Collaboration in model use through the development of an online collaborative portal

A partnership between WSP, Brunel University & Isee Systems to enhance the collaborative potential of models
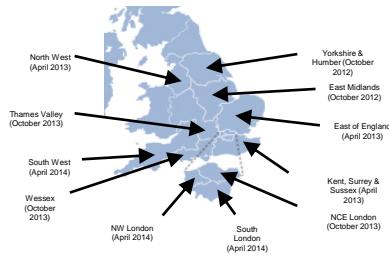

Fig 1 Regional members of the Workforce Modelling Collaborative

Context:
- The UK Health System & making strategic decisions about medical training numbers at a regional level
- A group model building process that resulted in a generic framework for addressing their key challenges
- A Workforce Modelling Collaborative in which members 'signed up' to calibrating models and sharing these in a 'safe' environment
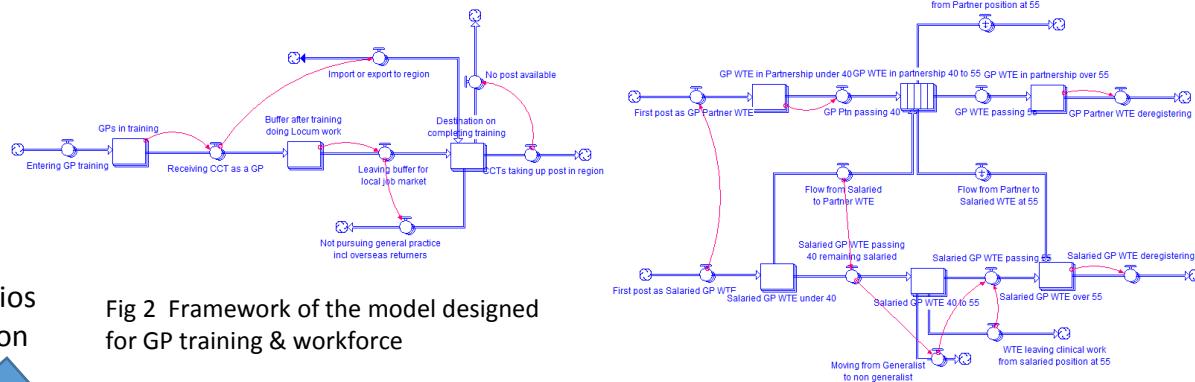

Fig 2 Framework of the model designed for GP training & workforce

The practical challenge:
- Once calibrated it would have been a time consuming exercise to collate and compare the outputs
- There was little opportunity to compare 'what if' scenarios
- The available technology for web deployment focussed on the use of single models or 'gaming'

The vision: *an online collaborative environment in which a generic model, calibrated to several different locations, could be shared for the purposes of comparison and benchmarking.*

The technical challenges:
- Extraction and storage of data from online simulation runs
- The creation of a robust online depository of simulation runs from which scenarios can be chosen for comparison
- The development of an intuitive and accessible benchmarking and comparison environment

The project: a two-year part government/part WSP funded *'Knowledge Transfer Partnership'* between WSP, working closely with Isee Systems, and Brunel University over which time the KTP Associate sought to address the challenges and bring to market a business solution fit for purpose
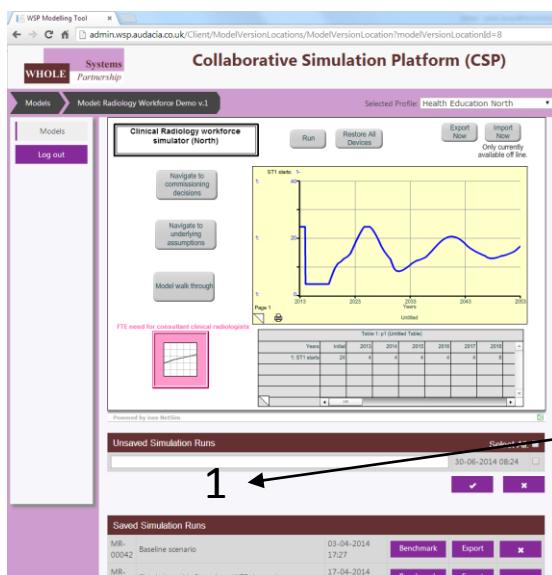
The vision realised

Fig 3 An embedded ithink model retrieved from the online calibrated set of models with a scenario run by the client.

Fig 4 A comparative set of outcomes for a different client using the saved simulations from other locations.
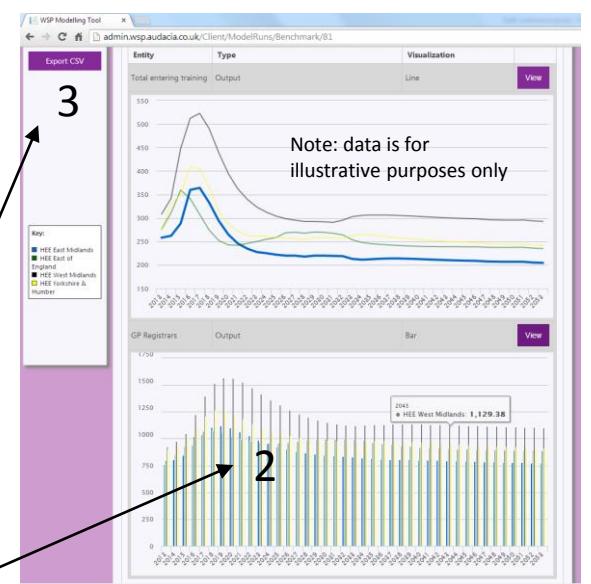
Note functionality:
1. The ability to save individual simulation runs and then select from a full menu
2. Ability to download full dataset for comparative simulation runs
3. Selection of locations to be compared is in the hands of the end user

The benefits:
- Consolidating the position of system dynamics models at the heart of a continuous improvement cycle addressing a real business need
- Strengthening the contribution of system dynamics models to the art and science of encouraging the spread and adoption of good practcie
- The ability of this approach to drive up the quality and consistency of data that is required to feed system dynamcis models
- The power of the approach to take account of local variation and different starting points in coming to aggregate strategic decisions thus complementing 'top down' with 'bottom up' approaches

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