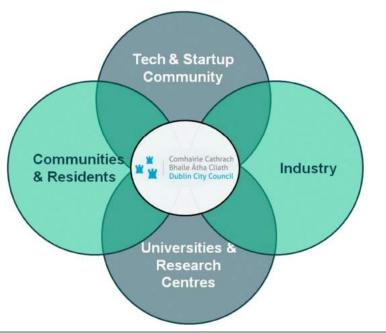


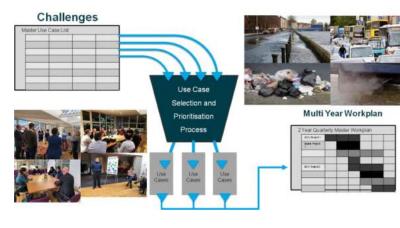






The City as a collaborator - challenge based approach







DUBLIN AS A TESTBED

WE ARE BIG ENOUGH YET SMALL ENOUGH TO BE THE IDEAL LOCATION TO PILOT NEW CITY SERVICES & SOLUTIONS



DUBLIN CITY COUNCIL SMART CITIES

1. CONNECTIVITY PROGRAMME

Helping to build the digital infrastructure to strengthen city connectivity.

2. DATA INSIGHTS PROGRAMME

Delivering test cases to show how data can strengthen Council decision making.

3. EMERGING TECHNOLOGY PROGRAMME

Delivering test cases to show how technology can strengthen Council service delivery.

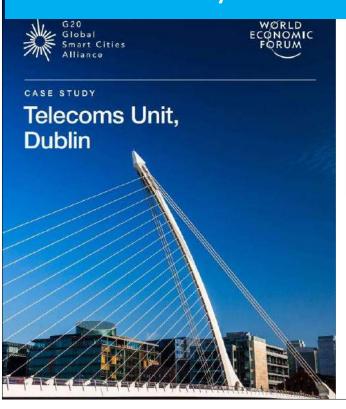
4. ENGAGEMENT PROGRAMME

Building resources, knowledge, networks and partnerships to strengthen Council outreach.

5. PROGRAMME SUSTAINABILITY

To ensure the operations and continuation of the Smart Cities programme.

1. Connectivity





NB-IOT

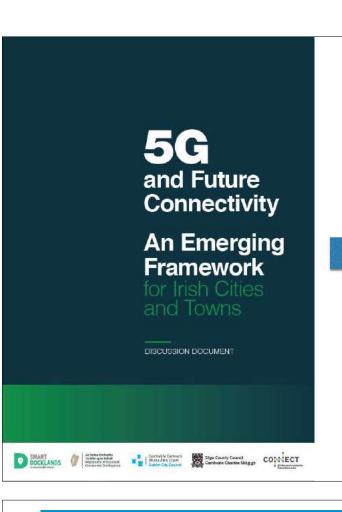
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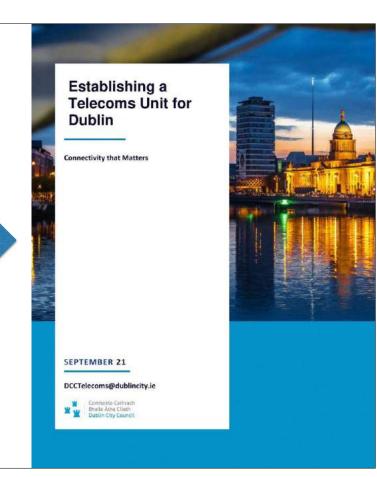
sigfox



1. Connectivity









Residential

<u>Business</u>

Your Council

Gaeilge

Q

content

Home > Business > Economic Development and Enterprise

Telecoms

A "one-stop-shop" for all telecoms-related requests within the Dublin City Council administrative area.

About the Telecoms Unit

An introduction to the Telecoms Unit

Rate Card & Standard Agreements

Information on Rate Card & Standard Agreements

Asset Registry

An interactive Asset Registry that lists Dublin City Council's asset portfolio in the city

https://www.dublincity.ie/business/economic-development-and-enterprise/telecoms





Over 120 Radios will eventually be deployed on 18 University Campus sites across Ireland, all linked into a single private network, enabling enhanced funding and access to Europe's highest quality academic & industry researchers.

This is the first time such a network has been build in Ireland or the EU.

In May 2018 Dense Air Ireland undertook an agreement with Dublin City Council & the CONNECT group of colleges, TCD Maynooth University to build a Small Cell Research network in order to explore improved customer service performance and capability delivered from indoor & outdoor small cell deployments.

Following the success of this 4 year relationship, in March 2022 an MoU was signed with CONNECT to build a Multi Campus National Testbed, fully funded by DAI. In September 2022 Teagasc agreed to join the program

- Original Partners CONNECT: TCD & Maynooth University
- Multi Campus Test Bed Partners: SETSU, TUS, MTU & ATU
- Additional Partners: University of Limerick, UCC,, Teagasc











MTU

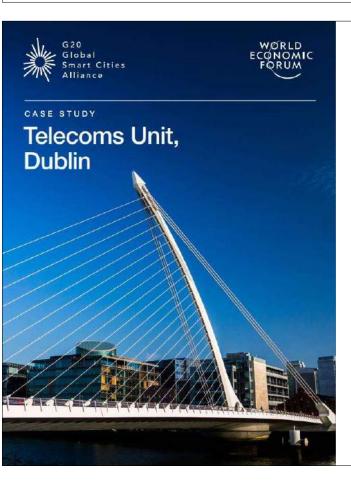


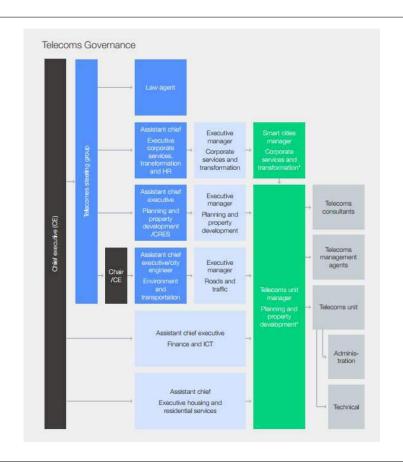
To Date we have deployed in six Teagasc Sites:

