Are Virtual Design Teams Right for You?

Utilizing a virtual design team is a strategy that can be implemented successfully for certain projects that meet specific requirements. This article reviews the necessary elements to ensure a successful virtual design team and offers tips on how to enhance its effectiveness.

By Jim Bleck

Virtual design teams are part of concurrent engineering, with the goal of improving time to market, maintaining a high level of innovation, and creating great products quickly. This model may be used for medical products, consumer electronics, and business equipment. The virtual model allows a design partner and its clients to build teams of unrelated companies and individuals effectively.

The Suturtek 360 Fascia Closure D
a period of three years by Suturtek int
design resources working as a team.

The virtual design team is not the same as a single manager coordinating the activities of several vendors and staff members. Implicit in the virtual concept is direct communication between team members without constant filtering of information. The virtual design team makes progresses with parallel activities and decisions being made independently. Cross communication between all team members can speed a project along, minimizing excess meetings and reviews.

Medical device virtual design teams differ from other commercial applications because of regulatory requirements. Differences in designing for medical and commercial applications come down to the impact of late stage changes. Commercial products can always be in a state of change without a significant impact on schedules. Conversely, medical device development schedules extend rapidly with late stage changes. Therefore, the virtual design team for medical devices benefits with better management practices.

Following are a few “thumb rules” to help manage the virtual process. While they are somewhat universal to all projects, they should prove very useful for medical device development.

When to Use the Virtual Design Team Model

Virtual design teams have the potential to bring the best talent and experience together to solve unique problems. Independent industrial designers, electrical engineers, software developers, regulatory consultants, and contract manufactures can be merged into teams to efficiently develop complex products or solve design problems.

This model is particularly well-suited to situations where a company’s management does not have the time to drive the project to completion; day-to-day internal activities and a lack of expertise in specialized areas prevent any real progress. The virtual design team must supplant internal management with external leadership. Re-design projects are always candidates for this process. Companies with platform technologies expanding a product line rapidly benefit from the process as well. Additionally, start-up companies with limited capital can get more done with less money by adapting the model.

Recognize Virtual Design Teams

A virtual design team formation can be a planned event or just happen as a project gains momentum. Recognize and manage accordingly.

If several outside vendors are working on a project and a single company employee is the pivotal contact, it is not a virtual team. It is simply a single employee managing several resources. That is effective if he really has the time to pay attention to all the details.The virtual team concept implies cross communication between the members. However, this can become complicated quickly and requires a large amount of independent activity with delegation of significant responsibility. For example, if not handled appropriately, a company may find design talking to contract manufacturers, vendors with different agendas sharing confidential information, and plenty of room for confusion. It is better to plan the formation of the team and not just let it happen.

This label writer product line was design by DYMO and Bleck Design Group.

Start in the Right Direction

Projects often go the way they start. Beginning with loosely defined requirements will lead to loosely defined solutions. A lack of agreement between management and staff will lead to lots of wasted time on the wrong issues. Defined requirements, goals, and budgets help the team focus creativity on the right problems.

Go slowly at first to gain better definition. Avoid the jackrabbit start that allows a team to run off and spend time and money quickly. This will run counter to some consulting cultures, so be clear about this rule. Going fast in the wrong direction is not going to speed the project.

Write it down and review until there is agreement. Requirement documents are inherent in following FDA design guidelines. For full product development they are usually well developed. However, sometimes documentation can be too general when working on discrete problems. Get requirement documents up to date before bringing in the outside resources.

Define the team. Be clear about who is on the team at what time and what the roles will be. Identifying all the potential resources is useful at the start but be clear on sequence of input and responsibly.

Make comprehensive cost estimates early. Don't let the team members start the project by saying they need to get into the project first before estimating the magnitude. That avoids setting practical limits. Estimate all the costs from start to production and encourage realistic cost and time estimates. Budgets always have a way of clarifying the project.

Everyone attends the kick-off meeting. In smaller companies, this means the CEO, vice presidents, and staff all attend the kick-off meeting. There is always a misalignment between management and staff perspectives and this is the best time to align these viewpoints. If a company has a powerful internal staff that will review the project and set direction, it is important for them to be at the kick-off meeting. Don't bring people to kick-off meetings that are not contracted to work on the program. This leads to confusion later.

