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The use of data in infrastructure analysis and spill over benefits to communities

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The use of data in infrastructure analysis

Case Studies and important of data to analysis impact of infrastructure investment.

The potential for spillover benefit >

1. Innovation
2. Jobs
3. Investment attraction
4. Housing
5. Ecological
6. Environmental
7. Transport

What is emerging is unknown – hence impact on investment is unknown

World 2030
Population : 8.5bn

Technology Trends
Driverless cars : increase
Tele-work : increase
Tele-education : increase
Tele-health : increase
Smart grids : ubiquitous
Smart factories : ubiquitous

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New data points are everywhere

World 2030

Population : 8.5bn
Average Age : increase
Retirees to Working age : increase
Urbanisation : increase
Unemployment : mixed
Megacities : increase
Dominant Industries : Services
Climate: Warmer and Changed

Cost of old infrastructure and opportunity costs ?

Data points

*households spending $11-110 per day per person in 2011 purchasing power parity
https://www.brookings.edu/blog/future-development/2018/09/27/a-global-tipping-point-half-the-world-is-now-middle-class-or-wealthier/

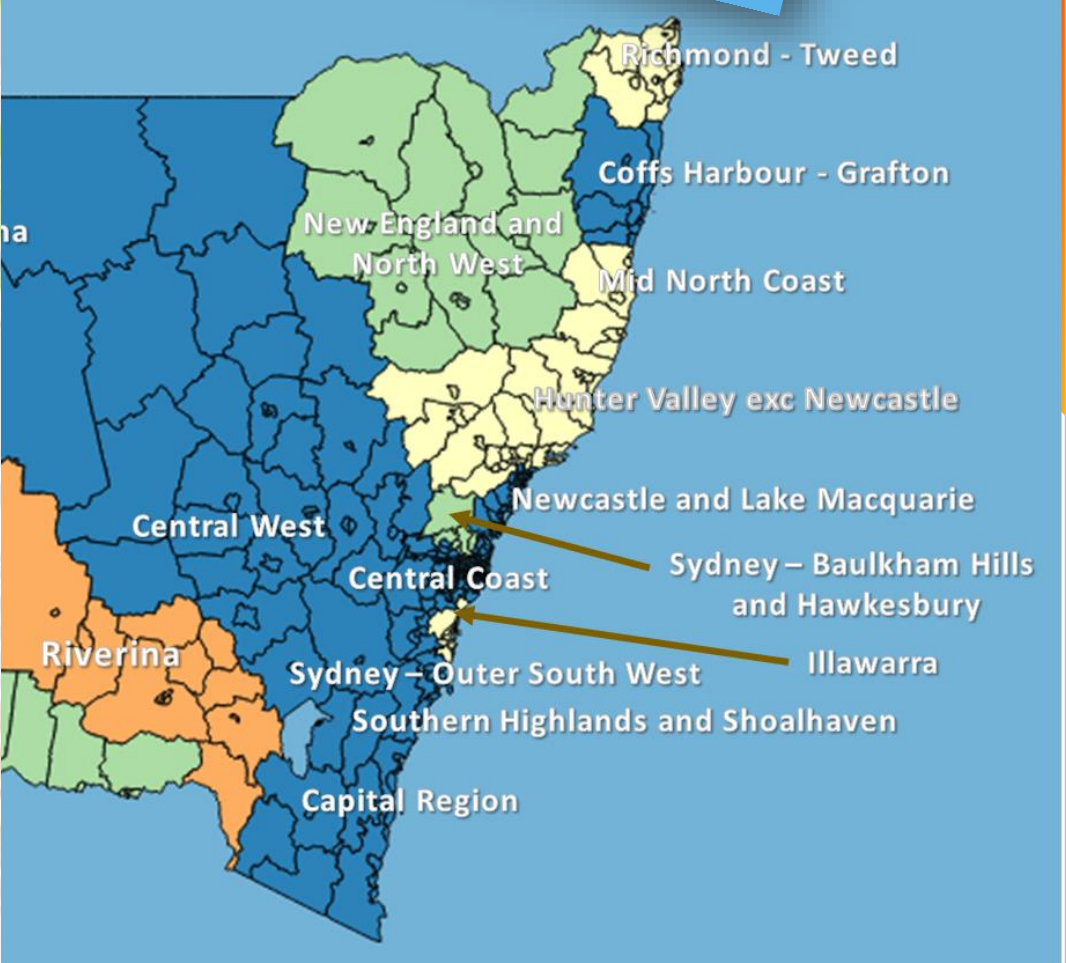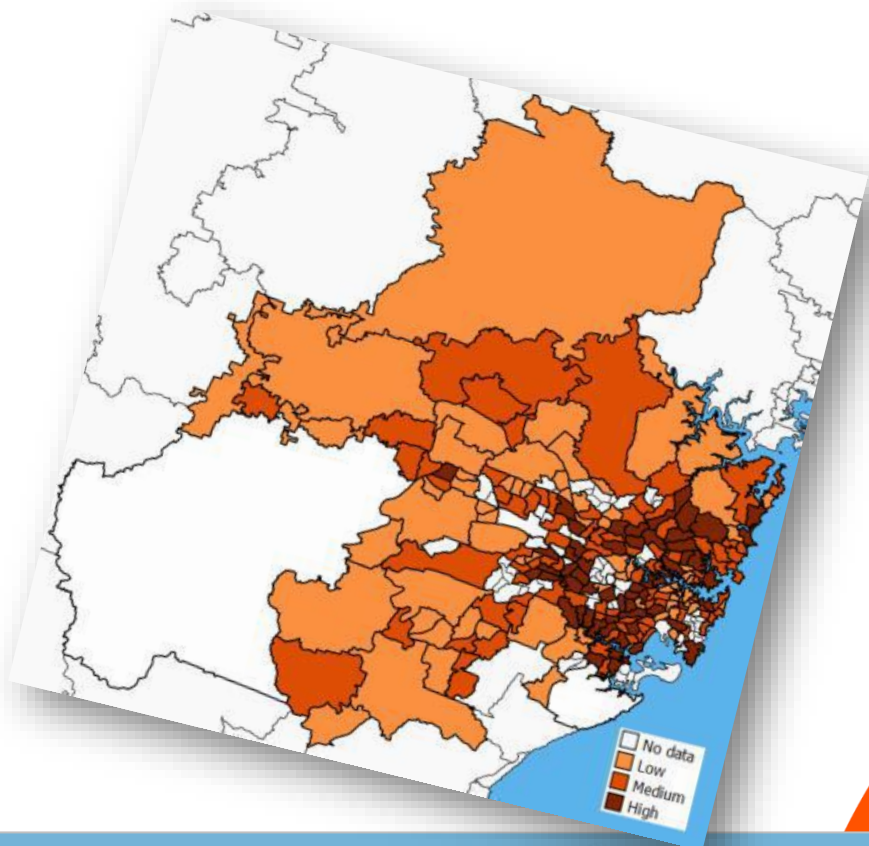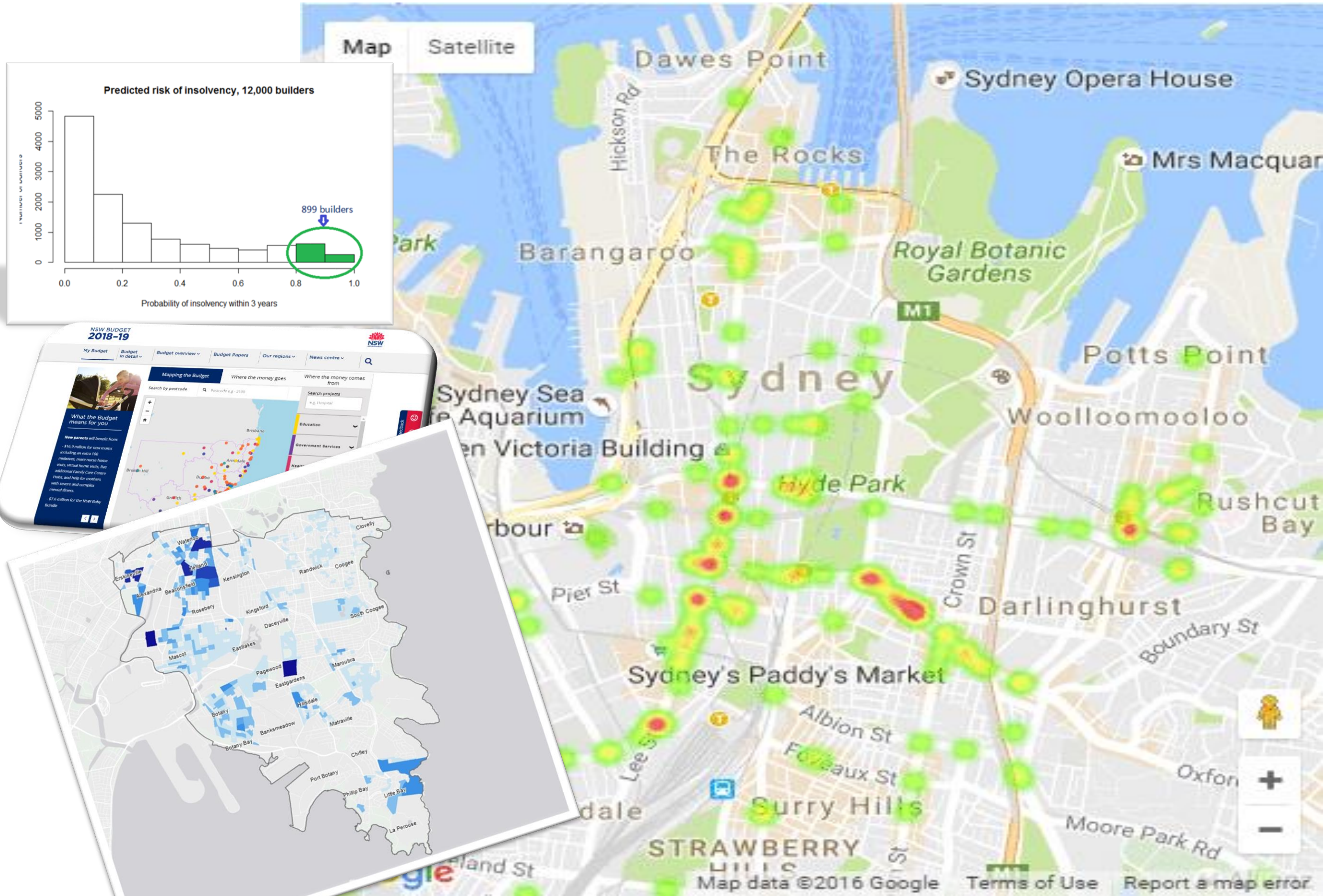As of 2018, most of the world is now middle class or wealthier*