- Moorpark Co. Cork
- Kildalton. Kilkenny
- Johnstown Castle Co. Wexford
- Ballyhaise Co. Cavan
- Ashtown Co. Dublin
- Grange Co. Meath

dense air

Dense Air Networks - Private and Confidential







DCC Telecoms Offerings

- 1. Duct Access (in place)
- 2. Rooftop access (in progress)
- 3. Parks access (in progress)
- 4. MDU's for DCC housing (future)
- 5. Public Lighting (future)
- 6. Street Furniture (future)

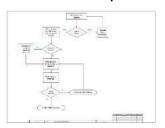
15

Example Telecoms Offerings - Duct

Telecoms Offering Matrix

Product Offering Typ	Available Sizes	Availability	Network Options	Lease Options	Pricing	Roles and Responsibilities Defined	Key Stakeholders Identified	Defined Processes and Procedures	Mayleaves and Licence Agreements	Available Supporting Information	Supporting Information Required to Access the Duct Network	Actively Monitored Chanbers	Standoff Chambers	Management and Support Contact
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Process Maps

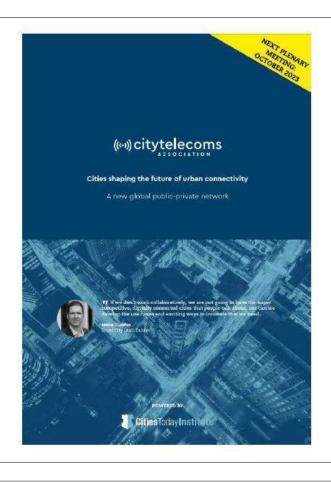


Asset Map



Rate Card

Comhairle Bhaile Átha Dublin City	Cliath DCC Docklands Duct Rate Card				
Product	Description	Unit	Rate		
Sub-Duct Core	Where sufficient capacity exists to install sub-ducts in the network is 32/28 mm sub-duct (inner diameter 28 mm, outer diameter 38 mm) will be installed. Minimum value of €1,700 ex VAT applies (i.e. 500 metres). This is an annually recurring charge.	Per meter per year	€3.40		
Micro-Duct Core	Where restricted capacity exists within the network a 10/14/mm micro-duct finner diameter Jünner, outer diameter 14/mm) will be installed. Minimum value of 62,700 ex VAT applies (i.e. 500 metres). This is an annually recurring charge.	Per meter per year	€3.40		
Connection Charges	One-off fee to include site surveys; drawings; administration; delivery and project management only. Note this does not include the cost of the supply and installation of any materials which will be charged at cost.	Per Order	£1,650.00		
	Ancillary Services	100			
Cable recovery	Cables to be removed at Operators own expense under DCC Management Agent supervision - see 'Supervision' charge below.				
Blockage Clearance	Does not include carriageway reinstatement, out of hours work or traffic management.	Per blockage	To be charged as incurred.		
Blockage Clearance (aborted)	Aborted clearance of a blockage in a duct per aborted clearance. Does not include carriageway reinstatement, out of hours work or traffic management.	Per blockage	To be charged as incurred.		
Removal of locked lids		Per hour	To be charged as incurred.		
Abortive time charge		Per hour, per operative	655.00		
Non-standard civils work	Any non-standard civils works required to deliver a connection. This may include building connections, additional chambers, additional ducting runs etc. A detailed morte will be provided.	TED	To be charged as incurred.		
Supervision	Supervision of works (cable removal, connecting to chambers)	Per Hour	€125		



((~)) citytelecoms

Delivering inclusive development in our communities

Founder Members





































The City Telecoma Association (CTA) is the tirst green or of urban connectivity, Pounder ofly members are commisted to the deployment or of urban connectivity, Pounder ofly members are commisted to the deployment of the deployment and innovation potential. The CTA's mission is to assist public and pill want together to tackle the challenges that are historient paledome deployments but also to constructivities that next generation digital connectivity can deliver for cities.









Cities and telecoms industry seek common ground on digital infrastructure



Cities Today 380 subscribers











Innovative deployment, business models, and use cases were among the topics on the agenda at the City Telecoms Association event which took place in Westminster, London last week.



Alpha Wireless & Bigbelly Join Forces for 5G Deployment

By News Desk - 02/13/2023 < 1 Minute Read

Antenna solutions provider Alpha Wireless has announced a licensing agreement with public waste solutions specialist Bigbelly to offer a turnkey 5G cell site solution with integrated antenna, mast, connectors and enclosure.

The complete site enclosure kit features the Bigbelly Tellybelly waste and recycling platform designed to host and conceal network equipment.



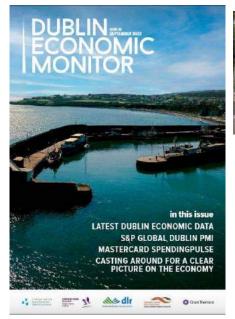
4C and 5C 10 Feb 2023 by SmartCitiesWorld news team



2. Data Insights Programme

- Mastercard Spend
- Big Belly Impact Analysis
- Wifi4EU performance
- · Drones Monitoring
- Google AirView / Hackathon
- Smart Tourism data insights
- Dublin Economic Monitor









Big Belly Bins

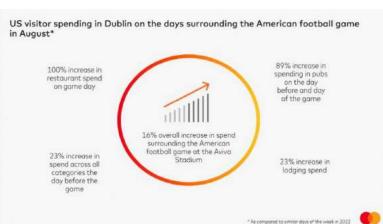
- 104 Big Belly Bins are located in Docklands area.
- For the period of January-October 2023, 8,969 collections were made. So this is a saving 25,000 bin liners versus standard bins in the same period!