Introduce inside and outside resources. Introduce all the team members. Make the outside resources aware of key vendors and internal staff with specialized knowledge. Have team members introduce themselves through independent contact to set up early direct relationships between each other.

Set up common sense rules for communication. Let virtual team members communicate in the most direct way possible. Clarify who is the main contact internally for each external resource and who the secondary contact will be. Make team members aware of confidential information that is not for general distribution among the team members. If barriers are desired, be clear about them.

Make sure the entire development team understands the business plan. The goal of doing this is to align the business goals with the development plan. Over and under design can be avoided if everyone understands the revenue and expense model for the project. This reminds all the team members about the top level goals and encourages making rational trade-offs.

Self Management and Independent Leadership

Everyone on a virtual team must be a leader willing to drive their part of the process. Virtual teams don't work very well if the team members can't self manage

the process and their own time. All the goals must be aligned at the start for self management to work.

When building the team, be sure to delegate enough authority so that virtual team members can proceed without every step needing approval. If this is not possible, there will not be a virtual team and the person starting the project is committing to being the leader. The project will pivot on his actions and it will be difficult to change to virtual management.Weak team members will damage the team. Be realistic about capabilities. Virtual teams work well with experienced staff. This is not a good model for training new staff.

Stopping Work as Necessary

Don’t let team members proceed without key information. This is a difficult problem for outside resources that want to bill time and get the project done. This runs counter to concurrent engineering trends. However, stopping a project gets everyone’s attention and focus on the critical issues. If an individual can’t get members to stop efforts because of missing information, he is almost guaranteed to be building on a weak foundation of partial assumptions.

Team members must take on responsibility to stop work when there just isn’t enough information to proceed. If team members can’t respond to this situation, costs will almost always increase and productivity drops.Ensure the team members understand that they must manage the information flow around the team to prevent themselves from having to stop work. This is where allowing team members to communicate directly saves time over a point person. If this type of communication will not work, don’t use the virtual model. Continue to use the single point of leadership.

Consistent Team Reviews

The background communication between team members needs to be periodically aligned through reviews. Following are a few guidelines.

Use the kick off team consistently at major reviews. Get the original kick-off team together when design directions are being selected. Don’t start down the narrowing path without getting buy in. Claiming to know what management wants is not the same as having them making hands-on decisions.

Avoid top management providing input directly to team members. This can be a real problem. Avoid CEOs and VP level executives with power directing individual team members. That direction can be confusing and create instant misalignment in the team. If this happens, the individuals must get everyone together on the team and resolve the input. Watch for this problem with internal staff.

Incorporate member-to-member reviews. Use these to resolve detail issues. This can really make the process move faster. If these reviews start making a broad impact on the project, they need to go to a full team review.

Maintain periodic reviews. The once-a-week review is common, but two-week

intervals are much more practical and productive. This tends to leave enough time for interim meetings to occur and progress to be made. One successful strategy is to simply provide a two to three day notice prior to a review meeting. The goal is to allow team members to set deadlines around progress and avoid inconclusive meetings.

Conclusion

A virtual design team is not the right strategy for every project or every team. However, when the proper elements are in place and experienced individuals can be relied upon for critical decision making during the process, this technique can greatly enhance the functionality of the group and significantly reduce the time and expense of this phase of the product development cycle.OnlineFor additional information on the technologies and products discussed in this article, visit Bleck Design Group at www.bleckdesigngroup.com [1].

Jim Bleck *is the president and CEO of Bleck Design Group. He founded the company in 1983 as an industrial design and product development consulting firm. Bleck's prior experience included working at Digital Equipment Corp. and LBA consultants. He is also the chairman and co-founder of the Merrimack Valley Venture Forum at the UMass Lowell. Bleck can be reached at 978-251-7474 x223 or* jbleck@bleckdesigngroup.com *[2].*

Source URL (retrieved on *05/03/2015 - 7:55am*):
http://www.mdtmag.com/articles/2007/07/are-virtual-design-teams-right-you

Links:
[1] http://www.bleckdesigngroup.com
[2] mailto:jbleck@bleckdesigngroup.com