

From problem-solving to problem-prevention with model-based management

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Most published work about system dynamics models describes efforts to solve a problem - there is some undesirable situation that people want to understand and work out a fix. Indeed, accepted wisdom in the field is that modelers should "model the problem, not the system". One top professional even described SD models as like Kleenex tissues - use them once then throw them away. [Exceptions do exist of SD models being used for continuous system management, but such examples are rare].

If taken literally, this mantra has two unfortunate consequences. First, because of the lengthy time and high cost of developing unique models, the method is affordable only for the most costly problem situations. Secondly, it bars SD from becoming embedded in organisations' normal, continuing management processes. If a CEO asks "*Can you help me better manage my business?*" our answer, apparently, must be "*No - we only fix problems*". So, the CEO turns to Finance and other support functions, who wheel out the tired old spreadsheet models that are not fit for purpose because they do not deal adequately with the ubiquitous accumulating stocks, feedback, threshold effects and interdependencies that SD handles completely.

SD models *can*, though, be used as the basis for continuous sound management. Any enterprise is an 'engineered system' and every engineering field that deals with non-static constructs deploys equivalent engineering control theory to ensure those systems function well. This session will describe two contrasting cases where SD models are being used in this continuous manner. The first concerns a fast-growing marine engineering business that wants to govern its strategy continually with a model driven by live data on its performance and its market. The second case concerns the provision of elderly-care homes in England and Wales, for which reliable long-term provision has now been devolved to over 150 local authorities. In both cases, the aim is not to "solve a problem" but to ensure, continually, that problems do not arise in the first place.

Kim Warren is an experienced strategy professional, teacher and writer. After 15 years in senior strategy roles, Kim joined the faculty at London Business School, teaching on MBA and Executive programs. Realising serious limitations with the strategy methods available, he developed the powerful strategy dynamics frameworks. He is author of the prize-winning *Competitive Strategy Dynamics* (Wiley, 2002), a major strategy textbook [Strategic Management Dynamics](#) (Wiley, 2008), and e-book summary of the method – [Strategy Dynamics Essentials](#) (Kindle, 2011). He is also co-owner of [Strategy Dynamics Ltd](#), which publishes "serious games" and other dynamics-related learning material for management, and the user-friendly modelling application, [Sysdea](#). Most recently, his work has proved directly transferable to non-business domains, including International Aid and the provision of elderly-care capacity.