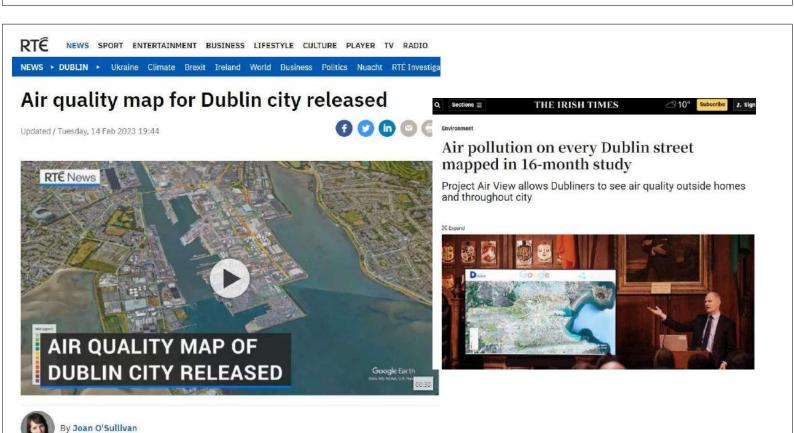


2. Data Insights Programme



Surge in Dublin DECEMBER 8, 2022













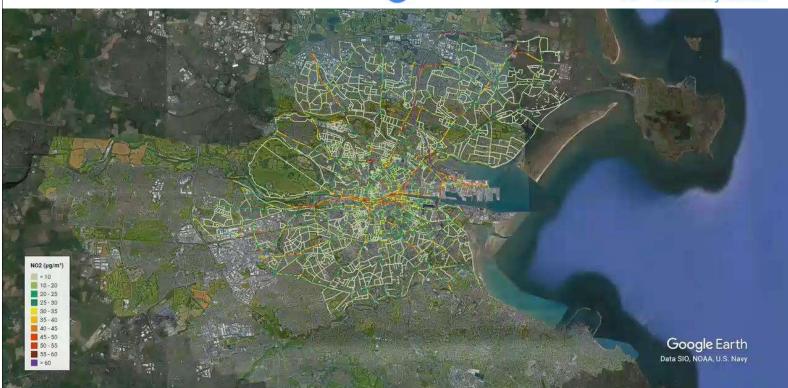
Comhairle Cathrach Bhaile Átha Cliath **Dublin City Council**







Comhairle Cathrach Bhaile Átha Cliath **Dublin City Council**







Public Sector Digital Transformation Awards

Data Innovation of the Year - Sponsored by



Project Airview 1st











Excellence in Local Government Awards

Sustainable Environment and Biodiversity - Sponsored by



Project Airview







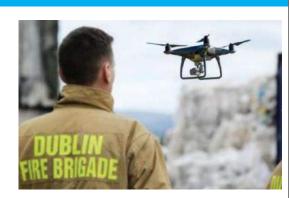


3. Emerging Technology Programme

- DCC Drones Strategy
- Digital Twin Programme
- Ring Buoys
- Gully Monitoring
- Smart Mobility Hub
- Kerbside Management
- Last Mile Deliveries
- AR and Tourism









Accelerating the Potential of Drones for Local Government 2021-2022

Mission:

 Explore drone potential to improve the way local government deliver services, increasing efficiencies, public engagement, digitalisation, data driven decisions

Vision:

 Accelerate the potential of drones for local government and position Ireland as pioneer worldwide

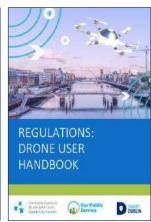
Goals:

- Ensure Compliance, H&S, Trust
- Prepare for future (roles, responsibilities, infrastructure, challenges)
- Take advantage and explore drone innovation potential









DCC Drones Strategy in Development (Q1 2024)

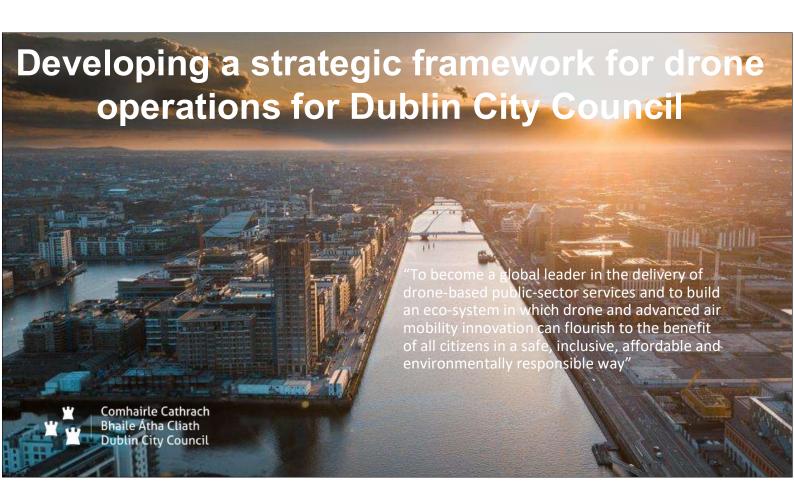
"To become a global leader in the delivery of dronebased public-sector services and to build an eco-system in which drone and advanced air mobility innovation can flourish to the benefit of all citizens in a safe, inclusive, affordable and environmentally responsible way"













Developing a strategic framework for drone operations for Dublin City Council

- Assessing DCC drone use now and in the future
- Review of the Irish drones market and service offerings
- Benchmarking study on DCC drone services (compared with other European Union urban drone services)
- A clear and comprehensive set of recommendations and roadmap for the Council to progress towards full deployment.





