Project Management

Project Planning

Risks

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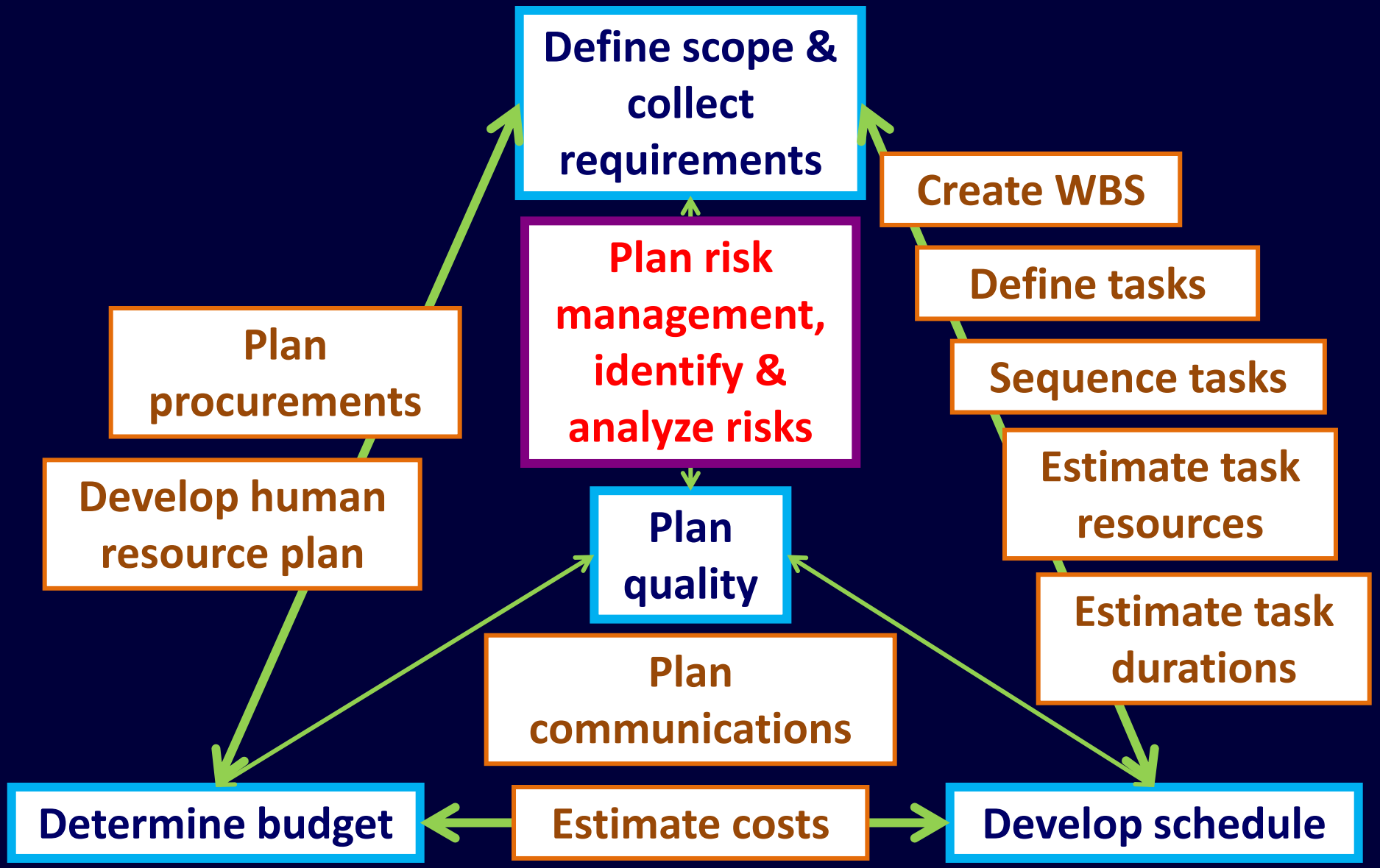
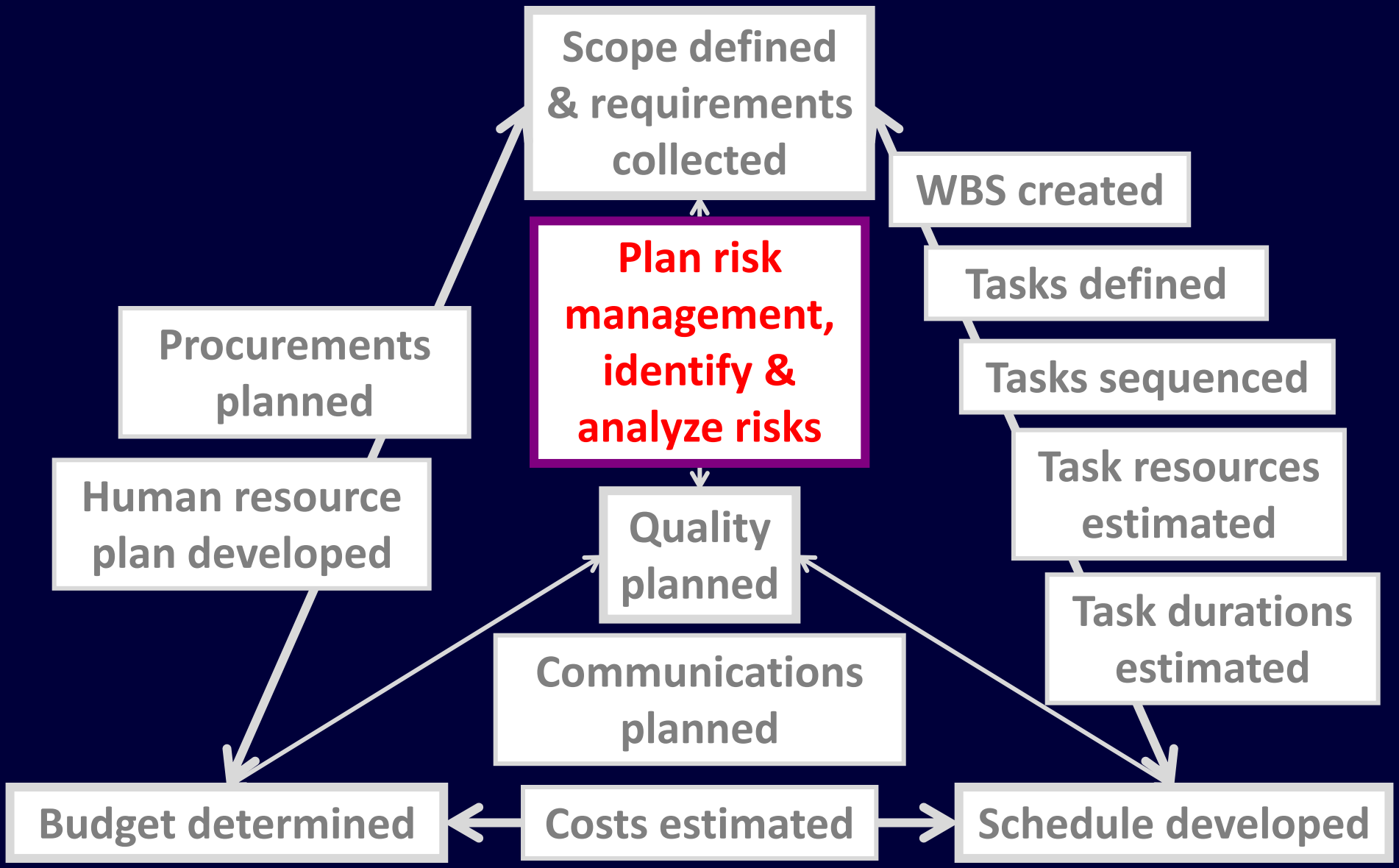
Project planning processes



