New software aids planning

THE University of Wollongong is rallying interest in sophisticated new simulation software touted as a crystal ball for the region's planners.

UOW's SMART Infrastructure Facility is building a honeypot of demographic and other data to feed into the model, which will allow registered users to test with greater certainty how new policies and proposed infrastructure projects will affect the region.

David Laing, senior principal in the Wollongong office of infrastructure and environmental services company Cardno, said the new technology held the promise of providing "real evidence" to support the business case for new projects.

He cited the case for a one-hour commute from Wollongong to Sydney as one that could be advanced using better modelling.

"New projects coming up for the region need a strong and robust business case behind them, and this model will certainly provide that," he said.

"You need things like this to first of all work out whether the strategy for the region is right, and then it is a relatively easy exercise to identify those projects that give you the best bang for your buck.

"In the past, we've tended to focus on individual projects in a policy or strategic vacuum."

Called Vision Illawarra, the model is the first in Australia to use the Netherlands-built simulation platform GEONICA.

SMART research director Pascal Perez said resulting models could be used to make more compelling competitive applications for government-funded infrastructure projects.

"The government is putting the quality of proposed projects under more and more scrutiny," Prof Perez said.

"Part of the quality of the projects will be based on the transparency of the pre-feasibility studies attached."

"Having the region use the same tool in a transparent way, where all the stakeholders have agreed this is the tool they want to use to assess any kind of project, would be a significant boost for the region."

A meeting hosted by SMART in Wollongong last week aimed to enlist groups including Regional Development Australia Illawarra and Wollongong City Council on two fronts - as paying subscribers and as suppliers of the data and expertise to feed it.

The model differs from other planning tools by dynamically linking four kinds of changes: land use, demographics, economics, and transport.

This created a "self-correcting process" for mapping the flow-on effects of, for example, building the Maldon-Dombarton freight line, Prof Perez said.

"There's a critical limitation to the existing tools used by planners," he said.

"They are trend-based, feet-forward models, where you start with an initial assumption and everything else is inferred from that. If the initial assumption is wrong, everything else in the model is wrong."

"[Vision Illawarra] looks at where are the synergies. It might be that the Maldon-Dombarton freight line would help the transformation of Port Kembla, which would create more jobs, and most of the other jobs created would be by people who would like to live in West Dapto. If we put all these things together, is there an advantage?"

The model will be supported by existing data sets from Sydney Water, Integral Energy and waste service Remondis.