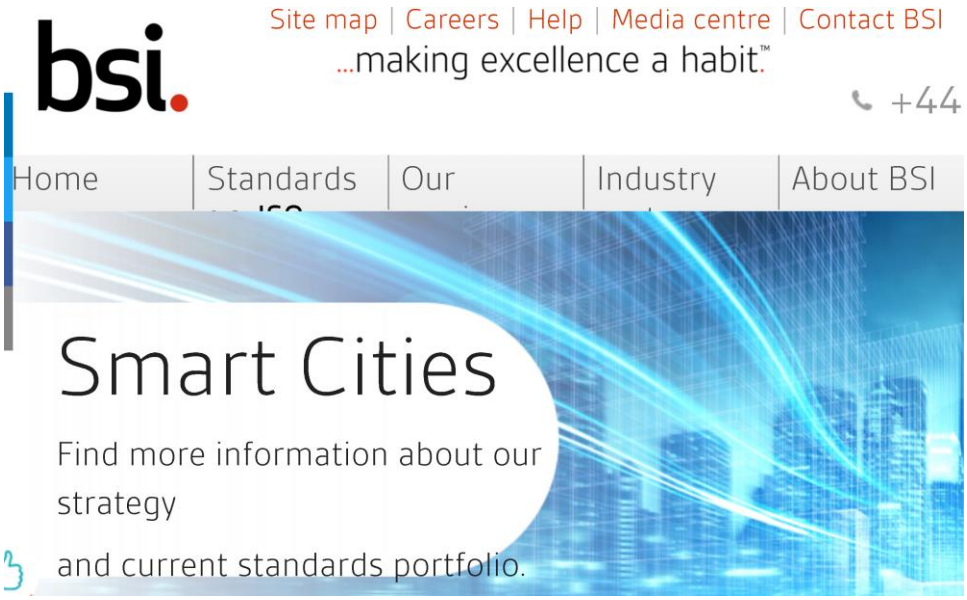
AI for better towns and cities

Ben Hawes
Programme director, Benchmark Initiative on responsible use of location data
Associate, Connected Places Catapult

1



2

Connected Places Catapult

Our mission is To help British businesses address the grand challenges of today **to create connected places, fit for the future**.

Our vision is for the UK to lead the world in creating cities, towns and places which thrive on their ability to connect people to resources, opportunities, ideas and each other. Where the smooth flow of people, goods, transportation and services, drives economic success, productivity and wellbeing.

CATAPULT Connected Places

3

Not so easy:
Reduced resources
Devolution
Limited understanding of local digital in central government

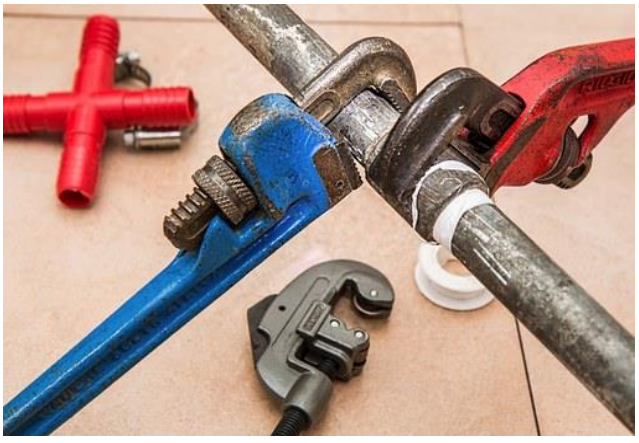
4

Barriers to data sharing

- Poor at sharing data in services that span related industries, e.g. health and social care
- Legal, ethical, governance and accountability issues need to be addressed but **mindset is hard to change**
- How can we best convene the eco-systems to understand new products and services that sharing data could enable?

