



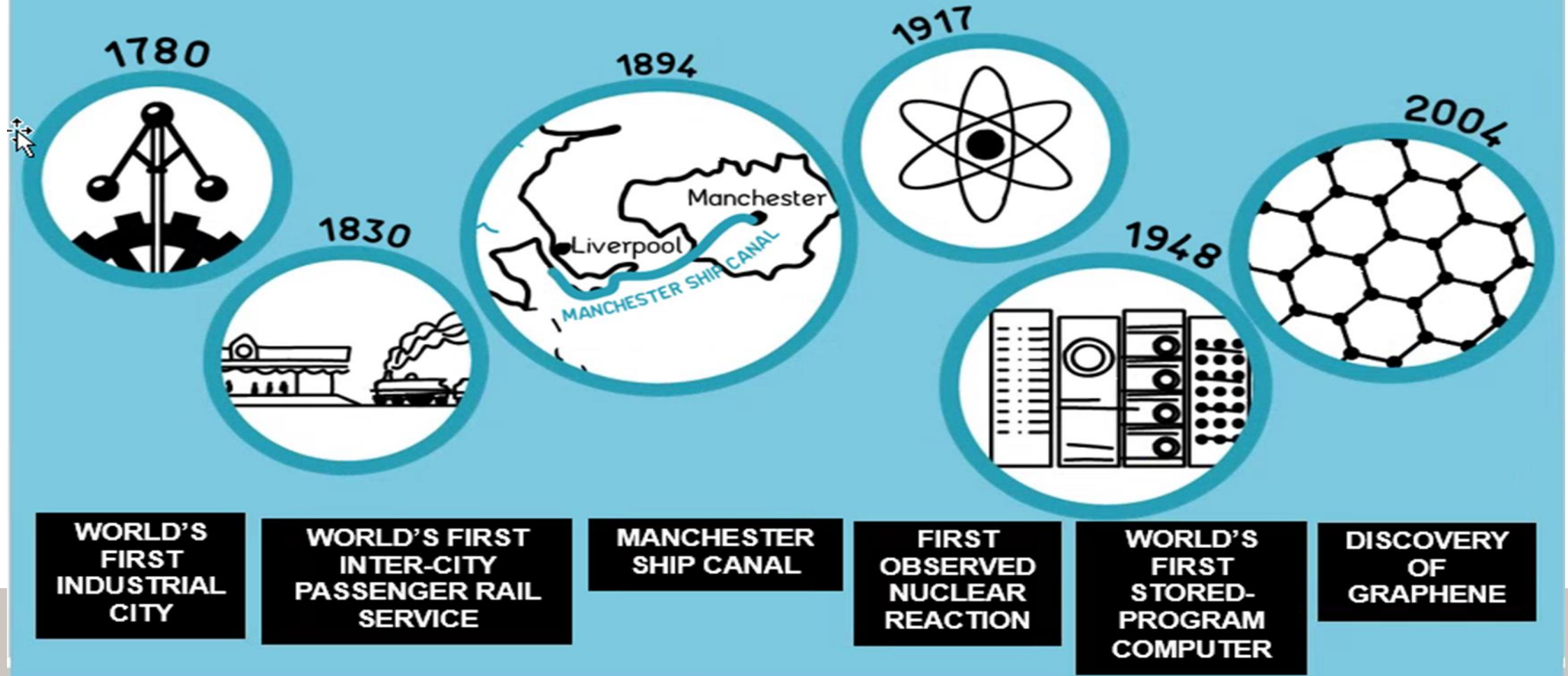
MANCHESTER  
CITY COUNCIL

# Smart City Manchester

**Adrian Slatcher, Principal Resource & Programmes Officer  
Policy, Partnerships and Research,  
Manchester City Council**

