

Belfast

Putting our citizens
at the heart of
Urban Innovation





Our ambition

Belfast is a city of creators and inventors. Innovation is in our DNA. Down the generations we have demonstrated a resilience and an ingenuity firmly grounded in grass-roots entrepreneurship.

We are home to a vibrant and engaged community of businesses, researchers, corporations, SMEs, start-ups and incubators. Together, supported by a determined city leadership, we are collaborating on shared global challenges such as healthy urban living, mobility and sustainable energy.

Our collaborative approach draws from a deep well of research excellence and strong digital economy clusters in areas such as fintech, cyber security, bioscience and artificial intelligence. We have exciting emerging clusters in life and health sciences focusing on data-driven and connected technologies that will transform the health of our citizens.

Smart Belfast is a statement of our collective intent to harness knowledge, assets and investments to drive a transformative once-in-a-lifetime innovation and inclusive economic growth programme. This ambition will be greatly accelerated by a forthcoming £1 billion Belfast Region City Deal investment in research excellence, digital connectivity, skills and economic and regeneration initiatives.



Key strengths

Belfast's knowledge economy sector is the engine of our ambition. Our fintech, cybersecurity, software and IT sectors are amongst the fastest growing in the UK.

Across the region over 40,000 people are employed in the knowledge economy sector with 7,000 employed in research and development.

Data science is an important sub-sector, with companies building strengths in AI technologies. Between them, our two universities are home to six major clusters of AI research excellence including hardware, core data science, medicine and robotics.

Our region's life and health sciences sector generates more than £800 million in sales each year. Our universities are among the UK's top ten locations for bioscience research.

By 2030, Belfast's knowledge economy sector has the potential to deliver an additional £3 billion of GVA and generate 80,000 new jobs.



#1 international investment location for **USA cybersecurity development** projects



#1 global destination for **financial technology investment**



#1 European city for new **medical software development**



One of the **fastest growing creative industry** clusters in the UK



2nd fastest growing **knowledge economy** in the UK



Our foundations for digital innovation

Belfast Digital Innovation Partnership

A city leadership group established by Belfast City Council, Queen's University Belfast, Ulster University, Belfast Harbour and Catalyst, with a collective ambition to weave digital innovation into all aspects of our economy, our infrastructure and urban and healthcare services for the collective benefit of our citizens.

It is an action-orientated group focused on decision-making and delivery. Belfast's first **Digital Innovation Commissioner** works with the group to drive this ambition globally.

The Belfast Innovation Challenge Fund

An initial £60 million fund aimed at industry and researchers to help generate innovative solutions to major urban challenges in areas such as health, mobility and decarbonisation. It will encourage new forms of collaboration between industry, academia, government and wider society.

Centres of Research Excellence

Queen's University Belfast and Ulster University are establishing new centres of research excellence that build on their existing strengths and offer a unique resource to drive economic recovery and urban transformation. These centres are in the heart of Smart Belfast:

- **The Global Innovation Institute:**
Offering co-innovation between research and industry, harnessing AI and big data research expertise to deliver a One Health agenda.
- **Centre for Digital Healthcare Technology:**
A world-class space for researchers, industry and clinicians to innovate in Life and Health Sciences solutions including connected health and tele-medicine technologies.
- **Institute of Research Excellence for Advanced Clinical Healthcare (iREACH):**
A unique ecosystem driven by researchers, industry, the NHS and government to test new drugs and support their integration into health care pathways.
- **Screen and Media Innovation Lab:**
Seeking to exploit and embed bleeding edge technologies in the creative industries.
- **Advanced Manufacturing Innovation Centre:** Supporting industry to adopt rapidly maturing, disruptive technologies such as AI, robotics and next generation wireless networks.

Digital fabric

Industry has committed to making Belfast one of the first UK cities to offer 5G services. The city is enhancing this with additional investments in gigabyte fibre and next generation wireless. Enhanced connectivity will include:

- 10 Gbps fast fibre, additional LTE and WiFi coverage
- Internet of Things networks for urban services
- 5G network densification to support Industry 4.0
- A unique urban data platform for infrastructure and data sharing.