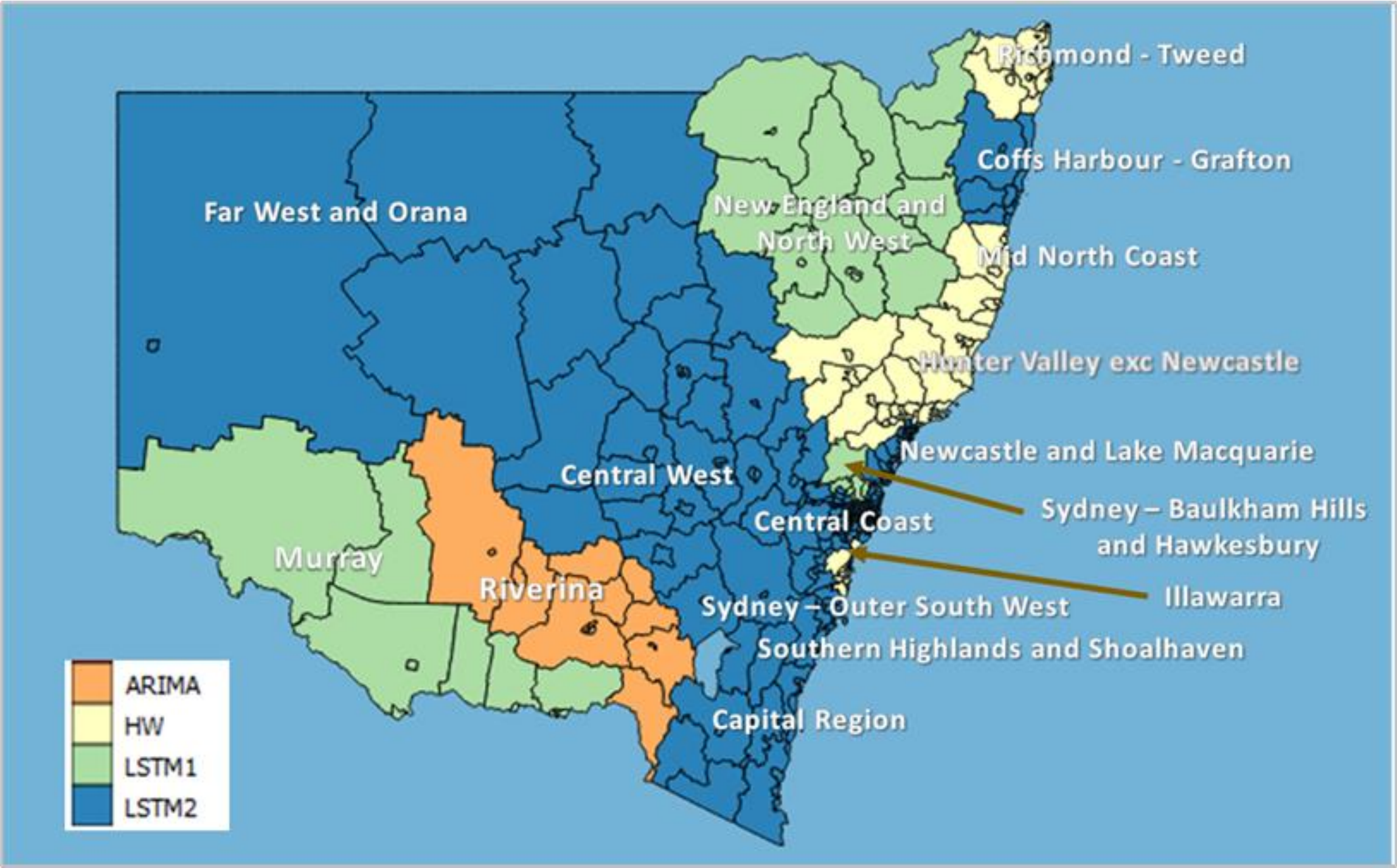