Microsoft

BEST PRACTICES

VISUAL MODELS FOR SOFTWARE REQUIREMENTS

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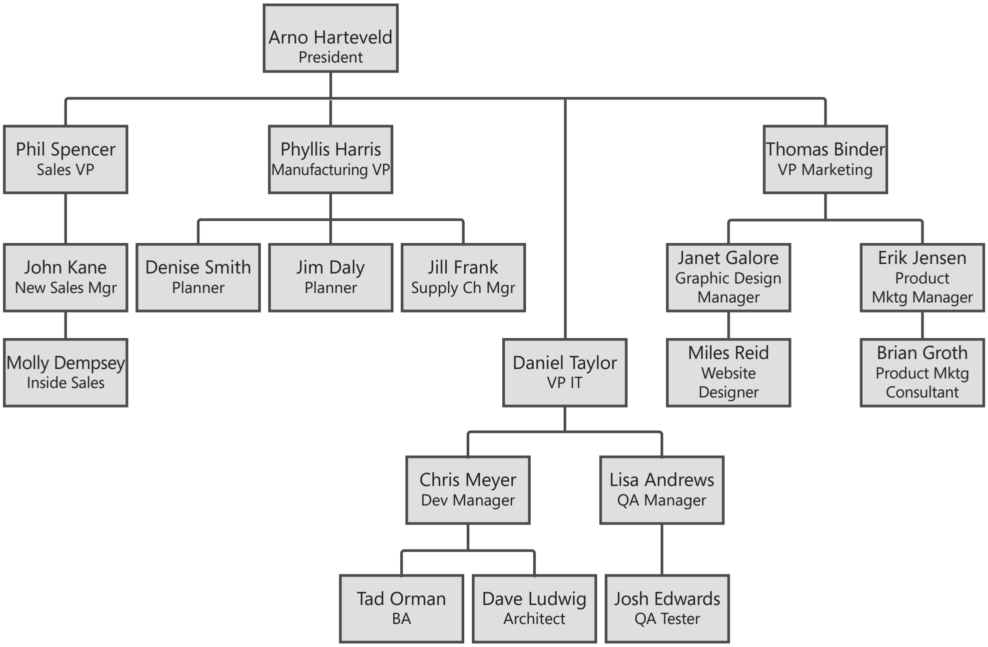

FIGURE 8-5 An example individual Org Chart.

Creating Org Charts

The typical process to create Org Charts is shown in Figure 8-6.

FIGURE 8-6 The process for creating Org Charts.

Locate Existing Org Charts

In many cases, organizations already have Org Charts for the entire organization, in which case, creating the Org Chart is simplified. Even if an existing Org Chart is out of date or incomplete, it can provide a good starting point for creating a project-specific Org Chart. Additionally, it might be possible to derive an Org Chart from an email system or online directory. If the organization has configured its email system to define who reports to whom, the organizational hierarchy can be teased out of those reporting relationships. However, some organizations do not have Org Charts, in which case you will have to create one yourself.

Determine the Right Level of Org Chart

In cases where an Org Chart does not exist or needs to be supplemented, the first decision to make is the level at which to start. The Org Chart must capture all of the parts of the organization that have users of the solution, managers of users, or anyone who makes decisions about the scope. It is almost always useful to start with a departmental Org Chart at a minimum, and then create role and individual Org Charts if needed.

Another important decision to make when creating an Org Chart is what information to include in each box. For departmental Org Charts, you include the department or group names, role Org Charts should add role names, and individual Org Charts should add individual peoples' names. If there are few people per role, you can combine the information from an individual Org Chart into a role Org Chart, listing both the role and individual names in each box. If there are a significant number of people, it can be helpful to use a grouping box to group stakeholders who belong to the same department.

Complete the Org Chart

Completing the Org Chart will require diligently interviewing your way through the Org Chart, asking each manager to provide his or her department makeup (roles and actual direct reports) as well as who each manager thinks his or her peer groups are. As each level of the Org Chart is created, if any boxes are left blank, those should be noted as action items to follow up on and complete. A missing box might represent an entire stakeholder group that should be involved.

You can also use other RML models to ensure your Org Charts are complete. This concept will be discussed later in the chapter.

Departmental Org Charts

Organizations typically have many people within each department. Starting with a departmental Org Chart will simplify your role and individual Org Charts, minimizing the number of boxes you must include. Particularly if you are creating an Org Chart for a large company, you should start with a departmental Org Chart, and build the Org Chart based on groups or departments, rather than individuals or specific roles. We recommend that for a departmental Org Chart you include the entire organization, even if it is large. Start with the uppermost level of the organization, typically a president or CEO. From there, you can trace your way down from the top level to each of the subordinate levels by identifying each person or group who reports to the president or CEO. At the second level, you might not have very many boxes.

