

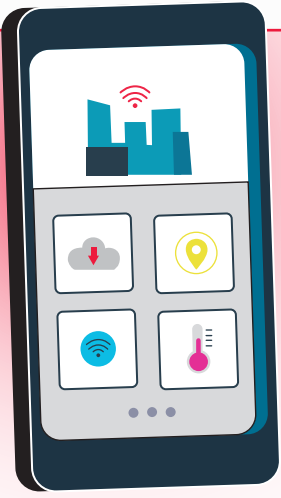
Rewilding cities through tech-driven sustainability

Cities are responsible for **over 25% of human-driven biodiversity loss**,¹ as infrastructure development disrupts habitats, pollutes ecosystems, and fragments natural corridors. Yet the same infrastructure—if designed with ecological intelligence—can actively reverse these trends, making cities more resilient, equitable, and sustainable.

For city planners and infrastructure leaders, it directly supports climate targets and aligns with **Sustainable Development Goal (SDG) 11, one of 17 global goals established by the United Nations**. SDG 11 specifically calls for inclusive, safe, resilient, and sustainable cities.²



Real-world examples



Edge-powered urban monitoring

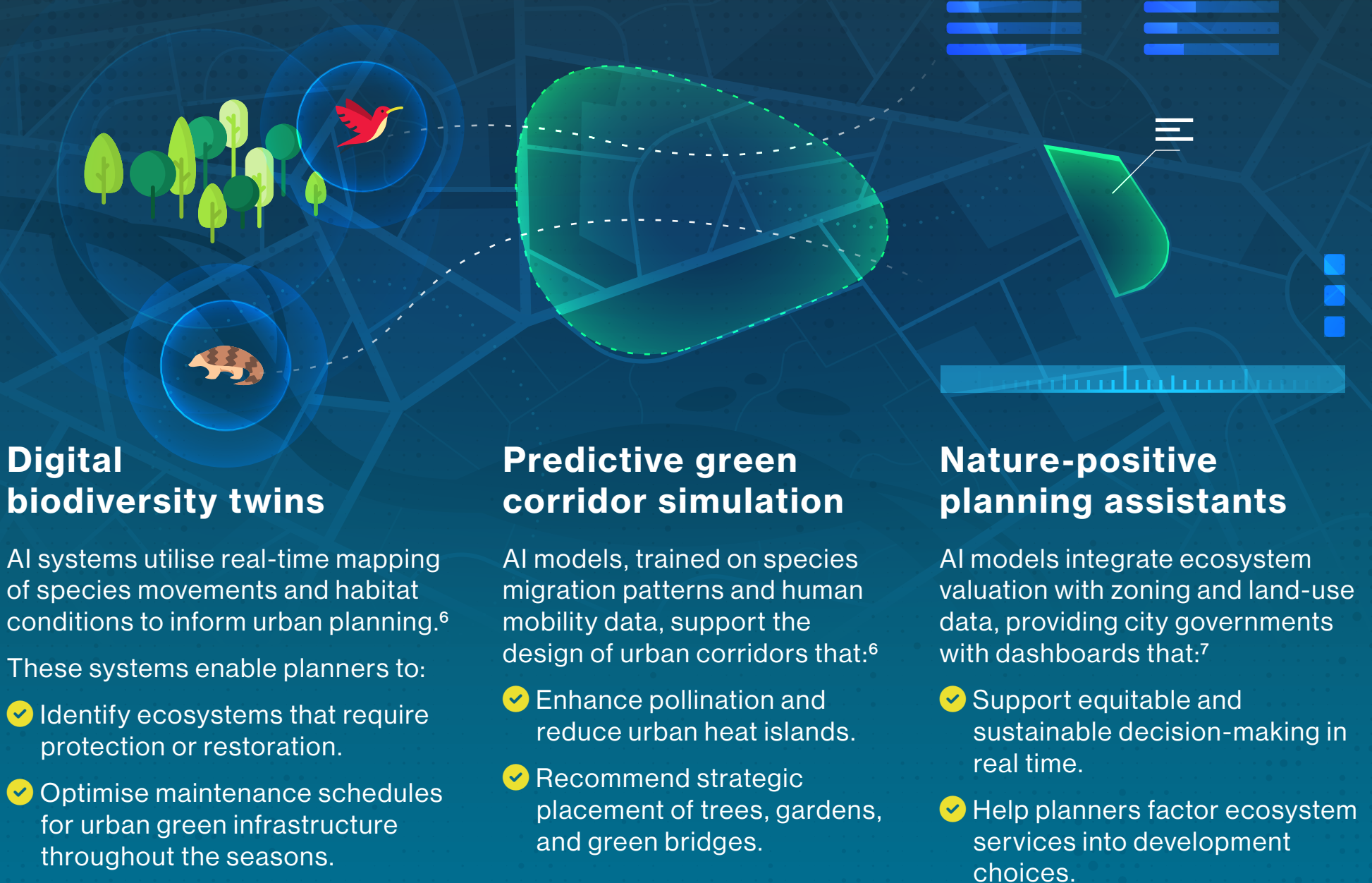
In Philadelphia, USA, edge computing integrates real-time air quality, mobility, and weather data to enhance urban planning and environmental monitoring.³