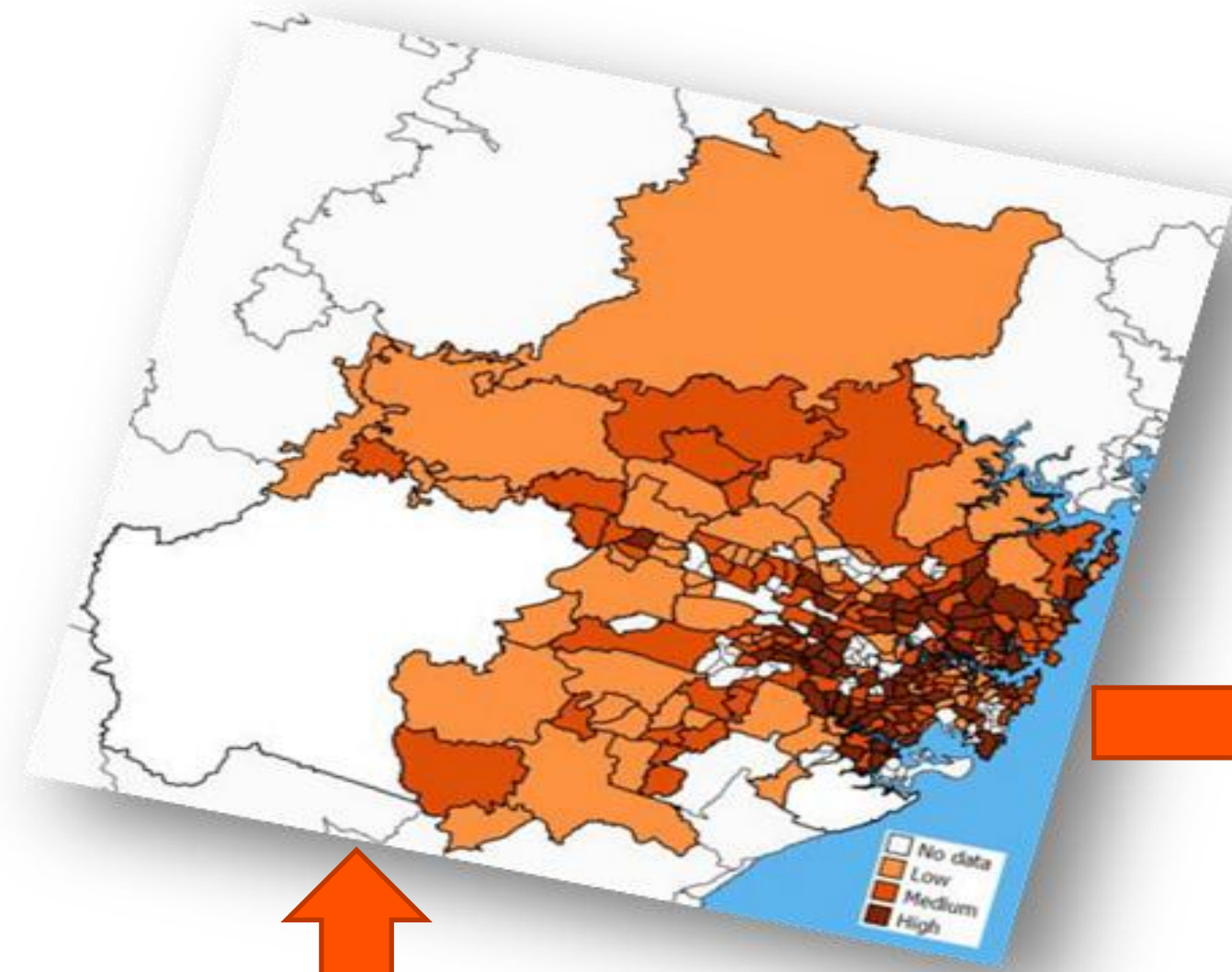# An interconnected world view !