SMART MOBILITY HUB



SEEKING SMART, LOW COST SOLUTION ...

CHALLENGE: WORKPLACE



PUSHBIKES



ABILITY TO REPLICATE IN OTHER LOCATIONS

APPLY HERE: WWW.SMARTDUBLIN.IE

€200,000 IN FUNDING AVAILABLE









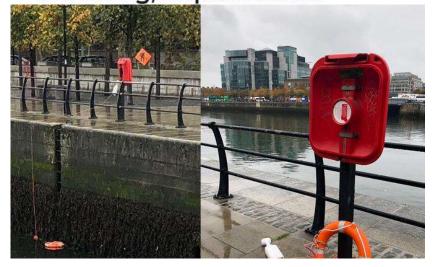






SOLVING CHALLENGES LOCALLY & SCALING

Missing lifebuoy hampered efforts to save actor from drowning, inquest hears



Buoy toys: vandalism of safety floats rings up €50,000 cost

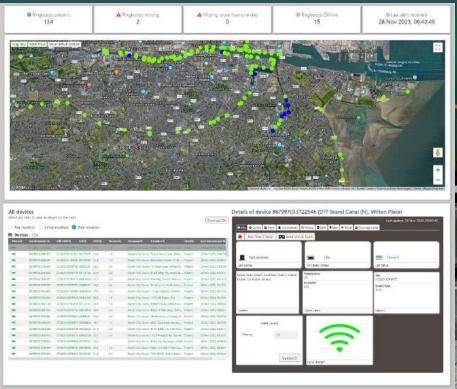
Dublin floats idea of tracker chip deterrent as young men on stag dos are blamed for theft and destruction of safety kit



Local authorities across the country are spending more than €50,000 a year to replace an estimated 1,500 lifebuoys that are stolen or vandalised.

Dublin city council had to replace 500 lifebuoys in 2018 at a cost of €20,000. As the council is in charge of more than 140 lifebuoy locations, it is the equivalent

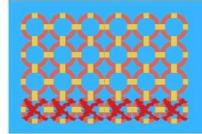
Ring Buoys Dashboard





SMART RING BUOYS PROJECT





100s of Ring Buoys go missing each year across Ireland



640+ Sensors



€145,000 Funding 110
DROWNINGS
PER YEAR



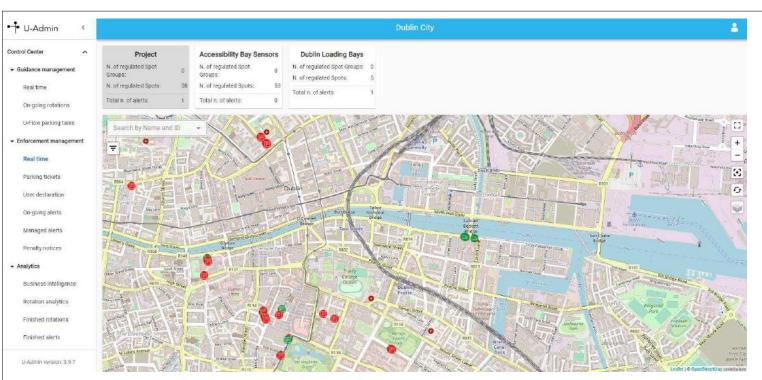
Smart Accessibility Parking Project

The Smart Accessible Parking Project intends to leverage state-of-the-art sensors and user-centric mobile apps to transform the parking experience for individuals with accessibility issues.

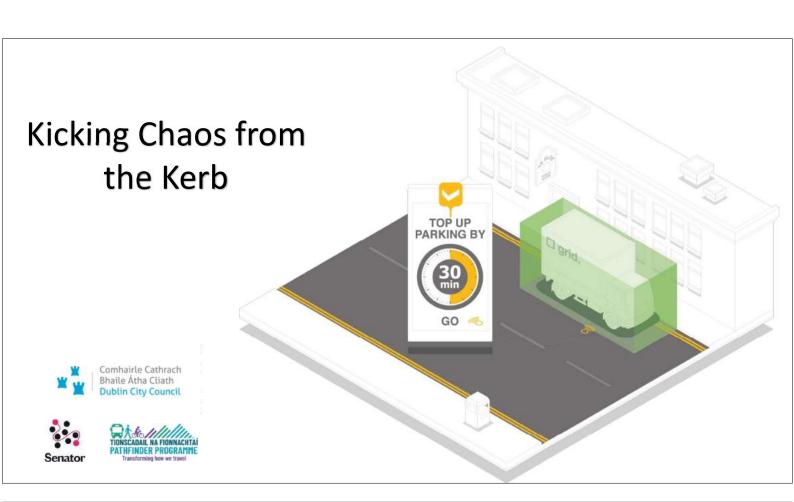








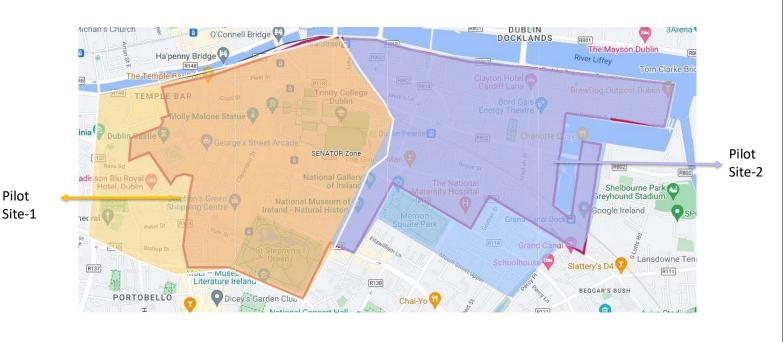
Accessibility Bay Sensors and Loading Bay Sensors



