* **Steve** – will prep for section 1.
* Next meeting will be Thursday 11/12.

1. [40%] Produce a resource plan and a leveled plan schedule that has minimal resource under-utilization and no over-utilization of resources. DO NOT ASSIGN THIS SECTION TO A SINGLE TEAM MEMBER – TAKE A PROJECT PHASE EACH.

**1.1 (Re)sequence the plan around allocation of human resource to tasks, planning at least two streams of parallel activity where possible.** [Steve – all phases, done by Wed 11/04] Allocate one person per task, unless this is a collaborative task such as integration testing or client review. You may need to add some resources or change resource allocations from those identified in your subsystem scenarios. Consider which people should be multi-skilled (for example, you probably cannot afford to have a database specialist just doing database design on a small-medium project – you would need someone who could also design and develop server-side software such as SQL code). Do not just define additional human resources to resolve short-term bottlenecks, or they will be sitting on their hands between tasks (and costing a fortune). Do not just swap a core team member for a consultant to solve a scheduling problem – note the problem and move on. Explain your resource planning strategy.

**1.2 [Michelle – Predevelopment, Steve - Phase 1, Shaima – Phase 2,Ben – Phase 3 all done by Friday 11/06]**

**Allow some overlap of tasks where resource allocations make the hard demarcation between project phases unworkable** (e.g. you can’t have the whole team sitting around, waiting for the client to sign off on stage 1 – you can redefine the end of stage 1 as the end of development work and overlap client testing and acceptance activities with starting work on the most well-defined functional components for stage 2 development. Defer the requirements analysis/redesign following from stage 1 evaluation until the client has signed off on stage 1 and agreed revisions. Explain the logic of the changes you made here.

**1.3 Shaima done by Sunday 11/08 - Level the plan to use resources efficiently: use the resource leveling tool in Microsoft Project, saving a backup copy of your project first(!).** Compare the end-date – how much time did leveling add to your schedule and why do you think this happened?

**1.4 [Michelle – Predevelopment, Steve - Phase 1, Shaima – Phase 2,Ben – Phase 3 all done by 11/10]**

**Manually adjust tasks on either the original plan, or the leveled plan to balance resource utilization with reducing project duration.**  In the Microsoft Project Team Planner view, drag and drop tasks manually between resources to remove gaps between individual developers’ task allocations. Split large tasks where you have some people over-utilized and others not doing anything in that period. You might also double-up people to reduce the duration of tasks that present a bottleneck for the project. But remember that most tasks are done more effectively by one person than by 4-5. Consultants should have defined periods when they will be needed – not just a day here and there, but a period of a few weeks at a time, or it will not be worth their time to show up. The end result is that core team members should have no more than a few days between tasks – not weeks and certainly not months – although I don’t expect perfect – just try to get this “good enough”! Compare the end-date – how much time did manual resource reallocation remove from your schedule and what constraints prevented you from planning more efficiently?

**1.5 Briefly discuss your resource utilization and its implications for the project budget.**

**Michelle (whenever)**

Make sure the (italicized) questions from parts (a) - (d) are addressed in your discussion. What impact does this plan and resource utilization have on your budget, given that you are paying people to be there, not just to work on assigned tasks?

2. [40%] Prepare a financial analysis of your project.

I have provided you with a worked example, to demonstrate how to calculate these items. Please do

not just copy the categories of costs or benefits that I have used. Each category has been cut-down so

I could demonstrate how to perform the calculation on a single page (especially the TCO). The lecturenotes

provide a more complete set of categories to consider, for both costs and benefits.

**2.1 Steve done by Wed 11/11 Produce a project cost breakdown that allocates costs to the various subsystems (sets of WBS activities, including pro-rata testing and requirements analysis, etc. costs), and provide the basis**

**for your figures [** (e.g. 30 man-hours @ $35/hour \* 1.35 overhead costs). Account for the different

costs of various human resources (e.g. DBA vs. Business Analyst vs. Java Programmer). Research

salary averages for various expertise and explain how you accounted for overhead costs.

**2.2 Shaima by Wed 11/11 Calculate the total cost of ownership (TCO) of the system assuming a usable system lifetime of five years.** Think about and justify TCO costs in terms of your specific system context and explain

the basis for these costs. Don’t just copy the costs in my example, or my cost categories (which

are a minimal set, provided to explain the spreadsheet layout) ! Think about the circumstances of

your own company and its operating environment.

**2.3 Ben by Wed 11/11 Quantify a range of project benefits to assess whether a project is financially viable and (briefly) justify the basis for these figures.** Your POS success criteria will provide you with a starting point for quantifiable benefits – also think about how you might put a figure on intangible or indirect

benefits, such as improving customer satisfaction, or providing CSRs with better information. Do

not just make up a total – think about how you would define benefits in this type of business and

explain the calculation of benefits. Google ballpark figures for similar types of business elements.

**2.4 Michelle by Wed 11/11**

**Present a return on investment analysis (a cost-benefit analysis),** that determines whether the

project is financially viable, assuming a usable system lifetime of five years before any major

redesign or total system replacement.

3. [20%] Provide a brief summary and evaluation of your project

Section (a) should be no more than one page; section (b) aims for ½ page. Summarize the critical

points that support your arguments and point the reader to the section/page of the plan (all three

assignments) where the evidence supports your conclusions in all 3 parts of this assignment.

3.1 **Michelle done by Fri 11/13**Summarize the main points of the project plan (across all three assignments):

(i) the ways in which it will change your business operations, (ii) how much it will cost and how

long it will take, (iii) the main business benefits it will deliver and the main risks it presents.

3.2 **Shaima done by Fri 11/13** Briefly define how your project would evaluate and report progress. What reports would be

needed, who would originate these and who would review them?

3.3 **Ben done by Fri 11/13** What do you recommend? You have three options: (i) proceed with the project as planned;

(ii) modify the project to build a subset of components to reduce the budget but provide core

functions required; (iii) do not proceed with this project as it cannot be justified in business

terms. Briefly justify your recommendation, based on your analysis of the project and its risks.

Refer back to your financial analysis to identify strategic (critical but intangible) business benefits

that are central to business success going forward, but hard to quantify; and to identify the

financial benefits or losses from the project (ROI). Refer back to the risk analysis to identify

critical risks that might undermine specific benefits.