The world
of 2030

Global
Challenges

Data in the real world

Impact of every $ invested should lead to job's and wages in a particular region

Impact of rail infrastructure to local economy

Source: https://www.theaustralian.com.au/business/property/highrise-construction-hits-low-point/news-story/88653f4a55f5e71884897b1cdd71f614

Source: https://transportnsw.info/travel-info/ways-to-get-around/metro#/

Source: https://www.bbc.com/worklife/article/20200413-how-factories-change-production-to-quickly-fight-coronavirus

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Govt services investment to local schools and surrounding areas region

Source :https://www.theguardian.com/culture/2015/jan/02/the-10-best-school-buildings
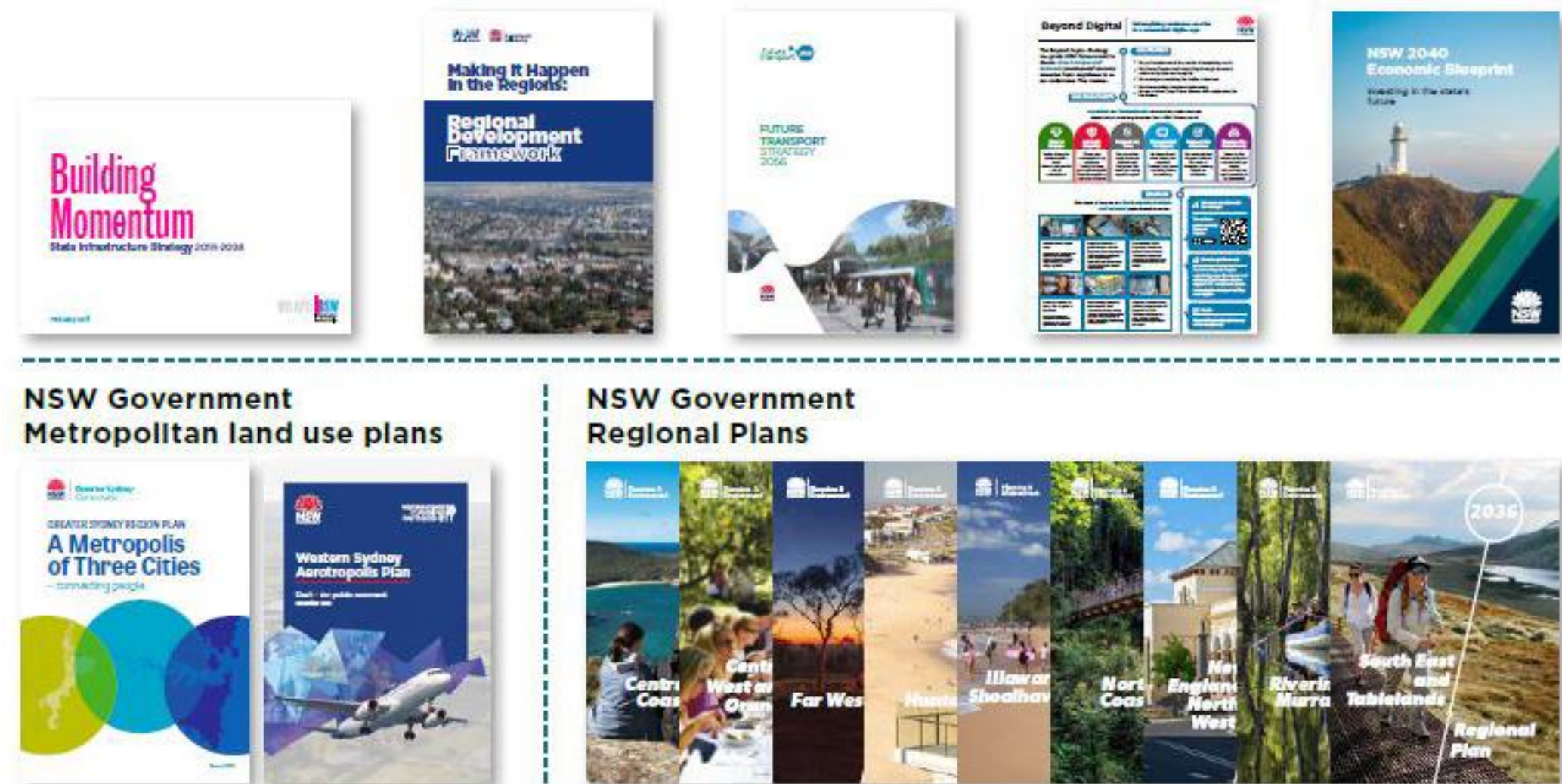

Wealth creation or not ?

$$$$$$$

Source: https://www.kings.edu.au/exploring/senior-school/senior-school-facilities-in-detail/

Whole of community perspective

Enhanced by Digital Twins, Data Sharing, Security and Privacy

https://www.dpie.nsw.gov.au/our-work/strategy-and-reform/smart-places/smart-places-strategy/delivering-outcomes-for-customers

