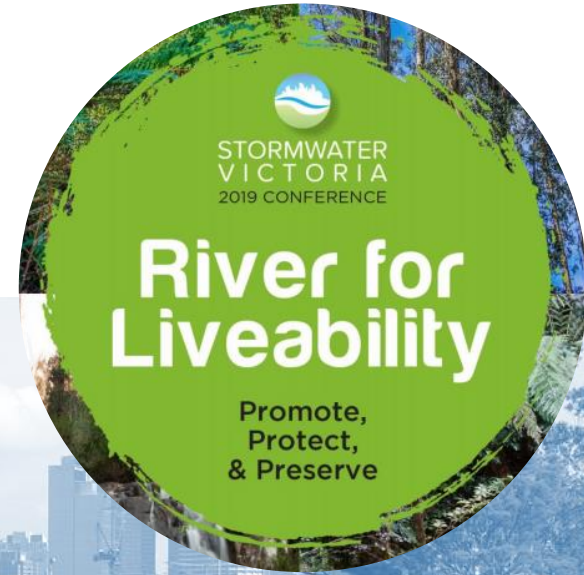


Rivers for Liveability – we all know its true!

It's all about Places?



What did we want to do?

Plan early

ensure recognition of social value in planning for waterways

Link to condition

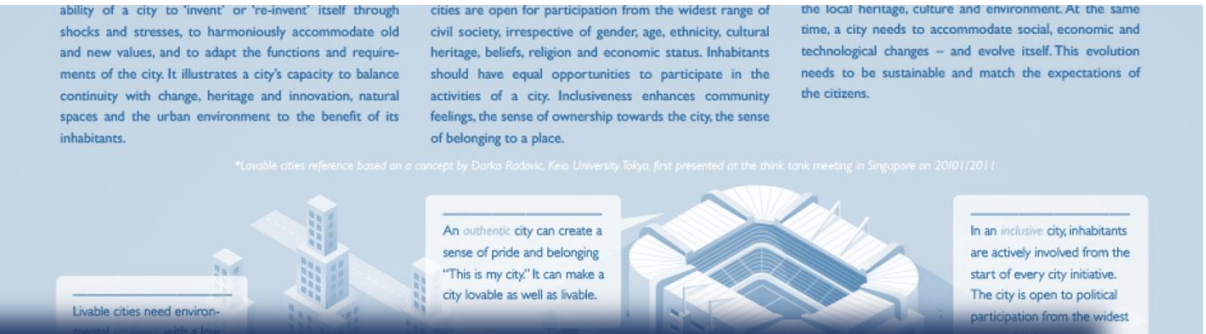
use the waterway condition metrics that under pin social value

Integrating information

create an environment to represent and explore social values of waterways

Leveraging location

create a typology to spatially represent social values of waterways



Great for messaging / comms

but

not so great for strategic asset planning



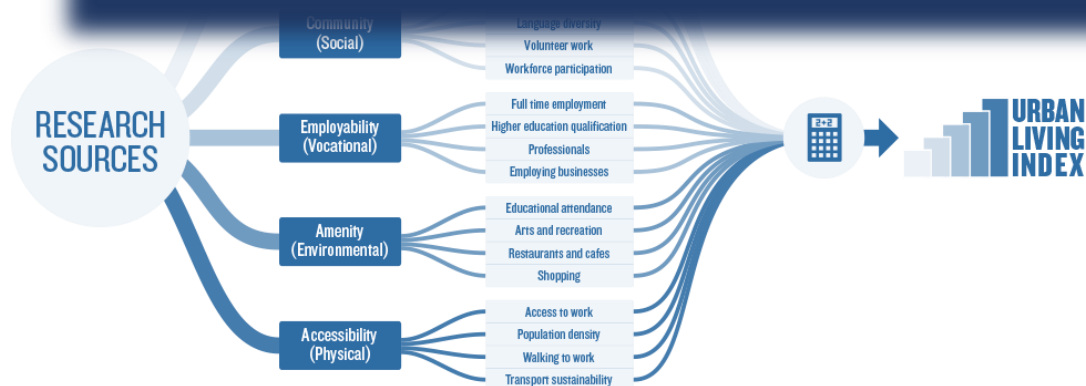


All good stuff but not much focus on waterways in this lot!

BUT

“liveability” is an aggregate idea

Research



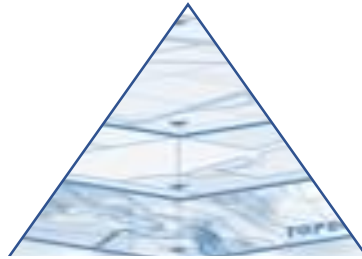
What exactly are our questions?

Can we ***spatially represent*** the social value (liveability)
contribution of water ways?..

Can we set up a framework to ***spatially integrate and explore the relationships*** of social values of water ways?
...the “where” and “why”...

