



Introducing A Unique Global Urban Partnership

- ✓ Help governments, academics and corporations to co-operate on eco-solutions
- ✓ Contribute to the 'Technology Mechanism' promised in the Copenhagen Accord
- ✓ Engage with urbanisation challenges and markets worth \$trillions each year
- ✓ Broker links between natural, built and virtual environment specialists
- ✓ Create a new online research and development network to help balance our planet
- ✓ Expand global urban business opportunities for smart people everywhere

Gaining Momentum: Global Moves to Auto-Pilot The Planet

MACRO | HISTORICAL CONTEXTS

- Astronomers usually discover the advanced mathematics that inform humans on Earth.
- Today we need to accelerate applications of aerospace technologies towards healthier living on Earth. (As US President Barack Obama has directed NASA.)
- The astronomical and aerospace technologies revolution will continue to revolutionise urban development via the Square Kilometre Array (SKA) project to build the world's largest and most powerful wireless radio telescope system in either South Africa or Western Australia. Announcement of winning bid is scheduled for 2011.

KEY ADVANCES

- **1928** US scientist Buckminster Fuller proposed using future computers to 'fly Spaceship Earth' and equitably balance the planet's resources.
- **1940s-1970s** Fuller developed this idea as the Geoscope and World Game, 1940s through 1970s. Alan Turing's team in England developed the Enigma machine to crack coded messages.
- **Since 1945** Many other electronic research advances emerged from cybernetics researchers.
- **Since the 1980s** Complex stone elements on Antoni Gaudi's half-finished Sagrada Familia Cathedral are being digitally prototyped by spatial information architect Mark Burry and others.
- **1989** US computer guru Will Wright launched Sim City, a popular 'evolutionary city' video game.
- **1992** The Japan Agency for Marine-Earth Sciences and Technology opened the Earth Simulator Center, an array of supercomputers near Yokohama, to simulate Nature as a virtual planet.
- **1995-1997** Internet and other computer technologies have triggered the 21st century 'online digital age'. 'Father of the Internet' Tim Berners-Lee. Key books about digital urban futures by Nicholas Negroponte, William J. Mitchell, Bill Gates, John Frazer, Bill Hillier, Peter Droege and others.
- **1998** The International Society for Digital Earth (ISDE) was launched. Supported by US Presidential candidate Al Gore, it is now HQed at the Chinese Academy of Sciences in Beijing.
- **2005** UK mathematician Mike Batty published *Cities and Complexity* to explain new digital systems for detecting urban behaviour patterns.
- **2005** MIT's William J. Mitchell and Carlo Ratti formed cross-discipline teams to use digital systems to organise telecommunications and transport.

- **2008** d_city network was launched in Sydney during the Metropolis major city governments congress, October.
- **2009** IBM launched a global branding campaign, Let's Build A Smarter Planet, with Smarter Cities as a sub-theme.
- **2009** The International Society for Digital Earth (earth and space scientists, HQed at the Chinese Academy of Sciences) began a process to adopt the d_city project.
- **2009** Lobbying continued to include in the Copenhagen Accord a clause supporting the d_city network concept. The final agreement, signed by more than 100 countries, promised both a 'Technology Mechanism' and more than \$US100b in 'Green Climate' funding.
- **2010** UN-Habitat announces the World Urban Campaign and begins to help support the d_city network. More relevant UN and other international peak bodies are expressing interest in joining the d_city network/partnership.
- **2010** A process has begun to appoint a Global Research Leaders Group to thought-lead a chain of case studies towards Online Planning for Eco Cities. Chairing the Appointments Panel is Professor Saskia Sassen of Columbia University.
- **2011 and beyond** d_city will launch its communications services at relevant international conferences.

A New Technology Network to Accelerate Urban Eco-Solutions

BACKGROUND

Since 18 December 2009, more than 100 nations have signed the Copenhagen Accord, organised by the United Nations' Framework Convention on Climate Change (UN FCCC).

