

Shifting Worlds



Trends

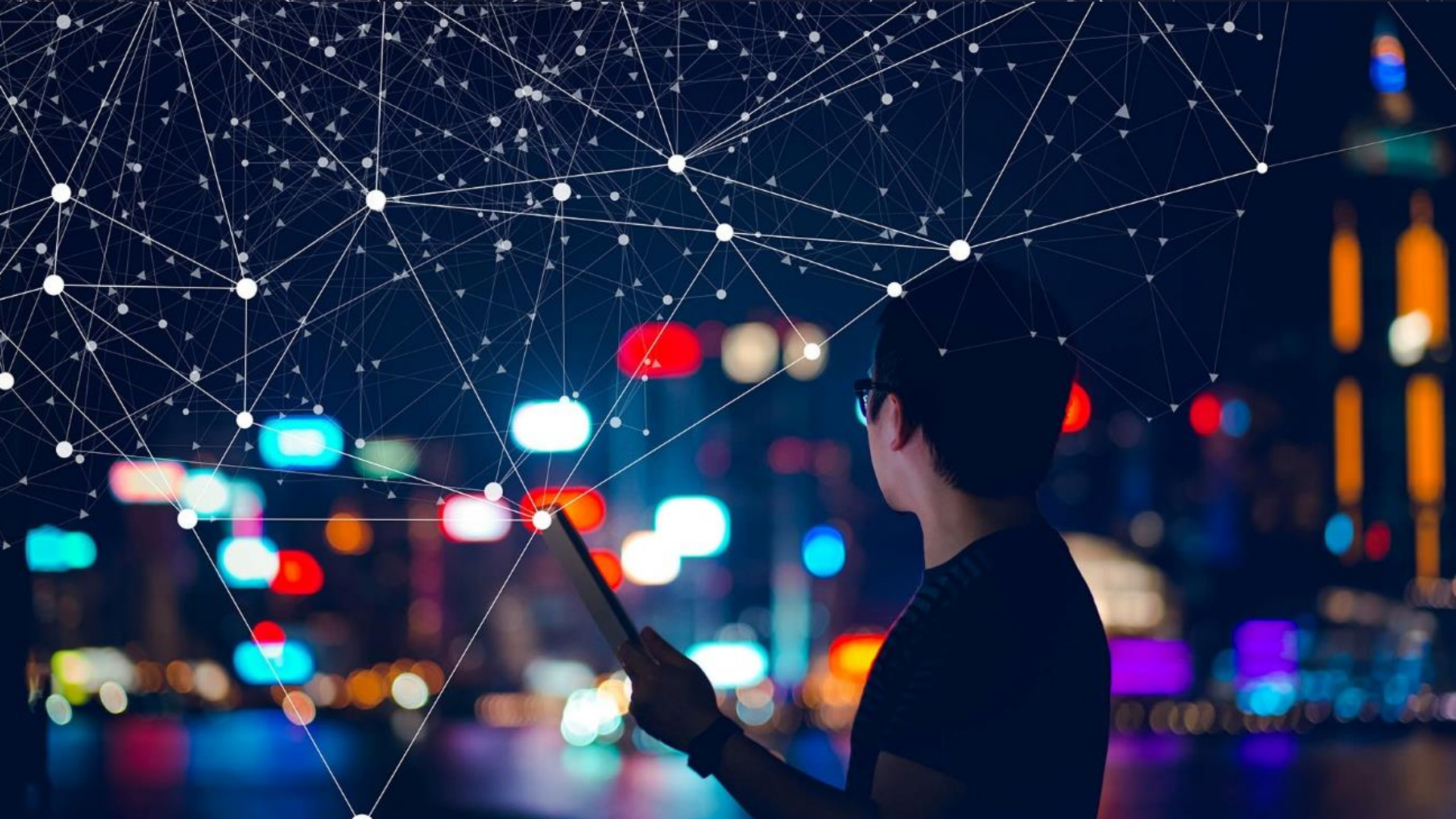
**If technology is
the answer what
was the
question?**