5

Needed to fix the plumbing first…



6

“Artificial Intelligence technologies aim to reproduce or surpass abilities (in computational systems) that would require 'intelligence' if humans were to perform them. These include: learning and adaptation; sensory understanding and interaction; reasoning and planning; optimisation of procedures and parameters; autonomy; creativity; and extracting knowledge and predictions from large, diverse digital data.” EPSRC.

7

Factors driving AI growth:
- new and larger volumes of data
- supply of experts with the specific high level skills
- availability of increasingly powerful computing capacity

8

AI for better places

- New analysis of complex problems
- Improved planning
- Social media monitoring to understand citizens' needs
- Monitoring and management of traffic and air pollution
- Monitoring of infrastructure
- Faster and more accurate analysis of local economies
- Computer vision analysis of CCTV to identify violations, eg fly-tipping
- Analysis of bulk internet of things data to track weather, sound, movement, streetlighting

9

AI and data to improve public services

- Cost of deprivation versus cost of interventions
- Loneliness and isolation prediction
- Early identification of families on the edge of crisis
- Identifying the most vulnerable of society to domestic violence for targeted support
- Predicting children who would best benefit from school interventions
- Predictive road maintenance scheduling

10

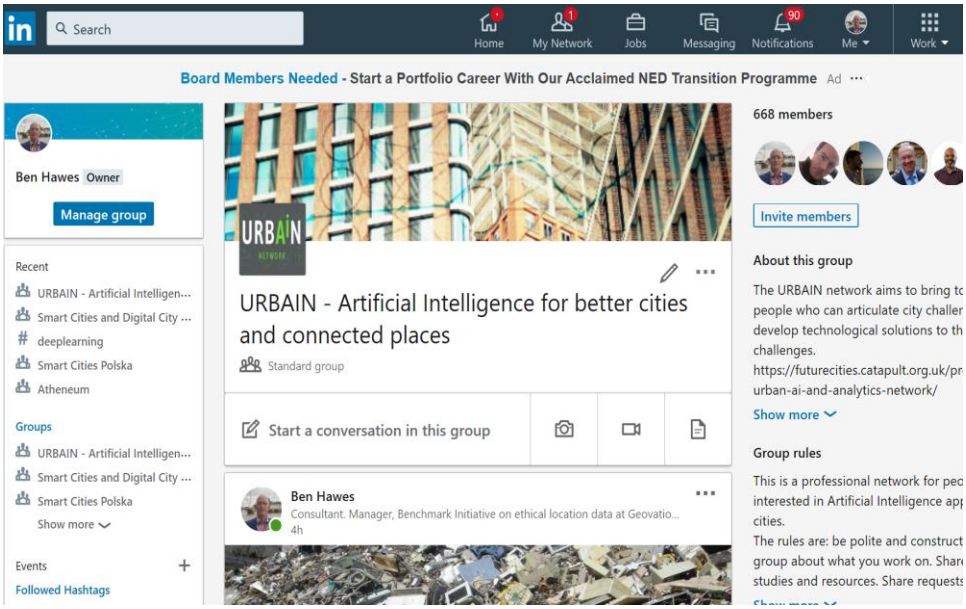
URBAIN: Urban AI and analytics network

- Cities are on a cusp of a future where AI and analytics improves a variety of services and transforms the lives of urban citizens.
- URBAIN is a network to help city service providers to understand and benefit from the latest AI and analytic technologies that UK industry has to offer.

The goal of the URBAIN network is to create new market opportunities through fostering and unifying:

- Confident customers ready to invest time or resources in new products.
- An ecosystem of business offering tried and tested products that deliver real impact to customers or ready to pilot new ones with city authorities.

11



12

Fix the plumbing first…

13

Office for Artificial Intelligence

Guidance

Draft Guidelines for AI procurement

Published 20 September 2019

Contents

Introduction
Overview
Guidelines for AI procurement
1. Explore procurement processes that focus on the challenge rather than a specific solution
2. Define the public benefit of using AI while assessing risks

How these Guidelines were developed

The Guidelines are a collaboration between the Office for AI and the World Economic Forum Centre for the Fourth Industrial Revolution. The authors consulted with stakeholders from industry, academia and government. These Guidelines will be updated, as public sector use of AI evolves, to incorporate new learnings and best practices. This is a living document intended to encourage feedback from practitioners.