Signatory nations agreed to deliver a Technology Mechanism to accelerate solutions to climate change challenges, especially for developing countries and small island states. Developed countries are raising substantial new financing, including a \$US 100b 'Green Climate Fund'.

Leaders of key United Nations programmes, notably UN-Habitat and the Intergovernmental Panel on Climate Change, have indicated support for the d_city concept.

They recognise the d_city 'dream' as a crucial opportunity to support and co-ordinate diverse international research communities to effectively contribute solutions to the urban challenges of climate change.

As well as contributing a network to support the Copenhagen Technology Mechanism, d_city's key partners will contribute to solutions for the UN Millennium Development Goals, Habitat Agendas, new World Urban Campaign and World Youth initiatives.

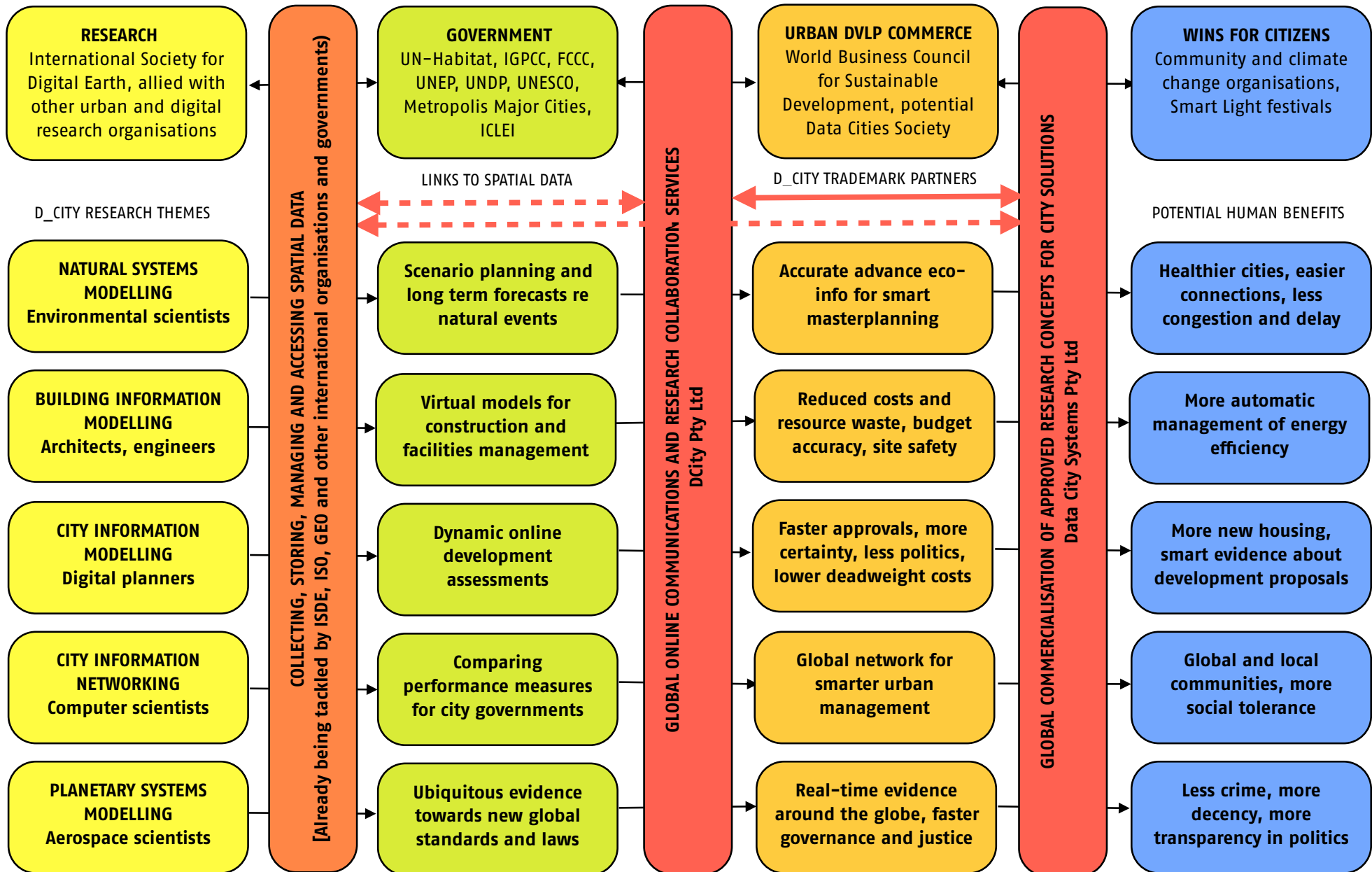
FIRST CASE STUDIES

d_city's first priority is to establish a global chain of case studies for 'Online Planning of Eco Cities' – applying dynamic digital information about the earth's natural environmental systems, to better inform the eco-sensitive planning of large new urban developments.



Top d_city's soft-launch during the Metropolis 'Connecting Cities' Congress in Sydney October 2008, with a three-week exhibition of international videos at the City of Sydney's Customs House cultural centre.

D_CITY GLOBAL NETWORK TO ACCELERATE DIGITAL DATA SOLUTIONS FOR THE ECOLOGICAL CHALLENGES OF CITIES



How the D_City Network will Operate

SUMMARY

d_city is an emerging global social network/ partnership to accelerate ecological and economic efficiencies in planning, designing, constructing and managing cities.

Involving international professionals in Research, Government, Commons and Commerce, the d_city scheme is needed to improve urban decision-making via 3D spatial data technologies (GPS, GIS, laser scanning, photogrammetry and other systems developed from the aerospace sector).

Launched in Sydney in October 2008, with backing from Australia's NSW Government and NICTA research organisation, d_city now has an alliance with the Metropolis organisation of more than 80 major city governments, the International Society for Digital Earth, and several programmes of the United Nations.

Key professors at prestigious international universities are participating and more than 30 nominations have been tendered to appoint a Global Research Leaders Group to thought-lead the d_city community.

Aligned with d_city's goals is an emerging international series of 'Smart Light' festivals of low-energy urban light art installations – to educate and inform public audiences.

KEY ORGANISATIONS

Core to success of the d_city network is co-operation between three global service enterprises:

GSDI, GEOSS and Digital Earth Projects

Various global peak organisations already collaborate to decide best ways to collect, manage and disseminate spatial data. They include the ISDE, OpenGeo, the International Standards Organization, Europe's INSPIRE program, FOSS4G and GEOSS.

