52ND SESSION OF THE UNITED NATIONS STATISTICAL COMMISSION – SIDE EVENT: THE GREAT DEBATE

Future Trends - The Geospatial Element

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The World in 2050

Big data

Smart robots

Vaccines and cures

Autonomous systems

Emerging markets will dominate the global economy

Widespread internet access

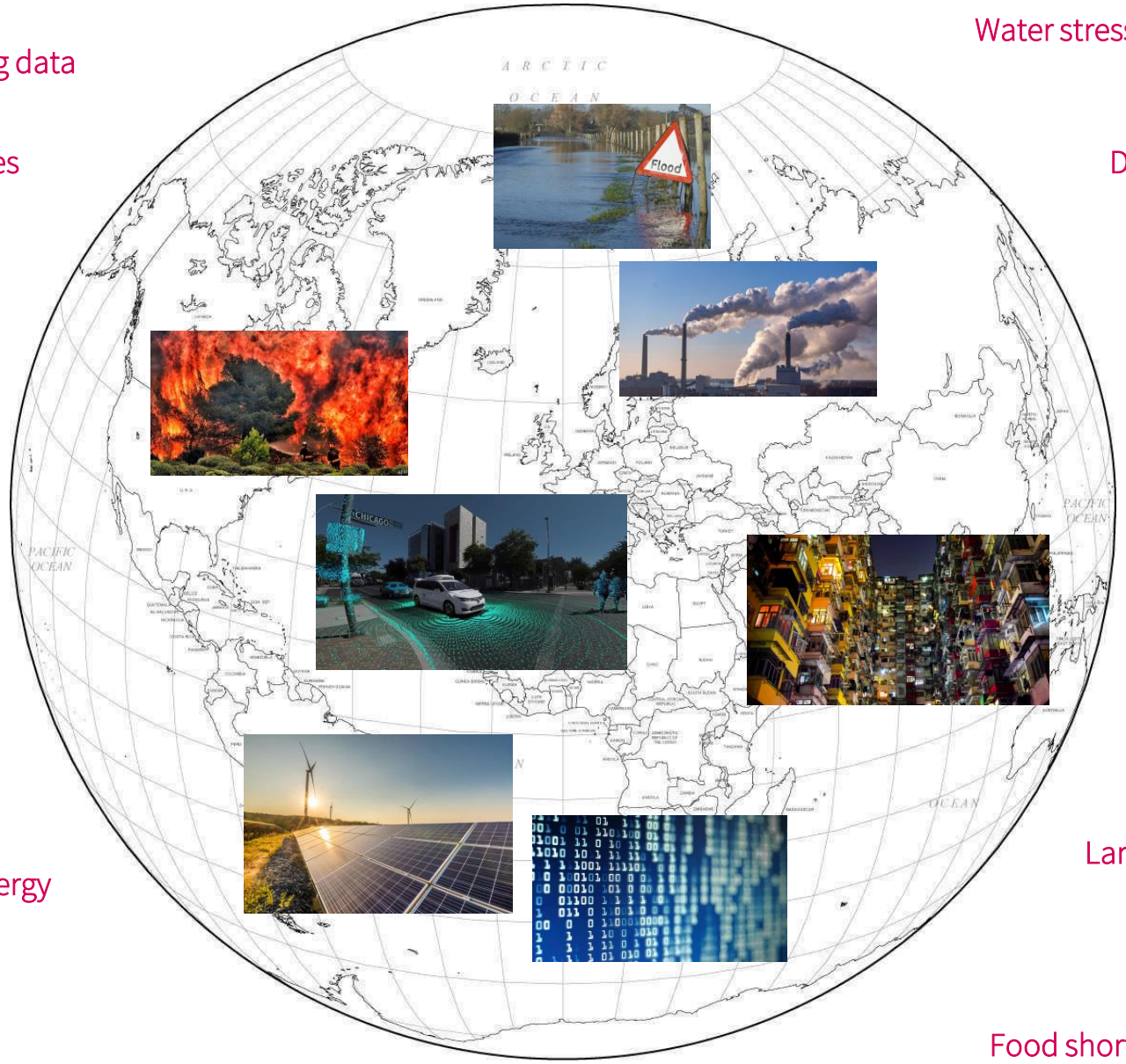
Literacy rate increase

Child mortality rates lower

New industries and new jobs through Artificial Intelligence

Increase in renewable, clean energy

Greater equality and diversity



Water stress

Superbugs & diseases (malaria, cholera, yellow fever)

Deforestation

Privacy concerns

Cyberattacks

Climate change

Natural resource pressures

Urbanisation likely triple

Air pollution & respiratory diseases

Rising temperatures

Aging population

Large-scale blackouts

Rising water levels

Bio diversity

Food shortages

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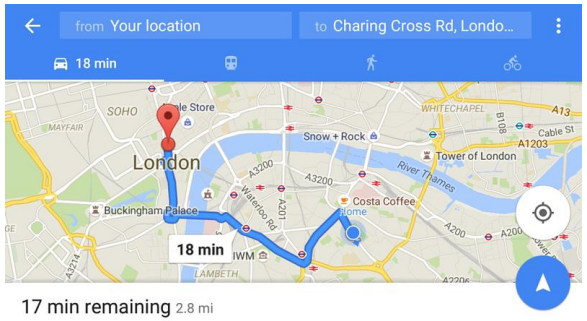
Geospatial is not ‘special’ – *Everything happens somewhere*

Geospatial information – it’s in the sat nav in your car, the apps on your phone and the survey of your home.