How we think about social values for waterways

Representation



The 3 R's of integrated spatial information

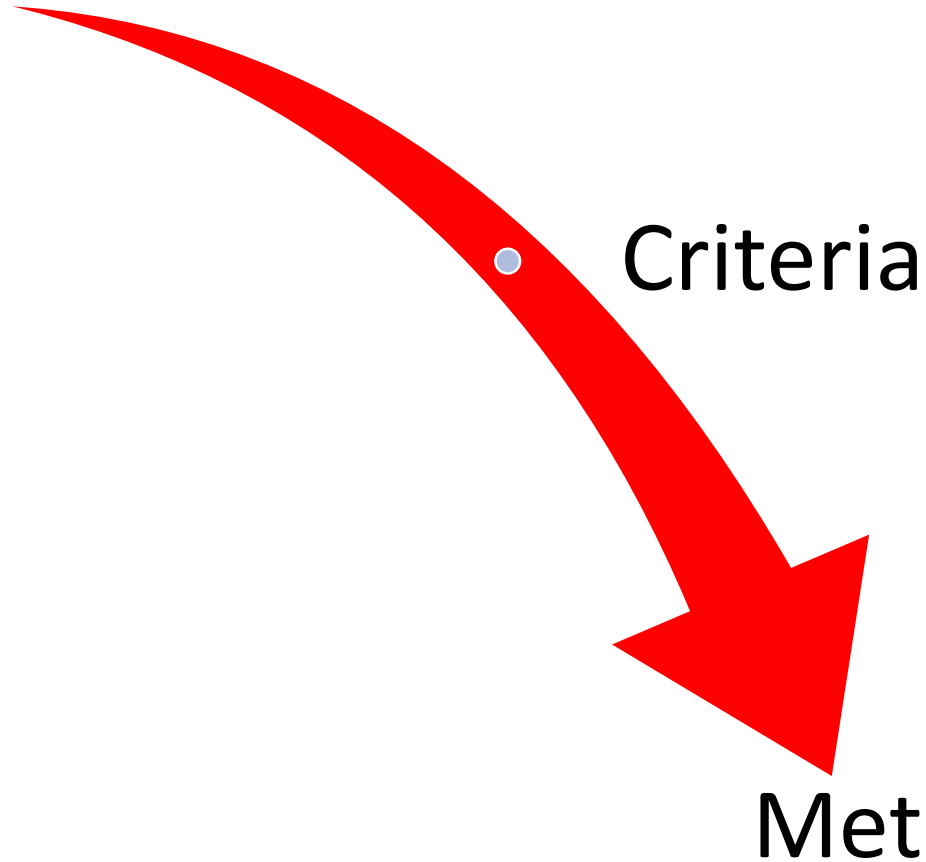


Resolution

Relationship

Representation - Defining social values for waterways

Categories



Amenity — the pleasantness of waterways and their ability to provide a restorative escape

Community Connection — waterways connect the community with nature and with each other

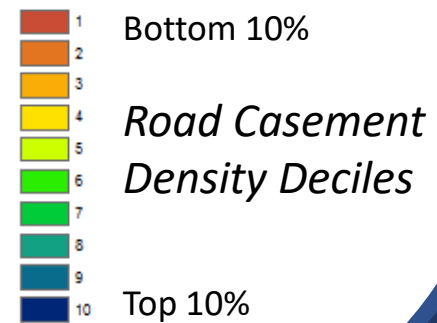
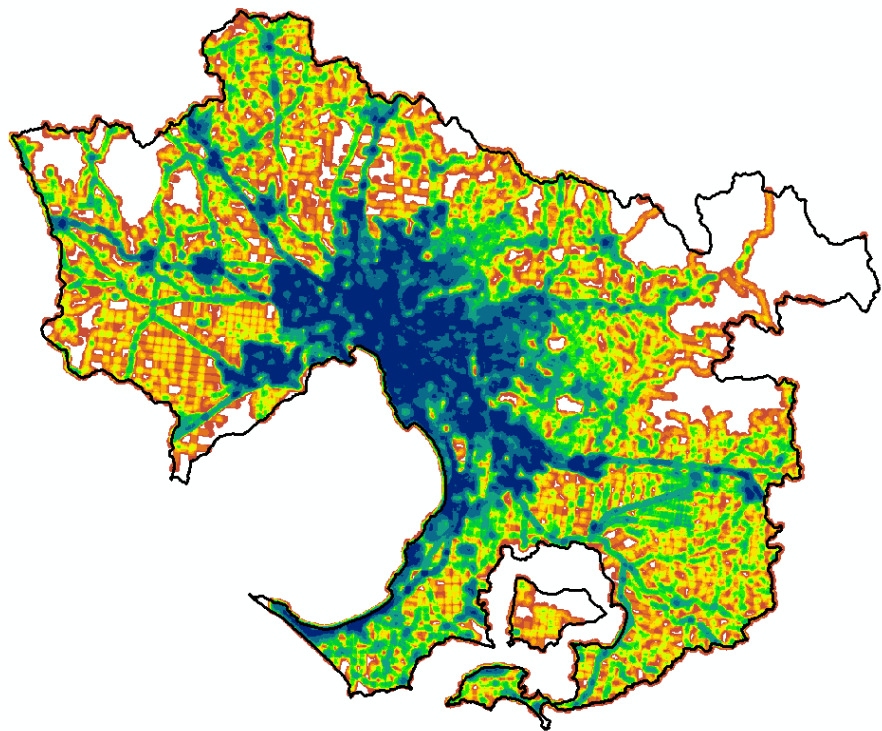
Recreation — waterways provide a setting and potential for active and passive recreation