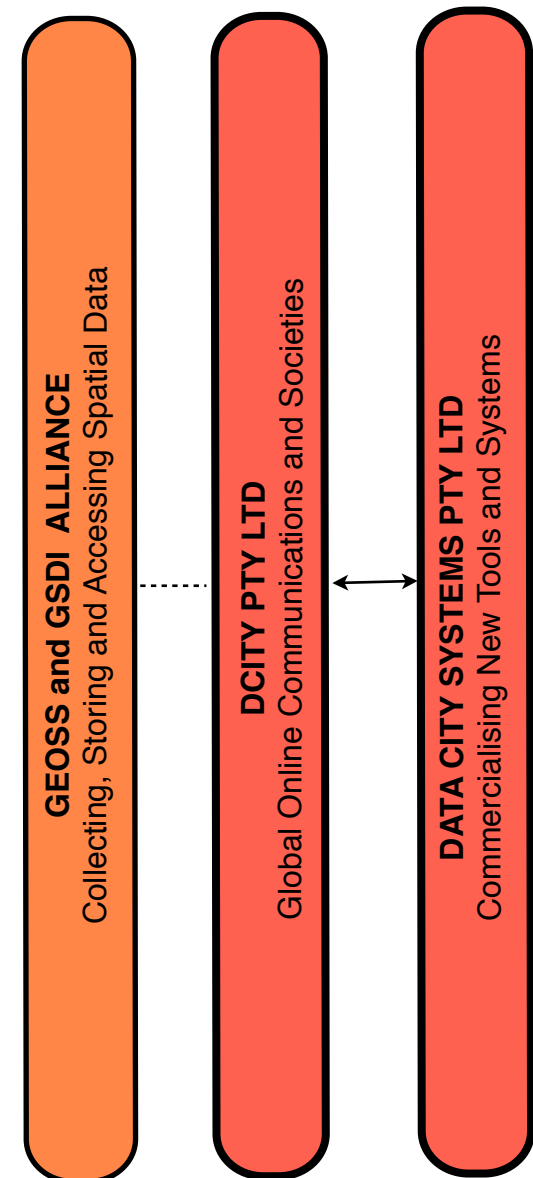
DCity Pty Ltd

International media brands are being invited to invest in a 'limited profit' international company to develop and manage a new online system to support d_city collaborations among academics, commercial partners and governments. The first projects are case studies in online urban planning.

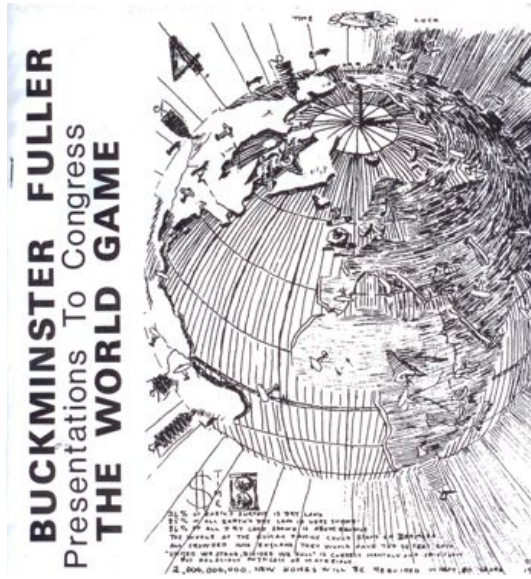
Data City Systems Pty Ltd

A 'limited profit' alliance of global digital, finance and urban development corporations to commercialise selected 'proofs of concept' from researchers in academia and SMEs. It would pay royalties on sales of a d_city line of software tools to enable smart decisions to:

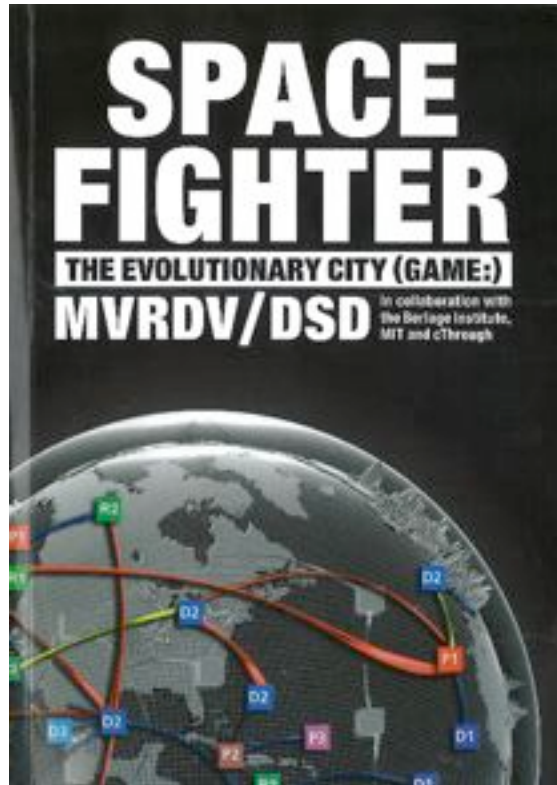
- improve urban living,
- compare scenarios for future development of cities
- use 'virtual prototyping' to minimise wasted resources in construction projects,
- use automatic systems to allocate resources more effectively around the planet, and
- accelerate solutions to many challenges of climate change.



