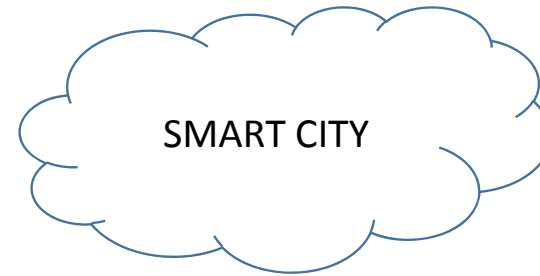
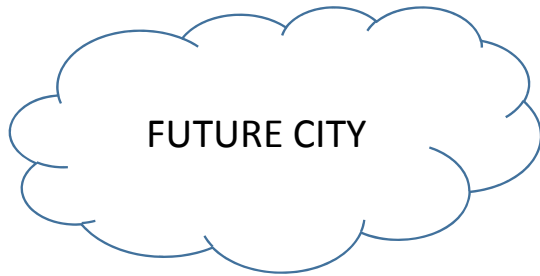




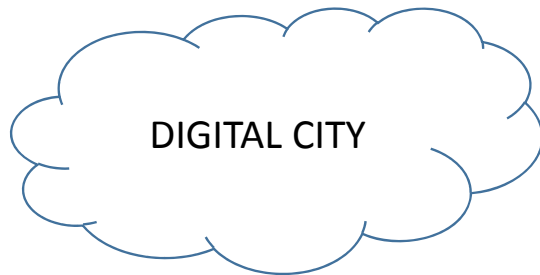
Glasgow

The Future Cities Demonstrator

Peter Devine
Engineering Officer
Land & Environmental Services, Glasgow City Council



“There is **no absolute definition of a smart city**, no end point, but rather a process, or series of steps, by which cities become more “liveable” and resilient and, hence, able to respond quicker to new challenges”



FUTURE CITY = SMART CITY = DIGITAL CITY = CONNECTED CITY
WHAT DO WE MEAN BY SMART CITY?



City Themes

Health

Energy

Transport

Public Safety

Glasgow Operations Centre | City Demonstrators | OPEN Glasgow

Glasgow Operations Centre

The image shows a vast, dimly lit operations center. In the foreground, a workstation is visible with three curved monitors displaying different camera feeds. The room extends into the background with rows of similar workstations. Large video walls are mounted on the walls, showing various types of data, including maps, diagrams, and multiple camera feeds. The overall atmosphere is professional and high-tech, with blue ambient lighting under the desks.



Open Data Catalogue

<http://data.glasgow.gov.uk>

People at the heart of Glasgow's future

OPEN Glasgow

Linked Data

<http://linked.glasgow.gov.uk>
(coming soon)

LINKED DATA
Connecting open data on Glasgow's assets and the communities they serve

The Data Catalogue
A wide selection of OPEN Glasgow data stored as RDF Linked Data to enable easy use and application development.

