

Local.
Smart.
Digital.
Connected.

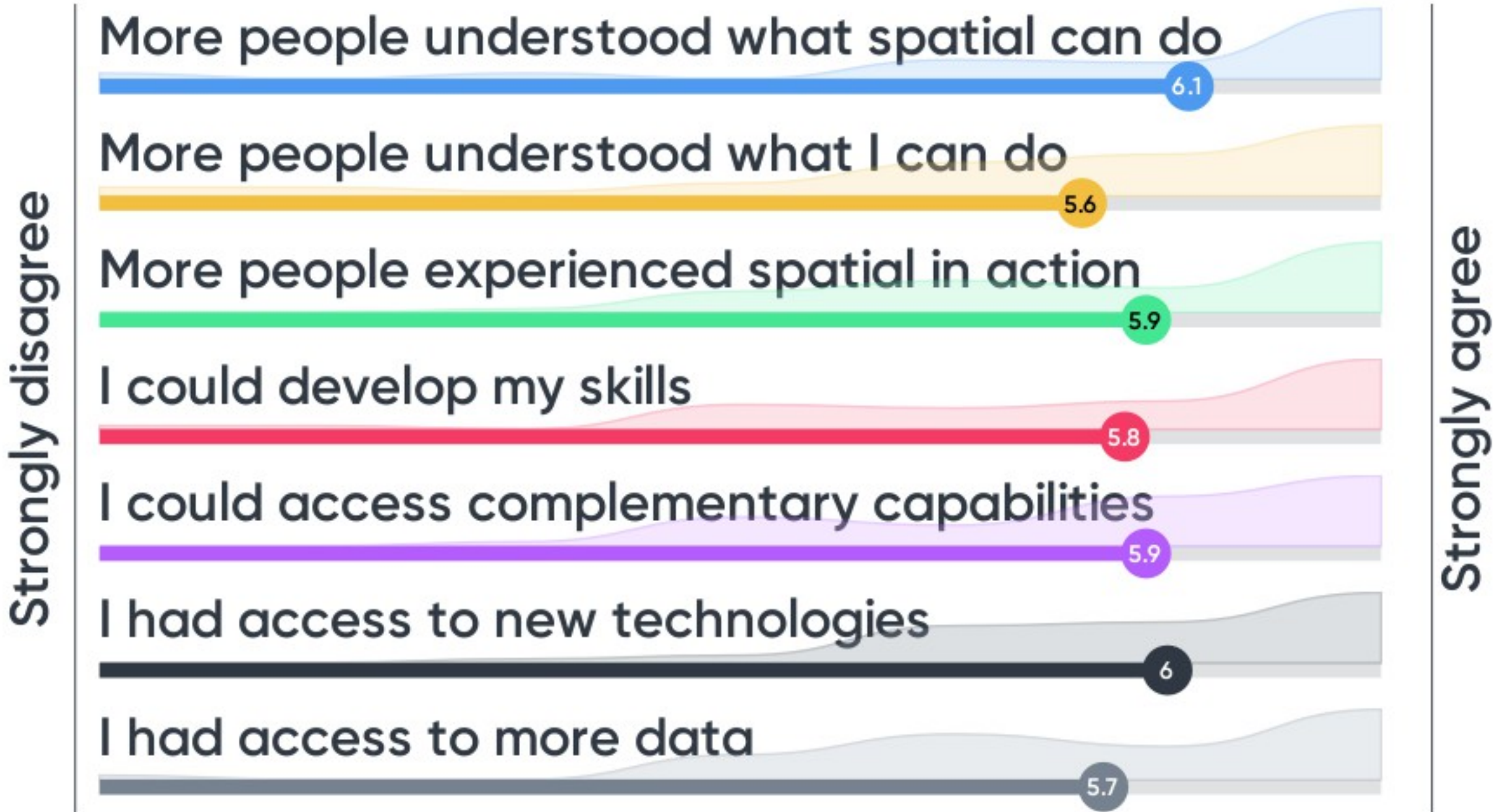


I prefer, therefore, the phrase *smart, connected* cities, where we explore how to **intelligently connect** people with others, services, and infrastructure. A smart, connected city is **human-centric** – it's a city that enables its residents and visitors to do what they want, more easily. A smart, connected city should **enhance liveability** – which includes everything from quality of work and calibre of jobs, to arts and culture, to public facilities and transit, and transport options.

Cat Mason

Chief Digital Officer, City of Brisbane

As a geo-professional, I could have more impact if....



Let's take
a tour.



Population of 18,500



3 towns, 17 villages





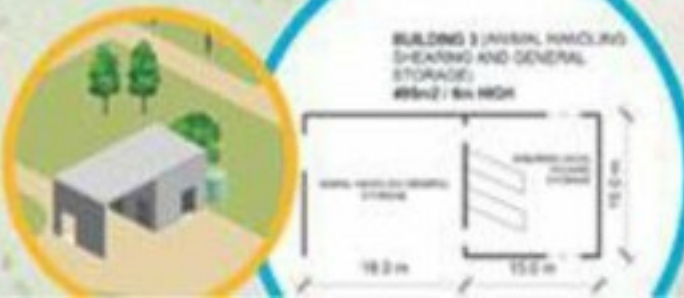
Newly-amalgamated Council

Agricultural industry



CSIRO Boorowa Site - Proposed Infrastructure Plan.