Planning processes: where do we stand?



Risks

- The possibility of something bad happening at some time in the future
- Anything that can go wrong <u>will</u> go wrong!

Murphy's Law

GENeRAL mURPHology

Murphy's Law
If anything can go wrong, it will.

Corollaries

1. Nothing is as easy as it looks.
2. Everything takes longer than you think it will.
3. If there is a possibility of several things going wrong, the one that will cause the most damage will be the one to go wrong.
4. If you perceive that there are four possible ways in which a procedure can go wrong, and circumvent these, then a fifth way will promptly develop.
5. Left to themselves, things tend to go from bad to worse.
6. Whenever you set out to do something, something else must be done first.
7. Every solution breeds new problems.

From ***Murphy's Law: 26th Anniversary edition*** by Arthur Bloch

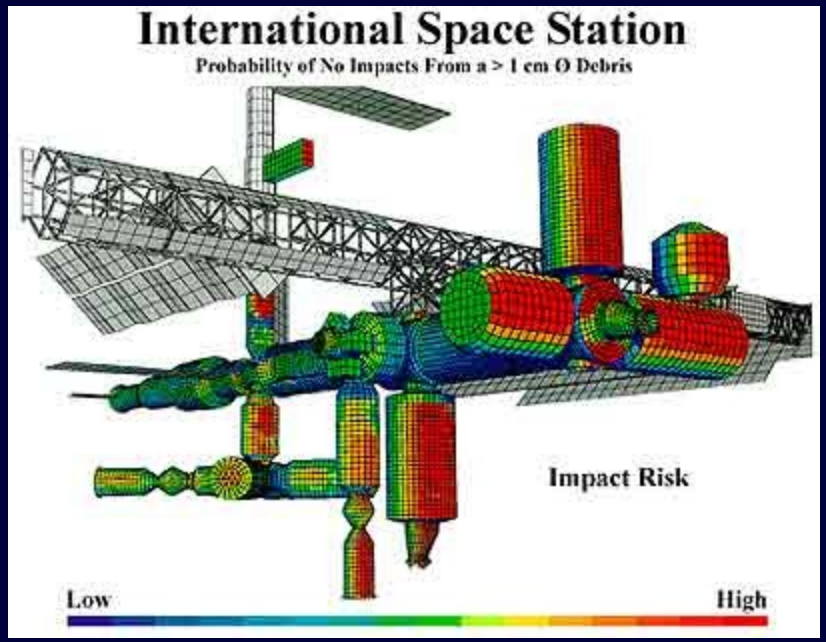
Example of poor risk management

Plan risk management (1)

- Define how to conduct risk management for the project.
- Ensure that sufficient time and resources are allocated to risk management.
- Take into account the relationship with other areas of the project management plan.
- Identify risks and take action to mitigate or eliminate them.

Plan risk management (2)

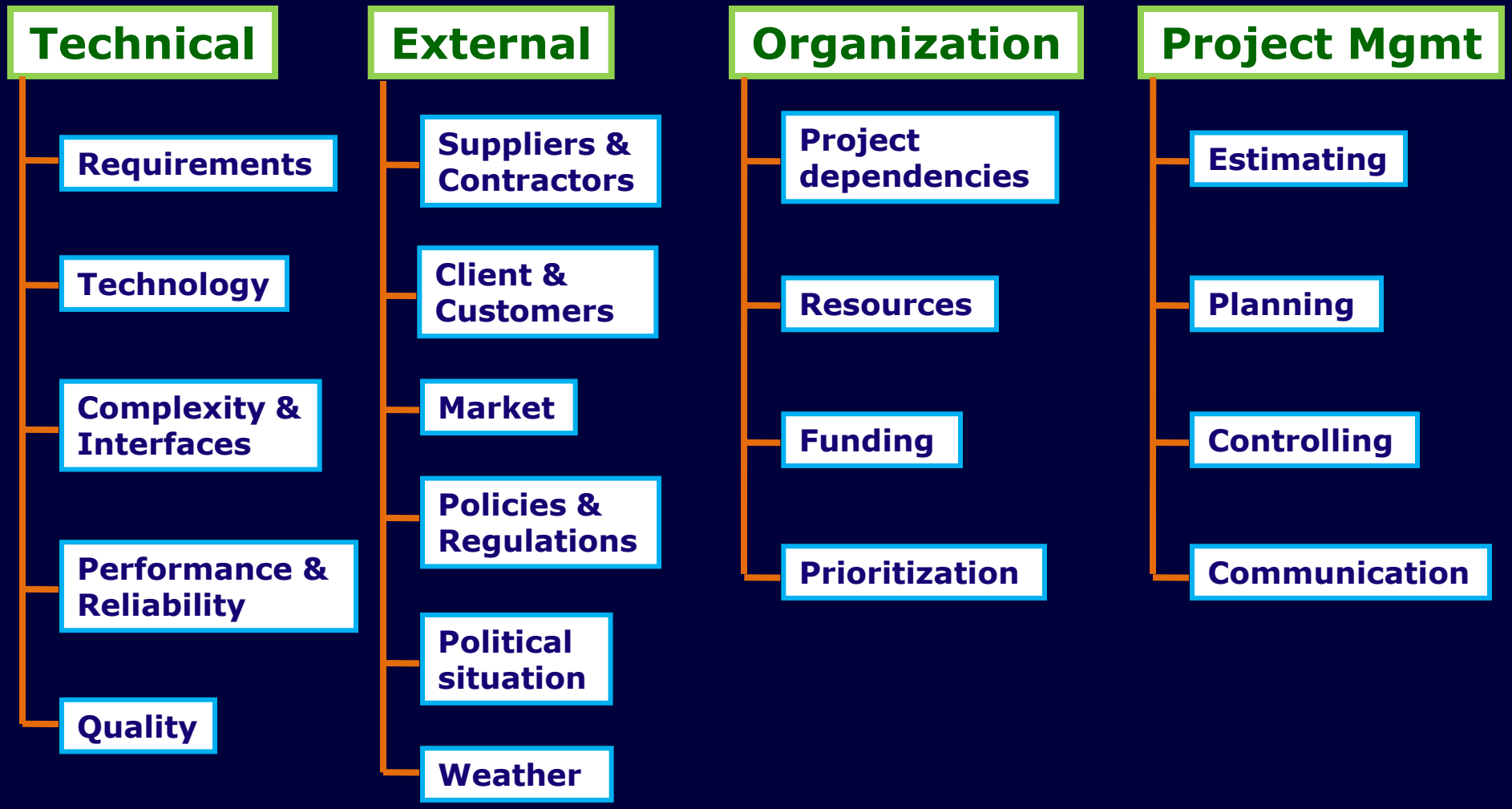
- Methodology
- Roles and responsibilities
- Budgeting
- Timing
- Risk categories
- Risk impact levels



