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Colouring Cities: a worldwide network to inform buildings research and policy

What happened?

Researchers developed a platform for sharing data on buildings, which can help to inform decision-making in areas such as urban planning and climate change adaptation. The Colouring Cities Research Programme (CCRP) creates online maps that collate and visualise data on individual buildings, combining automated approaches and crowdsourcing to capture and verify missing data. ASG funding is now enabling CCRP researchers to collaborate with international academic partners, with the result being a worldwide network of Colouring Cities platforms that are tailored to suit local needs. Platforms provide access to large datasets. Colouring London alone, for example, collects data on 3.7 million properties.

What are the real-world impacts?

- Vastly improved access to buildings data relevant to policymaking, including age, use, energy rating and construction type, at the level of individual buildings.
- Roll-out of Colouring Cities platforms across eight countries is in progress, with
 platforms for <u>Australia</u>, <u>Greece</u>, <u>Indonesia</u> and <u>the UK</u> already live. The core project's
 open-source code and <u>manual</u> ensure low set-up costs for partners.
- Adaptations by partner cities and countries address locally relevant issues. Australia, for example, is incorporating new data categories for accessibility and safety.
- CCRP researchers are engaging with local governments to provide solutions for visualising the data they need, for instance, for <u>planning applications in London</u>.
- The openly accessible format offers innovative opportunities for community engagement with buildings data and for increasing transparency in planning.
- CCRP was <u>selected as a 2022 case study</u> by the G20's Global Infrastructure Hub for its potential as an 'infrastructure technology'.

Why was the Turing's **ASG** programme uniquely placed to do this?

- ASG-funded <u>Research Application Managers</u> worked with CCRP to improve the user experience to encourage widespread adoption and use of the platform.
- The Turing's Research Engineering Group was critical in the development of reproducible core Colouring Cities code for testing by CCRP partners.

What's next?

- Collaborators at Leibniz Institute of Ecological Urban and Regional Development are setting up Colouring Dresden with a €50,000 citizen science award funded by the German Federal Ministry of Education and Research.
- More Australian city platforms and Colouring Bogotá (Columbia) will launch in 2023.
- Once enough buildings data has been collected via CCRP platforms, researchers will use Al approaches to rapidly gain new insights from the data at a global scale.

"We expect the data to be of great value for the work of governmental bodies, urban planning and design professionals, researchers, students and NGOs, and for the residents of Athens to better understand the urban environment of their own city."

Athina Vlachou, Urban Planning Research Lab.

National Technical University of Athens, Greece