CSIRO Ag Research Station



Rural IoT Network

Emerging education hub



Ecosystem thinking

Hilltops **SMARTSCAPE**

Integrated program
of thinking and doing

Across the region of 3 towns and 17 villages, the **SMARTSCAPE** program will connect people, organisations and activities through a multi-stream **living lab** model that includes:

learning **SMARTSCAPE**

Creating a regional knowledge centre, anchored by a new \$6.5m multi-purpose education and community precinct as a local base for a network of universities as well as a hub for digitally-enabling schools, TAFE, remote libraries and whole-of-life learning.

agribusiness **SMARTSCAPE**

Create new economic and social value from the comparative advantage of the local agricultural sector by hosting the national pilot for an agtech open sensor network roll-out in 2017 and leveraging the re-located CSIRO Agricultural Research Station at Boorowa (BARS)

civic innovation **SMARTSCAPE**

Creating new forms of public-private shared value through managing tech-enabled joint projects



enterprise **SMARTSCAPE**

Creating the culture and conditions for enterprise through incubator, workspaces and support services for small business, start-ups and young people as well as access to inspiring mentors and new development opportunities in emerging industries

digital + data **SMARTSCAPE**

Innovative responses to rural connectivity and data-led insights to support resilience, productivity and full participation by Hilltops in the networked economy.

arts & culture **SMARTSCAPE**

Vibrant multi-use spaces where learning is juxtaposed with creative, arts and culture initiatives for all ages and needs.

government **SMARTSCAPE**

Developing new networked services for improved administrative efficiency and citizen service effectiveness.

Hilltops SMARTSCAPE

Beyond strategy.
Convening + mobilising
an ecosystem of activity
for enduring impact and
value.

- Ideas**
 - Concepts and strategies
 - Responses to challenges
 - Opportunities
 - New ways of thinking

- Capacity**
 - People (partners, leaders, innovators, makers)
 - Resources and funding
 - Skills and experience)

- Projects**
 - Tangible initiatives
 - Applied innovation
 - Experimentation

- smart precincts**
...physical spaces
 - Buildings
 - Campuses
 - Linked areas, etc

- smart zones**
...virtual spaces
 - Digital networks
 - Knowledge hubs
 - Online, etc

- smart clusters**
...social spaces
 - Communities
 - Interest groups
 - Alumni, etc

Towards a
**Hilltops
Digital Twin**

Spatial innovation platform project

Prototype project

Build a prototype intelligent 3D platform using the Hilltops Council region as a pilot

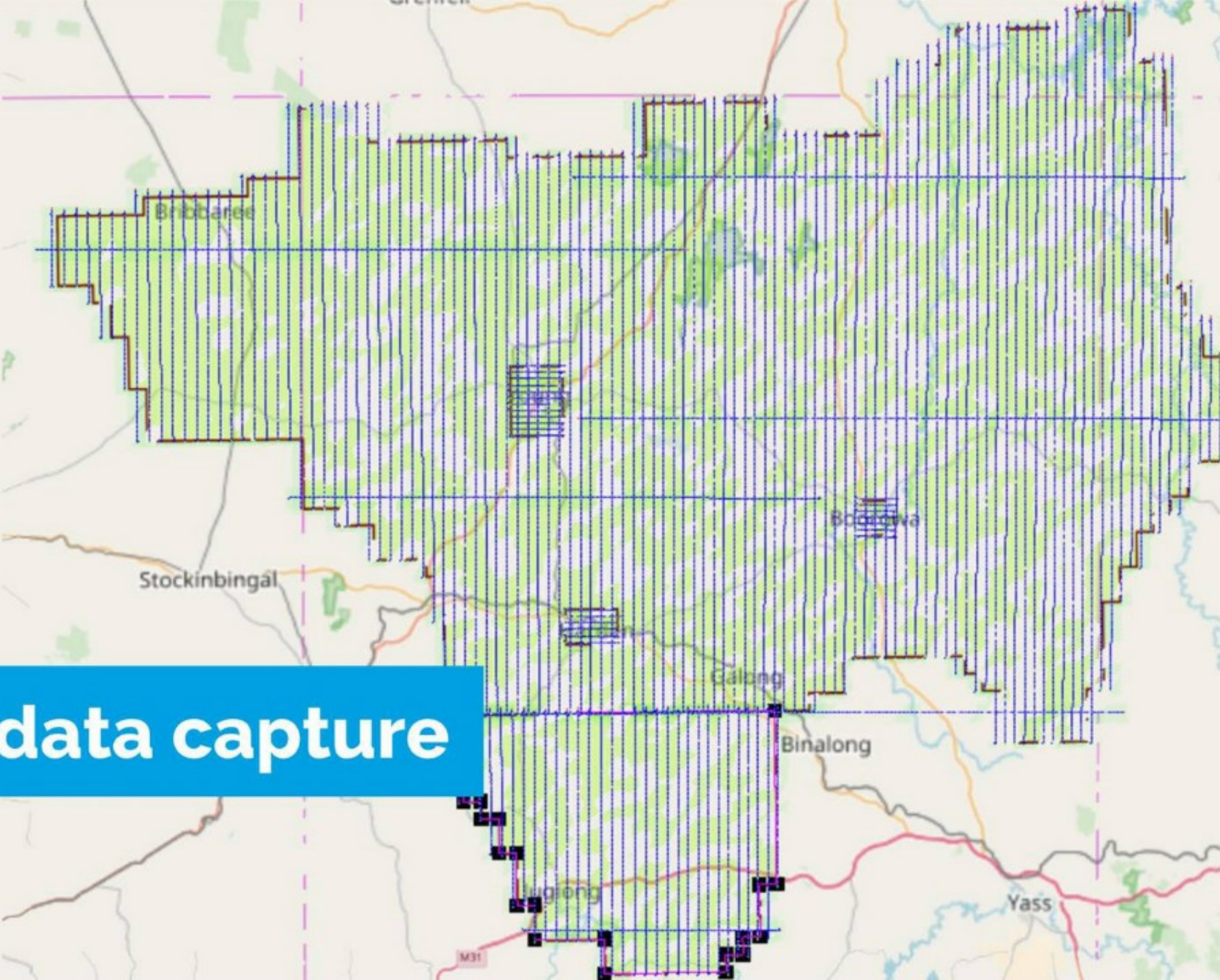
Undertake a 3D data capture of the Hilltops region:

