Advanced Use-Case Modeling
An advanced class on using use cases for large-scale software development projects

**Delivery:** On customer site
**Course Length:** 1 day (or 2 days when combined with the Use-Case 2.0 Conversion Course)
**Course Approach:** Lecture, discussions, workshops, exercises, case studies
**Level:** Advanced

**Course Description**
This 1-day class is intended to equip product owners and requirement engineers with the skills they need to successfully apply use-case modeling to the requirements management of large, or out-sourced, projects and programmes. Throughout the class, common problems and their solutions will be explored.

The course includes detailed instruction in the use of the use-case relationships used to structure large, complex and re usable use-case models, and a detailed examination of the system of systems pattern that lies, at the heart of the application of use cases to systems engineering and the development of very large systems. The course was developed by Ian Spence, co-author of the best-selling use case book ‘Use Case Modeling’ (Addison Wesley, 2003).

**Objectives**
Upon completion of the course, participants will understand:

- how to start the use-case modeling process regardless of the size or scale of project being undertaken
- how to apply use-cases to systems-of-systems
- how to apply use-cases for packaged systems development and re-engineering legacy systems
- how to apply use cases in an out-sourced environment
- how to apply the use-case modelling technique recursively to simplify complex requirements problems
- how to recognise and avoid the most common use-case model related anti-patterns
- when and where to use optional features such as include and extend

**Topics Covered**
Structuring the use-case model, including:

- How to use include and extend effectively
  - How to use use-case generalization
  - Common use-case patterns and anti-patterns
- Use-case modeling for large scale systems development, including:
  - Use-case modeling for packaged systems development
  - Use-case modeling for replacement systems
  - Use-case modeling for out-sourced projects
  - The system of systems pattern
    - Treating reusable components as products
    - Product Line Engineering for Application Families