Identifying & managing risks

- **Involves:**
  - ✓ expert judgment,
  - ✓ analysis of historical data,
  - ✓ teamwork,
  - ✓ brainstorming workshops,
  - ✓ a “risk breakdown structure” (RBS).

Risk Breakdown Structure (RBS)



Derived from *A Guide to the Project Management Body of Knowledge ("PMBOK® Guide")* published by the Project Management Institute (pmi.org).

Minimizing/eliminating risks (1)

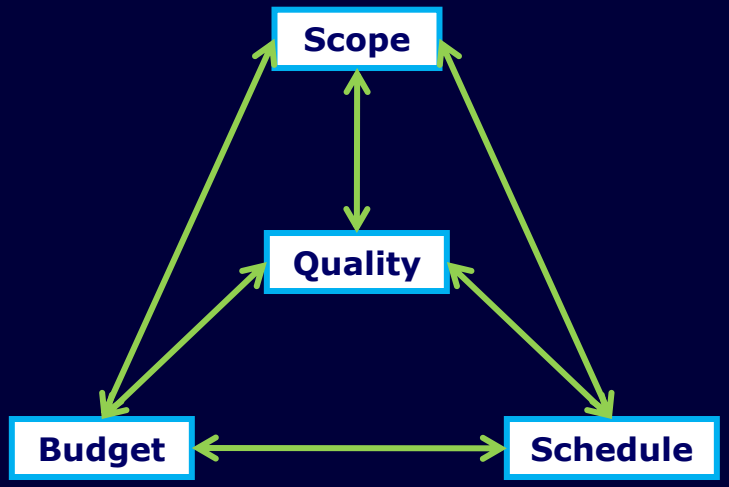
- Make sure that requirements are comprehensive and unambiguous.
- Make sure that the WBS and description of tasks in WPs are comprehensive.
- Clearly identify all of the dependencies between tasks.

Minimizing/eliminating risks (2)

- Identify critical paths in the project schedule.
- Include dummy tasks?

Evaluating and acting upon risks

- Probability of materialization
- Impact on the project
- Course of action
- Cost



Example of risk evaluation

Risk factors	Risk probability level	Risk impact level	Actions taken or to be taken	Cost of risks	
				Already included in budget	To be added to budget
Requirements unclear, many grey areas, ambiguities to be resolved.	High	High	Q&A spread over a week + two-day meeting with client to review, refine and agree on requirements.	4 500	
The client didn't ask for a mock-up interface before the prototype phase: disagreement on interface may cause rework and delay in following tasks.	High	High	Interface mock-up phase in two iterations to be proposed to client, in order to agree on interface before further design and development steps.		10 000
Our network architect may not be available at the time he is needed for network design.	Moderate	Moderate	Use an external consultant (already identified) in case our expert is unavailable.		3 000
Members of our development team disagree on workload estimates for phases 1 and 2 of application coding.	High	High	The amount factored into the budget for phases 1 and 2 coding has been calculated on the basis of a weighted average of indivual estimates, validated by a senior developer, but a contingency reserve of 15% should be added.		9 450
Debugging the system after client testing may take longer than allowed by the schedule imposed by the client.	High	High	More time and resources have been allocated to testing; need to negotiate schedule change with client.	5 250	
One of the client's sites at which the system is to be deployed might not be ready at the scheduled date: risk of delay in deployment and related payment.	Low	High	Need to negotiate with client in order to obtain at least 50% of amount to be paid on the scheduled date, whatever the delay on deployment due to the client.		
The client's terms of payment provide for only 10% upon signature of contract: not sufficient to fund the first phases of the project before the next scheduled payment.	High	Unacceptable	Legal & Finance feel confident they will obtain a 20% down payment at contract signature. If they don't, we should opt out of the project!		
Given the complexity and length of the project, there is a natural degree of uncertainty regarding task durations and resource usage.	Very high	Very high	A management reserve of 10% should be added to the total cost of the project.		75 000
			TOTAL COST OF RISKS	9 750	97 450

Questions?

Planning completed in all PM areas!