Digital Earth Projects



Above R Buckminster Fuller's 1928 drawing of a system to model the planet's behaviours. Bottom It later was prototyped as the Geoscope, shown here at the University of Minnesota in 1954.

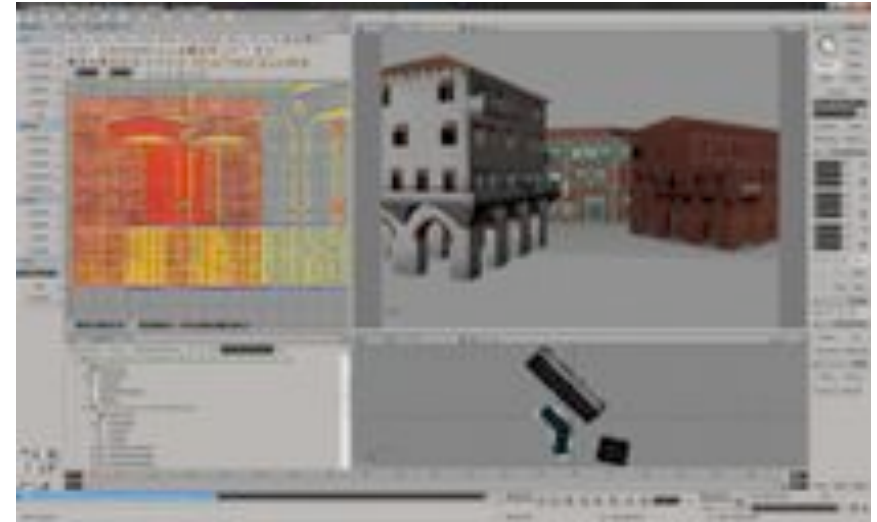
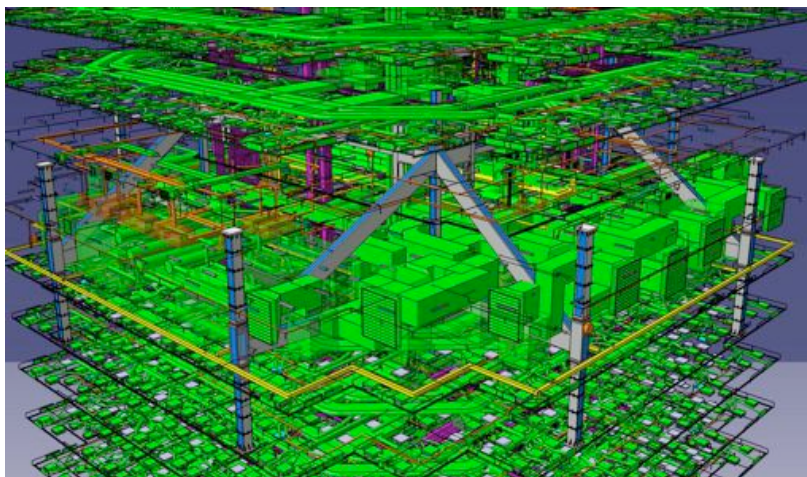


Above At TU Delft and formerly at the Berlage Academy and MIT, Dutch architect Winy Maas is leading the Spacefighter project to update Fuller's concept for a 'World Game', using evolutionary urbanism principles and video-game concepts.

Right In 2002, Japan opened the Earth Simulator Centre, powered by the world's then-largest array of supercomputers, near Yokohama. Many environmental sciences researchers contribute to this model via the International Society for Digital Earth (ISDE).



