In *Loitering Theatre*, artists used airborne cameras to film hidden parts of Dublin.

CITIES

Metropolitan mash-up

Anthony King enters a parallel city that teems with hackers innovating for the public good.

Embrace your inner hacker. That is the exhortation of the exhibition *Hack the City* at the Science Gallery in Dublin. Here, science, technology and art mingle in an exploration of how urban spaces and systems such as WiFi networks can be mashed up, recreated and subverted for the public good.

With 70% of the world's population predicted to be living in cities by 2050, the pressure to ensure that these are sustainable, equitable environments is growing. In *Hack the City*, Dublin is the test case for workshops and exhibits probing issues ranging from urban-dwellers' authority, autonomy and ownership to their freedom of expression and social bonds. The timing is apt: during the exhibition's run, Dublin will host the Euroscience Open Forum 2012, a gathering of scientists and policy-makers from across Europe.

The gallery is eager to distinguish between malicious 'cracking' and hacking. The hacking ethos, argues lead curator Teresa Dillon, is about citizens sharing resources and wresting back control from planners and commercial interests. A hacker, she explains, is "a craftsperson who looks at a particular system, identifies weaknesses and creates

alternative solutions for their own and others' benefit". Apple co-founder Steve Jobs was an early hero of the hacking community.

'Hacklab' workshops will introduce visitors to crowdsourced science, data manipulation, environmental monitoring and more. For example, 'Sensing the City' is a series of citizen-science experiments that will run in late July and early August. Researchers from IBM and Dublin's Trinity College will offer lessons on how to map urban biodiversity and track waste to create a greener city. Other workshops and projects will show visitors how to turn their phones into noise-measuring devices and explore traffic-noise maps, or to make computer measurements of air pollution.

Berlin-based artists Julian Oliver and Danja Vasiliev will showcase Newstweek. This is an innocuous-looking wall plug that, placed in a WiFi hotspot, enables you to alter any news being read on nearby wireless devices such

"Hacking is about citizens sharing resources and wresting back control from commercial interests."

as smart phones. The plug answers faster and more frequently than other hosts, and can route all localized traffic through itself. The stunt shows how a strictly media-defined reality is vulnerable to manipulation, say the artists.

A loaded issue in modern cities is the freedom to gather in open public spaces. In the ongoing 'Uncommon Land' project, artist Eilis Murphy explores the creeping privatization of those spaces. In May, for example, she called together a flash mob of 35. Armed with cameras, the crowd shot more than 1,300 images and 50 minutes of video, starting in the privately owned Mayor Square, where photography is banned, and finishing in Commons Street, one of the few remaining publicly owned streets in Dublin's International Financial Services Centre. A distillation of the images is exhibited, and will eventually be uploaded to Google Maps.

'The Sentient City Survival Kit', by architect and artist Mark Shepard, is a collection of artefacts for a near-future city in which retail could invade privacy through item tagging and data-skimming. Shepard offers 'his and hers' bras and boxer shorts that vibrate to alert the wearer to hidden radio frequency identification (RFID) tag readers nearby.

'Loitering Theatre', by film-maker and digital-rights expert Caroline Campbell and visual artist Nina McGowan, turns the tables on urban surveillance. They used iPad-controlled quadcopters — small, rotor-powered aircraft — with cameras on the front to film normally inaccessible views of Dublin. Examples include Facebook's un-signposted European headquarters, and houses hidden behind hoardings in the development wastelands, where, Campbell explains, an elderly lady saved her garden of lilies from the property boom. They hope that this visual information will catalyse ideas on how to improve the Dublin cityscape.

And in a robotic 'hack' of the city's physicality, the small spidery-armed, insect-shaped robots in artist Jérôme Abel's 'Chimères Orchestra' tap out rhythms in the gallery and the Temple Bar area. Abel's schematics and codes will be available online, so anyone can duplicate and modify them.

The hacking ethos has inspired people across the disciplines, from open-source publishers to amateur biohackers practising garage biology. This exhibition is a paean to hacker culture and a call to arms for the rest of us to harness our powers of invention to push our cities in the directions we want them to go. ■

Hack the City
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**Euroscience Open
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