

10 Step Estimating Process Checklists

Checklists can play an important role in repeatable processes. Here is a basic set of checklists from my book. These should be tuned to the individual organization's needs.

Step 1: Establish Estimate Scope and Purpose

Initials of Analyst when Complete	Item	Notes/Description
	Identify the Scope; is this an Estimate at complete (EAC), and estimate to complete (ETC) . . . Also, is integration of this software to other software included? If so, list the other programs that it integrates with that are included here. A portion of SEIT?	
	Define the purpose of the estimate (to determine cost, schedule, staffing . . .)	
	Point of Contact: establish one or more points of contact: technical data, contract data, requirements information . . .	

STEP 2: Establish Technical Baseline, Ground Rules and Assumptions

Initials of Analyst when Complete	Item	Notes/Description
	Technical baseline. This description will be used as the WBS structure to enter into SEER-SEM. This must include at a minimum each CSCI, their relationship to each other and the outside world (integration), and any currently planned builds/deliveries. Builds/deliveries must be clearly identified, non-delivered builds are much less expensive than actual deliveries.	
	Ground rules: a list of all the known conditions surrounding the development (e.g. developer must use DO178b . . .)	

	<p>Assumptions: a list of all the information necessary to complete an estimate, but not available to the analyst (e.g. hardware will be available when needed . . .)</p>	
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Step Three: Collect Data

Initials of Analyst when Complete	Item	Notes/Description and Source of the Estimate/Actuals
	Customize the SEER-SEM data collection worksheets. (i.e. fill in all the parameters that you can using the available documentation so as to minimize the time required from the customer.)	
	Complete the customized SEER-SEM data collection worksheets for each CSCI (major computer program).	
	Review the data for reasonableness.	
	Re-check any parameters in question with the contractor/developer (if possible)	

Step Four: Software Sizing

Initials of Analyst when Complete	Item	Notes/Description and Source of the Estimate/Actuals
	Size estimate for all new software to be developed (least, likely, and most). (Make sure the SLOC or Function Point definition is clear)	
	Size actuals/estimate for all pre-existing code to be used.	
	ReWork parameters evaluated for all pre-existing software.	
	All COTS software identified.	
	Secondary methodology used for the size estimates.	
	Growth factors applied to size estimates.	
	Any prototyped code identified.	

Step Five: Prepare the Baseline Estimate

Initials of Analyst when Complete	Item	Notes/Description
	Enter all the data in SEER-SEM	
	Input notes for each parameter (even if the note says KBase used)	
	Analyst review the inputs to make sure they are correct	
	Analyst review the outputs to make sure things look right. (This will be done in MUCH more detail in Step 7)	
	Analyst and developing contractor together review the inputs (if possible) to either make sure the 2 parties are in agreement, or the differences are documented.	
	In a spreadsheet (or similar document) make a comparison of this baseline estimate to the previous one. (if one exists). Note the differences between each estimate. (Use Estimate Track.xls as a basis for the format.)	

Step Six: Quantify Risks and Risk Analysis

Initials of Analyst when Complete	Item	Notes/Description
	List all the Risks associated with the development of each CSCI (major software program)	
	Determine which risks will be included in the estimate (document these decisions in the Ground Rules and Assumptions)	
	Decide how to "show/brief" the risks: all included in the estimate; included in the estimate one at a time to show the potential impact of each risk individually . . .	

Step Seven: Estimate Validation and Review Checklist

(This is just a checklist to review the estimate, not the actual estimate process.)

Initials of Analyst when Complete	Item	Notes/Description
	Productivity: does the estimated productivity look reasonable within the industry standards and the developing organizations current ability	
	Staffing: can/will the developing organization be able to meet the estimated required staffing plan currently and in the future	
	Size: have the size estimates been checked for reasonableness and is growth included	
	Top 10 Cost Drivers: do the top 10 cost drivers match the program (i.e. if Security is a top cost driver, does the program indeed require security . . .)	
	Schedule: if the schedule doesn't fit into the "master" schedule for the program, what has been done	
	Risk: have risks been identified and included in the estimate. Also check the risk/confidence level used to create the estimate.	
	Cost: if cost is being used, has the labor rate been verified and a list of costs/included been checked	

Step Eight: Prepare a project plan based on the estimate

(SEER-SEM Client for Microsoft Project is the tool to do this.)

Step Nine: Document the estimate and the lessons learned

Initials of Analyst when Complete	Item	Notes/Description
	Verify that each parameter selected has an associated note/rationale.	
	If there is more than one version of the estimate, verify that each are properly documented	
	Make sure the ground rules and assumptions are attached to the estimate.	
	Document any special circumstances surrounding the estimate (e.g. estimate done for schedule only . . .)	

Step Ten: Track the project throughout the development

Initials of Analyst when Complete	Item	Notes/Description
	Collect the required data using the SEER-PPMC Metrics Collection data form.	
	Using your baseline estimate, enter the data collected above into SEER-PPMC.	
	Present and use the data as required by your program.	