On average, we rely on geospatial information more than 40 times a day:

- Utility providers (gas, electricity, telecommunication, water)
- Waste collection
- Property sales
- Addressing
- Insurance
- Delivery services
- Infrastructure development
- Emergency services
- Local services, such as schools, hospitals and roads
- Traveling from A to B



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What is the Future Trends report?

The Future Trends report provides expert opinion on the mid to long term-developments in geospatial information and is a strategic insight document for all countries and the global geospatial information community.

It is broad in nature, looking at emerging trends in technology, legal and policy, skills and training, the private and non-governmental sectors, and in the role of government.

Recognizing that disruption and change in the geospatial community are likely to occur as a result of the linking of multiple trends, the report explores a diverse set of emerging and developing trends. Among others, these include data privacy and ethics; Digital Twins; Artificial Intelligence and data analytics; and, capacity building.

The full Future Trends report can be accessed here.

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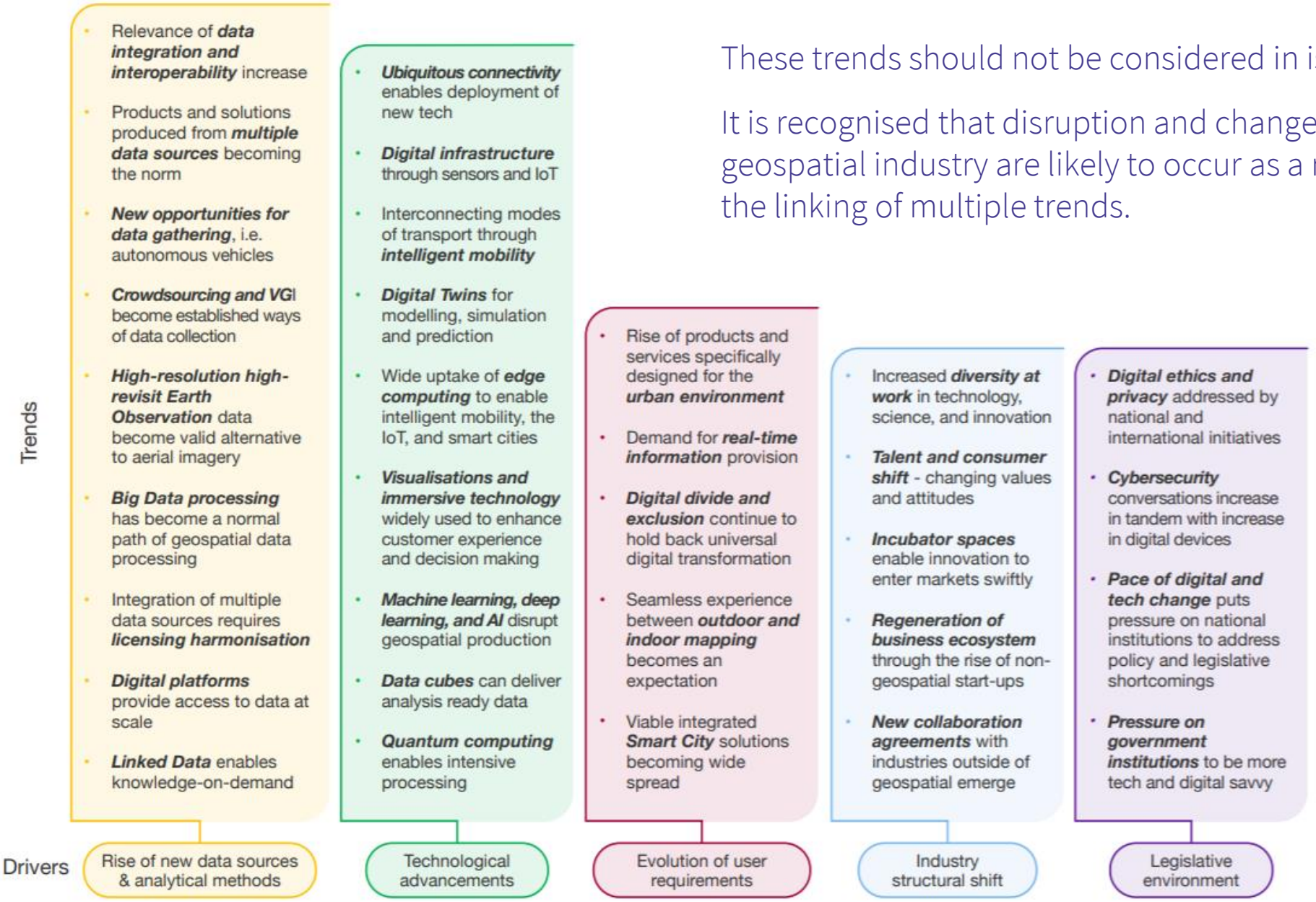
Geospatial drivers and trends



These trends should not be considered in isolation.

It is recognised that disruption and change in the geospatial industry are likely to occur as a result of the linking of multiple trends.

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Mapping diseases – The case of COVID-19

In 1854, John Snow demonstrated the clear value of location to epidemiological science – mapping the clusters of cholera deaths in the London epidemic and tracing an important source of the outbreak.

Today, the COVID-19 pandemic has highlighted again how geospatial infrastructures have become an essential component of disease prediction, prevention, and response:

- Spatial Big Data, such as from smartphones, social media and wearable devices, are being analysed to trace people's movements;
- Predictions on people's behaviour are made by using contextualized data, digital maps and technologies including geofencing, GPS trackers and sensors;
- Visualizations make data more easily accessible highlighting where people are affected and where clusters are emerging – both locally, nationally, and globally; and,
- Machine Learning techniques using aerial and satellite data help assess how environmental changes may impact infectious disease transmission.

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“We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten.”

Bill Gates (1990s)

Thank you!

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