# Manchester Context

## A city of pioneering innovation



# Greater Manchester Context



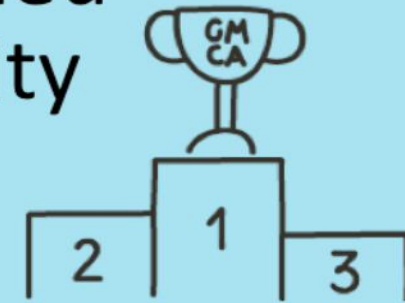
**2.7** million  
RESIDENTS

**10**

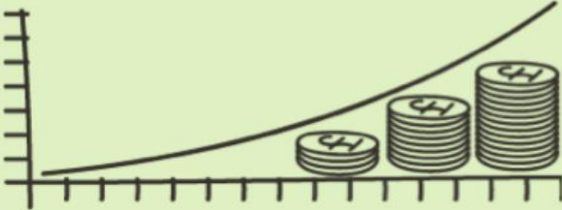
authorities  
working  
together



UK's first  
combined  
authority



## GREATER MANCHESTER



Economic potential  
**exceeds** all other  
UK city regions



Heart  
of the  
north



Centre of innovation,  
education, industry  
and culture



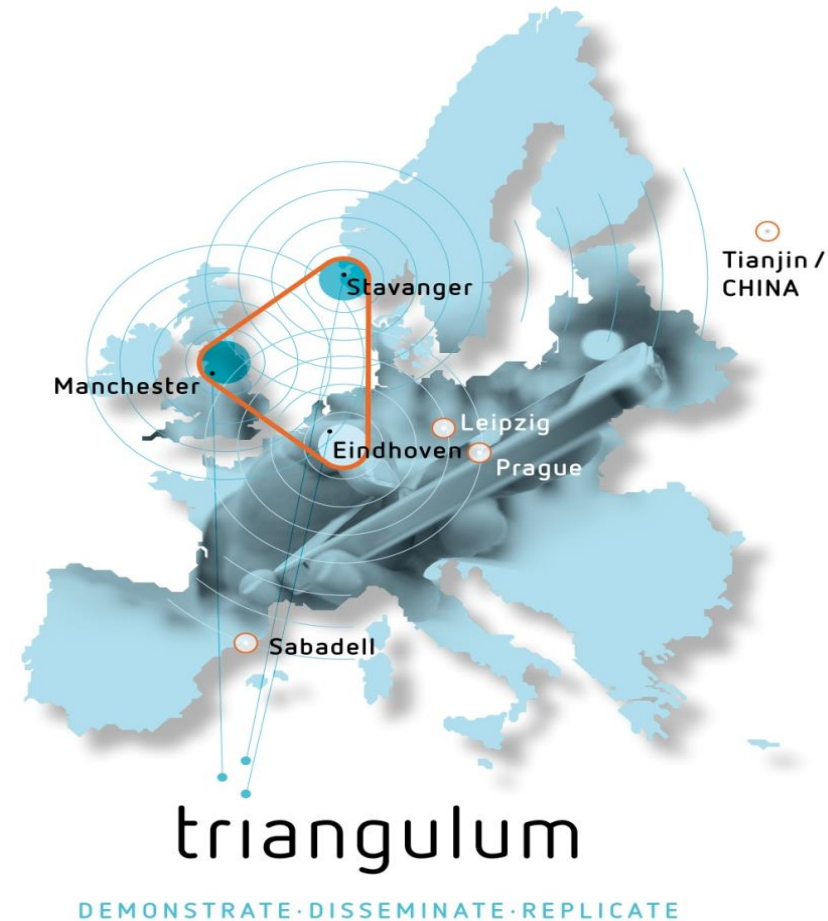
# Oxford Road Corridor – Manchester's Smart City District





# Triangulum – Project Overview

- **Project budget: 29 million EUR**  
Horizon 2020 funding: 25.4 million EUR
- **5 year Project:** Jan 2015 – Jan 2020 Currently in M26
- **Consortium: 22 European partners in 6 countries**  
including municipalities, research institutes and businesses
- Project focus is on **Energy, Mobility, ICT**
- **Manchester Partners** are Manchester City Council, the University of Manchester, Manchester Metropolitan University, Siemens and Clicks & Links.

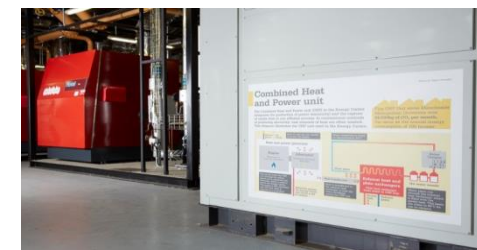


This project has received funding from the European Union's Horizon 2020 Research and Innovation Program under Grant Agreement No 646578



# Additional Capacity

- MMU Birley Fields Campus



- Originally planned to install biomass and SOFC
- Amendment to install Electrical Energy Storage -
- Will complement 158kw solar pv also installed as part of the project



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# Mobility – e-vehicles



- MMU have purchased 2 additional e-vehicles for their staff 'pool car' fleet
- UoM have leased 7 e-vans for the estate maintenance team
- Both universities are creating a business case using documented carbon and cost savings to purchase further electric vehicles
- In – car telematics procured
- Siemens investigating linking the charging points to the grid monitoring activity at Birley Campus



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# Mobility – e-cargo bikes



- Oxford Road restrictions
- MCC have procured the use of 4 bikes and maintenance from a fleet of 10
- E-cargo bikes have now been ‘hired’ (free of charge) for over 650 days
- E-cargo bike journey data is now automatically uploaded to the City data platform
- A variety of public and private businesses have trialled e-cargo bikes



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Building this smart city will take trailblazing IoT technologies and a collective desire for ongoing collaboration.