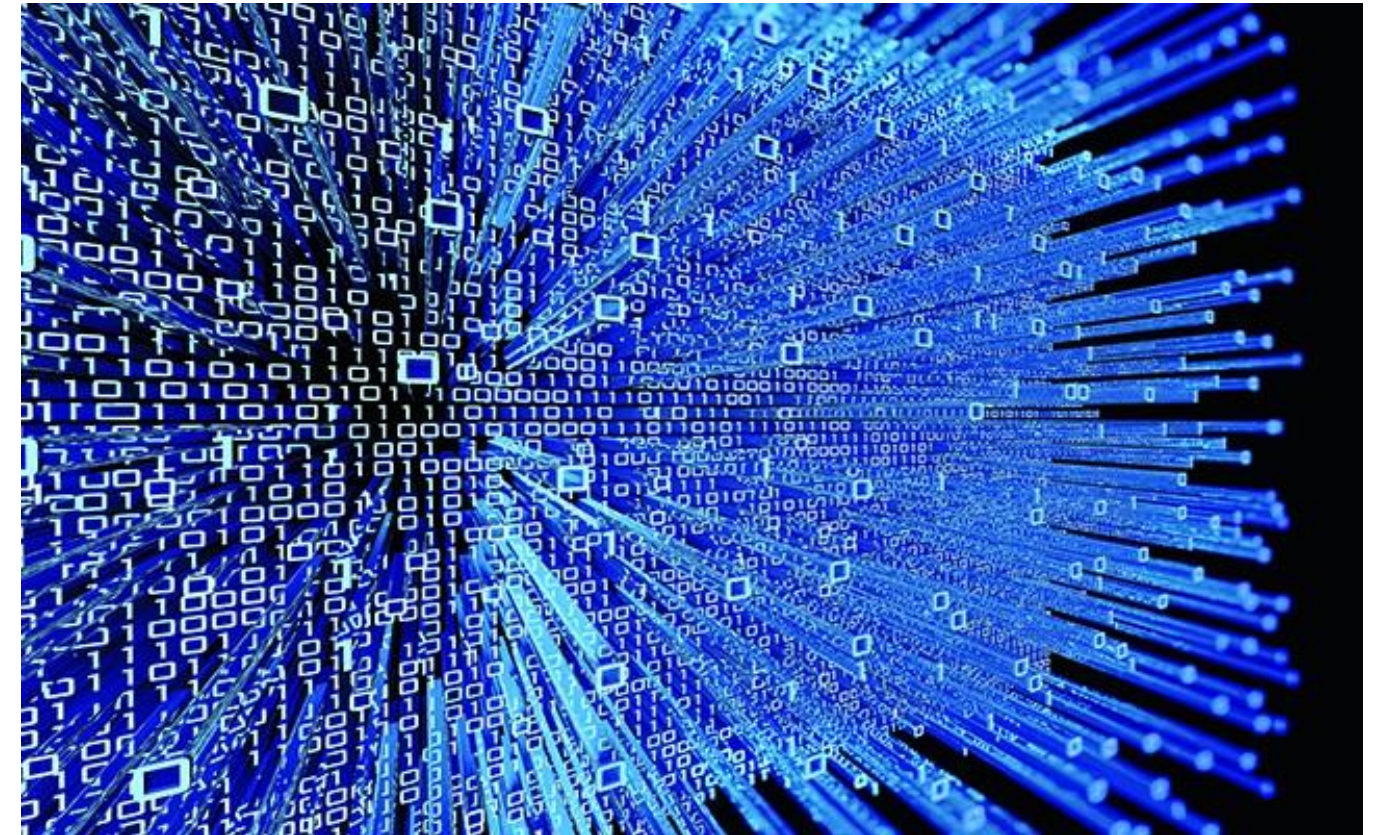# Data Sharing framework and trust network

Factors for data analytics

www.towardssicence.com

What data is required ?

Is the data reusable ?

Is the data quality consistent ?

Is the data supply clean and easy ?

Is it open data or not

Key data outcomes to foresee

www.combox.ai

What will the data inform you ?

How many formats will the output be in ?

What decisions and value will executives and decision makers make?

What data will be required on an ongoing basis ?

