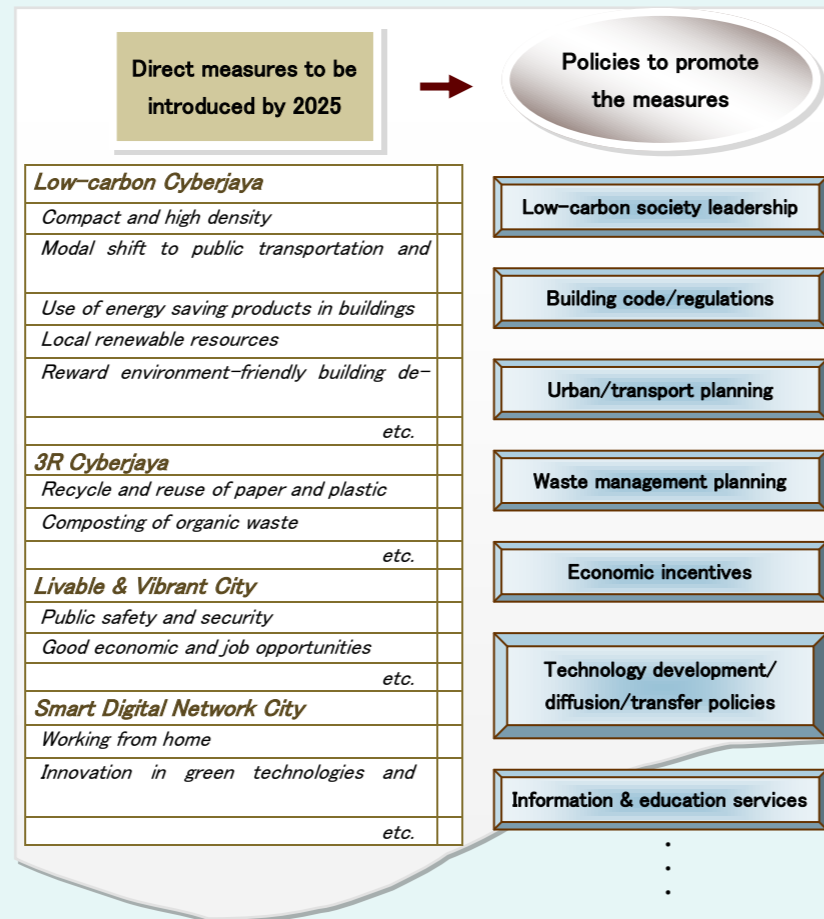


What can be expected as the outcome?

Once required measures are identified by the modeling tools, the next step is to identify the policy options to promote those measures by 2025. The Figure on the right hand side shows an image of the expected outcome of the measures and policies.

The models used in this research will be able to calculate such quantitative requirement. E.g. percentage diffusion of particular equipment, MWh of PV generation, modal share of public transport, recycling rate, area of roof-top gardening, etc. However the policy options will be identified through intensive discussions with policy makers, identification of more concrete and long-term actions is a subject of future work.



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Cyberjaya Digital Green City 2025

-Feasibility Study-



This report presents the framework of the feasibility study for the “Cyberjaya Digital Green City 2025 (Cyber DGC 2025)” project. This project was launched in August 2011, as a response to the Prime Minister’s announcement to develop Cyberjaya as a pioneer township in Green Technology and as a showcase for the development of other townships. The aim of this study is to formulate and propose concrete actions towards achieving Cyber DGC 2025, and is a collaboration between Universiti Teknologi Malaysia, Multimedia Development Corporation Sdn. Bhd. (MDeC), Cyberview Sdn. Bhd., Kyoto University, Okayama University, National Institute for Environmental Studies (NIES), Japan, and the Asia Pacific Integrated Model (AIM) team.

The preliminary results of this study will be available by the end of 2011. In developing a solid Low Carbon Roadmap, further detailed surveys and analyses by the relevant local authorities is required.



What is Cyberjaya Digital Green City 2025?

“Develop Putrajaya and Cyberjaya as pioneer township in Green Technology as a showcase for the development of other townships”. This was a statement made by the Prime Minister of Malaysia, YAB Dato’ Sri Mohd Najib bin Tun Abdul Razak, in the 2010 Budget Speech on 23rd October 2009. At the end of that same year, he announced to reduce its CO₂ emission’s to 40 per cent by the year 2020 compared with its 2005 levels, subject to assistance from developed countries, in COP15 (15th Conference of the Parties) which was held in Copenhagen.

In light of the increased awareness for the environment, the Multimedia Development Corporation as well as other relevant organizations have formed a research team to prepare a feasibility study aiming towards achieving Cyberjaya Digital Green City 2025 (Cyber DGC 2025). This research will support the policy-making processes from the viewpoint of expert knowledge, skills and modeling techniques.

Where is Cyberjaya heading toward?

Four Environmental Targets

The goal of Cyber DGC is divided into four main themes: “Low-carbon Cyberjaya” for climate change mitigation, “3R Cyberjaya” for solid waste management, “Livable & Vibrant City” for a good living environment, and “Smart Digital Network City” for an ICT-based society. The figure on the center of this page illustrates the four environmental targets of Cyberjaya.