At the heart of CityVerve our focus is on people – the people who live, work and visit the City. Success will be when they see and feel the difference CityVerve has made to their lives

2km<sup>2</sup>

Innovation corridor



£16m

IoT investment



21

delivery partners



1<sup>st</sup> July 2016

Start date

15 Use Cases across Health & Social Care, Transport & Travel, Energy & Environment and Culture and Public Realm

# Projects and Partnerships – CityVerve UK's IoT Demonstrator





# Projects and Partnerships – CityVerve UK's IoT Demonstrator





# PlaceCal – an online calendar for social isolation



[www.placecal.org](http://www.placecal.org)



# Buzzin' App – City Wayfinding & AR



**buzzin** @buzzin\_app · Dec 1

There are still spaces left on our @FuturEverything @cityverve Festive Tech Tour: Explore the Christmas Markets using Emerging Tech.

Free to register and open to the public: [eventbrite.co.uk/e/festive-tech...](http://eventbrite.co.uk/e/festive-tech...)

Use #buzzin to navigate around the @MCRMarkets. Free to download 🐝





# See.Sense Smart Bike Light

SEE.SENSE \ CYCLING TECHNOLOGY

## HOW WE RECRUITED PARTICIPANTS



Create collateral



Lights offered at discounted rate of £10 (RRP is £65)



Coverage received by media outlets



Over 400 applications received in 1 week



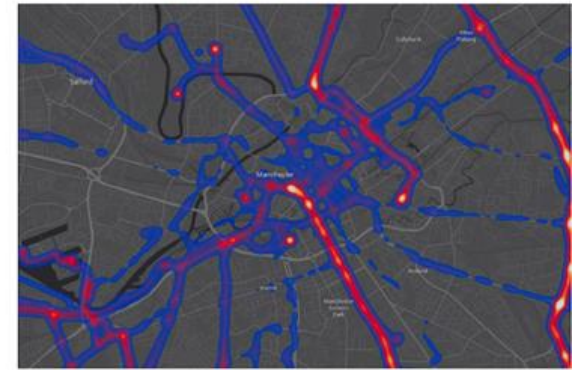
180 selected who met profiled criteria of commuter cyclists



Bulk delivery of lights to CityVerve/FE and cyclists collect.



Onboarding using video on Youtube



Go live in October



# Energy & Environment

## Building Retrofit

cityverve

The screenshot displays the cityverve web application interface. The top navigation bar includes links for Map, Dashboard, Alerts, and List, along with a user profile for craig.morley@bruntwood.co.uk and various utility icons. On the left, a sidebar menu under the 'MSP' header shows a tree structure for 'CityLabs 1.0' with 151 total items. The '00 - Ground Floor' is expanded, showing 40 items, with 'Existing' (15) and 'New' (21) sub-categories. Other levels like '01 - Level 1' (65), '02 - Level 2' (36), and '03 - Level 3' (10) are also listed. The main map area shows a building footprint with numerous green and orange star-shaped markers indicating retrofit locations. The map is bounded by 'Oxford Rd', 'Nelson St', and 'The Blvd'. A 'Tools - 00 - Ground Floor' dropdown is visible in the top right of the map area. At the bottom, there are map controls for 'Map', 'Satellite', and a zoom slider. The footer includes 'Map data ©2018 Google' and links for 'Terms of Use' and 'Report a map error'.

cityverve

Map Dashboard Alerts List

craig.morley@bruntwood.co.uk

MSP

- CityLabs 1.0 (151)
  - 00 - Ground Floor (40)
    - Existing (15)
    - New (21)
    - + Add group to 00 - Ground Floor
  - 01 - Level 1 (65)
  - 02 - Level 2 (36)
  - 03 - Level 3 (10)
  - + Add level to CityLabs 1.0
  - + Add building

