Overcoming 3 Big Challenges to IT Project Success

A Visual Approach to IT Process & Project Management

ABOUT THE AUTHOR

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The world of IT project management is facing a number of challenges today. Senior management expects projects to get done faster, with a higher level of accountability. Megaprojects, which used to have a timeframe of a year or more, are now being divided into numerous smaller projects, each with their own reporting criteria. Project teams are becoming more dispersed, creating a need for a tool that gives all team members a shared picture of project progress and their responsibilities. Agile principles are gaining even more ground in project management, which requires teams to communicate better and move faster. Corporate reorganizations and regulatory changes are coming faster than ever, which can profoundly affect projects in the pipeline.

On top of these challenges, the classic enterprise software tools that PMs have always used to manage large, multifaceted, multi-year projects haven't kept up with the times. They aren't very nimble or adaptable, decreasing their value to busy project managers and their teams. A better type of software tool is needed to manage today's IT projects.

Three Key Challenges

In this whitepaper, we examine three key areas where change is driving a need for a visual solution to IT project management. These recommendations are based on interviews we conducted with multiple IT and project managers in the aerospace, SaaS and computer hardware industries.
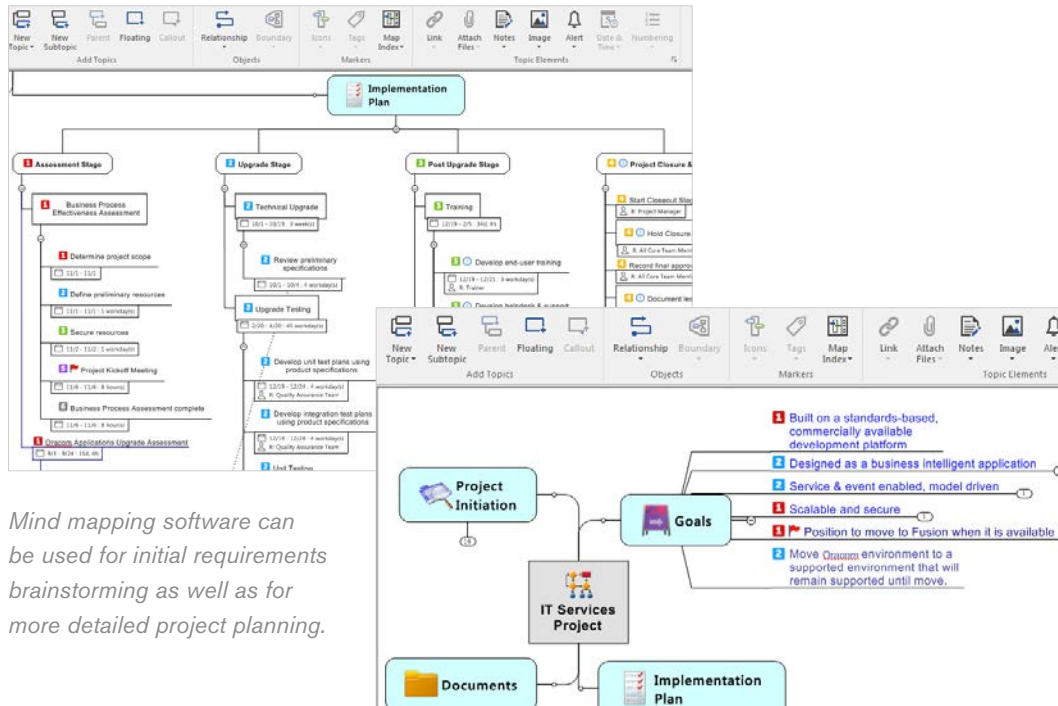
- **Adaptability and agility:** Today's project management software must accommodate changes in the corporate environment, industry regulation and a host of other ad hoc factors that may impact project execution.

- **Communication and visibility:** Senior management in many organizations is demanding that project managers contain costs more aggressively than ever. That means greater scrutiny and more frequent reporting to executives who don't have time to wade through lengthy reports. At the same time, project management tools must be able to support virtual teams and outside partners, including technology vendors, channel partners and others.

- **The special needs of small, ad hoc projects:** Today's smaller projects need to support much more than task management. As we will see, project managers have a wealth of information collection, organization and management needs that are unmet by traditional enterprise project management tools.