After the second level of the departmental organizational hierarchy is documented, you can repeat the process for each second-level box that either is or might be relevant to your project. If you do not know, keep the box in the Org Chart until you feel confident about cutting it. For the example in the previous section, if you determine that the Research department will not affect or be impacted by the project, there is no need to continue to include more depth for this group in the Org Chart. This helps to quickly pare down the Org Chart to the boxes that are useful and to provide detail for and maintain those.

Continue completing the remaining levels in the same manner, until you have all of the relevant departments or groups in the Org Chart.

Role Org Charts

Each group of the departmental Org Chart that is within scope of your project needs to have a role Org Chart that shows the specific roles within the groups. Ideally, the full role Org Chart will still fit in one chart, but if the organization is large and many departments are involved, it will be necessary to create role Org Charts for each department. In these cases, show each department in a separate diagram.

Each organization typically has multiple people within each role, but the role Org Chart really is capturing the groups of people by role name. Keep in mind that the roles might not be formal job descriptions. They might be based on the variations of work each person does. After you prune out roles that are not needed, you can remove them to simplify the Org Chart.

If you don't need to document each individual within a part of the organization, you can stop at a role Org Chart. For example, if you are using the Org Charts to ensure that you are meeting with all of the groups and are finding individuals to represent every group, that is often sufficient.

Individual Org Charts

Finally, you can create an individual Org Chart that shows peoples' names in the reporting hierarchy. This is very helpful to determine exactly whom the team should be interacting with throughout the project.

If you do decide to document each person's name in an individual Org Chart, keep in mind that the Org Chart will be a snapshot of the organization's makeup at the time the chart is completed. As individuals join and leave the organization, the Org Chart must be updated to be accurate. For even short-term projects, changes at the individual level can be important, so keeping an Org Chart up to date can be an equally important task.

Though it might be sufficient to ensure only that you interview several people from each role, you need to be very careful. Often, regional or locational differences in a job are significant enough that two people in the same role in different locations should really be considered to be in different roles. Alternately, people within roles might service different types of customers, data, or systems, requiring you to create additional role names that do not map to job descriptions. Finally, for each role, the managers of the teams involved can identify the specific representatives whom they feel will be the best subject matter experts. They can then authorize them to speak for the entire team.

Using Org Charts

As stated previously, although Org Charts are fairly common, many people would not think to use them for requirements activities, even though they are absolutely critical to identifying stakeholders.

Identifying the People Who Have Requirements

At the very beginning of a project, Org Charts are used to identify who has an interest in the solution and who will be using the solution. This tells you who will have requirements for the solution, and who will be the key people to include in requirements elicitation and review sessions. In addition, an Org Chart can be reviewed to see which people or groups are related to already-identified stakeholders. The visual structure of an Org Chart makes these connections obvious as compared to just a list of stakeholders, which helps to reduce the chances of missing any constituents. For example, if you already knew that you had to meet with Jim the Planner, by looking at who he works with in his department, you can identify that you might also need to meet with Denise the Planner.

After you have an Org Chart for the project, you can look at each block on the chart to decide whether it represents a stakeholder. This will help you to ensure that you identify all stakeholders. At the most basic level, you can review each box in an Org Chart and ask:

- Is this person or role a user of this system?
- Does this group, role, or person have any requirements for the system?
- Is this group, role, or person influenced by something we are doing in the system?
- Which part of the process are they involved with?
- Are there any processes that don't have a group to execute the process?

These questions are important to ask on every box of the Org Chart. It is much better to take the time to do this, rather than assuming that a box has no users, requirements, or interest in the requirements discussions and being wrong.

In one particular organization we worked with, a project was clearly going to affect many parts of the organization, so an Org Chart was the basis for identifying all the possible stakeholder groups. We printed out the entire company's Org Chart on many pieces of paper and plastered the walls with all of the sections, each including 6 to 10 boxes of the full Org Chart. The project sponsor came into the room, and we gave him a marker so that, for each section of the Org Chart, he could easily either put an "X" through any stakeholders who were not relevant to the project, or circle stakeholders so that the team would know who did need to be included in elicitation. If he was unsure, he put a question mark on the section, and that prompted us to talk to those people directly to find out. From that 30-minute effort, we could quickly focus our conversations with each part of the organization and determine whether they indeed were users of the project or had some stakeholder interest in it.

Identifying Internal Users

If the solution is an internal IT system, the Org Chart is useful because almost all of the possible users are somewhere on that Org Chart. Therefore, when the chart is reviewed with diligence, you are virtually guaranteed that all of the possible users of an internal system are identified in an Org Chart, ensuring that no users are missed during analysis.

You will have to use judgment as to how many of the individual users in the Org Chart you actually need to meet with. For example, if there are 3,000 sales representatives, you can assume that you do need to meet with more than one of them but not all 3,000 of them. You can send a survey to 3,000 sales representatives to get some basic information, and then just meet with some fraction of them in person, as long as the sampled population represents the breadth of the organization in terms of geographic location, experience, and training levels. However, you might need to meet with significantly more to have full coverage, especially if you identify groups of sales representatives who use different processes because of their customer base or possibly because of the particular products they sell.