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Spill-over benefits to look out for

www. https://www.pitara.com/science-for-kids/5ws-and-h/why-does-milk-spill-over-when-it-boils/

www. Weforum.org

www. Wikipedia.com

www. Wsp.org

www. Trsil.com

www.abc.net

www.travellor.com

https://www.utblick.org/2021/11/11/rd-innovation-and-tax-policy/

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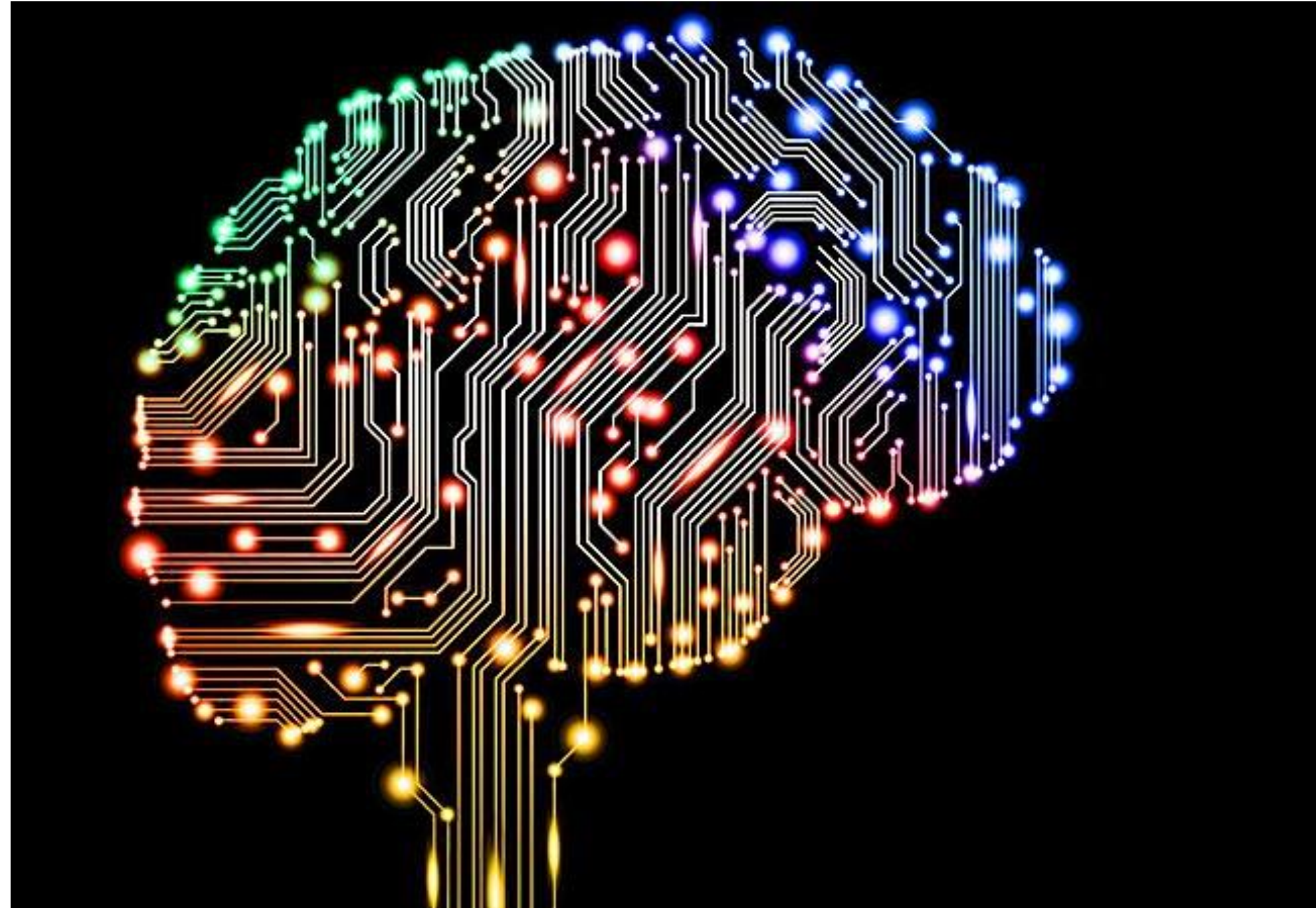
Everything should be made as simple as possible, but no simpler.

Albert Einstein

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