Context — contextual metric like distance from waterways, catchment identifier, tenure category etc

Representation - From Category to Criteria to Metrics?

Category	Criteria	Metric
Context	Demand - Population within the area of interest	Mean density of population at a statistical mesh block level across the area of interest (data sourced from Australian Bureau of Statistics)
Amenity	Sense of escape – The amount of “isolated” waterway / river valley	Mean density of regional sinks (valleys and slopes as identified through using the Topographic Position Index (Jenness) tool) across the area of interest
Community Connection	Community engagement – Community grants	Presence of community grant sites across area of interest (data sourced from Melbourne Water)
Recreation	Active recreation – Bikes	Mean density of bike trails across the area of interest (data sourced from VicRoads)

30+ additional metrics

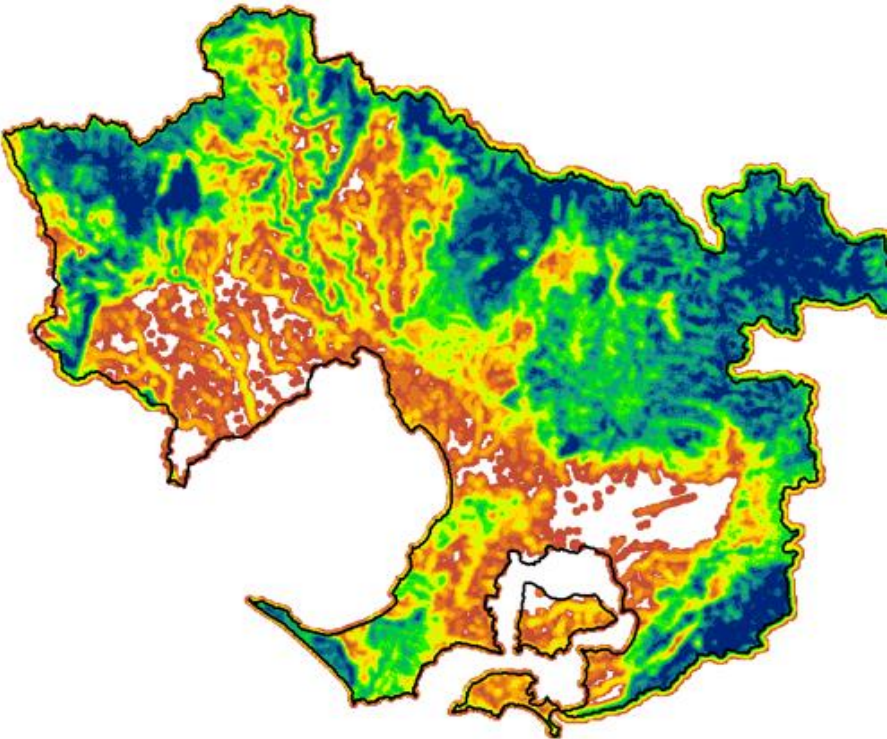
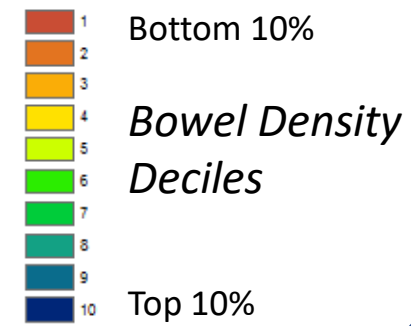


