

Managing XP with Multiple or Remote Customers

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Abstract

The generally accepted ideal picture of Extreme Programming (XP) has an expert customer representative on site with the programming team. Unfortunately, in the real world this scenario is not always possible.

Through deliberate techniques and careful management of client interactions we can improve the chances of project success when working with remote customers or if there is a single development project dealing with multiple clients.

Keywords

remote customer, multiple customers, client interaction

INTRODUCTION

The generally accepted ideal picture of Extreme Programming (XP) has an expert customer representative on site with the programming team. Unfortunately, in the real world this scenario is not always possible.

This paper explores the different client relationships and customer locations that are possible in an XP environment. We then examine each of the different client interactions that take place through an XP project and highlight problems or techniques development organizations should be aware of for working in these non-ideal environments.

CLIENT RELATIONSHIPS

There can be a number of different relationships between the development team and client organization(s). We use the word client here to explicitly differentiate from the customer role in XP.

Single Client

A development team devoting all of its time and energy to a single client is the typical XP approach. This is a classic consulting development project with clear and focused business goals. Responsibility for decisions about the priority of different features and development tasks is clearly assigned to the customer.

Multiple Clients

A project with a small number of important clients dramatically changes many of the processes in XP. The development organization (as opposed to development team) must become more involved in defining business value and priorities.

Projects of this type would normally have 2-5 clients

working with a single development team. The system being developed will be an important and large investment for each of the clients with specific and potentially incompatible customizations required.

Although each client may individually be clear on what provides business value and what stories to prioritize, the development team must work to provide the highest value across all clients. The business value decisions can no longer be simply pushed onto the customer, members of the development organization must make trade offs and decisions about the importance, relative value and current satisfaction of each client.

The development organization must engage clients in active discussion and negotiation to try and reach consensus on stories through collaboration. Client relationship management (i.e. politics) becomes an unavoidable part of the process.

Many Clients

Conversely, a large number of clients simplifies the relationship back to the single client state [1]. The number of clients becomes so huge that the value of each one is relatively low. Client decisions become the result and interpretation of market research studies.

The marketing department for the development organization must take on the customer role. They need a clear vision for the product being developed so questions can be answered quickly and decisively.

CUSTOMER LOCATIONS

The customer role is a vital part of the XP process, defining and choosing all value for the project [3]. While the customer may have many different styles or approaches, they can only be in one of the locations outlined below.

On Site Customer

Many XP practitioners argue that you must have a customer on-site. According to Jeffries et al in [3] "the plain truth is that the more time the customer and programmers spend together, the better things go".

An on-site customer gives programmers access to immediate and well explained decisions backed by recognized expertise. Involving the customer closely in the development process ties ownership of these decisions directly with the delivered solution reducing disappointment in or blame for the result (on the slim chance something still goes wrong).

The friendships forged and emotions conveyed through

daily face-to-face contact cannot be undervalued, particularly when things get difficult. The feeling in the workplace can even convey the current state of the project.

Off Site Customer

For the purposes of this paper we define an off-site customer to be situated locally, but not situated in the same workplace as the programmers.

Many of the problems faced by remote customers apply in this situation, but it is much simpler to get troubled projects and communication back on track through immediate face time. At the very least you should try to get the customer on site for planning meetings [3].

Remote Customer

Remote customers may be geographically isolated, work in a different time zone, or even speak another language. Constant verbal communication is so vital to XP that any language differences beyond dialect or point-of-view should probably be deemed insurmountable. Geographic and time zone isolation require very careful attention and planning to overcome.

An on-site customer makes communication simple to initiate and free form in nature. Body language and moods can convey the entire project status in an instant.

When dealing with remote customers communication must be more deliberate and planned. Be proactive in your communication, even if you think there is nothing to say. Plan for regular communication; both verbal and face-to-face where possible.

Determining feelings and emotions gets increasingly difficult as you move from face time to phone calls or email. In remote communication honesty and direct questions are vital; the relationship can only work if both sides are committed to open communication channels.

Finally, when dealing with remote customers it pays to be paranoid about their feelings. Lack of communication is always a bad sign, pick up the phone immediately and start getting things back on track.

CLIENT INTERACTIONS

In this section we will examine each of the typical client interactions in an XP project. Most of these will occur with the allocated customers, but there are a number of vital interactions that occur with managers and management on the client side.