5G-enabled risk management

In Catalunya, Spain, a 5G private network combined with edge computing delivers real-time data precision, empowering city managers to make informed decisions that mitigate risks to nature.⁴

3 ways AI helps build nature-aware cities



Digital biodiversity twins

AI systems utilise real-time mapping of species movements and habitat conditions to inform urban planning.⁶

These systems enable planners to:

- ✓ Identify ecosystems that require protection or restoration.
- ✓ Optimise maintenance schedules for urban green infrastructure throughout the seasons.

Predictive green corridor simulation

AI models, trained on species migration patterns and human mobility data, support the design of urban corridors that:⁶

- ✓ Enhance pollination and reduce urban heat islands.
- ✓ Recommend strategic placement of trees, gardens, and green bridges.

Nature-positive planning assistants

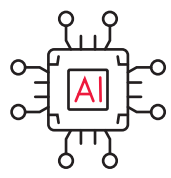
AI models integrate ecosystem valuation with zoning and land-use data, providing city governments with dashboards that:⁷

- ✓ Support equitable and sustainable decision-making in real time.
- ✓ Help planners factor ecosystem services into development choices.

Connectivity as the catalyst for cities in sync with nature

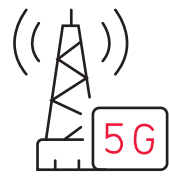
Advanced technologies like AI, 5G, and edge computing are transforming how cities respond to climate and ecological challenges.

With uninterrupted, high-speed networks, cities can process vast amounts of environmental data in real time, enabling smarter, faster decision-making.



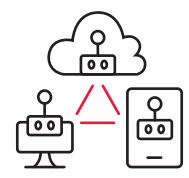
AI-powered systems

turn data into actionable insights—forecasting pollution risks, managing energy use, and predicting infrastructure vulnerabilities.



5G networks

connect sensors, devices, and data centres in real time for smarter decision-making.



Edge computing

brings intelligence closer to where it's needed, allowing for instant monitoring and response.



Through this connected ecosystem, cities can design infrastructure that not only supports biodiversity and mitigates climate risks but also **improves operational efficiency and enhances liveability**.

5G network coverage across every corner

Singtel 5G+ network with its 700 MHz spectrum ensures that insights reach every corner of Singapore—urban high-rises, underground spaces, and even remote natural landscapes. This extended coverage supports real-time monitoring, rapid interventions, and seamless data flow across urban and green environments, empowering cities to make informed decisions for sustainability, climate resilience, and biodiversity planning.



Contact us

Discover how seamless connectivity can enable nature-positive cities.

References

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- ⁵ Technology Magazine, How Google's Project Green Light Slashes Traffic Emissions, 2025
- ⁶ PrismSustainability, AI-Driven Biodiversity Corridors in Cities, 2025
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