Defining the Pilot Areas







Surveying the areas

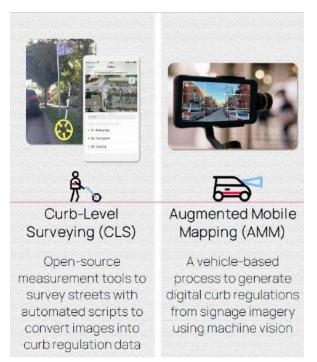








LiDAR Data Collection



The Kerbside Insights







Location: Temple Bar Street/Dame Street Area Covered: ~1.25 sq. Km

Roads Covered: 30+ Km

Data Points: ~2000 data points

20+ Unique Data Sets

Street Name	Restriction Type	No. of Bays	Operating Hours
Townsend Street	Paid Bay	5	PB Standard days: Mon-Sat 07:00-19:00 Max Stay: 3h
Townsend Street	Loading Bay	2	LB Standard days: Mon-Sat 10:00-12:30
Townsend Street	Double Yellow Line		DYL Standard days: 00:00-00:00

Street	Restriction	Operating Hours	Exceptions	Extent
Merrion Square North	Cycle lane	At all times		1129.9 feet / 344.4 metres
Merrion Square North	Bus lane	All year, Mon-Sat, 07:00-10:00	Cyclists	827.7 feet / 252.3 metres

Location: South Docklands

Area Covered: ~1.06 sq. Km

Data Points: ~2000 data points

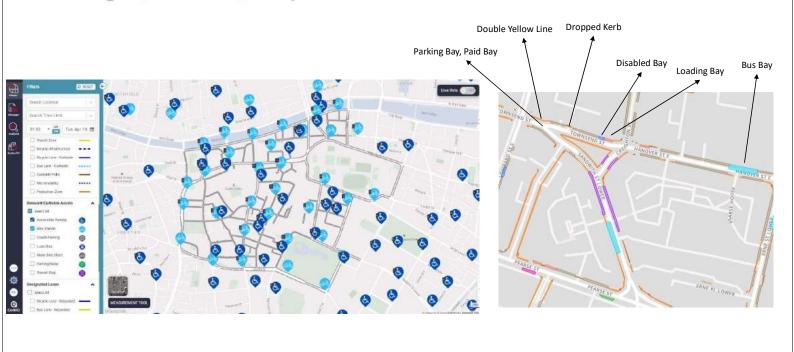
Roads Covered: 30+ Km





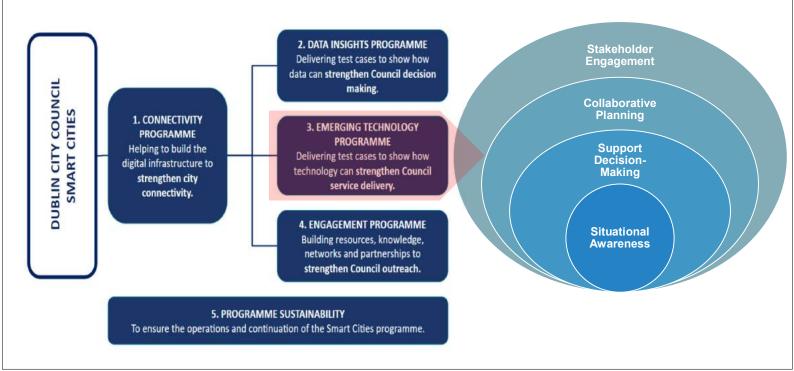


The Digital Kerbside Maps









DCC's Approach towards Digital Twins

Proof of Concept

Trial and Test LDT use-cases -Ethical and Governance Framework for design and deployment phases + Evaluate



Comhairle Cathrach Bhaile Átha Cliath













Capacity Building

Build a Collaborative Ecosystem -DT Interest Group @ DCC -Local Stakeholder Groups









New Opportunities

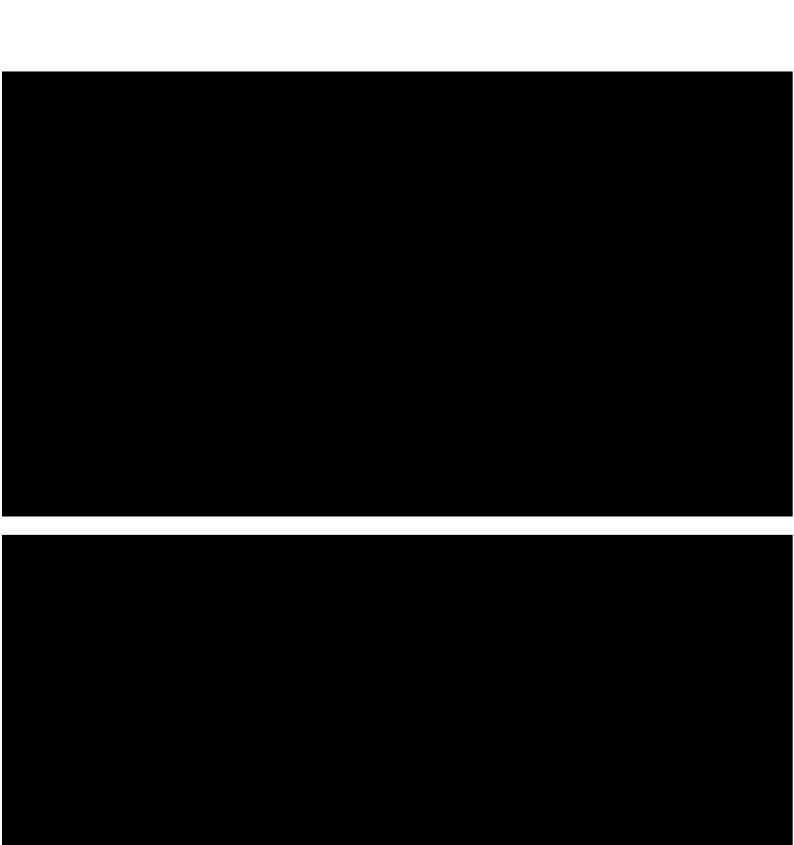
Future partnerships - EU funding calls and work with private enterprises -EuroCC's DIF call







Partnership for



Active Travel Data Innovation?