- Region-wide imagery and lidar
- Proposed Education and Community Precinct site in Young
- Environmental catchment sites and local features

Council staff engagement and training

Data capture trial using app-based capture





Aircraft data capture

RPAS data capture





Mentimeter

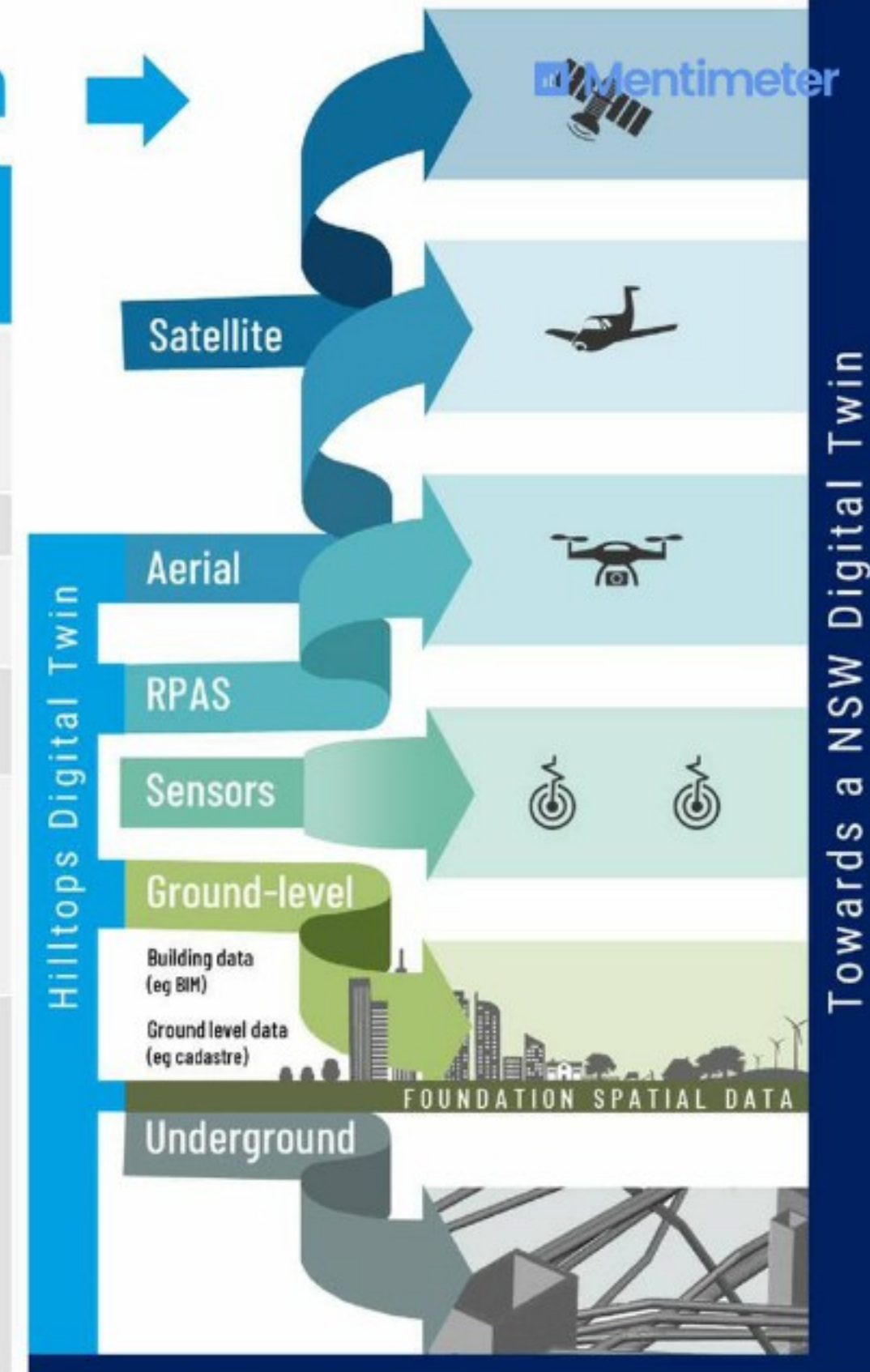


3D digital twin MVP

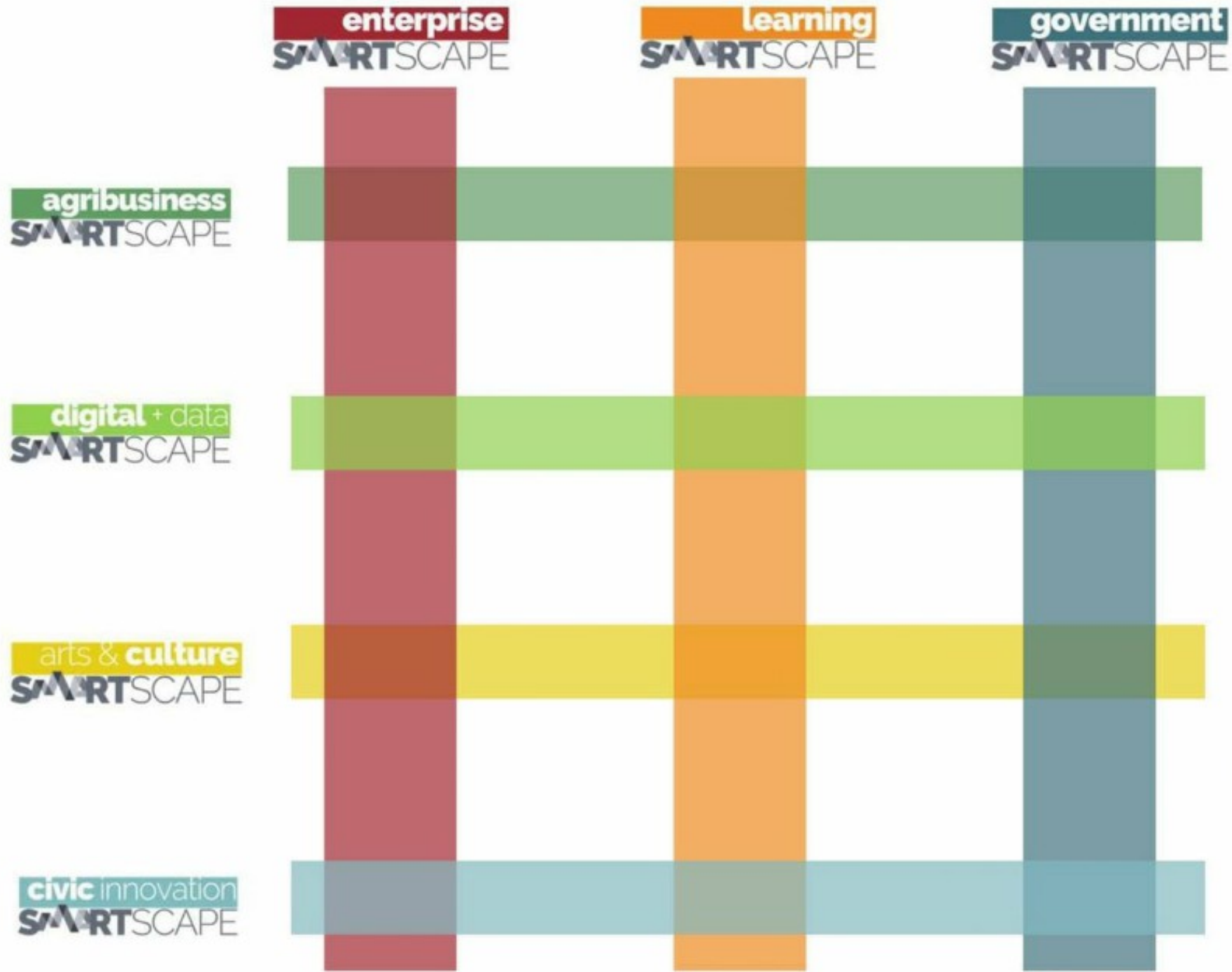


