1 Pre-Project and Khalsa's ORDER model

Usually, a software project begins with an idea or a need – a 'gain' or a 'pain'. Many software projects start out of a pain or problem situation: somebody postponed a problem for some time until it became a real pain or a killer question. It is very important that there is a professional pre-project analysis phase before you can write an offer and make up estimates about a software project's duration or budget.

How can we 'start', when there is just a need or an idea, but no detailed specification yet? Should we make up a work breakdown structure (WBS) right away? Or write a specification and plan the work packages while being still in a state of unclear goals and many open questions? I would say 'NO!' right now. Let us see what Mr. Mahan Khalsa's idea is when we speak about managing pre-projects and clarifying or scoping a software project using his ORDER model.

1.1 ORDER – the basics

ORDER is a sequential approach to manage the pre-project phase. It is a 5-phase process, like a waterfall model and well suited for technically complex projects and problems. The pre-project phase is usually located between the sales and project implementation phases, i.e., before the client orders the project or a solution. ORDER is an abbreviation and stands for:

O(pportunity): No need, no problem = no project!
R(esources): Insufficient or wrong resources for definition = no project!
D(ecision Process): No decisions during pre-project = no project!
E(xact Solution): Focus on an offer and offer an exactly defined solution!
R(elationship): Keep a productive and ongoing relationship:
    Project: „go"! ➜ Start the project management process and do the project
    No project or competitor wins: stay in contact! ➜ Customer Relationship Management
    No decision: stay in contact! ➜ Customer Relationship Management

1.2 ORDER phases in detail

Opportunity: At first, we **identify a project opportunity**. Possible ways to do that are: networking, trade conferences, trade fairs, marketing promotions, client directly contacts the potential supplier etc. All opportunities are equal business opportunities (leads). In this phase, we have our first meeting with the client and receive the first product requirements.

Goals: What does the client need? What is the budget? Is this just an interesting lead or a real opportunity?
Results: Analysis of the client's requirements / first draft of requirements list / first system definition of the desired solution. Completed checklist for a new meeting with the client. Identify important data and enter it in the CRM system.
Milestone: "Lead/opportunity identified"

Resources: We need to identify which and how many **resources** are necessary **for the pre-project phase,** both on client and supplier side, and under which conditions they are available.

Goals: Which experts are needed? Who is involved on client side, who else should be involved? Who is needed on the supplier's side? Are these people available? Who will pay for these resources? How much effort is estimated for the pre-project phase? How large is the budget on client side for the pre-project and the actual project? Does the budget correspond to our first estimates? Generally, we should already consider if our team possesses the necessary skill sets for the actual project; the focus, however, is still on the pre-project phase.
Results: Schedule & resource planning for the pre-project
Milestone: "Pre-project planned"

Decision Process: We need to **identify** the **decision makers** and the **decision-making process on client side**. Who will decide and how will it be decided if we *(the supplier)* will be the partner for this solution? (tenders, quote process, ...) Who are the competitors?

Goals: What is the structure of the decision-making process? What do we have to do to be more successful than our competitors? Which people are necessary on supplier side to negotiate with decision makers (legal, procurement, IT, CEOs, board of directors,...)?
Results: The decision-making process is defined and identified in detail by the supplier. Responsibilities for this process are divided among the supplier's team.
Milestone: "Decision-making process defined"

Exact Solution: We need to **create** a **quote with exactly specified solution versions**. Each solution must be specified as detailed as possible in the quote so that there is no room for misunderstandings and discussions at a later date about what is included or not. This ORDER phase requires the most effort. We basically need to create functional specifications based on insufficient information. This may especially become a problem in projects with a fixed price (consider the Funnel Curve and that we deal with the first 30% of the entire project's duration☺!).

Goals: Which risks does the supplier take with the quote? Which effort is to be expected from the project? Which type of cooperation/delivery is offered (license, source code, maintenance, time & material,...)?
*Results: **Quote** (fixed price/ time & material / combination of both), effort estimate / cost estimate / estimate of project duration and schedules, risk analysis, contract draft*
Milestone: "Quote sent to the client"

Relationship: The quote establishes a relationship with the (potential) customer. There are three possibilities: 1) there is a project, 2) there is no project and 3) no decision is made. Depending on the outcome, "relationship" can either be called a milestone or becomes a medium or long-term CRM process.

