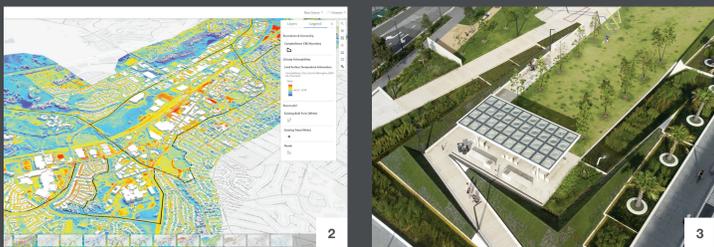
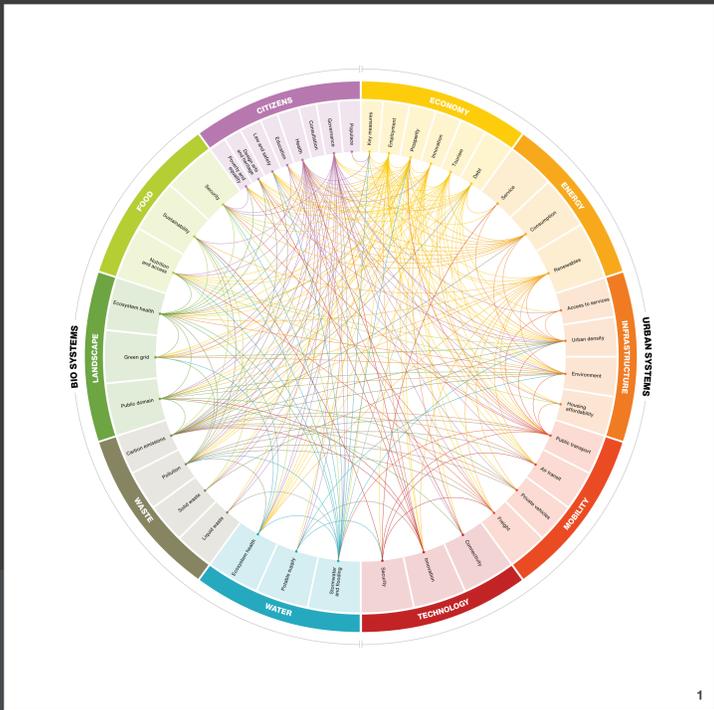


Biourbanism: A Resilience Model for 21st Century Cities

Taking a systems-based approach to city planning ensures more holistic outcomes across social, environmental and economic measures of success.



Designing for resilience.

Informed by new urban sciences, ecological science and landscape architecture theory, **Biourbanism** proposes a new systems-based blueprint for city design. The approach comprehends cities as living anthromes, or Homo sapiens-modified biomes. It defines cities as living ecological constructs and vibrant habitats that are inextricably linked to the wild biomes, and novel ecosystems of their surrounding landscapes and those of the planet.

Interplay of ten systems.

The Biourbanism model is based on ten interconnected systems that together determine the health, prosperity and resilience of cities. Implementing the model allows landscape architects, urban designers, planners, and governments to take a holistic view of cities to manage the intricate interplay between these ten systems. **The five Bio Systems are citizens, food, landscape, waste and water; the five Urban Systems are economy, energy, infrastructure, mobility, and technology.**

Resilience Indicators + Targets

A series of resilience indicators and targets, championed through new urban sciences and the data revolution – allows city planners and governments to respond to emerging issues in their own cities across the ten systems. Officials are able to quantify constraints and create strategies that respond accordingly.



Dashboard + Digital Twin

Adopting a digital twin and Biourbanism dashboard will enable the delivery of smart city and resilience outcomes. The workflow enables mayors, city authorities and stakeholders to identify urban challenges and create change strategies so that their cities can become more prosperous. Importantly, the workflow facilitates the creation of evidence-based policies that can be measured over time to support a city vision. The model is well suited to cities from both developed and developing countries, as each can set bespoke targets and move at their own pace according to available resources.



Creating a Resilience Action Plan

- 1. Establish the city story:** Why does the city exist? What are its key achievements? What are its aspirations?
- 2. Set up a resilience dashboard:** Create a Biourbanism Resilience Indicators city dashboard to record key performance indicators.
- 3. Map city data:** Create a city digital twin, record data and identify KPI data gaps requiring further investigation.
- 4. Establish opportunities and challenges:** Develop a list of primary resilience opportunities and challenges across the ten Biourbanism systems.
- 5. Set targets with priorities:** Establish key performance targets for the indicators to address challenges.
- 6. Test design scenarios:** Design and model policy and planning scenarios to achieve desired KPI outcomes across the ten systems.
- 7. Develop an action plan:** Develop a plan of change strategies incorporating selected design and planning scenarios.
- 8. Deploy policies:** Implement change policies and planning projects over a staged timeframe.
- 9. Monitor progress:** Monitor annual progress against Biourbanism Resilience Indicator targets and track competitor cities.
- 10. Adapt:** Evaluate, learn from and adapt policies and planning.



Citations: [1] The Ten Biourbanism Systems, 'Biourbanism :: Cities as Nature', Adrian McGregor, 2022 // [2] Campbelltown City Centre Framework + 3D Model by McGregor Coxall with Campbelltown City Council, 2022 // [3] The Drying Green by McGregor Coxall with City of Sydney, completed 2022 // [4-5] Examples of Biourbanism Resilience Action Plan KPIs, 'Biourbanism :: Cities as Nature', Adrian McGregor, 2022 // [6] Sample Biourbanism Dashboard, Biourbanism :: Cities as Nature', Adrian McGregor, 2022 // [7] Ten Steps of the Sample Biourbanism Dashboard, Biourbanism :: Cities as Nature', Adrian McGregor, 2022