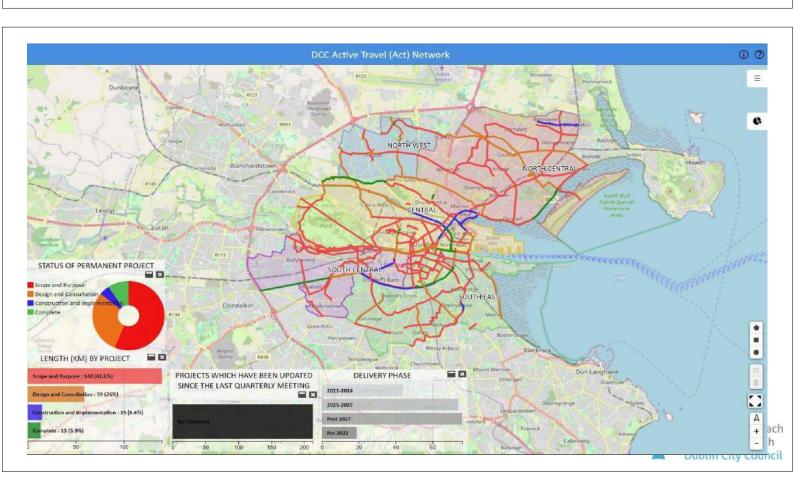
Over the next 8 years, the #ActiveTravelNetwork will grow from 10km to a connected network of 310km across the city.



Targets

2028 - 25% Active Travel Journeys Current Share is 12%

Aim - 95% of people within 400m of 310km network





EUROPEAN CAPITAL OF SMART TOURISM

OUR JOURNEY TO THE HEART OF DUBLIN

2019: Dublin Launches

Smart Tourism Programme



2022: Dublin Establishes Dedicated Tourism Unit for Responsible Tourism



2020: Dublin Hires First Full Time Smart Tourism Manager



2023: Dublin Publishes Sustainable Tourism Strategy 2023-2028



2021: Dublin Shortlisted for European Capital of Smart Tourism 2022!



2024: Dublin Hosts European Capital of Smart Tourism?



Dublin City Tourism Unit-Team



Head of Tourism Unit (Barry Rogers)



Tourism Innovation Manager (Nollaig Fahy)



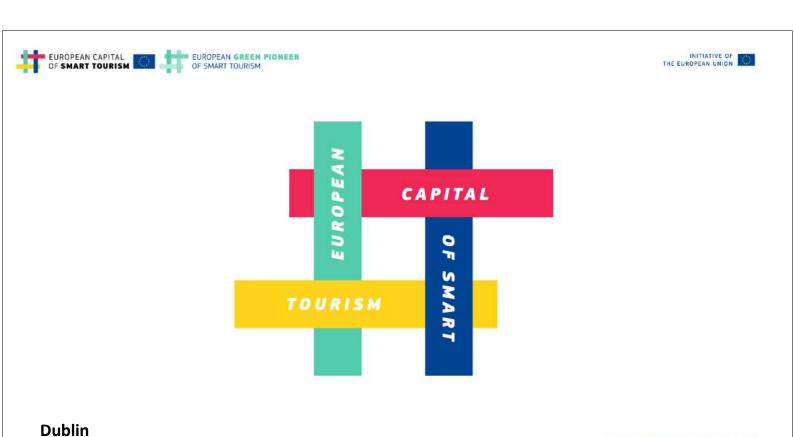
Tourism Strategy Manager (Dr. Mariia Perelygina)



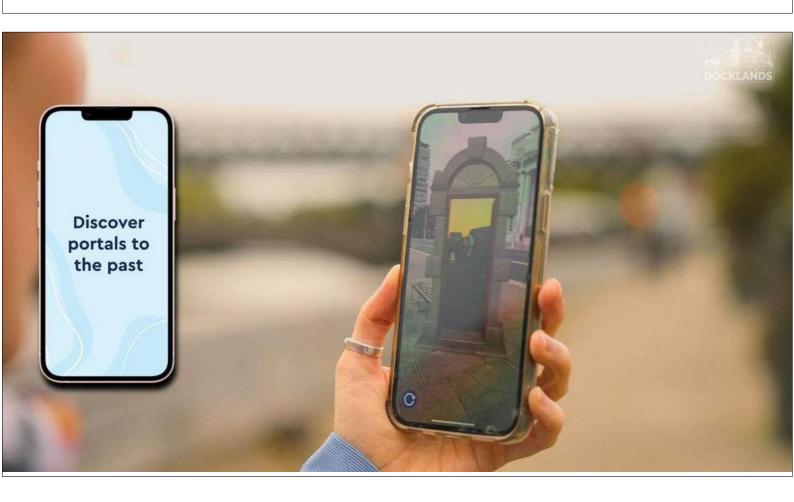
Tourism Data Manager (Manna Thomas)