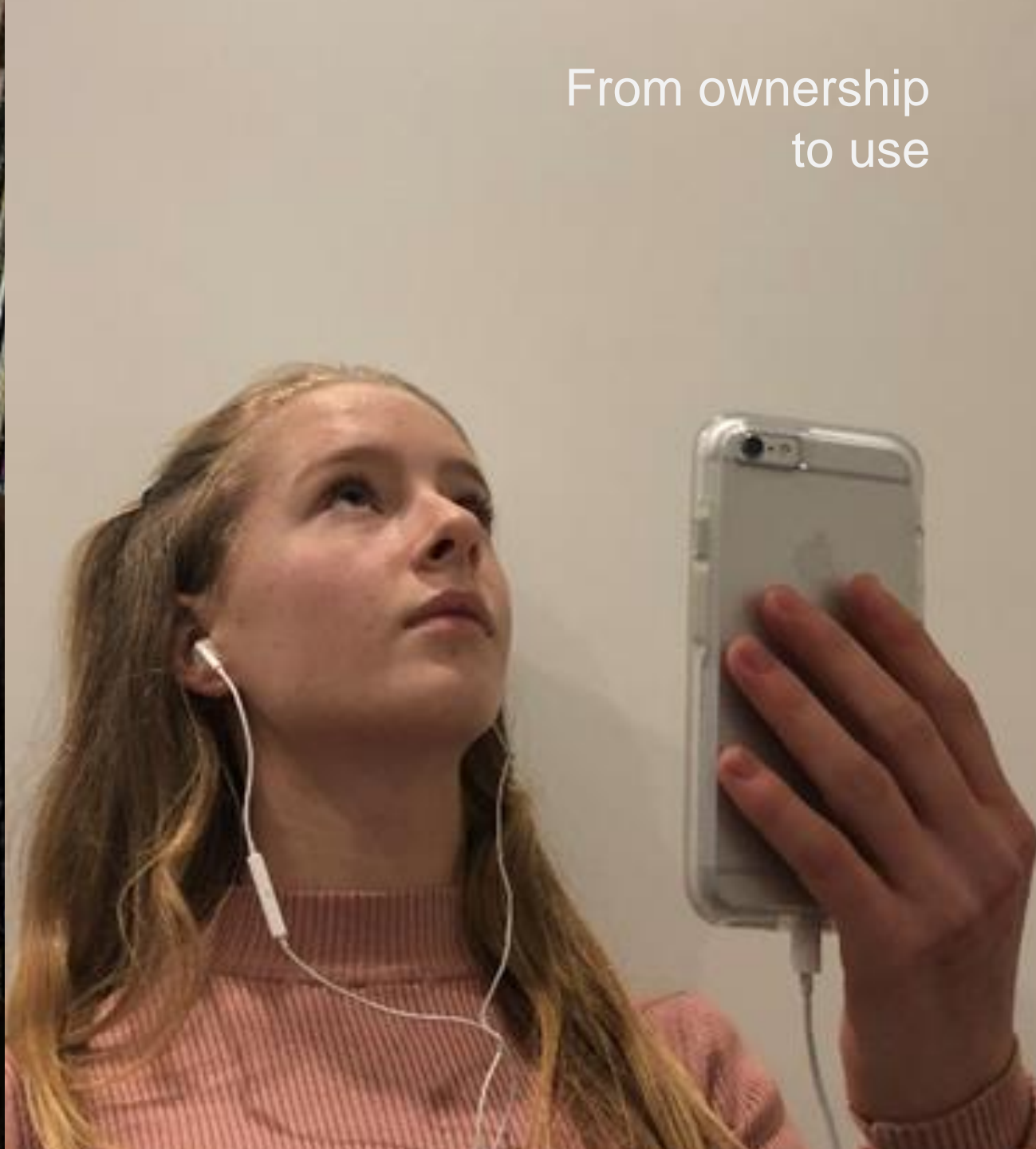
Cedric Price











From ownership
to use

From use to
experience



From corporations
to networks

Rank	2002	2007	2012	2017
1	Microsoft \$260bn	Petrochina \$720bn	Apple Inc. \$500bn	Apple Inc. \$870bn
2	General Electric \$260bn	Exxon Mobil \$510bn	Exxon Mobil \$390bn	Alphabet Inc. \$730bn
3	Exxon Mobil \$240bn	General Electric \$370bn	PetroChina \$260bn	Microsoft \$660bn
4	Wal-Mart \$230bn	China Mobile \$350bn	BHP Billiton \$250bn	Amazon.com \$560bn
5	Pfizer \$200bn	ICBC \$340bn	ICBC \$240bn	Facebook \$510bn
6	Citigroup \$180bn	Microsoft \$330bn	China Mobile \$230bn	Tencent \$490bn
7	Johnson & Johnson \$170bn	Gazprom \$330bn	Wal-Mart \$230bn	Berkshire Hathaway \$490bn
8	Royal Dutch Shell \$150bn	Royal Dutch Shell \$270bn	Samsung Electronics \$230bn	Alibaba Group \$440bn
9	BP \$140bn	AT&T \$250bn	Microsoft \$220bn	Johnson & Johnson \$380bn
10	IBM \$140bn	Sinopec \$250bn	Royal Dutch Shell \$220bn	JPMorgan Chase \$370bn

foursquare

- RESIDENCE
- FOOD
- ARTS & ENTERTAINMENT
- COLLEGE & UNIVERSITY
- NIGHTLIFE SPOT
- GREAT OUTDOORS
- SHOP & SERVICE
- PROFESSIONAL & OTHER
- TRAVEL & TRANSPORT

4AM



4AM






Waste Collection
in Seoul

Cycle data in San Francisco
to plan transport
infrastructure





Sensor network to
manage supply and
demand of energy in
Copenhagen

Context



Improving
productivity and
competitiveness.