Example

Category: Amenity

Criteria: Access to the waterway

Metric: *Density of road casements to indicate accessibility of waterways*



Example

Category: Amenity

Criteria: Sense of escape

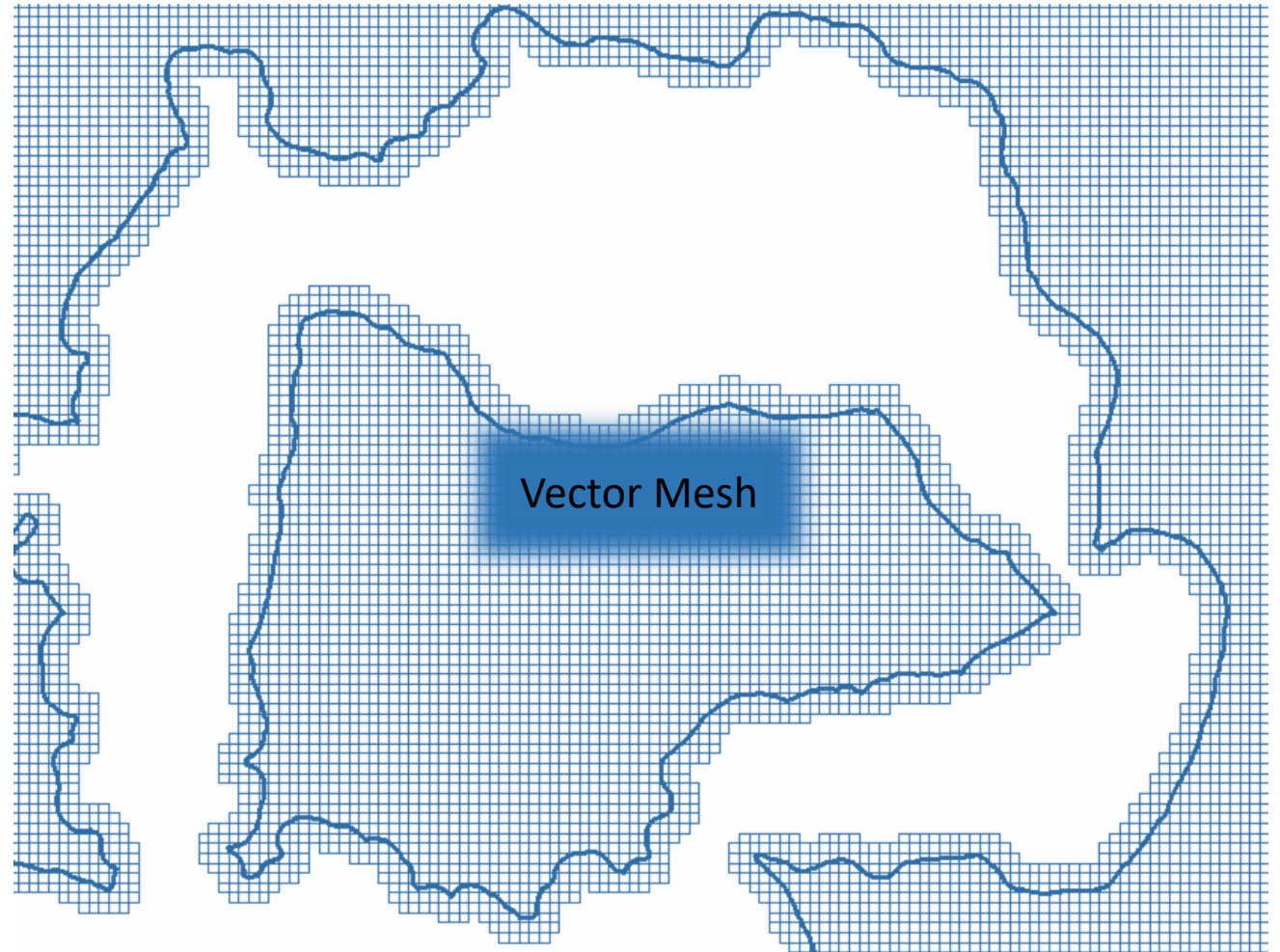
Metric: *Density of waterway valleys to indicate "isolation" from urban life*

Resolution – what is the geography of social value of waterways?