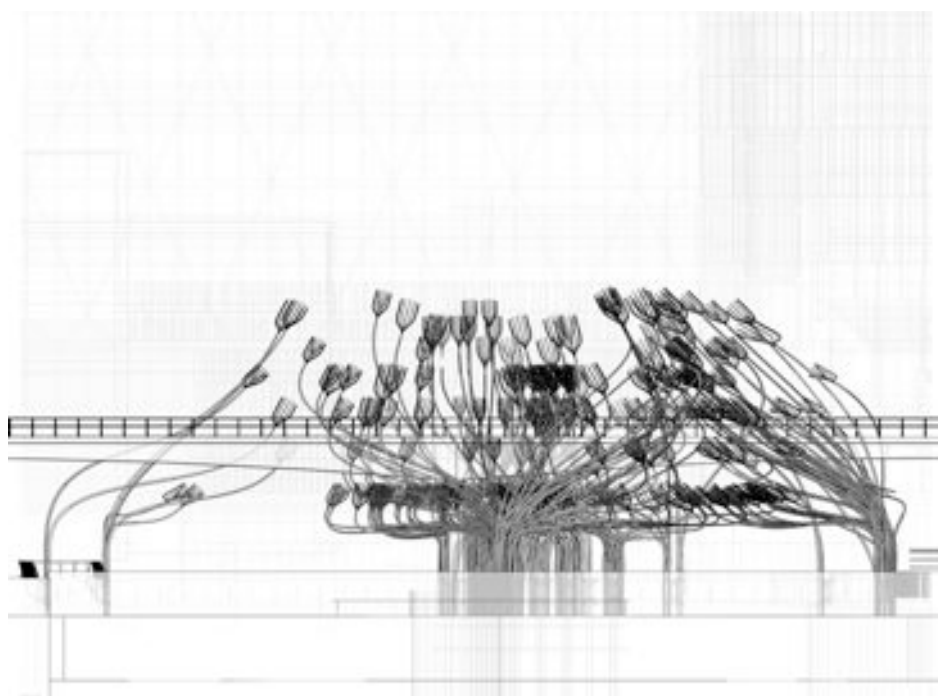
Converging Ideas and Technologies



Top left Space agency satellites constantly monitor structures and behaviours on Earth. More of this spatial data is becoming more accessible, and other aerospace technologies will soon be applied to urban development challenges. Image: NASA.

Top right CityEngine modelling system developed by Perceptual, spun off from an R+D team at ETH, Zurich.

Bottom left and centre Building information modelling using Gehry Technologies' Digital Project system, adapted from Dassault Systèmes' air and spacecraft modelling software. In this BIM for a tower in Hong Kong, thousands of structural clashes were resolved in the virtual prototype before any resources were ordered on site. Images: Swire | GT.

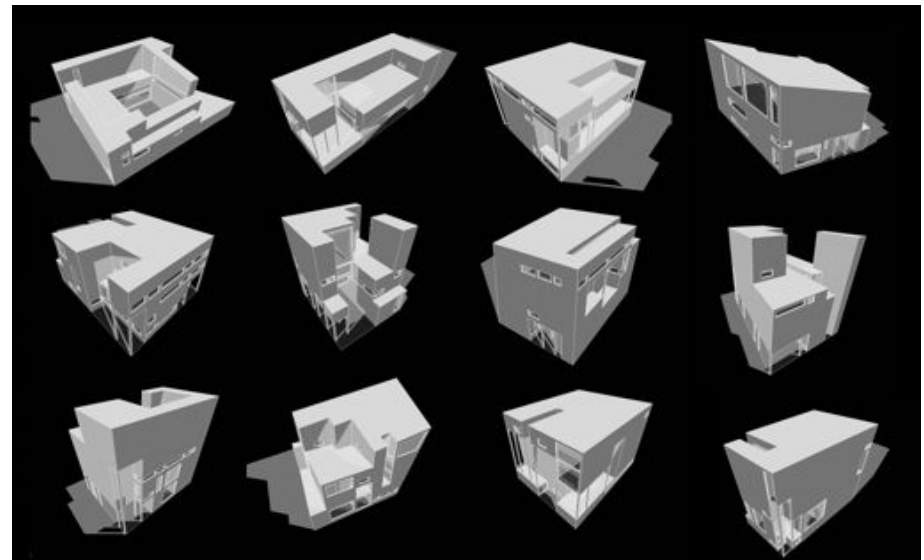
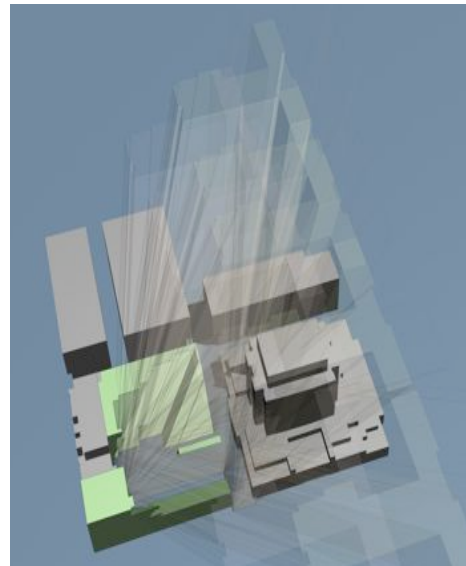