Within these four themes, several concrete quantitative targets are set; namely, to reduce CO₂ emission per economic activity (for “Low-carbon Cyberjaya”) & solid waste final disposal (for “3R Cyberjaya”) by 50% compared to Business as Usual (BaU) level by year 2025. The other two themes, “Livable & Vibrant City” and “Smart Digital Network City”, will indirectly contribute to achieving the set targets.

Action	Theme
Action 1 Eco City Planning	Low-carbon Cyberjaya
Action 2 Green Transportation	
Action 3 Environment Friendly Buildings & Houses	
Action 4 Local Production & Consumption of Renewable Energy	
Action 5 Urban Energy System	
Action 6 Green Incentive & Education	
Action 7 Reduce, Reuse, Recycle & Smart Management	3R Cyberjaya
Action 8 A Livable Community and City	Livable & Vibrant City
Action 9 A Vibrant Urban Space	Vibrant City
Action 10 Smart Community	Smart Digital Network City
Action 11 Intra-city Digital Network	
Action 12 Innovative Green Business	

Dozen Actions

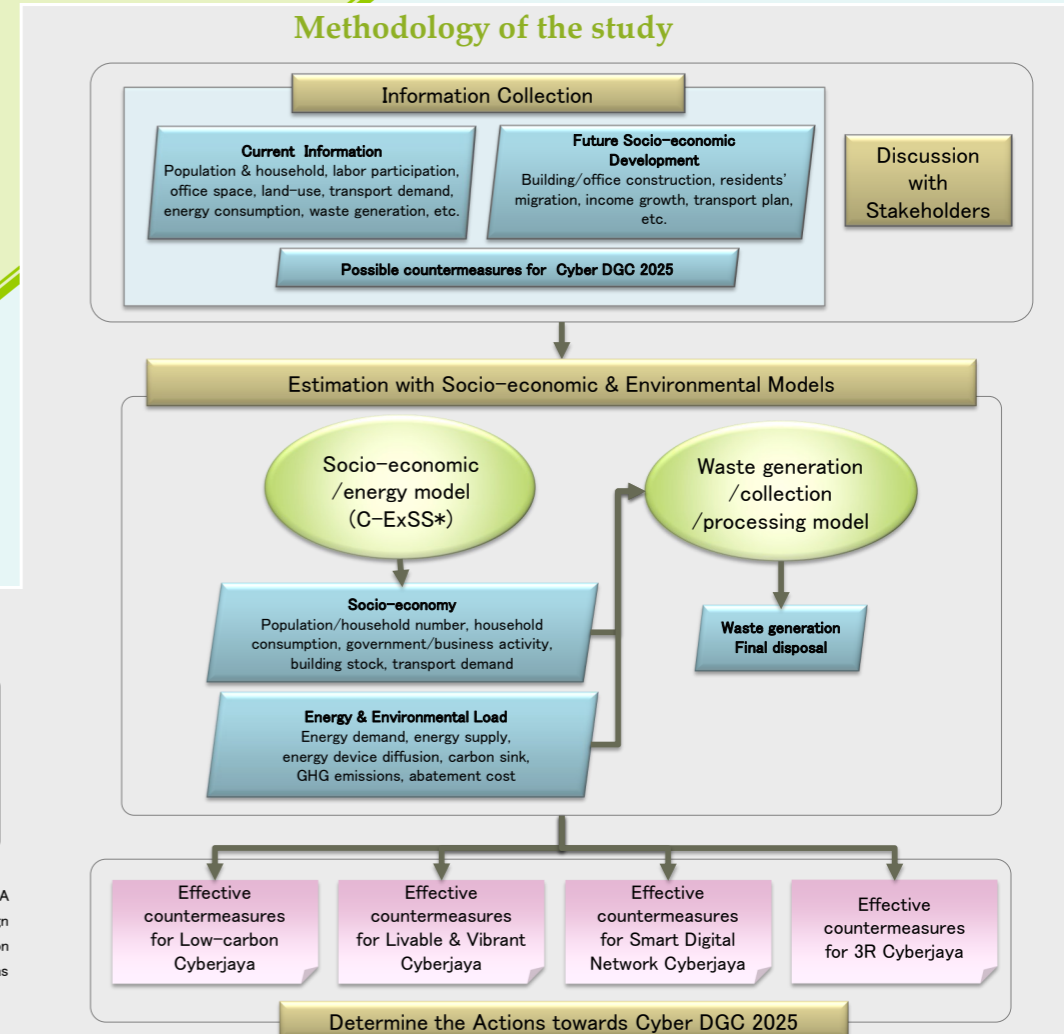
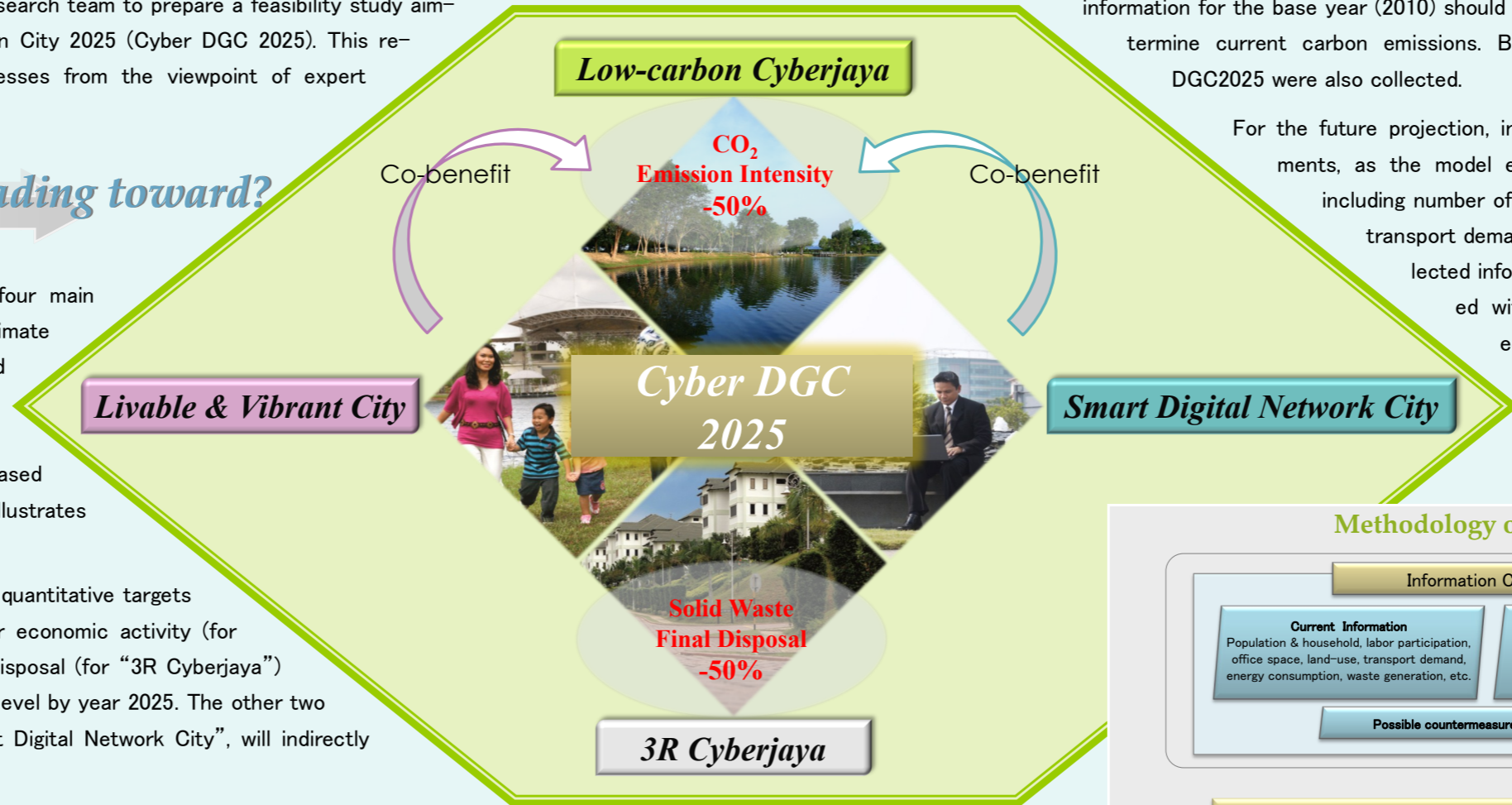
Towards realizing a Digital Green City through the four themes for Cyberjaya, a “Dozen Actions” table was formulated as a concrete vision for such a society. The table on the left-hand corner lists these actions. These actions were categorized according to the four environmental targets.

How is this study conducted?

In order to identify the necessary actions, an “integrated modeling” based on “back-casting” approach is used. The back-casting approach sets a vision of the future society as a goal, and then seeks a pathway towards achieving that goal. In the current phase of the research project, focus will be placed through four environmental targets. The models are used to estimate quantitative future activity levels, environmental emissions, as well as the measures to be implemented in order to achieve the targets.

Information collection is the first step in any modeling work. Socio-economic information as well as environmental information for the base year (2010) should be collected and analyzed in order to determine current carbon emissions. Besides this, feasible options for Cyber DGC2025 were also collected.

For the future projection, information is based on planned developments, as the model estimates socio-economic activity levels including number of households, land area and building stock, transport demand and other variables. Based on the collected information, environmental loads are calculated with or without counter measures. These equal to Actions. These actions are necessary and effective measures identified through iterative calculations and discussions.



Legend
 Step (Yellow box)
 Information (Blue box)
 Model (Green oval)
 Counter-measures (Pink box)

*C-ExSS: Community Extended Snapshot Tool. A static, accounting-type model used to design quantitative future societies as goals of low-carbon society scenarios, especially in small cities/areas (=community) which have small industry.