SPARQL endpoint
Query results by Glasgow.gov.uk

```
select query
```

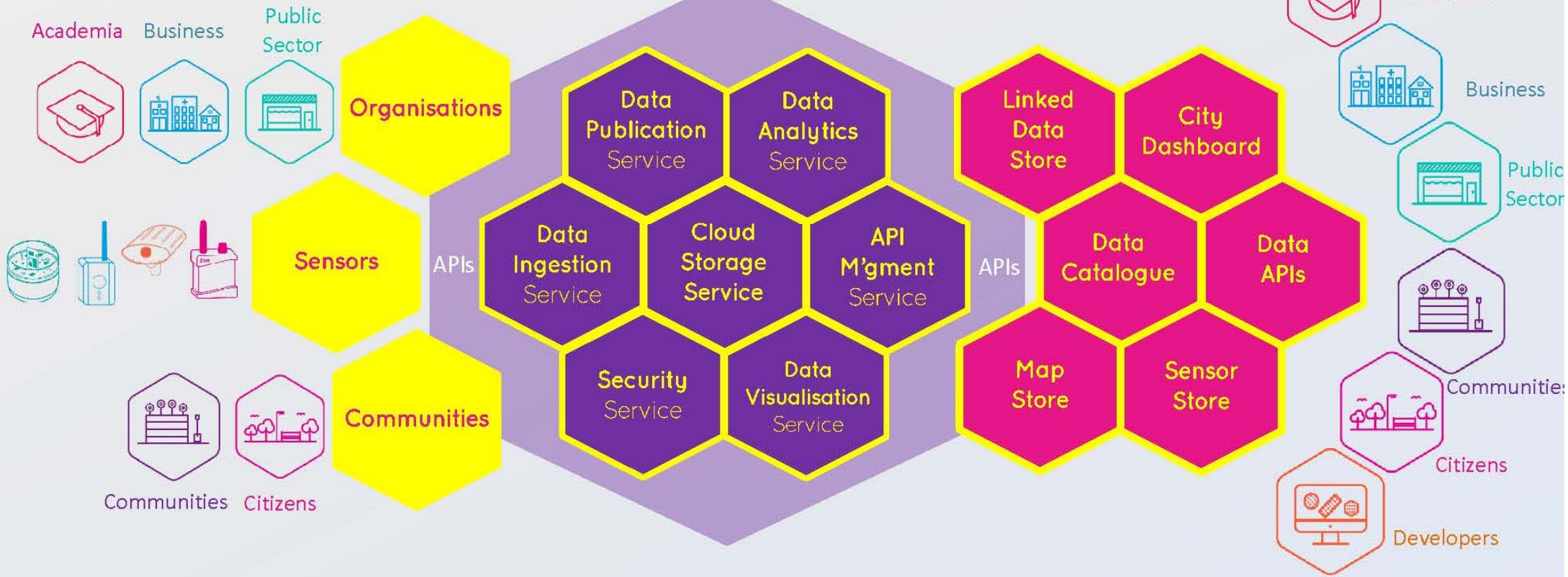
City Dashboard

<http://map.glasgow.gov.uk>

CITY DATA

CITY DATA HUB

OPEN GLASGOW



City Demonstrators



Energy Efficiency

Intelligent Street Lighting

Integrated Social Transport

Active Travel

Background

- Intelligent Street Lighting Networks
- LED Lights providing Sustainable , Street Lighting
- Reduced Energy Consumption (Estimated 65.2%)
- Reduced Carbon Output (130,000 tons over 10 yrs)
- Accurate Energy monitoring (Smart Metering)
- Lighting on Demand “The Right Amount of Light at the Right Time”
- A Lighting Central Maintenance System (CMS) that can be the city’s “Central Nervous System

Deliverables

Gordon Street

- Dynamic LED Lights (Energy saving of up to 68%)
- Sensors that collect Data (Sound, Air Quality, Footfall)
- Lights that react to the Sensors(Increasing Lighting Levels by 50%)
- System that alerts CCTV operators to possible issues/events.

Riverside Walkway

- Dynamic Led Lights (Energy Saving of up to 78%)
- Sensors that detect Joggers, Cyclists and other users to adjust Lights accordingly creating a “Wave of Lights”
- Sound Sensors that alerts CCTV operatives to possible issues

Deliverables

Merchant City

- A City within the City.
- A Retro — Fit solution.
- Dynamic LED Lights (Energy saving of up to 68%).
- Sensors deployed at busy junctions monitoring Pedestrian/vehicular traffic flow. Sensors also monitor Car parking spaces and Electric car charging points.
- Lights that are programmed for residential areas and Commercial areas.

Benefits of Central Maintenance System

- Additional savings (up to 20%)
- Variable light levels achieved on a use case basis
- Trimming saving up to 221 burning hours per light.
- Correct energy costs calculated and paid at every stage of Luminaire Life.
- Constant Light output leading to accurate planned maintenance.
- A system that can be used as a Asset management platform for all street furniture (Energy)
- An Integrated platform delivering data via the Street Lighting Network.

Priorities & Legacy



- Year on Year Energy Savings and Carbon Reduction
- Deployment of Intelligence throughout the City - providing a resilient response to events/issues and providing a safer environment.
- Deployment of Dynamic Lighting in Parks and event areas promoting a more healthy lifestyle.
- A secure complimentary communications network for GCC services and stakeholders.
- Asset Management of Street furniture (Energy)



Moving forward and Legacy



Glasgow is:

- 'Sustainable and Smart' lead for SCA
- Lead Partner for 'Scotland's 8th City – the Smart City'
- Disseminating learning from Future City Glasgow
- Sharing via futurecity.glasgow.gov.uk
- Packaging-up resource across all Scottish cities – including the 'system-of-systems' approach that Glasgow has trialled in the FCG programme
- Engaged in service transformation

FUTURE CITY • GLASGOW

open.glasgow.gov.uk



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Follow us.

Be part of
the journey.

Thanks.