

Form groups of up to 3 persons per assignment. For the case study transport system provided in the lectures, identify the functions, requirements and subsystems. Pay particular attention to identifying sustainability performance requirements. What needs to be designed to match these and what needs to be adapted? Using the case study system data, begin to map out a design and delivery programme for the system. Prepare a Systems Engineering Management Plan (SEMP) to manage the design through to it being operational.

Some guiding points:

1. 10 to 15 pages
2. Each group to submit one assignment as a printed report. Provide assignment to Stephen Moore's office by midday on the 3rd April. Use the cover sheet template provided in the course overview.
3. Form of assignment is
 - a. Introduction
 - b. Context to contain the urban setting (ref the metro strategy references: #1 below) and the Transrapid based transport system option discussed in week 2. Put your sustainability vision for Sydney and connect to the goals and broad requirements we discussed in week1. Define the specific requirements for this option to meet (i.e what are the expectations required of this system to contribute satisfactorily to the sustainability vision and goals you adopted?). Think about the option and what it can be reasonably expected to contribute to this outcome.
 - c. Assume that this option is selected as the system to be implemented. Describe the system engineering management plan (SEMP) that you recommend to guide how agencies will design and enable this system so that it delivers to the system requirements. See the principles of SEMP discussed in week 3. Need to identify the system functions and the subsystems. Allocate the system requirements to the subsystems. Discuss the principles on how the design process and implementation should be managed. Use illustrations to show this if it is easier.
 - d. Provide a summary of your recommendations.
 - e. Provide references you have used.

#1

Context documents can be viewed on the metropolitan strategy website:

“The New South Wales Government formulated a metropolitan strategy to set out how the State Government intends to “sustainably manage growth and change in Sydney and the Greater Metropolitan region (stretching from Port Stephens in the north to Kiama in the south and westwards to the edge of the Great Dividing Range) over the next 30 years.” The Metropolitan Strategy: Ministerial Directions Paper may be found under “Documents” for 14 May at

<http://www.metrostrategy.nsw.gov.au> In this paper, Chapters 10 and 11 deal with transport, airports and ports, although reference to transport may be found elsewhere in the document. Also look at the Metropolitan Strategy Update Report (under Documents / 2007/ 15th June on the web site). (Look at the <http://www.metrostrategy.nsw.gov.au> web address and look up tabs for subregional planning / north west subregion and southwest subregion) ”