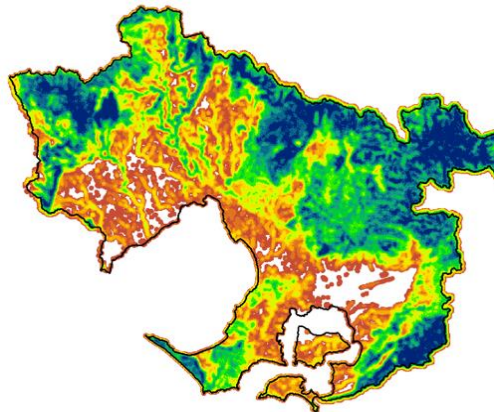
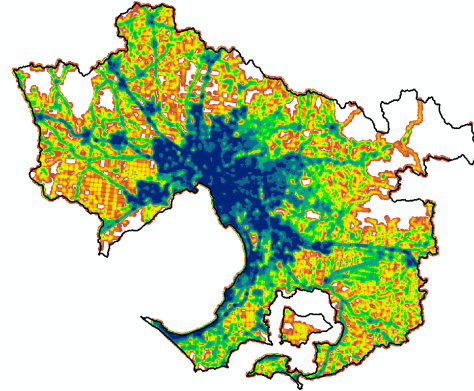
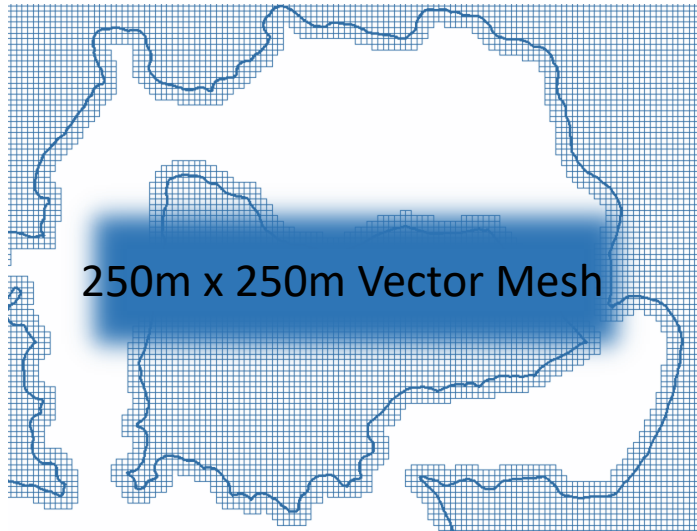
A geography for assigning metrics and integrated criteria

Some considerations:

- ☐ Operational use
- ☐ Knowing “where” and “why”
- ☐ Appropriate scale
- ☐ Ease of use
- ☐ Flexibility



Resolution – creating a social value mesh



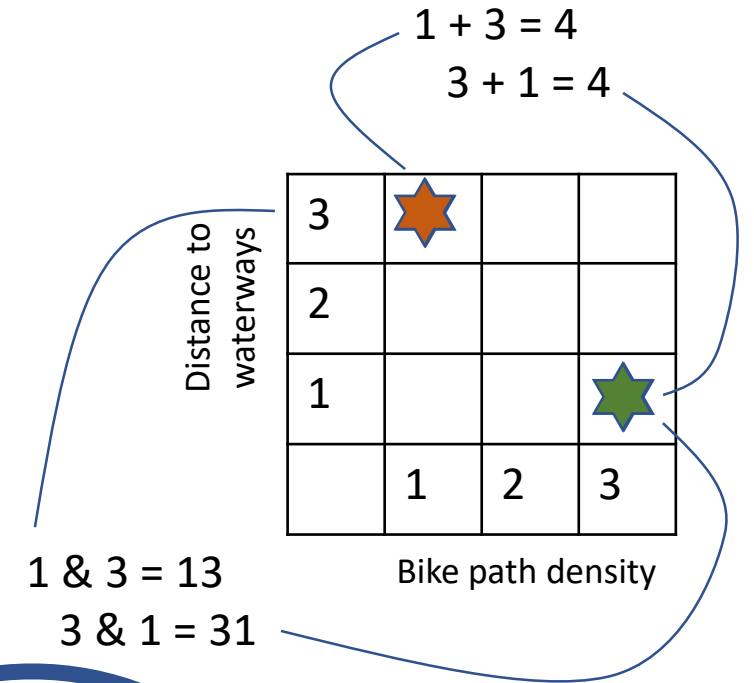
- ❑ One geography for all metrics
- ❑ All metrics in one database
- ❑ One database many curated views
- ❑ Enables simple queries – “profiling or targeting” using multiple metrics
- ❑ Can add metrics as required
- ❑ Can add context metrics – catchments, proximity to waterway etc

Relationship – what type of method will be useful?



MCA?

