A Dynamic Economy – Understanding the role of transport connectivity in Levelling Up the North of England

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The UK Government has an objective to level-up the economy away from London and the South East to other parts of the country, including the North of England. This objective is based on the idea that the UK's productivity challenge is largely a result of some regions significantly lagging behind the capital, and that a turnaround in the UK's fortunes can only be achieved by correcting the imbalance and boosting productivity in these slower growing regions. To help address this the Government and Northern leaders established Transport for the North, a new statutory body, to make the case for transformational transport investment that would enable the North to function as a single economic area. By pooling the economies of the North's major towns and cities, labour markets and trade networks would be expanded to a level that could begin to compete with London. Although there are international comparators, this vision for a highly connected and inter-dependent polycentric region is a clear departure from traditional economic models, which do not capture the barriers that have developed over decades of poor connectivity between the North's cities. To address this, TfN and Steer have developed NELUM, the Northern Economy and Land-Use Model. NELUM is a System Dynamics modelling tool capable of representing dynamic feedback loops between transport investment and economic performance, and it is now being applied in major transport business cases and long-term strategy development.

In this talk, Mike will explain how Steer developed the underlying approach that NELUM is based on, and how it was implemented at a regional scale for the North of England. Jack will then explain how TfN is applying the tool to shape TfN's policies and strategies and how the tool will continue to be developed and applied.

Mike Costello is a Principal Consultant with Steer, a consultancy specialising in infrastructure, cities, and transport. After studying Civil Engineering as an undergraduate but deciding to follow an initial career in project management and management consulting, Mike later returned to university to study an MSc in Transport Planning and Engineering. Here, he developed an interest in transport modelling, and particularly land-use transport interaction modelling (LUTI), which he attributes to playing copious amounts of the computer game SimCity in his formative years. Since joining Steer, Mike has worked extensively with Steer's 'Urban Dynamic Model' – a LUTI model based on System Dynamics that is the foundation of TfN's NELUM.

Jack Snape has a PhD in physics and has worked as an analyst in the Civil Service and in Local Government across a range of policy areas, including higher education, manufacturing, climate change and transport. Jack is now the Analysis Manager at TfN, leading the development of TfN's Analytical Framework, a new suite of software tools that provides a consistent approach to data, modelling and appraisal across travel modes and regions of the North.