Tools - 00 - Ground Floor

Oxford Rd Nelson St The Blvd

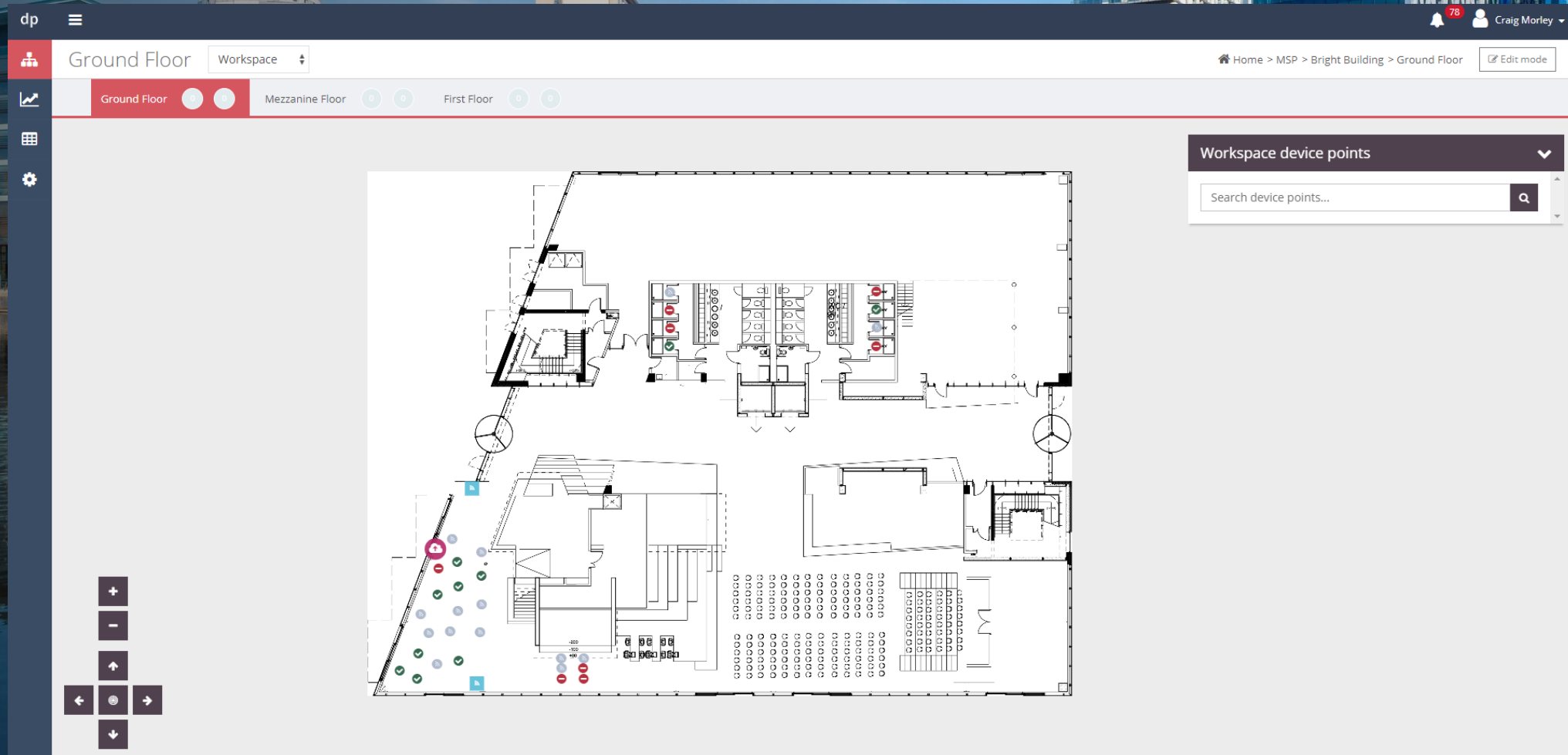
Map Satellite Map

Map data ©2018 Google Terms of Use Report a map error

# Energy & Environment

## Work Place Utilisation

cityverve



# Working with Ordnance Survey & OGC

- OS have done mapping of Manchester as part of CityVerve
- A workshop with our stakeholders – those who use geodata in the city
- Relationship between 2D and 3D
- We want to encourage more businesses to work with geodata to improve policy making, improve public consultation and improve implementation of new services
- Operational needs around existing software & what are the new ways of working for the future.
- Being able to layer real time city data on a model
- Use of V.R. and other new platforms
- An opportunity to develop a tool for CityGML working with Manchester





MANCHESTER  
CITY COUNCIL

# Thanks.

[a.slatcher@manchester.gov.uk](mailto:a.slatcher@manchester.gov.uk)  
[www.manchester.gov.uk/smartercity](http://www.manchester.gov.uk/smartercity)  
[@smartercitymcr](#)