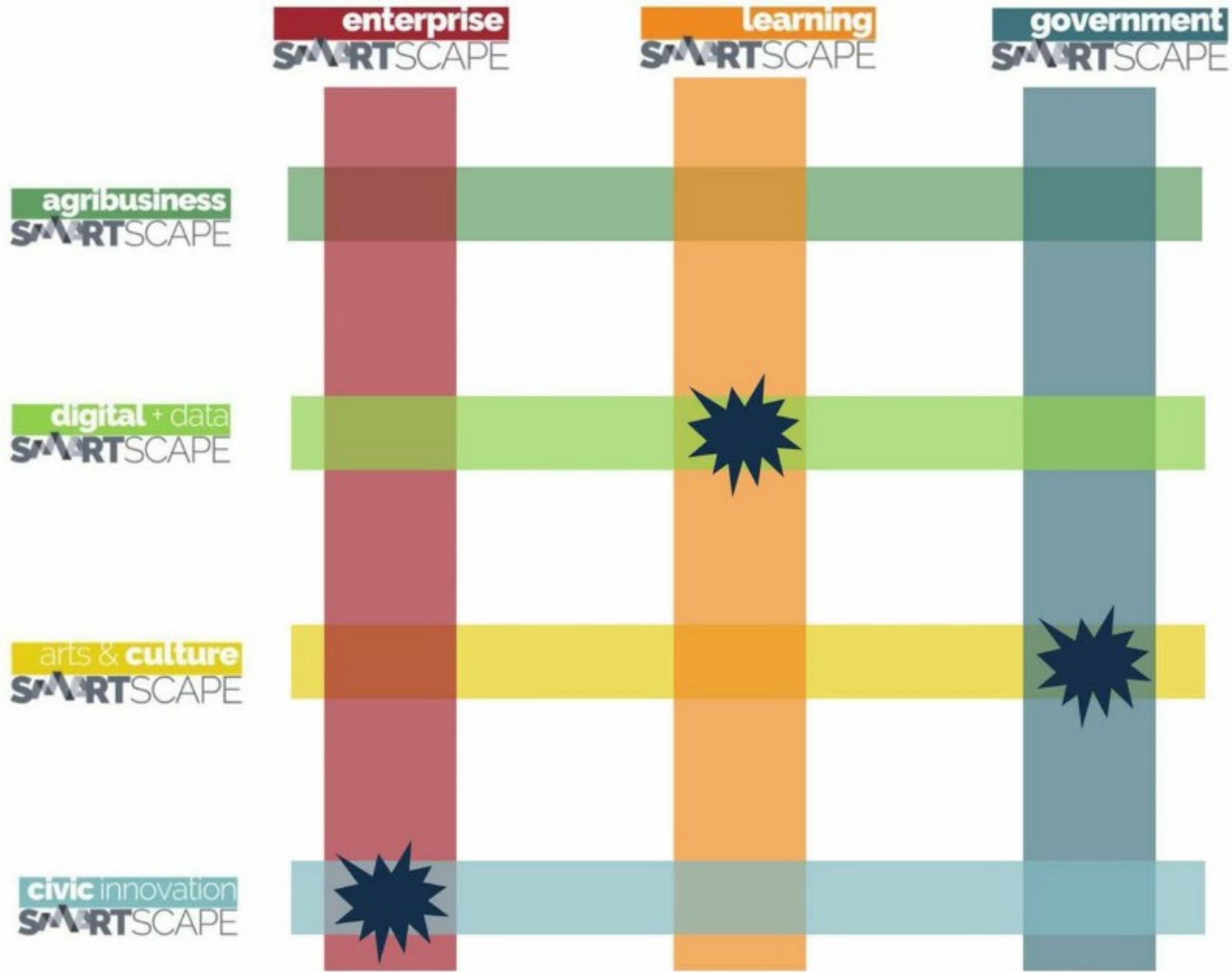
Launchpad for Government-as-a-Platform

Level of Detail	Coverage	Data and resolution	Capture mode
1	WHOLE OF LGA	3D mesh (30cm) (Digital Twin MVP model)	Aerial photography
		C3 point cloud	LiDAR
		Digital Surface Model (1m)	LiDAR
		Digital Elevation Model (1m)	LiDAR
2	TOWN ZONES <ul style="list-style-type: none"> • Young • Boorowa • Harden 	3D mesh (20cm)	Aerial photography
