The Dublin Dashboard
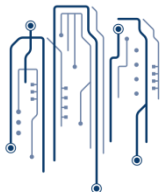
Gavin McArdle

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The Programmable City
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Maynooth University
National University
of Ireland Maynooth

Social Sciences Institute

erc
European Research Council
Established by the European Commission

sfi
Science Foundation Ireland

Summary of research

- Dashboards and city indexes are a key tool to manage and control urban operations and guide and evaluate public policy and compare jurisdictions.

- This project seeks to understand the process of dashboard design and development by building the Dublin Dashboard.
  - The Data
  - The Technologies
  - The Context

Key findings

- Data Audit
  - Driven by other city dashboards and urban indicators
  - 27 datasets for non-real-time data
  - 10 datasets for real-time data
  - 14 providers
  - 7 data formats

Data Set	File Type	Data Provider
Air Quality	JSON	Environmental Protection Agency
Ambient Sound Levels	API/JSON	Dublin City Council
Hydrometric Water Levels		Environmental Protection Agency
River Levels	API/JSON	Office of Public Works
Weather	API/JSON	Weatherunderground
M50 Travel Time	API/JSON	National Roads Authority
TRIPS Travel Times	CSV	Dublin City Council
Car Parks	XML	Dublin City Council
Traffic Cameras	URL	Dublin City Council/South Dublin County Council
Dublin Bikes	API/JSON	JC Decaux

Key findings

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  - 10 datasets for real-tim
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Data Set	File Type	Data Provider
Employment	StatBank	Central Statistics Office
Gross Value Added	StatBank	Central Statistics Office
Survey on Income and Living	StatBank	Central Statistics Office
Number by Employment Sector	StatBank	Central Statistics Office
Employees by Company Size	StatBank	Central Statistics Office
Overseas Visitors to Dublin	PDF	Failte Ireland
Waste Produced per Capita	PDF	Environmental Protection Agency
Household Recycling	PDF	Dublin City Council
Annual Water Consumption	CSV	Dublin City Council
River Water Quality	PDF	Environmental Protection Agency
Green Flags for Schools	PDF	Dublin City Council
House Unit Completions	Excel	Department of the Environment
Planning Applications	Excel	Department of the Environment
Supply of Land	Excel	Department of the Environment
Contribution from Developers	Excel	Department of the Environment
House Prices	Excel	Department of the Environment
Rent Prices	StatBank	Private Rental Tenancy Board
Population Demographics	StatBank	Central Statistics Office
Number of Households	StatBank	Central Statistics Office
Household Composition	StatBank	Central Statistics Office
Patients Waiting on Trolleys	CSV	Department of Health
Population Health	StatBank	Central Statistics Office
Education Level	StatBank	Central Statistics Office
Number of Students in Schools	StatBank	Department of Education and Skills
Crime in the Dublin Region	StatBank	Central Statistics Office
Fire Brigade Activities	Excel	Department of the Environment
Road Fatalities and Injuries	PDF	Road Safety Authority

