

Aims and Objectives

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BAWA, Bristol

Purpose

- The purpose of this workshop is to provide a **training session** in cost estimating conducted by professional estimating teams from academia, industry, tool vendors and consulting with the added benefit of **top-level critique** by senior government and industry executives.
- This program will be **instructive, entertaining, and suitable for a wide interest audience** (estimators as well as managers).

Workshop ethos

The workshop ethos will be;

- Presentations will be conducted in a **non-hostile atmosphere**.
- All observations will be **focused on the methodology and approach**, rather than the absolute cost accuracy.
- This is a **learning exercise** for the Teams and the audience.
- Team should seek ways to **demonstrate its innovation, experience, and presentation** skills.
- It is SCAF's preference that **younger members** of staff are used for the exercise, rather than 'veterans' of cost estimating, to provide a valuable opportunity for 'the next generation' to gain experience.

Background

Estimating and forecasting is **not an exact science** as the national audit office (NAO) major projects report for many years has frequently demonstrated through **numerous examples of project overspending and schedules slipping**. As a means of acknowledging this fact, cost engineers and forecasters have adopted **uncertainty and risk management techniques** to provide a means of communicating to decision makers the range of possible cost and schedule outcomes for budget, proposal or project.

In simple terms;

- **uncertainty** is defined as the variation surrounding the planned baseline resources or schedule required to deliver a project, while
- **risk** is defined as the probability of an event causing a deviation from the planned baseline and the impact of that event in terms of cost and schedule.

The Challenge (Problem)

You are **moving overseas** as you have been offered an opportunity to work in a foreign country as a cost analyst. The **job starts in 6 month time** and, as a diligent member of staff, this will require a plan. You have been asked to submit your expenses claim for relocation in advance to enable your new employer to agree a budget.

Using your planning and cost engineering skills you start to plan the tasks required over the next 6 months. At the same time you realise that the budget needs to be presented and agreed. Using risk management it is your intention to ensure that you are not short of funds or left to fund anything yourself.

This year's challenge is **to plan your move overseas using uncertainty and risk analysis and propose a budget for this project.**

As a minimum your plan should consider:

1. all transport (airfares, ferries, train),
2. all removals or shipping,
3. all hotels and temporary accommodation,
4. car hire,
5. all the families needs.

The Challenge (Problem)

The presentation to your new employer **should cover**:

- approaches to data gathering,
- uncertainty in the data,
- risk identification,
- presentation of a risk analysis model,
- the effects of uncertainty in the data on the cost model,
- sensitivity analysis of the results.

The objective is not so much to prepare accurate and realistic estimates, but to **describe the approach to this task** and how the task has been conducted. It is reminded that the Team members should not disclose proprietary information.

There is no pass or fail and certainly no **“right answer.”** We strive to keep the estimating spirit alive and to present a good cross-section demonstration of how world-class estimators approach the issue of analyzing data and producing risk adjusted models.

General Estimating Assumptions

1. The base estimates should be at **2014 economics**,
2. **Uncertainty and risk distributions** must be considered,
3. The teams will **not be limited to data provided** by SCAF in this paper and may supply their own insight into risks identified and uncertainty recognised,
4. The team should offer a **recommendation of the budget**, with an **explanation** of their reasoning, including risk inside their costs and risk outside their costs,
5. The team should **make assumptions** about the size of the family involved,
6. Technology forecasting, augmenting assumptions, and **innovative estimating are encouraged**

Format and Schedule

- The results of this case study will be in MS Office (PowerPoint and Excel) format, presented in **30 minutes** by one or more team presenters **including time for questions and answers** from the Senior Review Panel and audience

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