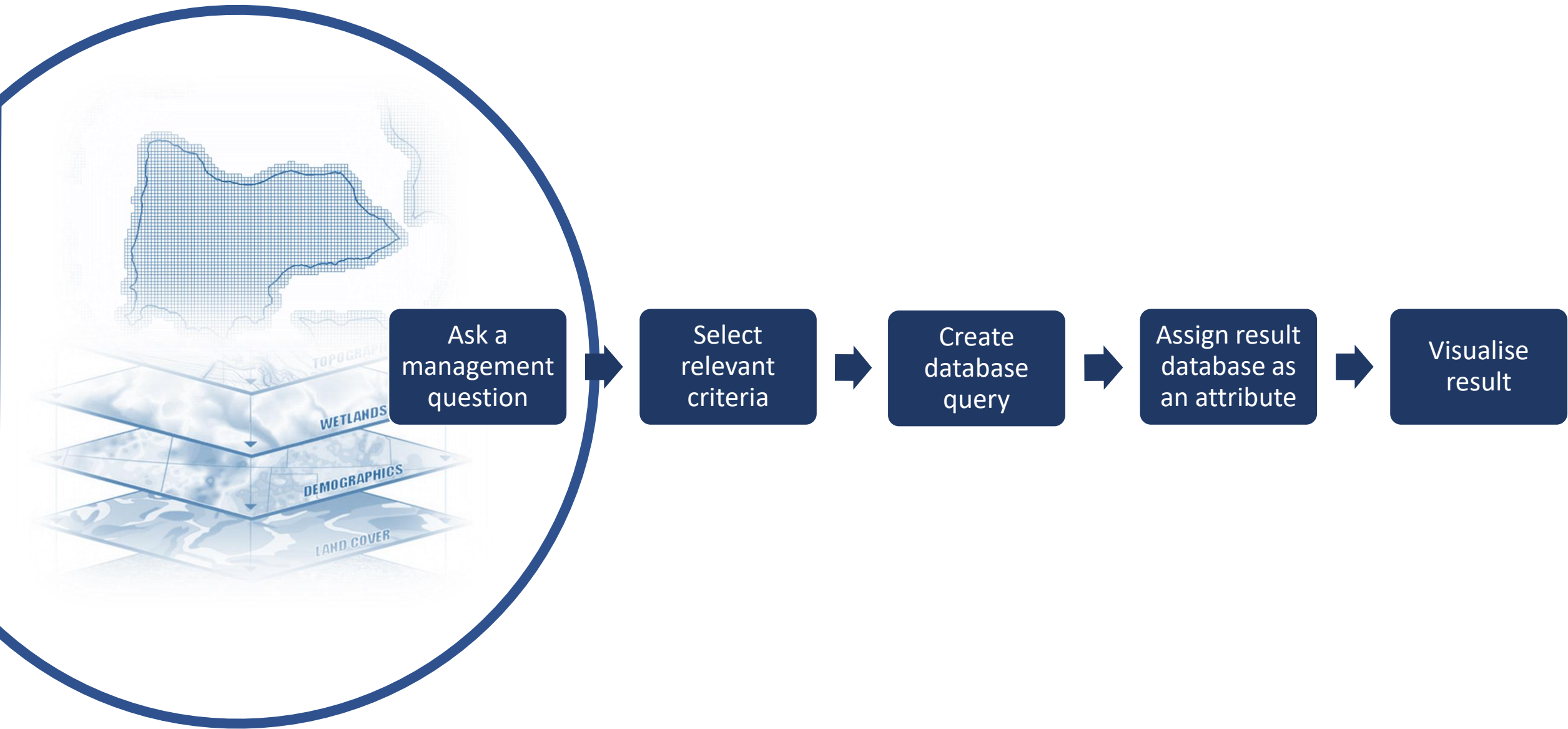
Its possible BUT
What does it mean to
add distance from rivers
and density of bike
paths?

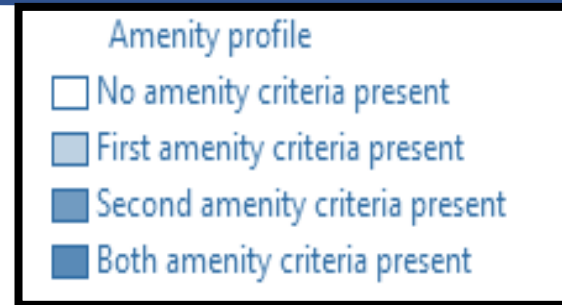
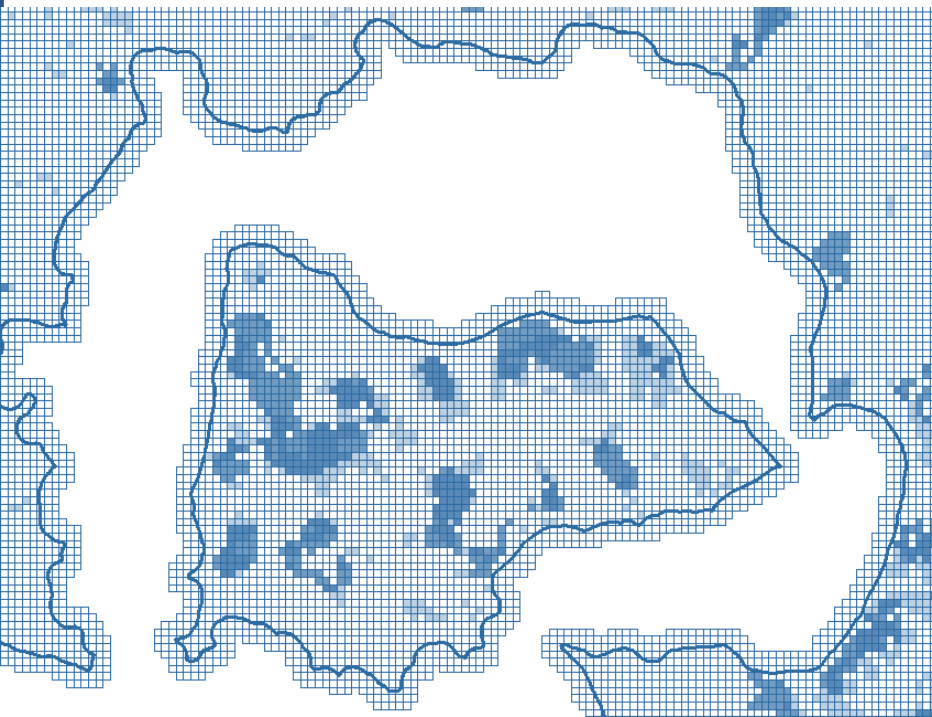