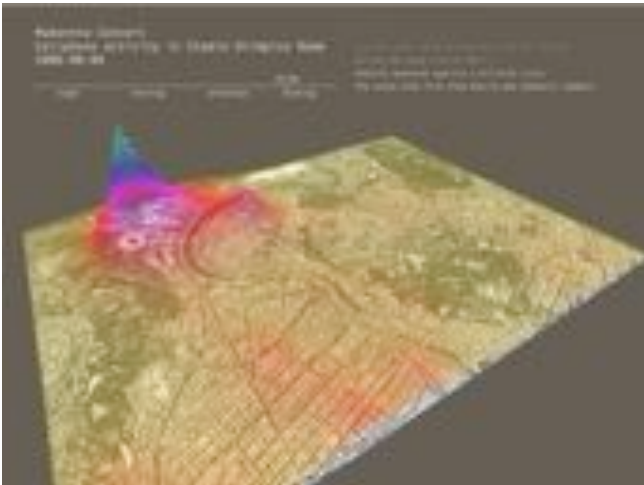
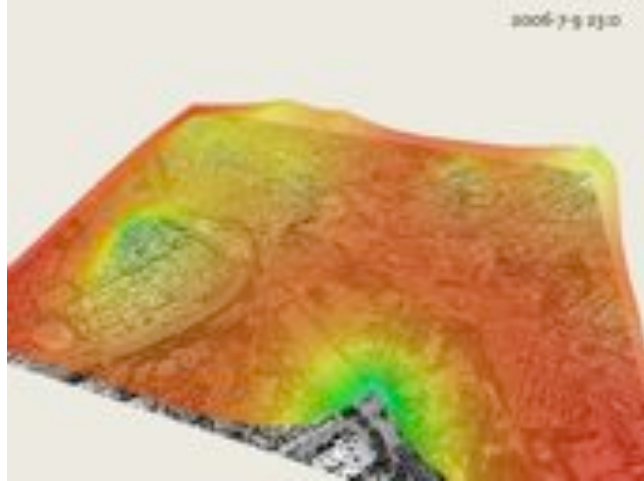
Top left London architect Alex Haw (Atmos) has imagined the Sunlands installation at Canary Wharf to track sunlight data from weather stations around the world.

Above right Navigating cities in Second Life. Image from Dr Andrew Hudson-Smith's 'Digital Geography', University College London Centre for Advanced Spatial Analysis.

Bottom left Algorithmically-generated building designs. Altering parameters in the algorithms can generate many alternative virtual models. Each model rotates on screen as the architecture evolves. Image: Dr Patrick Janssen.