2-3	SELECTED SITES <ul style="list-style-type: none"> • Cultural, Community and Education Precinct • Blackguard Gully 	3D mesh (20cm)	RPAS Handheld DSLR



ECOSYSTEM + PLATFORM =
COLLABORATORY





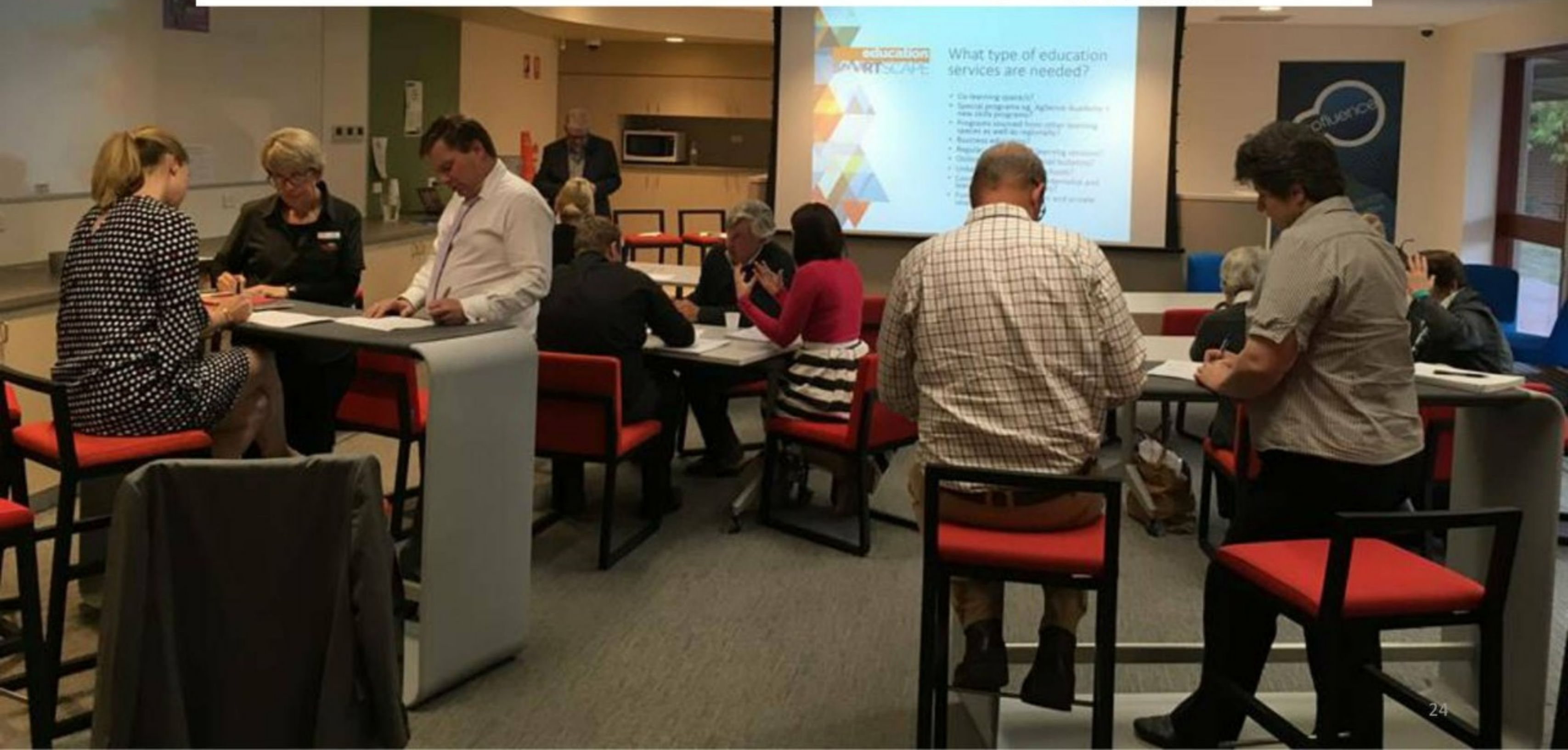
digital + data
SMARTSCAPE



learning
SMARTSCAPE



arts & culture
SMARTSCAPE



education
SMARTSCAPE

What type of education services are needed?