14

AI and data-driven decision making

- Few industries extract value from data and make use-case based improvements
- What will be done differently as an outcome to the advanced modelling?
- The Catapult's Data Science fellowships are building skills and capacity in Local Authorities
- Through our collaborative R&D we bring AI approaches from academia into a practical setting - partnering on place-based problems

15

New capabilities, new questions:
- is AI the best way to address a particular challenge?
- public services have a special responsibility for fairness and transparency
- do we have the data and the skills to use AI effectively?
- and to represent the public interest in an AI and data–driven world?

16

17

Mary Kenny: Our future will be increasingly organised by artificial intelligence. Should we fear rule by robots?

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18

THE IRISH TIMES

Sun, Oct 20, 2019

Ulster University

by sharing our extensive research expertise.

Formulating values for AI is hard when humans do not agree

China and the West prioritise different things in algorithms

19

Sidewalk Labs proposals put the fox in charge of the henhouse

October 8, 2019 11.39pm BST

An artist's rendering of Toronto's shoreline in 2050. Regulating the future city poses new challenges for different levels of government. Picture Plane/H

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Sidewalk Labs' nearly 1,500-page Master Innovation and Development Plan was released in June 2019. The document exhaustively detailed proposals for a smart city on Toronto's eastern waterfront.

Following nearly two years of often-contentious public consultations, this master plan is also intended to put to rest criticism that Sidewalk Labs, a Google sister company, would unfairly dominate the project by

20

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Rina Chandran 4 MIN READ

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By Juan Manuel del Nido

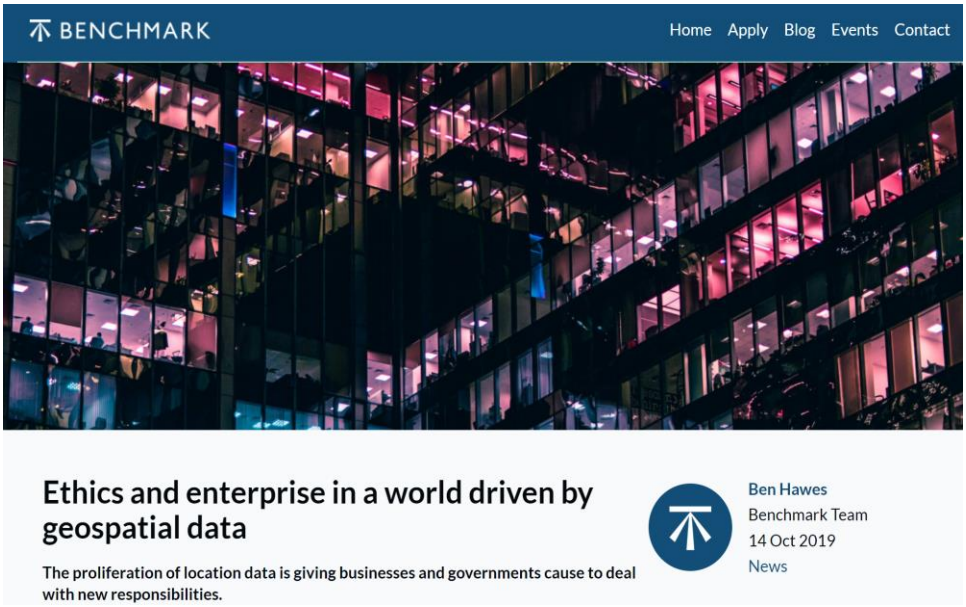
22

We are in an AI and data-driven world…

How to stand up for individuals and the public interest?

Does the local public sector need stronger responsibilities and powers to gain value for the public from data, for negotiations with major tech companies?

23



24

Thank you

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https://benchmarkinitiative.com/

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25