Story writing

All user stories should be written by the customer. Often this will occur out of discussions and close consultation with the programmers.

When working remotely remember that it will take longer to write and refine user stories. The collaborative process may take days rather than minutes due to the slow feedback time caused by alternate responses across time zones. A shared collaborative space for searching, viewing, editing and managing user stories is essential.

Collaborative definition and refinement of user stories by multiple customers can be a very rewarding process. It is also fraught with danger as conflicting ideas and client egos clash. The project manager on the development team must be careful to manage the story writing process, searching for consensus wherever possible. When consensus is not possible, breaking the story into smaller parts will usually allow all customers to get their desired feature set.

Story explanation

The one or two short sentences in each user story normally require considerable elaboration from the customer. This usually occurs naturally as part of discussions in the planning game.

When working with a remote customer story explanation can still occur as part of the planning game. Normally the game is played with the customer through a teleconference or similar event to facilitate open discussion and explanations. Other collaboration tools like an online white board may be useful in this situation.

Story explanation is most important when working with multiple customers; each party might have a completely different understanding of its meaning. Be sure to talk through stories with all customers involved in the XP process, either through collaboration or sequentially. Try to reach consensus if possible and split the story into pieces when required.

Release planning

Release planning requires the customer to choose which business value they want to add to the system first. The planning game is an interactive activity performed in physical space that encourages interaction between programmers and the customer. Principally this is a prioritization exercise for the customer.

For remote customers that planning game may be played by submitting the current priority set. Ideally the system for managing user stories should also have the capability to allow the customer to prioritize them in a planning game activity. At worst, the customer and programmers should sit with cards laid out on the table at each end and play the game by phone. Of all the customer interactions in XP this is the process that is best to try and ensure is done face to face with programmers.

Prioritization is made much more difficult when there are multiple customers. In this case, each customer needs to make trade offs when choosing user stories for implementation and the development organization must in turn prioritize and trade off the value of these client decisions against one another.

We found that the fairest way was to allocate secret votes to each customer. Clients with the highest value to the development organization are given proportionally more votes. These votes are usually completely arbitrary and don't reflect any real numbers. A client may choose to allocate all their votes to a single vital feature, ensuring its position in the current release.

A formal voting process helps force multiple customers into firm prioritization decisions. This process also gives customers the ability to affect decisions made by the client group, not just try to influence the development project manager into helping them.

Depending on your customer situation you might also institute policies to even up the voting. For example, a guarantee to develop each customer's top ranked story for the release.

Since customers are voting on a single set of stories, the definition of each story must be agreed and well defined. Stories must have a firm consensus or should be split into multiple sub-stories before voting can take place. Consensus should be encouraged as it maximizes the amount of useful business value that can be delivered to each customer.

Be open about your prioritization process. Communicate clearly with customers why you are using this process and how they can play most effectively.

Iteration planning

Iteration planning is basically identical to release planning. However, this part of the process can have reduced customer input if required. If the release is basically running smoothly then trust your developers to choose the most appropriate stories for development in each iteration.

Only if the schedule starts to slip and reprioritization or reassessment of the cards is required should remote customers become involved.

When dealing with multiple customers the iteration planning phase should always be handled internally. Customers of products shouldn't be involved to this level of detail.

Intra-Iteration Interaction

While developers are doing development during an iteration questions about the detailed meaning of user stories may arise. In this case, they need ready access to appropriate customer feedback or expertise.

If the question is quite specific then any of the standard electronic communication mediums should be sufficient. Otherwise a phone conference between the developer and relevant customers should be arranged.

When multiple clients are being used the internal "customer" should be consulted. At worst, the developers should make a best guess to get the feature completed and into real customer hands.

Acceptance testing

Stories are only complete when they pass the appropriate acceptance tests. Customers need to be involved in the acceptance testing process so they take ownership of and feel secure in the delivered solution.

Remote customers should be assisted to run acceptance tests when they so desire. Normally this will be after the release of a new system version to the customer. The

majority of day to day acceptance testing needs to be performed by the development team.

When there are multiple customers of a product they expect the features to be defect-free without testing. All acceptance testing should be performed by the development team. Acceptance tests may be made available to select customers who wish to be involved. In this case they may often take the form of installation tests to be run as part of checking for a successful deployment.