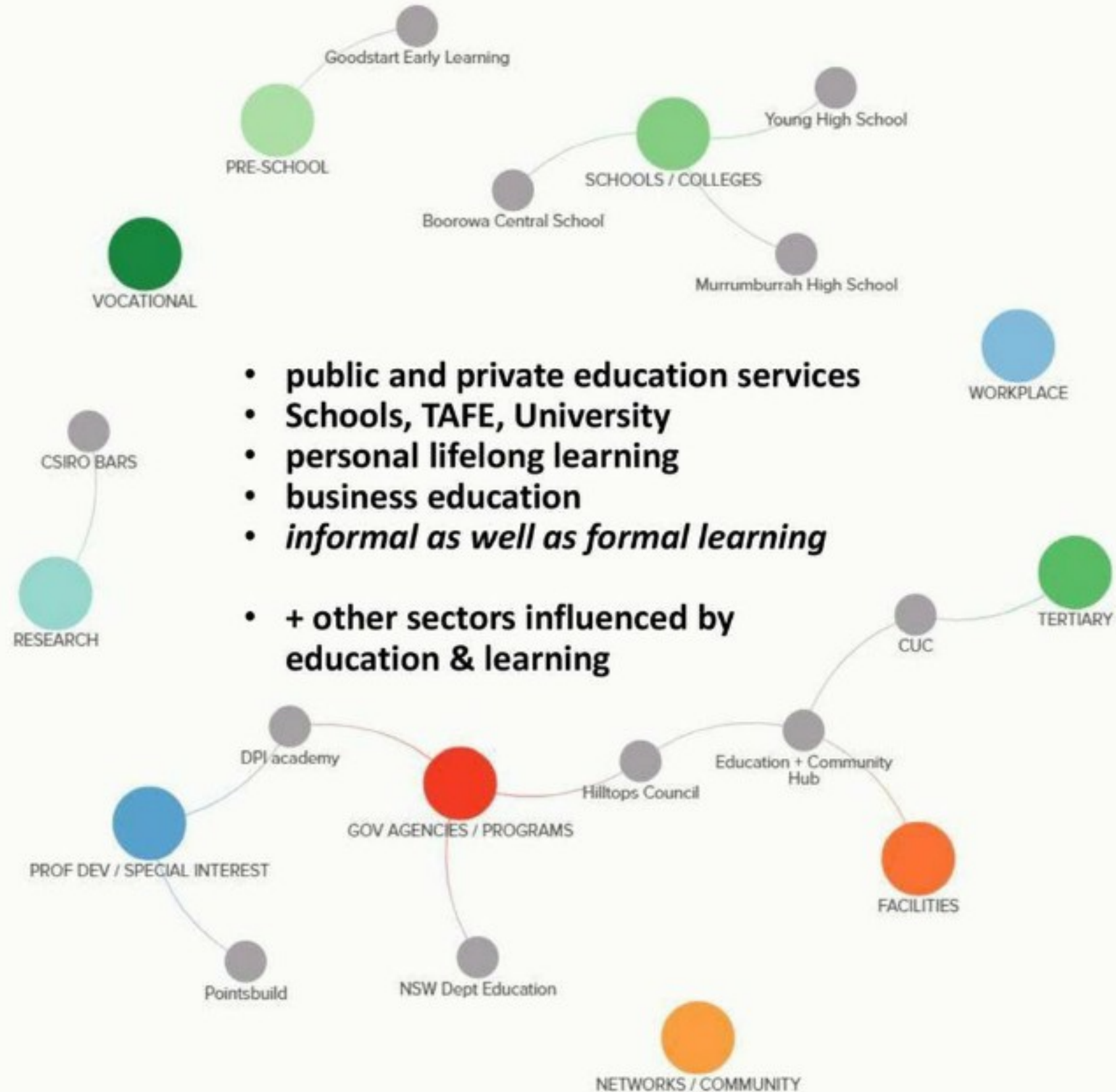
- Co-learning spaces?
- Special programs eg. AgriSense, Aquaculture & new skills programs?
- Programs sourced from other learning spaces as well as in-regionally?
- Business advice?
- Personal coaching services?
- Online learning resources?
- Local industry forums?
- Local knowledge and expertise?
- Programs to build capacity?

Places. People.

Ideas. Initiatives.

Projects. Capacity.

- Regional culture
- Funding
- Support
- Talent & skills
- Networks & community
- Facilities
- Civic
- Learning
- Commercial markets