Digital Innovation Office

Providing technical expertise to the partnership, industry, researchers, start-ups and communities to support the design and initiation of programmes. It offers:

- An 'Urban Sandbox' to lower infrastructure, regulatory and other barriers to innovation.
- A Belfast Data Trust for ethical data sharing, analytics and routes to commercialisation.
- Ready access to connectivity, research excellence, innovators, SME networks and industry.
- A vehicle for joint financing and investment.

Smart District

We have strategically selected three initial locations that offer particularly rich environments for our innovation community to collaborate on research; for businesses to form and scale; for investments to flourish; and for next generation urban services to emerge.

Collectively, these locations represent a global showcase of our wider city ambition.



The Innovation District

Built on the foundations of Belfast's engineering excellence, resiliency and creativity, the Innovation District will be a flourishing world-class hub for research, innovation and entrepreneurialism.

The district forms a sweeping arc from Ulster University's new £250 million purpose-built campus, running through City Quays and the Odyssey pavilion, and north along Titanic Quarter to the Catalyst Campus where Queen's University's proposed Global Innovation Institute will be located.

It covers almost 400 acres of the city, with the capacity to create homes for 10,000 people, employment space for over 30,000 jobs and educational space for 25,000 academics and students.

This will be a community for creative innovation where entrepreneurs, innovators, start-ups, researchers and large enterprises collide in a rich, mixed use, digitally connected waterfront environment.



The Smart Core

Belfast's city centre is undergoing a generational transformation as partners look to create an integrated cultural, retail and living environment for the coming decade. Major new investments are planned by both the private and public sectors to meet this ambition. The successful emergence of a transformed city centre is a key priority in the city's recovery.

We have plans to greatly increase the area's residential population, grow new businesses and deliver new forms of urban services.

As the world's urban population grows, the demand for advanced urban services has created a rapidly expanding market, worth an estimated £2.5 trillion by 2025.

The Smart District is an unique opportunity for companies to design and deliver innovative urban services in a supportive real-world environment; one that offers an 'urban sandbox' that reduces the complex barriers to in situ innovation.



The Smart Port

Belfast Harbour is the second largest port on the island of Ireland, handling 70% of Northern Ireland's trade and 20% of that of the entire island of Ireland.

The 2,000 acre Harbour Estate is the largest in the UK and is a key economic hub for the region. It is home to 760 businesses across a vibrant sectoral mix including a number of leading tourist attractions and the largest film studios in the UK, outside of Pinewood Studios.

With substantial investments in infrastructure and digital technologies, Belfast Harbour aims to become a Smart Port and Green Port, as well as the world's best regional port.

Key Investments

Innovation District

1) Global Innovation Institute

A £54m AI hub drawing together the leading-edge skills of three research institutes: The Institute of Electronics, Communications and Information Technology, The Institute of Health Sciences and The Institute of Global Food Security.

2) Catalyst

A 25-acre site providing 300,000 sq ft (with plans to increase to 1 million sq ft) of agile workspace for 3,000 people and 130 companies including Microsoft, IBM, SAP, Philips and Citi Group. Catalyst is a community of like-minded innovators in an entrepreneurial ecosystem, helping to drive the knowledge economy.

3) Titanic Film Studios

One of Europe's largest film studios, attracting producers such as HBO and Universal. Main studio and post-production facility for HBO's fantasy series, Game of Thrones.

4) Titanic Belfast

The world's largest Titanic visitor experience, attracting over six million visitors since it opened in 2012.

5) Belfast Metropolitan College

One of the largest colleges in the UK, providing further and higher education for 40,000 students, with qualifications in areas such as cybersecurity, immersive technology, visual effects and computer games development.

6) Olympic House (P)

150,000ft² of Grade A office space offering a quality, efficient and sustainable working environment.