Please note that **a relationship is established in all three cases**! If we do not get the contract, we still know that there are possible opportunities with this potential client. We know their contact persons, budget and decision-making processes. This means that we have a lot of information we need for quoting at the **next** opportunity. If we left a good impression with the client during the ORDER process, they would remember and hopefully invite us to quote in new project opportunities.

Goals: Continuous contact with the client, making the investment in the ORDER process worthwhile. If we got the project, officially turn the project over to the project team. If we did not get the project, find out what can be improved/changed in the future.
Results: Order confirmation / order / project contract, documentation of ORDER results (in CRM system), CRM relationship
*Milestone: "Pre-project completed"*

1.3 Basic ORDER principles to be observed at all times

Yellow Lights Principle
Generally, we should always look out for "warning signs" in the pre-project phase (and later, during the project). If these warning signs occur, we should rather stop - just like at a yellow traffic light - and try to determine if the traffic light will turn green or red afterwards. The more often you do not stop for yellow lights, the later you will identify a red light during the (pre-) project and the higher the damages will be (costs up to this date). Yellow lights in the pre-project are all kinds of information that is not available but necessary, unvoiced or unidentified risks and questions and other problems during the 5 phases of the ORDER process. If there is a red light, we need to talk to the client, who is the <u>only one</u> who can set it back to green. Red does not mean failure. Failure means consistently ignoring and blocking out warning signs and therefore postponing the inevitable red light. In this case, the consequences are only more painful and expensive. To sweep problems under the carpet - which actually means to ignore a yellow light - is therefore not very smart!

Illusion of Communication: questions, which have never been asked, but should have been…

"A whole year to build a house here? No problem."   *"Good. Let's get started. I'm in a hurry."*
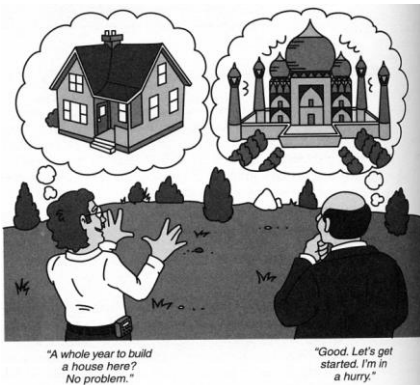
Ensure that the people involved do not think they are talking about the same thing, although this is not the case. Abbreviations and terminology need to be defined and non-goals need to be identified as well. Be aware that especially during the pre-project phase the future project partners do not know each other very well and that industry-specific 'technobabble' may often be misunderstood. This cartoon from McConnell's Rapid Development (1996, p.166) describes this principle very well. It is also important to ask and clarify questions as early as possible (see Yellow Lights Principle).

No Guessing

Generally, you should avoid wild guesses in the pre-project phase, especially the following three kinds of guessing:

1. **Accepting**: Do what the client says although the *supplier* knows for a fact (based on previous projects) that they will probably be unsatisfied with the solution. At the end of the day, it is the *supplier's* fault if the project fails because the consulting function was disregarded, even though everything was done correctly according to specifications / the client's wishes. The *supplier* should share his/her knowledge with the client and always try to find a win-win situation.

2. **Telling**: Tell the client they want something, although this will probably make them unhappy, just because the *supplier* would like to sell this solution or favors this approach. This will come back to haunt you later (at the user acceptance test at the latest).

3. **Guessing**: Guess what the client might need instead of asking when something is unclear. This is especially dangerous if the effort estimate and quote calculation are based on assumptions. Should you need to guess, this needs to be explicitly defined in the quote and effort estimate and confirmed with the client.

Move off preconceived solutions

Each new task should be approached without prejudice and preconceptions. Decisions about the technology used, system architecture, project team etc. should be defined based on the client's individual requirements in the "Exact Solution" phase. Generally, you should propose several versions to the client, from which they can choose. Attention: People tend to "filter" unpleasant things and only see the positive, perfect solution when talking to the client. Without questions, however, it is difficult to find out if these filtered issues are especially important to the client (think of the Yellow Lights Principle).

2 Progress monitoring

1. Name the five ORDER phases.
2. Explain the goals, results and milestones for the five phases in detail.
3. What is the Yellow Lights Principle?
4. Explain "no accepting", "no telling" and "no guessing".
5. Explain the concept of "Illusion of communication".
6. Why are there three possible outcomes for the relationship phase, which can all be called 'a relationship'?
7. Why is it sometimes better to stop after the first three phases (ORD) and not continue with ER?
   o Outline a situation where this could happen.
   o Who has to take this decision and why?