A Visual Approach

The next section examines each of the three challenges in greater depth and outlines how a visual approach to project planning and management can help IT managers effectively address them. So, what do we mean by "visual approach"? At the simplest level, we mean sketching out the elements of a project as though using a whiteboard, where requirements, issues, resources, etc. can be laid out for discussion. IT managers often create flowcharts to visualize process flows

and systems diagrams to illustrate data flows, and these are good examples of more complex visualizations. In the following section, we look at mind mapping software, which combines the free form nature of whiteboarding with sophisticated tools for adding the kind of detailed information found in flowcharts and systems diagrams. If you're not familiar with mind mapping, the Appendix to this whitepaper contains a more detailed definition.

Mind mapping software can be used for initial requirements brainstorming as well as for more detailed project planning.

Challenge #1: Adaptability and Agility

The Trend

Today's IT project managers are being asked to handle a greater number of projects and to execute on them faster than ever. The senior management of many firms have identified large projects as a target for cost containment. So they are asking for more frequent updates to ensure that projects stay on track and on budget.

Senior management also has a strong interest in reducing project risks. Traditional IT projects could run a year or more, with large sunk costs, only to ultimately fail. In response to the challenges of managing such large, complex projects, a growing number of companies are adopting agile principles for project management. One of the principles of agile is to "fail fast." In other words, fail early and often, learn from your mistakes quickly and iteratively improve your approach until you achieve the desired results. Change is a core element of agile.

At the same time, corporate reorganizations, changes in regulations and other industry conditions can throw a wrench into even the best project plans, forcing PMs to quickly modify their plans to accommodate these unanticipated events.

What's needed is a project management tool that is nimble and adaptable to the needs of today's project managers.

The Challenges

Some traditional project management tools are designed to accommodate large, multifaceted projects that maintain a linear trajectory with few changes. Complex tables of task data can often hide potential problems and make it hard for project team members to see what's missing and what needs to be better defined.

The Benefits of a Visual Approach

- The visual structure of a mind map makes it easier to see potential problem areas, redundancies and missing elements.

- Project managers can easily create templates to speed repetitive planning and information gathering tasks, such as meeting management, building work breakdown structures and taking notes during project meetings.

- Mind mapping software makes it easy to brainstorm project requirements and to reorganize project data at will. It is much easier to reorganize a project in a mind map than it is in a traditional project management tool like Microsoft Project or Primavera.

- Most of the people on IT project teams are resources, not professional project managers. A traditional tabular view of a project is often too complex for them to comprehend quickly. On the other hand, the visual presentation of project data in a mind map makes it easy for team members to see relationships between project elements, and to see the impact of changes to them.

- Project managers can create customized dashboard maps that enable them to keep important information at hand, and to quickly switch between projects without a big hit on their productivity. The visual format of a mind map makes it easy to see the project's current status, items that need attention and who is responsible for them.

- Many ad hoc projects require extensive information gathering from subject matter experts. Mind maps are a powerful tool for gathering, organizing and making sense of a mountain of information, and distilling it into a manageable project plan. They are much more than task management tools. Mind maps can be used to take notes during project meetings and as a planning tool, projected on a screen or via web-based collaboration to enable all team members to contribute to the project plan. Elements within a map can be coded with icons, symbols, colors, tags and other metadata to help project teams visually skim maps for related

information and to facilitate filtering of large mind maps to display a more manageable subset of information.