7) W5's Digital Skills Academy (P)

Microsoft is investing £1 million in a new academy, creating a DreamSpace digital skills experience for school-age young people.

8) Advanced Manufacturing Innovation Centre (P)

The £86m AMIC will work with industry to develop new manufacturing technologies, including design work at the Advanced Composites and Engineering Centre in Belfast.

9) Belfast Waterside (P)

A £450 million development on 16 acres of prime riverfront land, providing places to live, play, work and stay. It will feature BEON, a space dedicated to training and generating talent, a place where ideas can be tested, developed and shaped.

10) City Quays

A £275 million, eight hectare, office-led waterfront regeneration project located on former docklands.

11) Belfast Harbour Commissioners

Headquarters of Belfast Harbour since 1847.

12) Ulster University campus

£250m investment in Ulster University's new Belfast campus, delivering a world-class facility to 15,000 students and staff.

13) Centre for Digital Health Technologies (P)

A £45m Ulster University centre for digital healthcare and associated living labs in the areas of cardiology, diabetes, respiratory and stroke.

14) The Sixth

A £80m mixed-use scheme with 30,000m² of commercial space, including state-of-the-art workspace and active ground floor uses such as cafés, restaurants and retail.

15) Screen and Media Innovation Lab (P)

A £40m world-leading research and innovation centre to accelerate the creative industries sector in Belfast, already one of the fastest growing creative clusters in the UK and home to over 1,600 companies employing 20,000 people.

Smart Core

16) Belfast Destination Hub (P)

A signature cultural visitor destination in the heart of the city featuring: the Belfast Story contemporary visitor experience; the Belfast Film Centre; creative and digital skills spaces; inspirational architecture and civic spaces.

17) Tribeca Belfast (P)

A prime 12-acre city centre regeneration scheme, investing £500m to deliver 1.5 million sq ft of residential, office, retail, hospitality and cultural space.

18) Belfast Streets Ahead

A major public realm improvement scheme, including surfacing, lighting, landscaping, street furniture and public art.

19) Inner North West

A 42 acre city centre site incorporating residential, commercial, retail and leisure, together offering a sustainable and integrated urban living environment.

20) BT Ireland Innovation Centre

A £28m R&D centre with Ulster University, focused on advanced research in IoT, AI, 5G and data analytics.

21) Ulster Bank Accelerator Hub

Based at Ulster Bank's iconic Belfast headquarters, the hub is home to Entrepreneur Accelerator companies.

22) Ormeau Baths

Originally a Victorian bathhouse, now an award-winning co-working space for some of our brightest and best tech start-ups. Supported by over 20 global partners and home to Ignite NI, Energia and Digital Catapult NI.

23) Catalyst Belfast Fintech Hub

A partnership with Danske Bank and Catalyst, this co-working space is dedicated to our early stage tech companies that have ambitions to scale in the global finance space.

24) Weaver's Cross (P)

A £380m transport led regeneration project which will link a new high capacity transport hub with mixed-use development opportunities.

25) I-REACH (P)

£49m state-of-the-art, integrated clinical research facility, leading large scale clinical trials, supported by real-world, real-time data.

26) King's Hall Health and Wellbeing Park (P)

A £100m project to create one of the UK's most innovative health and wellbeing hubs, aiming to transform the provision of integrated healthcare.

Belfast

Dublin

London

The Belfast Dublin corridor
Looking beyond the city, the corridor with a population of over three million can become an internationally significant hub for digital innovation, research and trade.

Smart Port

27) Belfast Harbour

As part of a £245m investment, Belfast Harbour aims to become a Smart Port.

This includes:

Port Community Platform -

providing information to increase the efficiency of freight movements and transactions.

Mobility solutions - empowering personnel in the field with access to information.

IoT solutions - improving asset management through sensors and information reporting

Digital Twin - a complete digital representation of the Harbour and its assets.