Targeting?

Its possible as well
Define a question in
terms of the metrics and
locate (target) areas that
meet the profile

Relationship – how does targeting work?

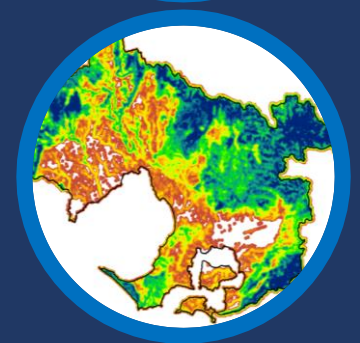
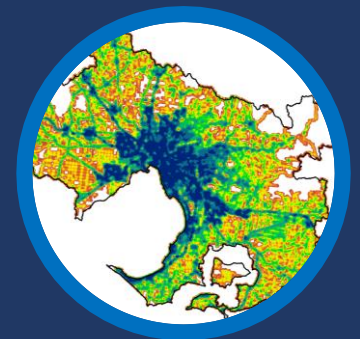




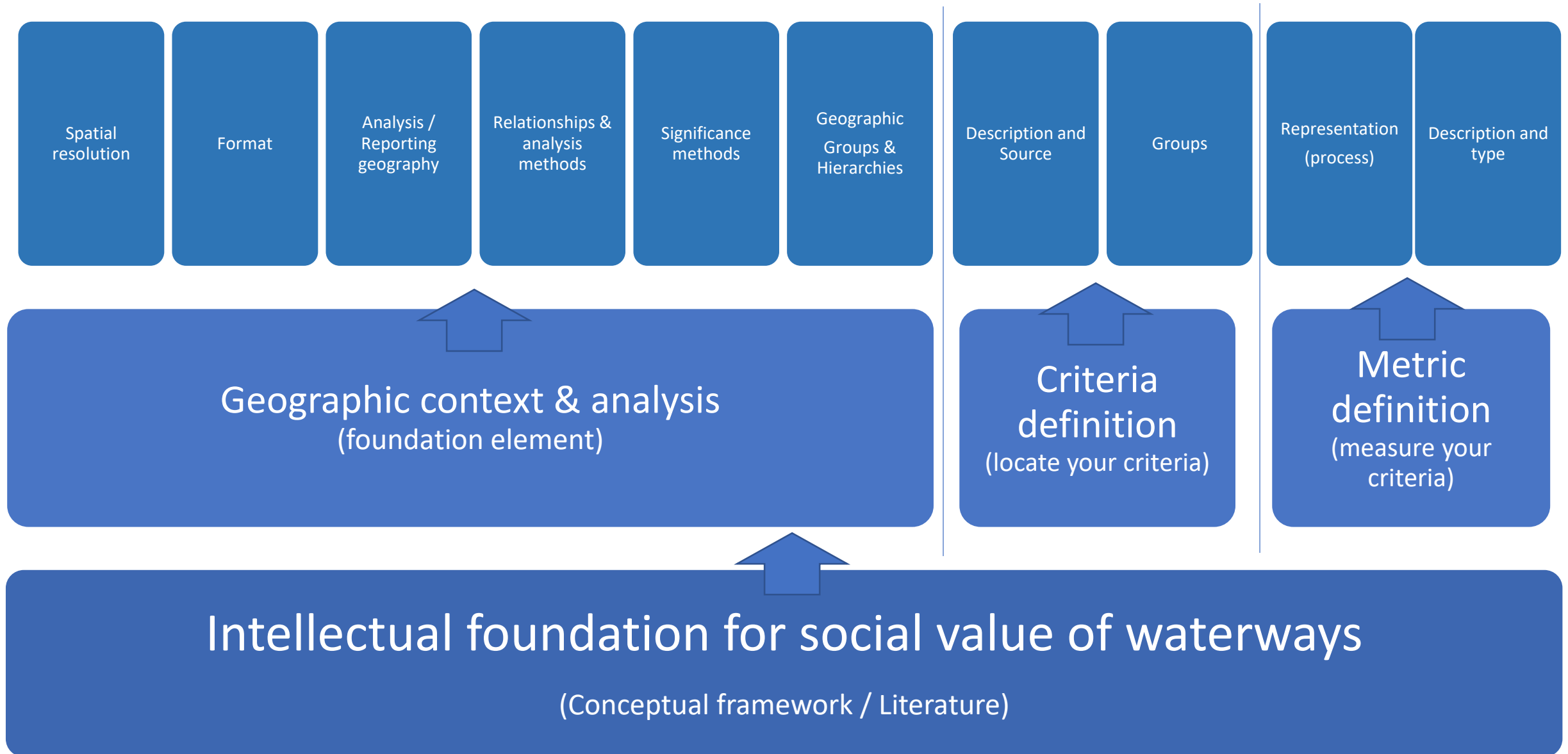
Where are the locations with significant sense of escape that are easily access?