- Software-based mind maps can be collapsed to show a high level view of a project, and can also be expanded to dig down into the details of it. No other type of productivity or project management software supports this dual "forest and the trees" set of perspectives. In addition, some mind mapping programs enable you to filter content to only show specific types of information or to display only a single branch. This functionality helps project teams stay focused on one section of the plan at a time, and results in more complete and accurate project plans.
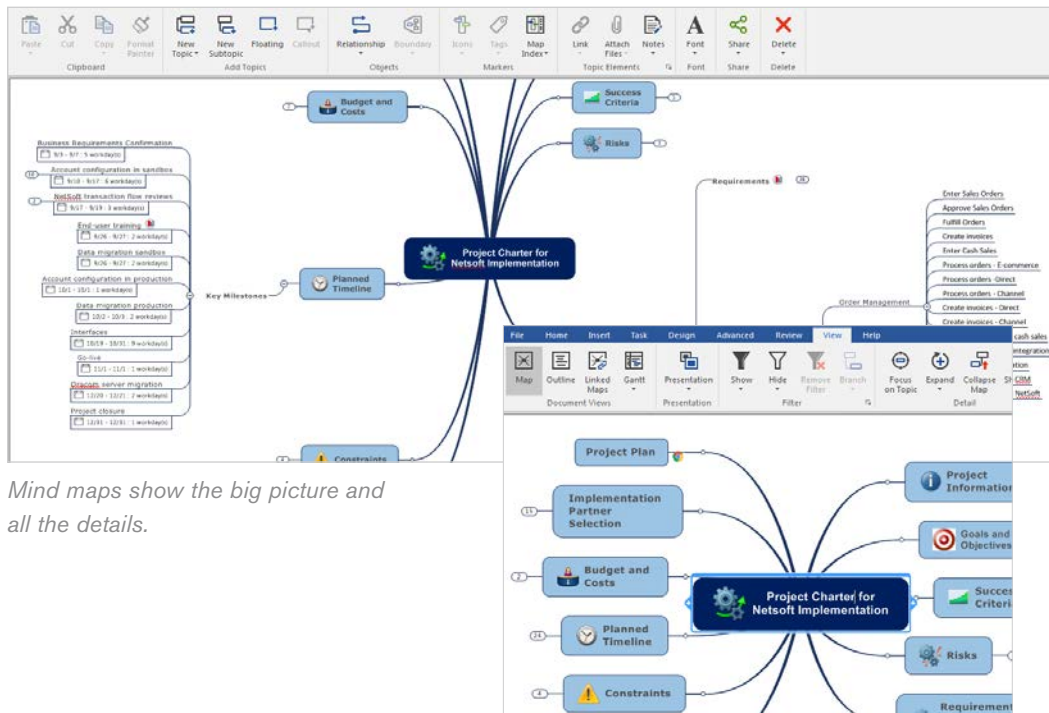
Mind maps show the big picture and all the details.

Challenge #2: Communication and Visibility

The Trends

Frustrated by long time frame megaprojects that frequently exceed budgets or do not achieve their objectives, the senior management of a growing number of organizations is now asking project managers to break large projects into several smaller ones. They are requiring deliverables every few weeks or months to ensure that projects stay on track and that problems are surfaced quickly. Management also wants greater rigor applied to smaller projects. All of this has a major impact on the project manager's workload.

Budgets continue to be tight in today's uncertain global economy, which means that virtual meetings are the "new normal." Enterprise project meetings may include people from multiple facilities and countries.

The Challenges

IT project managers need to be able to provide frequent updates to stakeholders in the formats that they are most comfortable with. Traditional project management software is limited in its reporting capabilities.

In large, multinational companies, meetings frequently involve people from multiple locations. Collaboration tools like WebEx and GoToMeeting enable teams to share and append documents, but they lack a whiteboard tool that enables them to brainstorm effectively.

Today, IT projects often utilize technology providers or contractors to perform the work. Like project teams and stakeholders within the company, outside vendors need a shared understanding of project status, next actions and responsibilities.

> *"Most of the people we work with are resources, not professional project managers. We need to deliver information to them in formats they're comfortable with."*
>
> **Larry S., IT project manager, aerospace**

The Benefits of a Visual Approach

The visual format of a mind map makes it easy for team members to see how all of the tasks relate to one another. It's also easier for teams to see relationships between project elements, to identify potential areas of duplication and any potential problem areas.

IT project managers say the radial design of a mind map is easily understandable by most people, and is much more user friendly than large, complex project status spreadsheets. For stakeholders who require reporting in a different format, mind mapping software can easily export project updates in many formats, including Excel spreadsheets, Word documents, PowerPoint slides and Microsoft Project files.

Mind mapping software has emerged as a powerful whiteboarding tool for virtual meetings, enabling geographically dispersed teams to brainstorm and plan with great flexibility. Just as whiteboarding versus presentations in live meetings focuses team member attention, mind mapping also serves to engage participants of virtual meetings more than passive reviewing of charts. Features like filtering and "show branch alone" enable project managers to provide their teams with customized views of projects during meetings, promoting understanding and consensus. It can be used to record project tasks and assign them to team members. At the end of a meeting, team members leave with a shared understanding of the project's status and their responsibilities.

