# Case studies notes for courses based on *Enlightened Planning*

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This note shares my views on using the Transcon and Samdo case studies for professional courses plus related university courses based on the book *Enlightened Planning*. Case studies text describing what the cases involve for course participants and presenters, and slides course presenters can use to discuss the analysis each team of course participants develops, are provided separately on the website. You may want to employ additional or alternative case studies, with or without drawing on the discussion provided here on the use of these two case studies.

The background to the original development of the Transcon case study as part of the Forum 2 programme for IBM UK is discussed in *Enlightened Planning*, and chapters 3 and 6 extensively explore the ideas underlying this case study. Section 1 of this note outlines how I use the slides for this Transcon case study, assuming that you have read chapters 3 and 6 of *Enlightened Planning* and the course and presentation notes provided separately on the website. You will also find it useful to read the case studies text before you make direct use of these notes.

The Section 1 discussion assumes that you will use a four part form of the Transcon case study. As discussed in the course and workshops notes, you may prefer a three, two or single part approach. For example, I use the four part approach for my university MANG6143 course, I usually use a one part approach for two day professional courses, but I have used a two part approach for IPMA three day courses, merging parts 1+2+3 but keeping part 4 separate.

The Samdo case study was created using the *Enlightened Planning* chapter 8 context, in the sense that the historical setting of the case study is Ontario, Canada, in the late 1990s, when Ontario Hydro was seeking to expand their portfolio of nuclear power stations, and Samdo was an Ontario based would-be producer of privately generated electric power looking to invest in gas-fired power to be sold to Ontario Hydro. Samdo is not based on any real company or people, but the Samdo case study was created drawing on my experience working for the Independent Power Producers Society of Ontario (IPPSO), who hired me to write the report chapter 8 draws upon. The Samdo case study can be seen as a very simple corporate top-down strategic planning case, it was developed and initially used 20 years ago, long before the *Enlightened Planning* book was conceived, and its linkages with chapter 8 are not as strong as the Transcon relationship with chapter 6. Section 2 of this note addresses how I currently use the slides for the Samdo case study.

## Section 1: Transcon 1-4

**Slide 1** assumes a four part presentation, and you will revise all slides to use your own organisation’s logo and name.

**Slide 2** initiates discussion with a focus on a measurable objective defined in terms of the expected value M (margin), with two components, B (the bid) and C (direct cost). The focus of Transcon 1-3 is C.

**Slide 3** facilitates very simple discussion of risk efficiency in a stochastic dominance sense using linear cumulative probability distributions, including recognising explicitly that the Zoro ‘hostile takeover’ risk implications are not portrayed but may matter greatly, and formally acknowledging this reinforces the preference for choosing an Astro approach without any need to assess impact or chance of occurrence. This slide does not portray the plausible minimum and plausible maximum values used to plot the two linear cumulative probability distributions, using the same format as the original IBM UK case discussion, and this ambiguity is used to initiate a discussion about the value of a more formal approach to estimation using the minimum clarity approach as introduced in chapter 3 involving a P90 estimate first followed by a P10 and applied to a variant of this diagram in chapter 6. I avoid discussing the ‘friendly takeover’ complications introduced in the context of this slide in chapter 6, but do mention

**Slide 4** illustrates taking a parametric approach to the very uncertain top-end of the Sysdoc cumulative probability curve, as discussed in chapter 6, along with the ‘quality’ differences in the Sysdoc and Datapol approaches, and how to deal with them.

**Slides 5 and 6** summarise key concluding discussion points.

**Slides 7 and 8** initiate part 2, shifting the focus to expected direct cost estimates involving a discrete outcome event structure.

**Slides 9 to 13** facilitate a discussion of the second order uncertainty concerns that are raised by a discrete decision and probability tree approach, subtleties like additional memory may be needed but Astro may not have to pay for it, and the conceptual difficulties people often have using expected outcomes which can never be realised, as discussed in chapter 6.

**Slide 14** summarises key concluding discussion points, building on part 1.

**Slides 15 and 16** initiate part 3, shifting the focus to total direct cost.

**Slides 17 and 18** facilitate a discussion of adding plausible minimum, plausible maximum and midpoint values assumed to be expected values, assuming a perfect positive correlation (100% dependence) relationship, and treating this as a simple first pass analysis to facilitate spending more time thinking about bidding, as discussed in chapter 6.

**Slides 19 and 20** summarise key concluding discussion points, building on part 2.

**Slides 21 to 23** initiate part 3, shifting the focus to considering the pricing issues underlying a bid, using the part 3 expected direct cost estimate.

**Slides 24 to 27** facilitate a simple introductory discussion of bidding as developed in much more detail in chapter 6. This discussion could be taken much further, depending upon your course participants. For university students taking a course like MANG6143 and most professional short courses, this level of discussion has worked well in the past for all of my courses, but you may prefer a different approach.

**Slide 28** summarises some key concluding points.

## Section 2: Samdo

**Slides 29 and 30** initiate the Samdo case study discussion in a similar manner to the approach taken to the Transcon case study. The key significant differences are M = B – C is replaced by M = R – C, where all the values are per annum, R is corporate revenue, E is corporate indirect and direct costs, and we are now dealing with a potential initial project for an organisation’s strategic plan.

**Slides 31 to 33** facilitate a simple discussion of top-down assessment of a project using a very modest level of decomposition into components associated with different kinds of uncertainty, as distinct from the bottom-up assessment many of the participants on professional courses are inclined to initiate their analysis with. Slide 31 suggests revenue is the place to start, recognising the dominant role of base load power sales to Ontario Hydro, the relatively modest implications of waste heat revenue, and the very minor role of back-up emergency power revenue. Slide 32 suggests cost is driven by the technology choices facing Samdo with two big components: amortised capital cost, and fuel cost. A residual third component, other costs, is assumed to be relatively small and reasonably independent of the technology choices. Slide 33 suggests creative thinking putting this together might suggest going for the new untested design approach with the emergency power business deferred, plus a back-to-back contract with Ontario Hydro. The second aspect would arguably be crucial, to ensure Samdo has long term contractual commitments from Ontario Hydro which avoid Samdo becoming squeezed between rising gas costs and revenues which did not rise in line with gas costs. In effect it involves seeking a contract to produce gas-fired electric power for Ontario Hydro with Ontario Hydro taking the risk on gas prices – paying for the Samdo power at a rate linked to gas prices. If they could not do this a gas price contract linked to the price of electricity might be a feasible fall-back. If neither were possible, Samdo should probably not proceed. If proceeding remains an option, timing considerations become crucial. Investing in a more developed business case is itself a risk not worth taking if a relatively simple but effective top-down analysis is not undertaken first.

**Slide 34** facilitates a concluding discussion in a simple manner. For nearly 20 years I have found this case study used in this simple way a useful way to clarify the difference between top-down strategic planning at a corporate level and traditional bottom-up approaches to planning projects. How far it is worth developing this discussion further in a manner linked to *Enlightened Planning* chapter 8 is an open question from my perspective. You may find it useful to think about this issue in terms of your course plans and alternative or additional case studies.