Criteria used:
Access to Roads
Sense of Escape

Metric thresholds:
Access to Roads – top 10%
Sense of Escape – top 10%

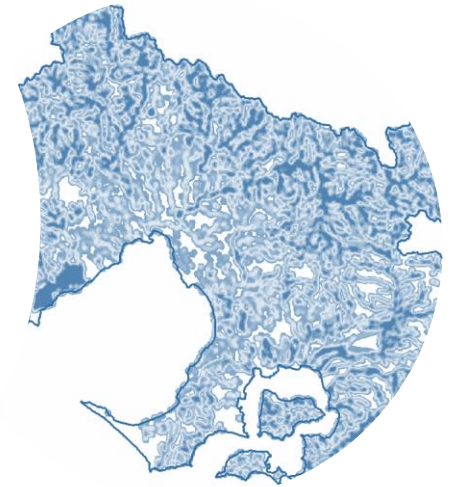
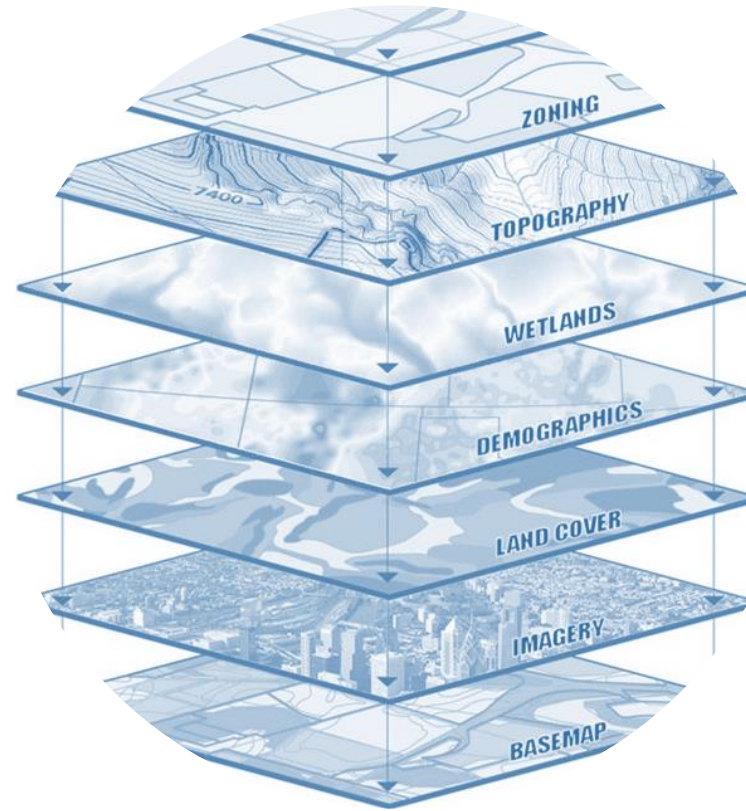
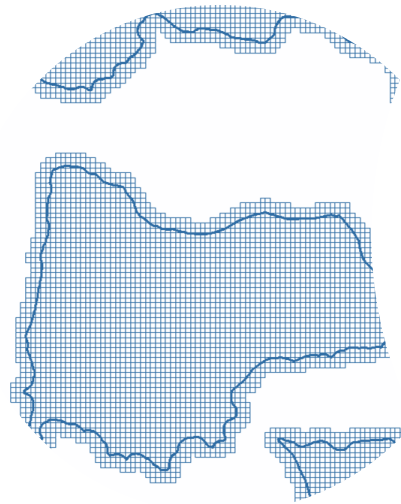


The framework



The framework benefits

- ❑ **Consistent** - Structured approach to metric development
- ❑ **Reliable** – forces clear definitions of metrics
- ❑ **Transparent** – tells you where and why
- ❑ **Interoperable** – any GIS can consume this format
- ❑ **Accessible** – easy to use resource for decision making
- ❑ **Scaleable** – can easily add additional metrics



Thank You

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