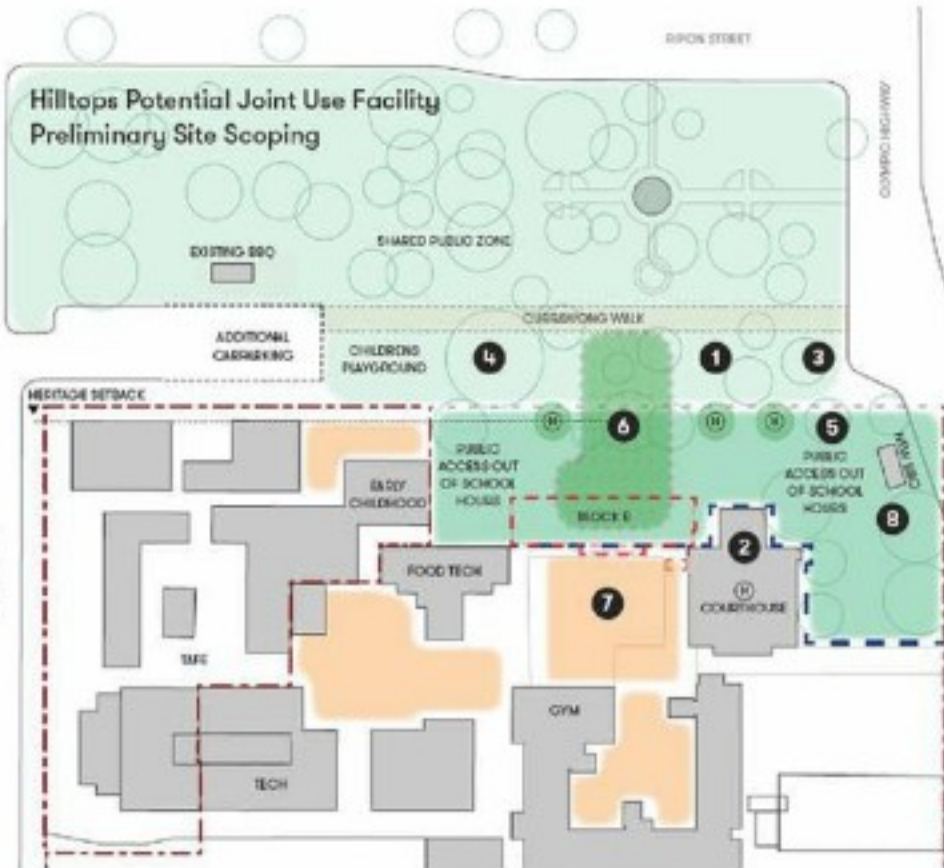


- public and private education services
- Schools, TAFE, University
- personal lifelong learning
- business education
- *informal as well as formal learning*
- + other sectors influenced by education & learning

Community learning hub

The Hilltops Council is planning to develop a Cultural, Community and Education Precinct, including a new library and learning space in Young.

Hilltops Digital Twin" 3D model will be used to design a significant civic asset



- **Creative and participatory community involvement** in the design and development of the complex using 3D models of proposed building designs situated in
- **Informed environmental and social impact assessment** through running scenarios on the 3D platform to replicate real-world issues
- **Collaboration** with Schools Infrastructure NSW, TAFE NSW and local education representatives to demonstrate **3D technology in infrastructure design**
- Develop **4D (time) capability** by following an infrastructure project lifecycle from conception through to commissioning



The Hilltops Cultural, Community & Education Precinct is a planned \$6.5m initiative to support learning, industry and cultural development in the region.