Ireland





European Cultural Tourism Awards

Digitisation advances and digital transition in Sustainable Cultural Tourism

Dublin Discovery Trails 2nd

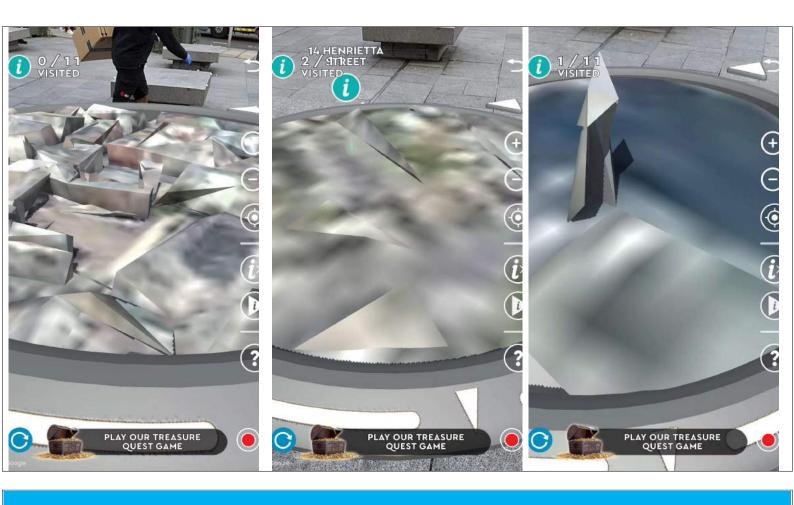












4. Engagement Programme

- Smart Districts Approach fundamental
- Academy of the Near Future
- UN Digital Rights / Public Sector Duty









A smart city tech programme for upskillers and students



NearFuture.ie



Meet the Team



Darach Mac Donncha
Programme Manager



Engagement Programme Manager

Grace D'Arcy

Academy of the Near Future



Clara Butz

Engagement Programme Lead

Academy of the Near Future



Karolina Anielska

Project and Engagement Manager

Community Engagement



Claudia Bailey

Technology and Engagement Manager

Local Authority Engagement



Shaping the Future of Cities

"Smart Docklands is a unique partnership between Dublin City Council and the SFI Connect Centre for Future Networks and Connectivity based in Trinity College Dublin to future proof Dublin. Supporting the acceleration and adoption of new and emerging technologies for Cities"

Smart Docklands was the first of Dublin's 'smart districts'" which has now expanded to 5 districts.







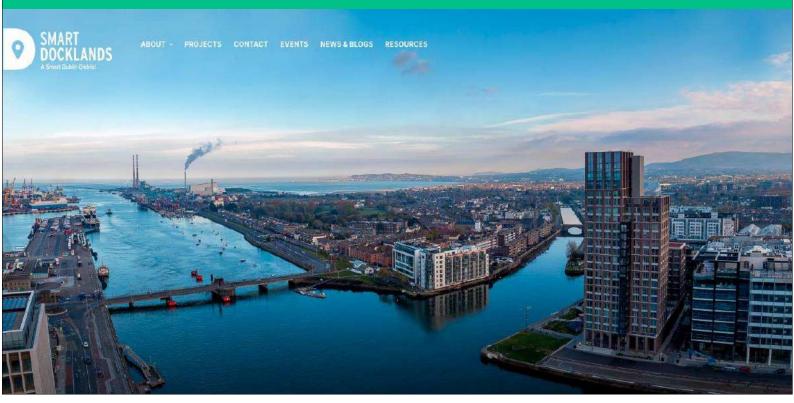
Smart City Technology

Experimenting with new connectivity for city services











Commonplace



Smart Docklands

Do you live in, work in or visit the **Dublin's Docklands**?

We would like to get your feedback on your experience in the Docklands area. What do you like about the area and what are the issues or challenges you face?

Click here to <u>answer our survey</u> or drop a pin on our <u>interactive</u> map!

e.g. sam@smith.com

Keep me updated

Your email will be used to contact you about project updates. You can unsubscribe at any point. Please read our <u>privacy policy</u>.





Engagement Programme

ACADEMY 器NEAR FUTURE

Building awareness & empowering young people & local authority staff to tackle 21st-century city challenges





Comhairle Cathrach Bhaile Átha Cliath Dublin City Council











70% DEIS schools



air pollution and traffic o)))) sensors set up in DCC schools



Over 1500 students

action projects on Active Travel



2 week-long programmes 14+ collaborators 8 student projects

21 staff in Digital Rights module 3 staff modules in development





Seoul Smart City Awards Human-CentriCity

Academy of the Near Future Silver















'Design Your Future City' is a 5 day programme for Transition Year students in February 2024, exploring science, technology, art and design.

Students are introduced to **smart city technologies** and facilitated through a **design thinking** process to develop, refine and **showcase their smart solution to a local challenge!**

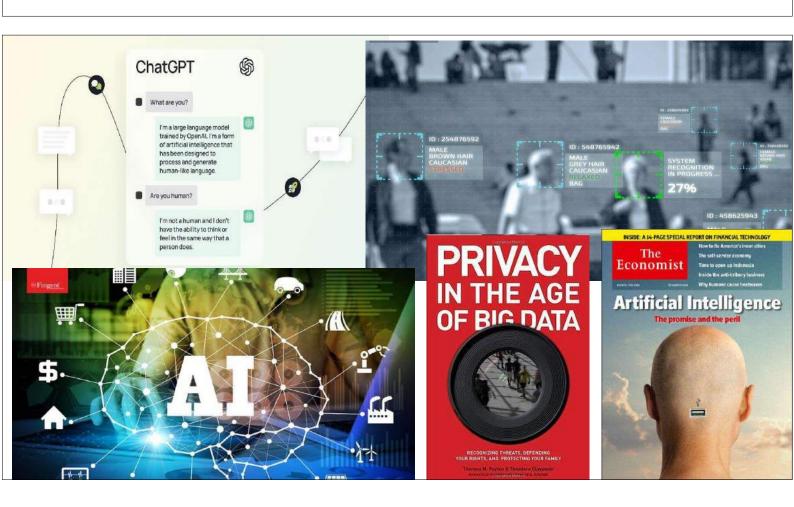


Academy of the Near Future and the Cellnex Foundation launch partnership to upskill students on smart technologies and digital connectivity. A €345,000 co-investment initiative

- April 2023, Dublin, Ireland: Academy of the Near Future, which is an award-winning Smart Cities Education Programme designed for young people and Local Authority staff, has partnered with the Cellnex Foundation for 3 years to develop young people's understandings of smart technologies and digital connectivity in primary schools across Dublin and nationwide. The programme builds awareness of new trends in telecommunications and digital connectivity as well as supporting future careers in STEM.
- Cellnex Ireland is Ireland's largest, independent telecoms infrastructure provider. The Cellnex Foundation is a Cellnex Group initiative which aims to use technology to bring people together through improved connectivity, particularly those at risk of exclusion.