Identifying External Users

If the system will have users external to the organization, there might still be stakeholders on the Org Chart who represent the external user populations internally, and identifying those representatives within the Org Chart will help find their counterparts outside the organization. For example, if you were developing a finance system for customers to check the status of their invoice payments, your Org Chart would include the customer managers who represent those customers. Seeing these internal individuals on the Org Chart will remind you to include them in your elicitation activities, providing you with a link to the system's intended, external users.

An Org Chart might not be useful for portions of the system that only the end customers will use. In these cases, you might need to use other stakeholder analysis techniques, such as persona analysis. A persona is an example of a user that contains the user's background information and motivations for using the system. Personas are not a visual model, because they do not provide a visual mechanism to ensure that you have captured all the information. Their purpose is to help the team imagine who they think will use the system (Cooper 2004).

Also, when you are looking for stakeholders outside your organization, an onion model might help identify them (Alexander 2005). An onion model is a template of circles to show stakeholders and their relationships to each other and the product being developed. An onion model can be used with internal stakeholders to trigger them to think of additional stakeholders.

Identifying People Used in Other Models

The groups or roles identified in departmental and role Org Charts are often the role names for the swim lanes of Process Flows, as discussed in Chapter 9, "Process Flow." Similarly, the roles identified by Org Charts are often the actors used in Use Cases, as discussed in Chapter 10, "Use Case." A word of caution in taking the step from the Org Chart roles to Use Case actors: there might not be a one-to-one mapping of user group to actor, because an actor can often cross various organizational roles, or groups can span multiple actors. Finally, the list of roles in the role Org Chart or people in the individual Org Chart is often useful for deriving the roles dimension of a Roles and Permissions Matrix, as described in Chapter 11, "Roles and Permissions Matrix."

Using Org Charts with Process Flows for Completeness

As fantastic as Org Charts are for identifying stakeholders up front, they can prove to be invaluable mid-project as well. The user performing a Process Flow step is represented in an Org Chart. Therefore, when reviewing the steps of a Process Flow, you should cross-check them against your Org Chart to make sure that the appropriate departments, groups, and roles are in your Org Chart and involved in your reviews. If you are using Org Charts along with swim lanes, this is even more obvious, because the swim lanes likely apply directly to one of the Org Chart levels. To ensure good coverage, at each step of the Process Flow, ask "Who performs this?" and "Am I meeting with them already?" to ensure that you do not miss any groups. Referring to your Org Chart when creating your Process Flow will ensure that you use consistent naming of groups. Using an Org Chart when creating a Requirements Mapping Matrix (described in Chapter 7, "Requirements Mapping Matrix") can help ensure that every step of the Process Flow has specific and identified owners.

For example, the project from earlier in this chapter involves configuration and pricing processes and rules for ordering cars online; naturally, the team created Process Flows. Figure 8-7 is a simple example of one of their Process Flows.

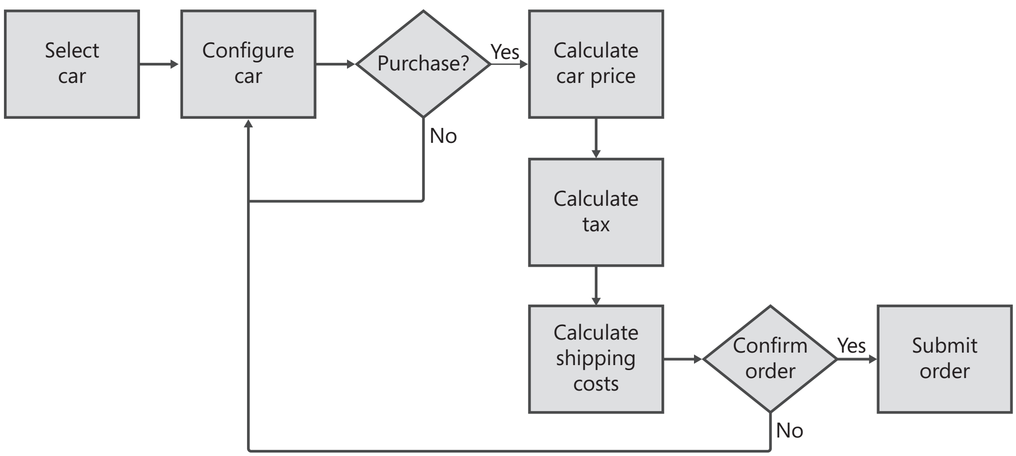

FIGURE 8-7 The Process Flow for purchasing a car online.

Suppose that, a few weeks into the project, stakeholders are reviewing the Process Flows for sign-off. One of the stakeholders notices a step in the Process Flow to "Calculate tax," and says, "I don't know how that works. That's not my department." This prompts the business analyst team to look at the role Org Chart and realize that they need to meet with the stakeholders in the tax department to review the requirements. Figure 8-8 shows the roles Org Chart they use.