Bottom right Solar performance predictions: Marcus White of Harrison and White, recent Industry-embedded PhD candidate with MGS Architects and Professor Mark Burry at the RMIT Spatial Information Architecture Lab. Image: Marcus White.





Left top to bottom Video visualisations tracking traffic and pedestrian movements over 24 hours of 'Real Time Rome'. Images: Professor Carlo Ratti, SENSEable City Lab, MIT.

Above right Sydney Opera House illuminated by British musician Brian Eno for the world's first low-energy digital urban lighting festival, Smart Light Sydney. Triggering an international series of 'Smart Light Walks', it was founded by light art and music engineer Mary-Anne Kyriakou and supported by **d_city**.

Branding

CONTRIBUTED BY FUTURE BRAND

After interviewing four key stakeholders of the d_city project in Australia, Future Brand developed their perceptions of the global network proposal into a professional identity kit for the launch in Sydney October 2008. The kit included colours, trademark logos, personality traits, key words and phrases and two distinctive typefaces.

This branding and the internationally registered trademark d_city will support multi-platform communications for the network's participants and a basis for marketing a d_city line of urban development-related software tools and systems.

Ever-evolving 3D data for planning, building & managing cities	FLUID
A preview to the future of urban living	FORWARD-LOOKING
Fostering connections for integrating knowledge	WELL-CONNECTED
Solving complex eco-challenges with clear solutions	INGENIOUS
Challenging conventions on how cities are built & managed	PROVOCATIVE

CONNECTIONS

TO EVOLVE URBAN LIFE

d_city is the global network where the world's top thinkers (researchers and experts) and doers (governments and industries) communicate and collaborate to create eco solutions for cities

Emerging Marketing and Investment Opportunities

D_CITY ANNUAL REPORTS

Corporate Profiles of 1, 2, 4 or 6 pages will soon be offered to relevant multinational companies for inclusion in the first D_CITY annual report, a prestigious document to be distributed to delegates at the 2011 conferences of d_city's partner organisations.

D_CITY ONLINE AND TV

Advertising, Partnership, Investment and Sponsorship opportunities are being developed around a proposed international series of multi-platform shows and reports exploring applications of new tools and systems for planning and developing future cities.

These will entertain large audiences and help to educate new generations of urban planners and politicians – especially for nations developing and revising networked infrastructures and societies in the era of cloud computing solutions for climate change.

D_CITY TALENT CIRCLE

Access leading research and thought leaders in the d_city network to provide conference keynote speeches, articles, consultancy advice, and public leadership of projects.

D_CITY BUSINESS BOOSTS

Business Development scouts at Cisco Systems, senior engineers at Arup and ambitious executives at other global corporations have demonstrated the advantages of access to d_city's growing network of outstanding research, government, commercial and communications leaders.

d_city-brokered introductions have led to multi mega-city sales deals, prestigious conference speaking slots and televised co-branding for these and other companies which presciently recognised the d_city value concepts during its startup phase.

D_CITY ETHICAL INVESTING

Communications Services Alliance

Selected international media and public sector organisations will be offered equity in DCity Pty Ltd, a 'limited profit' enterprise that will manage applications and licensing of the d_city trademark and branding collateral, and broker and manage diverse communications and networking services for d_city participants and partners.

DCity will aim to return rewarding dividends and capital growth to investors, but surplus profits will be offered to the research sector as Awards for Achievement in accelerating urban climate change solutions.

Research Commercialisation Alliance

Selected international high-tech systems corporations will be offered equity in Data City Systems Pty Ltd, a forthcoming 'limited profit' enterprise which will grow a unique international model for developing and commercialising selected proofs of concept from academic and SME researchers.

Data City Systems will aim to return rewarding dividends and capital growth to investors, but surplus profits will be offered to the research sector as Awards for Achievement in accelerating urban climate change solutions.

**'We have islands of opportunity amidst oceans of information chaos . . .
We have landed on the moon, we now must understand the Earth'**
—Al Gore, 1998

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Supporters



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