(P) = Planned development

Innovation District

Smart Core

Smart Port

The Opportunities

As the city responds to the challenges and opportunities of the post-Covid period, we believe the Smart District is well-placed to be an innovation multiplier for the digital transformation of our city.

Accelerate our digital economy cluster

The Innovation District is already part of the success story that has made Belfast the number one centre for global FinTech investments. Building on this success and our research excellence in cyber security, coupled with our world-leading AI research, we now are ready to become a world class digital economy cluster.

Global health care cluster

Drawing from the research excellence of our universities and utilising the investments in the Global Innovation Institute, the Centre for Digital Health Care Technologies and i-REACH, we aim to make Belfast a global centre for AI-enabled healthcare technologies.

Industry, government and our universities will work together to foster a dense cluster of 500 life and health sciences companies employing over 20,000 people.

Reimagining our high street

Major retail, residential and public space investments are planned for the city centre over the coming decade. As online retail transactions continue to grow, the Smart District will provide access to technological innovations to support retailers, businesses and city planners, to successfully navigate to a new form of high street.

Healthy urban living

We aim to grow the residential population of our city centre with major investments in student housing and multi-generational homes. As the city balances sustainable densification with post-Covid social distancing challenges, we have the opportunity to work with planners, investors and our life and healthcare innovators to rethink the design of our urban neighbourhoods.

Reskilling for the AI economy

Working with communities, our universities, colleges, schools and industry to deliver programmes to prepare our citizens for the challenges and opportunities of an AI economy. The recovery, including the leap to remote-learning, presents an opportunity to rethink how we design and deliver vehicles for education and training.

AI is expected to impact on 70,000 jobs across the region. The District, home to Belfast Met - the regional college for digital skills and W5's new DreamSpace - offers an opportunity to work hand in glove with partners to design, test and deliver courses that ensure growth is felt across communities.

Gateway to Europe and beyond

With the UK exiting the European Union, a successful Belfast Port is a critical element of the Belfast and regional economy. With substantial investments in infrastructure

and digital technologies, Belfast Harbour aims to become a Smart Port and Green Port, as well as the world's best regional port.

Energy transition

Northern Ireland has enviable levels of installed renewable energy generation, particularly from wind and we have potential for much more. Our challenge is transmission, storage and better energy management. We have the opportunity in the district to test and scale new technologies, including district scale hydrogen networks. And to work with transport agencies, water management bodies, industry and planners to bake-in renewables for a sustainable Belfast.

Active Belfast

Our city remains overly dependent on the private car, particularly for the work commute. The whole district, from City Hall and along the shores of the maritime mile to Titanic Quarter, is ready to make the transition to active modes of travel; last mile delivery solutions; and to prepare for the large scale usage of EV.

Digitally-enabled urban mobility solutions can support the city in this transition – whilst also offering opportunities for new businesses to develop services in a smart mobility market valued at £20 billion globally by 2024.

Belfast Destination Hub

We are developing a new contemporary visitor experience to complement the global success of Titanic Belfast. We have the opportunity to ignite collaboration between state-of-the-art experience designers, the Screen and Media Lab, the NI film and screen industry and the city's cultural sector

to explore how we can tell our stories in new and innovative ways. Contemporary cultural tourism expectations requires us to think deeply about how digital innovation can help us tell the story of Belfast to the world and improve the attractiveness and liveability of the city as a leading destination.

Energising Belfast

If you want to hear more or invest in Belfast's digital innovation ambition, we would like to talk to you.



smartbelfast@belfastcity.gov.uk



www.smartbelfast.city



#smartbelfast

One of the major sources of funding for the Belfast Digital Innovation ambition is the Belfast Region City Deal which aims to secure a transformational change in the city region's economy.

Read more: www.belfastcity.gov.uk/belfastregioncitydeal



**Belfast
City Council**

**Belfast
Harbour**



**QUEEN'S
UNIVERSITY
BELFAST**



Catalyst
Fuelling
Opportunity