

Facilities and Asset Performance (BUIL 5017)

Exam Questions

Answer all 4 main questions. Each is worth a total of 25 marks, with marks for each section shown in brackets. The total score will therefore be out of 100.

Question 1. Conveying the message / benefits

Congratulations, you have just been appointed as the Asset Manager for the University of South Australia. You have also been invited to prepare a 20-minute presentation to University Executive on how you propose to manage the organization's facilities and how to deal with any performance deficiencies. The executive includes representatives of various departments.

Whilst not preparing an actual presentation, you are asked to outline the key points that should be included in response to following questions:

- a) How would you explain to them the meaning of asset management? (3 marks)
- b) Next, how would you convey the benefits of implementing performance management in the organization and especially in the management of its facilities/assets? (5 marks)
- c) What are some of the likely barriers to introducing asset performance management principles? (4 marks)
- d) What are some of the considerations in motivating management and employees to make the effort to raise asset performance levels? (4 marks)
- e) How would you capture the attention of executives?

What techniques could you use?
How would you present options and seek their agreement to your preferred option?
(4 marks)
- f) What do you see as the main elements of your role as Asset Manager? How could you and executive measure your own performance in fulfilling this role? (5 marks)

Question 2. Business and asset requirements

A country region of a state health department has a number (say 8) of ageing hospital assets which, in the past, all sought to provide the same or similar services eg operating theatres. There are new directions in the health services required in the region due to the ageing population ie a trend away from maternity and operating procedures towards aged care, although some operating theatres are still required.

If you were the Asset Manager, explain how you would introduce and 'sell' to the region's executive the notion and benefits of defining and especially *differentiating* business and also asset performance requirements eg should emergency services be the same for all the hospital facilities in the region? Your answer should cover the following points:

- a) Outline the likely effects of the new service directions on the health assets in the region (3 marks)
- b) Describe performance rating scales and how they may be used to define various levels of performance. What does the 'highest' level mean on such a scale? What does the 'lowest' level mean? (4 marks)
- c) In establishing performance targets for the above health assets, and in the context of the statewide health system and facilities, discuss whether these should all be at the highest level? (5 marks)
- d) Should the same performance targets or requirements apply to both the assessment of existing facilities and the design of new? (4 marks)
- e) Outline the value/benefits of *differentiating* business requirements and hence differentiating asset requirements? (4 marks)
- f) Discuss how grouping or clustering of the various kinds of differentiated health facilities may lead to more efficient and cost-effective delivery of services and use of resources (5 marks).

Question 3: Asset performance assessments

Take an example of an organization with a large number of assets eg an Education Department with say 1000 schools.

a) Discuss whether performance measures and targets should be established by head office or by each of the schools themselves (3 marks).

b) Who should undertake assessments under the various categories of capacity, suitability, condition and compliance?

Should it be people from head office or the users at each site?

Should it be the users themselves? Should the views of occupants be sought and how?

Should it be specialist technical personnel/consultants?

Should it be a combination of each? (5 marks)

c) How would you approach the level of assessment eg would you arrange for detailed assessments of all 1000 assets? If not, what other approach would you adopt? (4 marks)

d) Discuss whether performance assessments should be based upon functional areas (eg general teaching areas, sports facilities, science laboratories or administration). Or on the physical assets eg walls, floors, ceilings, plant? Or both? (4 marks)

e) How would you arrange for intervention options to be developed and evaluated?

In-house? Or use of consultants etc? (as above)

If consultants, how would you deal with the problem that consultants tend to be risk averse? (4 marks)

f) How would you deal with the issue of compliance and the difficulty in achieving full compliance with current codes eg for fire safety, disability access, asbestos, ventilation, etc? What do you understand by the term 'residual risk'? How can this concept help in evaluating various options? (5 marks)

Question 4. Analysing gaps/risks across a portfolio of assets

As an Asset Manager for a Department of Road Transport, you are concerned for the safety of roads and bridges, given that the assets are ageing. In addition, there have been some cracks appearing in a bridge across the River Murray used by heavy vehicles and some of the road assets have dangerous potholes and slippery surfaces.

- a) How would you go about identifying the most pressing safety-related issues or 'hotspots' across the 'portfolio' of transport assets/infrastructure comprising about 1000 assets? (4 marks)
- b) Is there a way that you could categorise assets to aid this process? Give some examples of possible categories. (3 marks)
- c) Discuss how the use of risk analysis can add to the process for prioritising or ranking of deficiencies and determining 'hotspots'. (4 marks)
- d) What types of deficiencies are likely to represent the highest risk? (3 marks)
- e) Now, explain how you would prioritise safety deficiencies holistically in relation to other asset requirements. (4 marks)
- f) Having identified the deficiencies and prioritised them, how would you go about considering and evaluating various remedial options? How would you determine what is a 'reasonable' level of upgrading? (4 marks)
- g) How can an asset management plan demonstrate 'due diligence'? (3 marks)