In all cases the priority of automated acceptance tests will need to be clearly communicated by the development team. Normally, customers performing acceptance testing immediately see the importance of automation. Developers should keep some iteration time spare for implementation of process infrastructure like acceptance tests.

Deployment

Although often extremely difficult, deployment of releases to the customer site is not usually a focus of the XP process. Normally it is done through on-site work and close interaction with the client customers and users.

For remote customers the deployment and delivery of releases is the most important of client interactions. Without daily contact often the system is the only tangible result from working together. Frustration with the relationship and process will quickly arise if installation is not smooth and trouble free.

Plan to manage the deployment process very carefully. Strong, proactive support is essential. Clients often won't ask for help, they will just get frustrated and annoyed. If possible send a programmer on site to help, or at least talk the client through the deployment procedure with documentation and conversations.

When there are multiple customers you must be careful to communicate very clearly the business value that is being delivered with each release. It might make sense for some clients to skip releases all together. Take care to highlight the features of importance to each customer in turn, they may find benefit from stories that they didn't fully understand or vote for in the planning game.

Project Management

The development team coach is usually not the only layer of project management in an XP environment. Most customers will have a corresponding project manager at their end. Keep this person involved in the process; use them to facilitate development and deployment. If everyone takes ownership of the process and techniques things will run a lot more smoothly.

Regular communication between project managers is just as vital. Usually the project manager for the client will always be off-site or remote. Try to schedule regular meetings or conference calls to keep the communication open and honest. For projects with a remote customer pay particular attention to the communication channels in use and ways they can be widened.

With multiple clients there may still be a project manager

on each site. Normally this person will be responsible for deployment or installation rather than management of ongoing features. Be sure to identify this person early, their happiness is your key to a successful project and ongoing work.

As a development organization don't be afraid of too much communication with your client. Open, frequent and pro-active communication all add up to top quality customer service. The more you know about your client, the stronger the relationship and future opportunities.

Management

Whenever two companies work together there is always a layer of project management to handle things like strategy, contract negotiation and payment. Communication at this layer is vital for project success. Many projects die because one side thought things were going well only to be suddenly cut off by unmet management expectations on the other side. Often it's not what you do, but how you manage client expectations and satisfaction that counts.

When working with remote customers you must be pro-active in communicating. Be paranoid about their happiness. Don't just say "call me if there is a problem", no communication is always a bad sign.

Schedule regular communication, listen carefully and respond promptly to any perceived problems. Any problem that is known at this level must be significant.

Managing multiple clients is particularly important. Make sure your clients feel important and like a high priority. This may be in direct contradiction to their priority at the story development level, but management will understand their place in the pecking order.

If people are upset about your divided priorities, explain the benefits to them of development for many clients. They are benefiting from development funded by other clients and get a much stronger and more flexible product as a result. Tell them which features they requested that you have delivered recently, highlight things they now use but didn't think were important.

Sometimes a small disappointment like a bumped story can to high dissatisfaction. In these cases, consider raising the priority of features you know are very important to a given customer even if their formal voting priority is not enough.

General Awareness

One of the strong facets of XP is the general level of

understanding and awareness that is created between the development and client organizations [4]. This is a direct result of the extensive time spent working in collaboration on a common goal. Emotions like excitement at new features and pride in meeting goals carry through the team.

Using remote techniques for communication like the phone or email it is very difficult to convey these feelings of excitement and pride. No matter how many smiley's you insert in an email it is no substitute for a genuine grin.

Awareness is important at all levels in the development and client organizations. Make sure that the client customer, project manager and upper management are all completely satisfied and aware of your development achievements. In remote environments take care to think about awareness. If you are unsure, ask! Direct questions with honest answers are the only way to communicate when so much body language is lost.

While you deliver releases to multiple clients collectively, be sure to be aware of their needs and feelings individually.

CONCLUSION

Through deliberate techniques and careful management of client interactions we can improve the chances of project success when working with remote customers or if there is a single development project dealing with multiple clients.

Managing the XP process needs to be done on many different levels, not just between programmers and the customer. Recognizing the importance of each level and acting appropriately dramatically raises the chances of client satisfaction and project success.

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