Cities are looking to harness digital technologies because they provide the potential to; deliver better outcomes, improve efficiencies, accelerate growth and jobs as well as increase citizen engagement.



Outcomes



SMART CITY OPPORTUNITIES FOR LONDON

Productivity



Collaboration



Wave 1



Wave 2





Wave 3

Place

Christchurch, New Zealand.....12.51 pm on Tuesday 22 February 2011



Avoid misalignment between tech and human needs

A nighttime photograph of Songdo Smart City in Incheon, South Korea. The central focus is the Lotte World Tower, a tall, slender skyscraper with a distinctive tiered design, illuminated with blue and white lights. To its left, another tall building is visible. The foreground and middle ground are filled with modern, brightly lit buildings and streets, with a river or canal visible at the bottom. The sky is a deep blue, suggesting dusk or dawn.

SongDo

**Initial city branding through
tech investment**

**\$40 billion, 1,500 acre master-planned "smart city" in
Incheon, South Korea.**

**Partnerships with major tech companies (Cisco and LG) to
develop unique products and services attracted international
attention.**

Avoid misalignment between tech and human needs

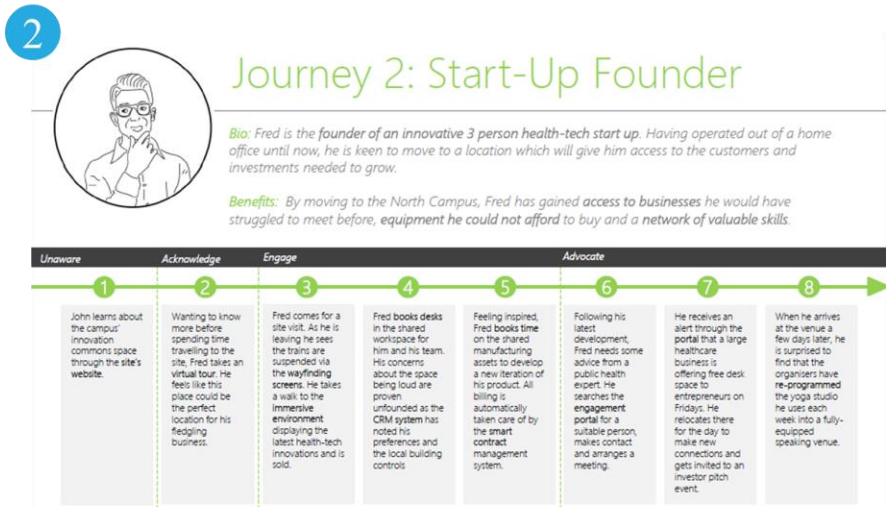
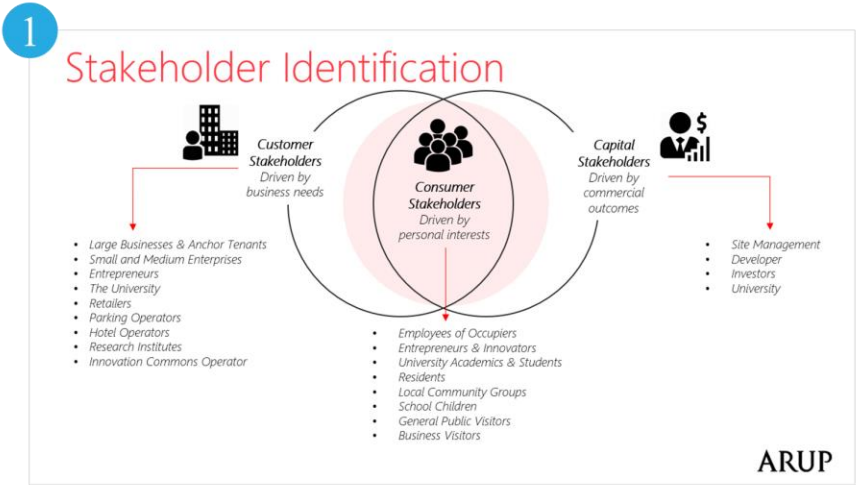
**Streets and spaces are empty
and residents lonely**