ACADEMY #ENEAR FUTURE

Module 2: Privacy and Ethics & Digital Rights

What are the privacy and ethical implications of deploying technology solutions in Dublin?

- Impacted stakeholder groups
- Intended & unintended consequences

Connection between digital rights and the Irish Public Sector Duty



Delivery robots in Dublin



2023: Delivered pilot module on Digital and the Public Sector Duty in

March 2023: Delivered pilot module on Digital Rights and the Public Sector Duty in collaboration with UN-Habitat and the Cities Coalition for Digital Rights

ACADEMY ENEAR FUTURE

Digital Rights









Human rights in the digital era

Learnings on local governance from pilots in Europe







Dublin is a Leading City with the Cities Coalition for Digital Rights! We are developing learning content with our partner city Vienna mainstream digital rights in the public sector.

We represented Dublin on a panel at the Smart City Expo World Congress in Barcelona!

We shared our key learnings from being a part of the Digital Rights Governance Pilot project – where we developed 3 workshops for young people, local authorities, and community members about digital rights.



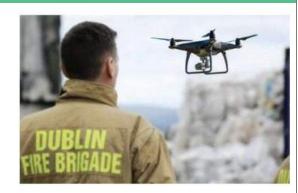


Call for pilots - 2024!





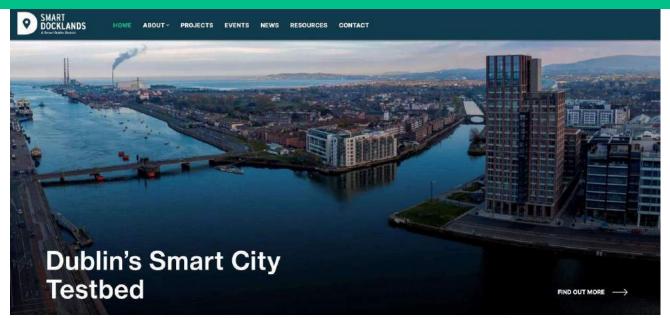








Feb 2024 Call For Pilots



"We are big enough yet small enough to be an ideal location to pilot new city services & solutions." "...Smart City ecosystem creating an example for the world and being happy to document and share it..."









Comhairle Cathrach Bhaile Átha Cliath Dublin City Council





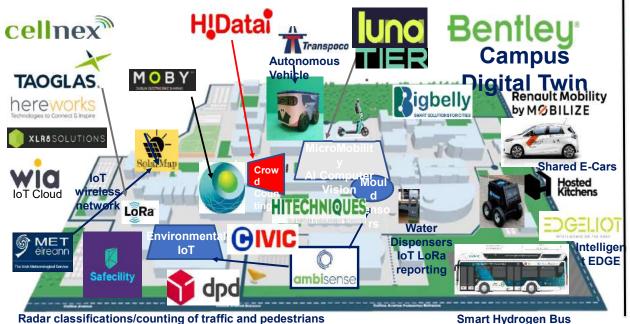




A Smart City Ecosystem

"...The World's Smartest Sandbox in the Heart of Dublin..." Bentley Systems

DCU is a "Living Lab" with a myriad of smart technologies from strategic partners bringing these technologies together under one roof for a 'Smarter' way of life.



- Air Quality Sensors
- Intelligent Waste Management
- Real Time Campus
 Occupancy
- √ Car Traffic Control
- ✓ Indoor 3D Mapping
- Smart 5G University
- √ Foot fall Tracking
- E-Bike MobilityTracking
- ✓ IoT Emergency Lighting Sensors



Going Digital Awards In Infrastructure

Founders' Honours - Facilities, Campuses & Cities

Smart DCU

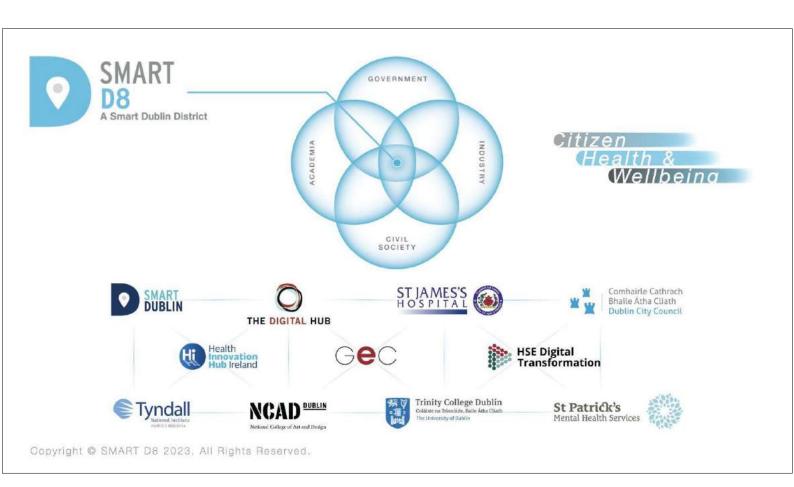
















Smart D8: Selected Pilots 2023

Menopause and The City | Brace MoveAhead | OSA Identifier App

















World Smart City Awards

Innovation Award

Smart D8 Finalist































Docklands Business Forum Awards

Docklands Community Award - Sponsored by Smart Ring Buoys



Tourism Award - Sponsored by

Dublin Discovery Trails

Smart Docklands Award - Sponsored by **Project Airview**