Education
School Infrastructure



TAFE NSW

Hilltops
COUNCIL



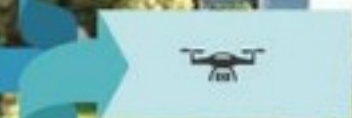
Hilltops Education Precinct

3D zoom
levels

Aerial

RPAS

Ground-level

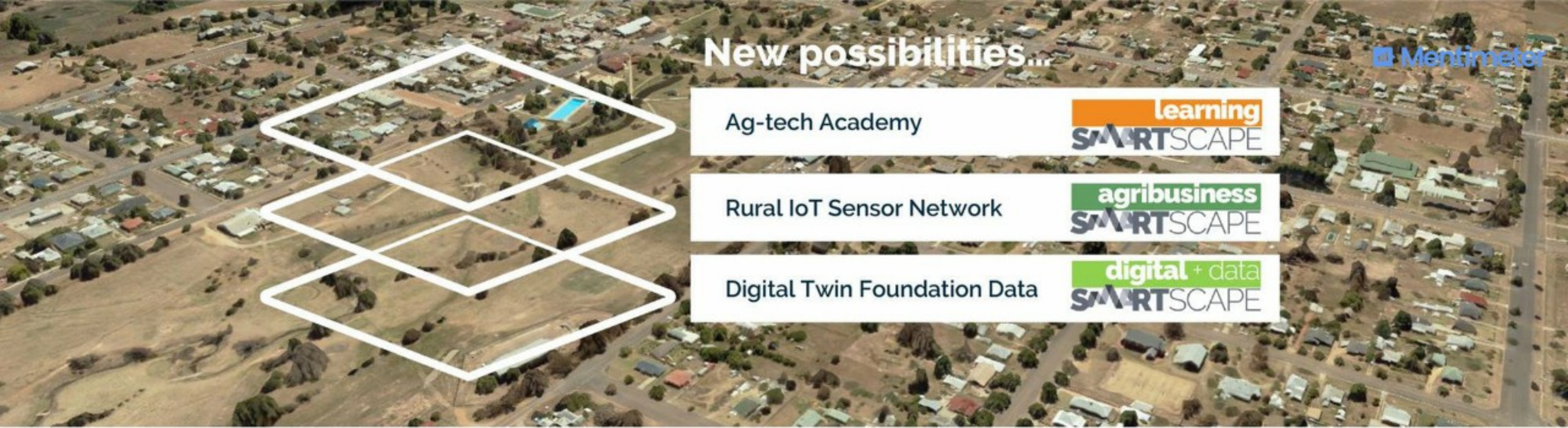


FOUNDATION SPATIAL DATA



Mentimeter



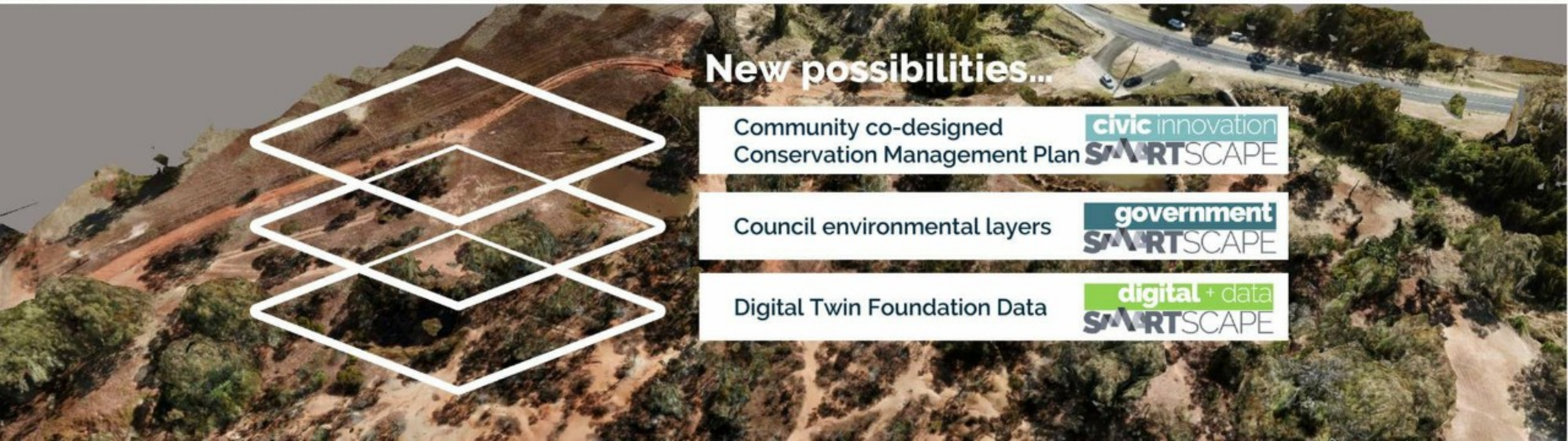


New possibilities...

Ag-tech Academy **learning SMARTSCAPE**

Rural IoT Sensor Network **agribusiness SMARTSCAPE**

Digital Twin Foundation Data **digital + data SMARTSCAPE**



New possibilities...

Community co-designed Conservation Management Plan **civic innovation SMARTSCAPE**

Council environmental layers **government SMARTSCAPE**

Digital Twin Foundation Data **digital + data SMARTSCAPE**



Image courtesy <http://www.abc.net.au/radionational/programs/science/now/images2.jpg/9236986>

Mentimeter

Image courtesy zentrumfuercitizenscience.at

Crowdsourcing that **makes sense** **creates data** **builds skills**



Image courtesy Rockymountainwild.org

Becoming
Local.
Smart.
Digital.
Connected.



We have...



Technical skills



Service delivery experience



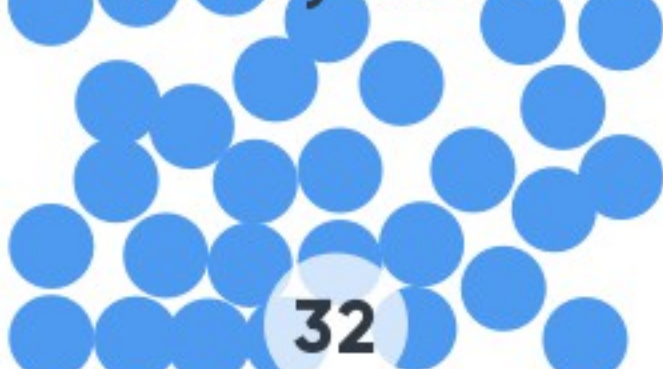
Comms/
engagement



Technology skills



Policy dev't



Research



Investment



Community dev't



Entrepreneurship

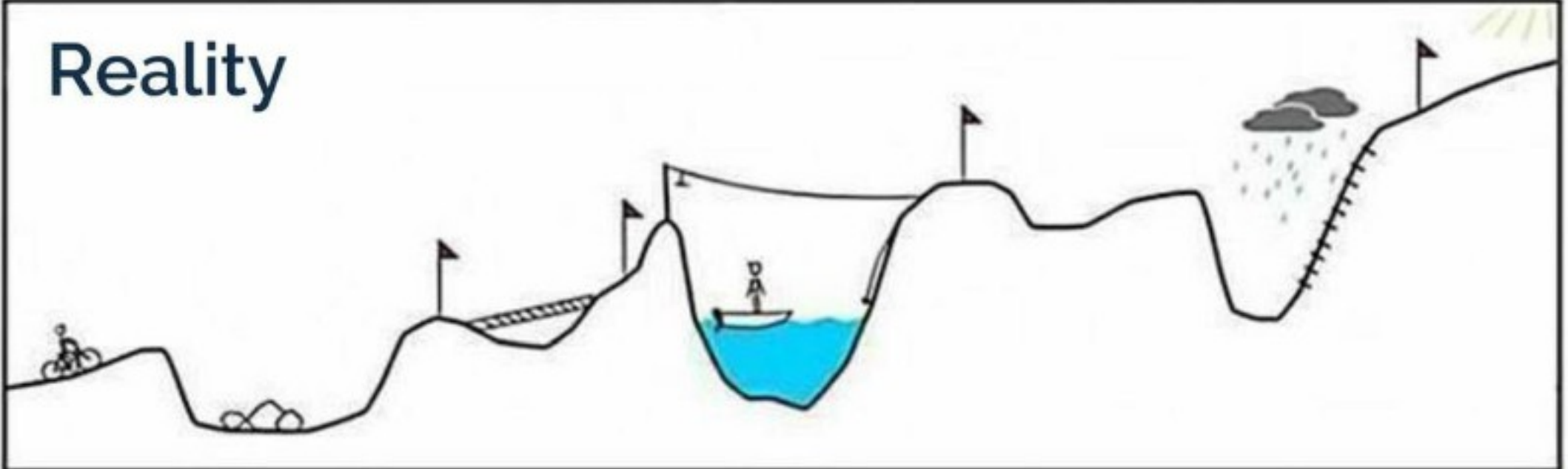
Collaboration is an
unnatural act between
non-consenting adults

Jocelyn Elders
Former US Surgeon-General

Plan



Reality



Key insights

- **Ecosystem** > enabling 'structure' for moving forward
- **True picture** of (digital) 'readiness' and capacity
- Communication & awareness **to link ecosystem**
- Leverage **existing strengths** (capability + industries)
- **Create the conditions** for new economy ways of working
- Pilot + flagship **projects for collective interest + action**
- Experiment with **new collaboration + partnership modes**