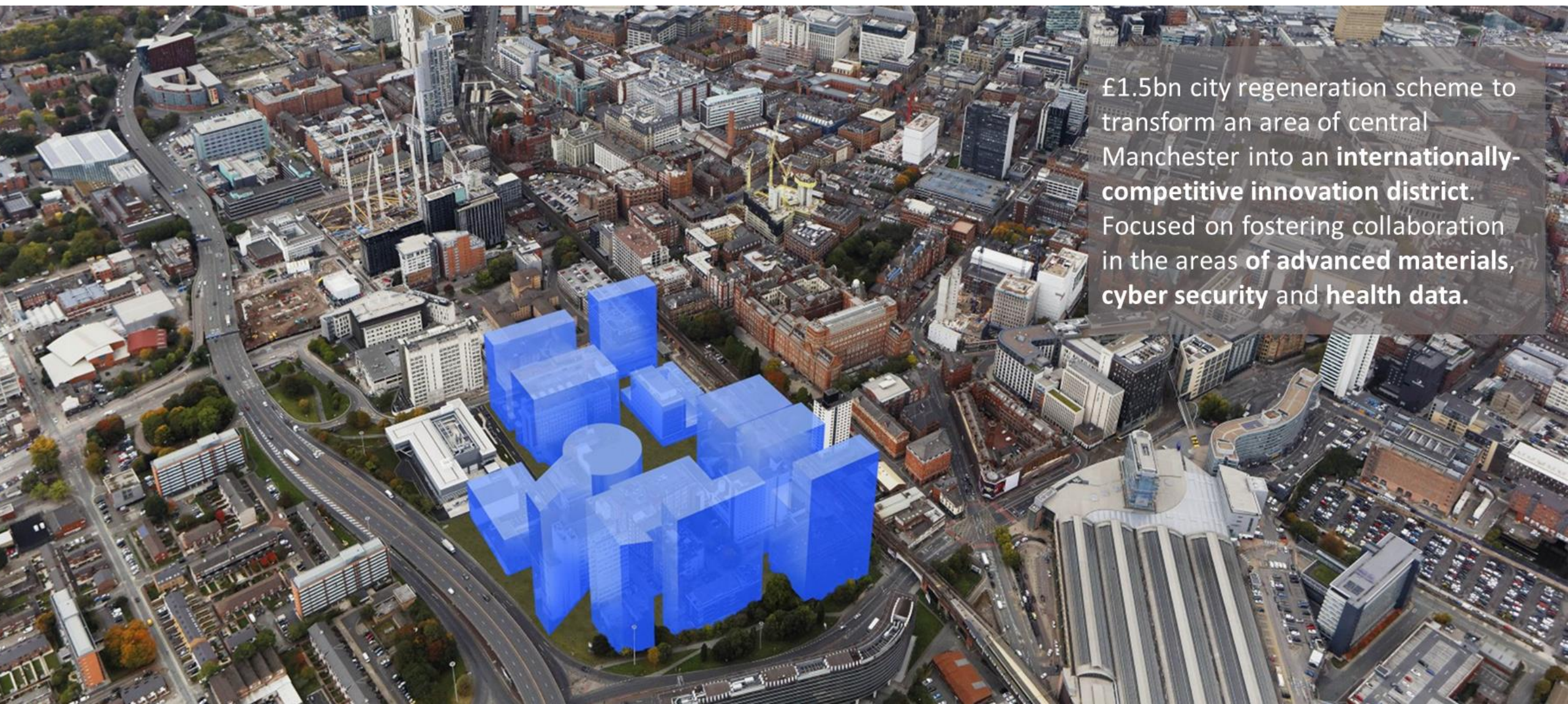
"I had expected this city to be like Singapore and Hong Kong, where there are many foreigners, but that has not been the case," Paik Dae-Il, 45

"For younger people, it's a bit more of a lonely city, actually. I'm struggling a bit because I don't have much things in common with my neighbors," Lee Mi-Jung, 25



A User-Centric Approach





£1.5bn city regeneration scheme to transform an area of central Manchester into an **internationally-competitive innovation district**. Focused on fostering collaboration in the areas of **advanced materials, cyber security** and **health data**.



Dubai World Expo
incorporating
sustainability, logistics,
security, infrastructure,
utilities, transportation
and pedestrian planning,

ARUP

Today



Digital Backbone



WIFI & SENSOR TOTEM

PUBLIC WIFI

Compact Parking

ROTATED & COMPACTED PARKING

CYCLE LANE

ARUP



Mobility Options

LOCAL SHUTTLE

RIDESHARE PICKUP POINT

BIKESHARE HUB

WAITING BENCH



Greenery

TREES

PLANTERS

GRASS



Flexible Program



CAFE

CAFE

PLAYGROUND

Takk