Residential property developers in urban agent-based models: Competition, behaviour and the resulting spatial landscape

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While it is widely acknowledged that property developers are the most important agent in the urban development process, existing urban agent-based models often fail to examine the diversity of their types, strategies and behaviours and the resulting effects this differentiation has at a spatial level. To examine this, a spatial multi-agent model that accounted for the variation in how developers purchase and subdivide land was created. Using this model, two experiments were conducted exploring how developer competition and behaviour affects the development of the urban landscape. Based on the outcomes of the model, it is clear that residential developers play a substantial role in shaping the resulting urban landscape, through the structure and composition of the residential developer market as well as the spatial application of their behavioural activities.

This talk explores recent work by Landcare Research, a Crown Research Institute, in the area of agent-based modelling of residential developers.

LUMAN – is a four year programme of exchanges between University College Dublin, Landcare Research, New Zealand and VITO, Belgium focussing on integrated modelling: modelling approaches (dealing with complexity) and research informing policy development. It is funded through European Commission FP7 Marie Curie International Research Staff Exchange Scheme.

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