Key Findings

- Technology
  - Ingesting, processing and visualising data
  - Database and file storage
  - Human in the loop
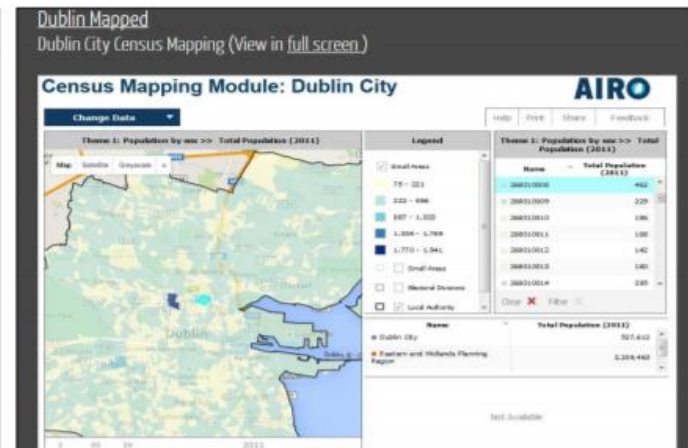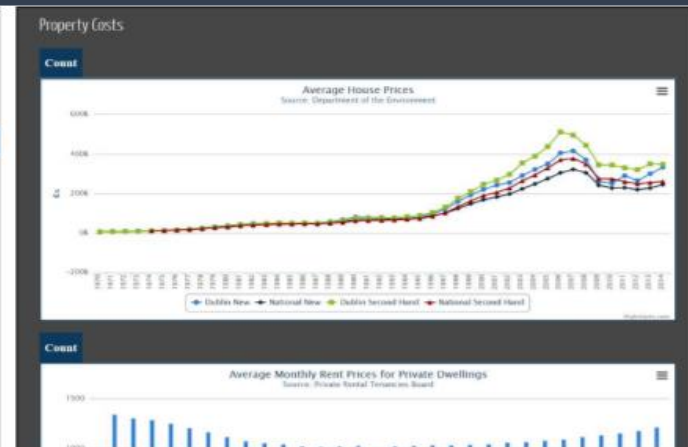 - Graphical User Interface
    - Maps and Graphs
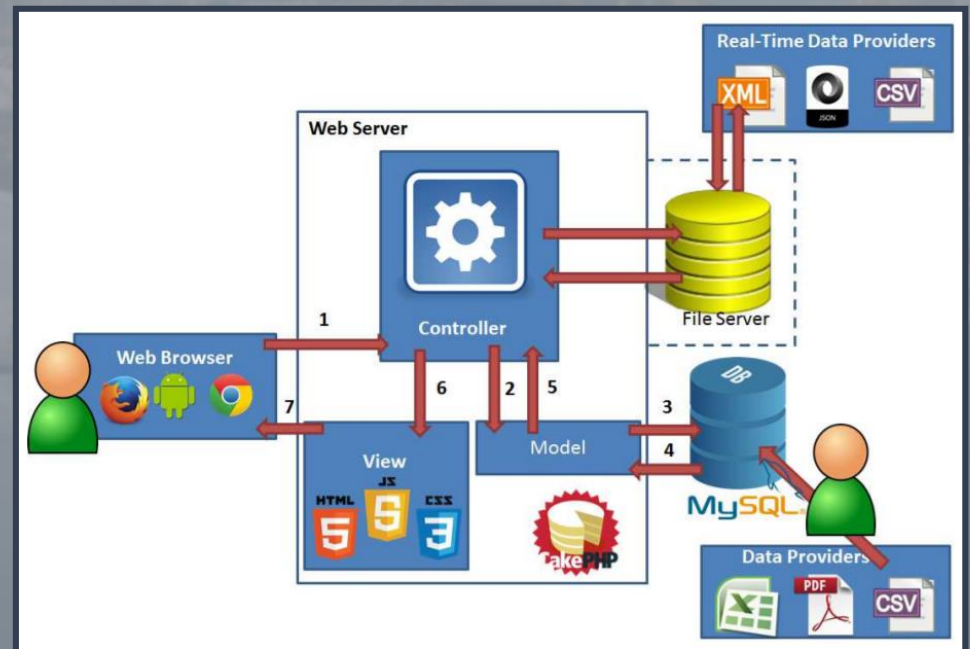
Key Findings

- Technology
  - Inges
  - Datal
  - Hum
  - Grap
    - M

Key Findings

- Context
  - Empirical study conducted by an ethnographer
    - Political
    - Actors
    - Social constraints
    - Economic constraints
    - Technical constraints of actors
    - Existing technologies
  - Users of such systems need to be aware of these findings when interpreting the data dashboards display.

Key lessons

- Data
  - **Formats**, licences, **veracity**, timeliness, etc. are all relevant and variables

- Technology
  - **Extensible**
  - Open Source

- User Interface
  - Design – UX Designer
  - **Mobile**

- Context
  - Equally Important

Launched September 2014
- 55K Users
- 10K Returning Users
- 156 Countries
- 33% via Mobile
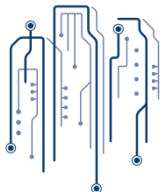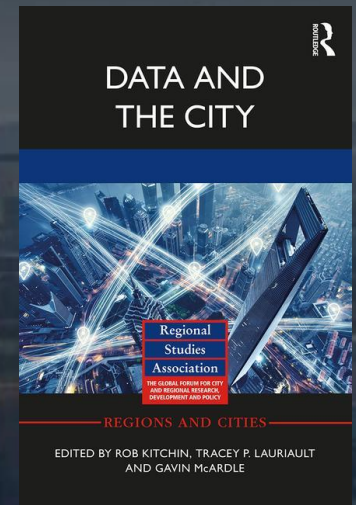
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DATA AND THE CITY

Regional Studies Association
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REGIONS AND CITIES

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