For project managers, who must manage a mountain of information on a daily basis, mind mapping software enables them to create personalized dashboards that let them quickly access reference information, project documents and corporate resources with a single click. It also enables them to switch between projects with a minimum of lost productivity.

"*In a chaotic, dynamic environment, mind mapping software dramatically reduces the overhead of moving from one project to another.*"

Mark P., test engineer, aerospace

Challenge #3: The Special Needs of Small, Ad Hoc Projects

The Trend

As described earlier, the senior management of a growing number of organizations is asking that megaprojects be broken down into smaller, more manageable chunks to improve accountability and contain costs. Like most executives, project managers continue to be asked to do more with less. They are being asked to manage a larger number of smaller projects and to do it all faster.

The Challenges

Today's IT project managers need more than a capable task manager. They need an all-purpose project management tool that enables them to brainstorm, take notes, gather information, organize and distill it, identify small problems before they become large ones and provide status reports in a variety of formats to project stakeholders on a frequent basis. Traditional project management tools tend to be rigid and inflexible. Project setup is time-consuming and it is hard to move individual tasks or project segments from one part of the timetable to another. In addition, the tabular data and Gantt charts of programs like Microsoft Project and Primavera are not easily understood by non-project managers.

How a Visual Approach Can Help

• Mind mapping software is a flexible, adaptable tool that is ideally suited to the needs of today's ad hoc projects. This powerful type of software makes it easy for IT project managers to gather, organize, distill and share project information with an unprecedented level of flexibility. Smaller projects can be managed from planning to completion with mind mapping software.

• IT project managers told us that project maps are easier for project team members and stakeholders to understand. They can easily see relationships between the various elements of the project. When reorganizing a mind map, they also say they experience less mental

resistance moving information from one part of the map to another, compared to documents, spreadsheets and other software tools.

- In addition, several project managers pointed out that dedicated project management software is overkill for many smaller projects. Mind mapping software, on the other hand is just right for today's smaller, faster, more agile projects.

How IT Project Managers Use Mind Mapping Software

The IT project managers we interviewed for this whitepaper utilize mind mapping software in a variety of traditional and nontraditional ways. Here is a summary of the ways in which they use it to be productive and effective. You can adapt any or all of them to your work environment.

Project Brainstorming and Planning

IT project managers commonly use mind mapping software in team meetings to brainstorm project scope and requirements. Displaying the map on a large screen gives team members a shared sense of the project's elements and their relationships, and tends to spur greater participation than utilizing flip charts, whiteboards or Post-it notes.

The IT project managers we talked to universally agreed that mind mapping software is a much more accessible way to view and organize information, even for people who have never utilized this type of software before. The visual format makes it easier for meeting participants to identify overlaps and duplications, and to determine what is missing from the project plan. This results in more complete and accurate project plans. Once the team is done brainstorming the project, the mind map can easily be converted into a work breakdown structure or a more formalized requirements document.

Mind mapping software works equally well, whether the team members are in the room or networking remotely. Brainstorming the project structure and seeing the changes reflected in real time is extremely valuable to all participants.

Process Management

Right-facing mind maps can be used to predict process flows, with the timeline running from the top to the bottom. Some mind mapping software also includes the ability to add flowcharts and process diagrams, which can help project team members see the execution steps the overall project must follow.

Requirements Development

Mind mapping software enables teams to capture requirements quickly and organize them later. They can easily group and regroup information as needed to categorize requirements and distill them into their final form. Having a complete picture of the requirements on screen also helps project managers minimize scope creep.

Work Breakdown Structures (WBS)

Mind mapping software, with its ability to display associations and relationships in a visual hierarchy, makes it easy to subdivide projects into logical units and then convert topics into tasks, complete with resources assigned, start and end dates and other data. Topics can also contain numerical data such as budgeted and actual costs, and can perform calculations on them.

Once the WBS is complete and the team and stakeholders have reached consensus on it, it's easy to convert the mind map into a project schedule, including a Gantt chart. The project execution can then be managed completely within mind mapping software or be exported to a project tracking system such as Microsoft Project or Primavera.

Taking Notes

Ad hoc projects require a tremendous amount of information gathering. Mind mapping software helps project managers to organize the information they've collected into meaningful chunks and logical groupings. This is especially true of companies that are implementing agile project management, which includes daily standup meetings where problems are quickly identified and solved.

Several project managers we talked to also use mind maps to take notes during ongoing project meetings. It enables them to quickly document the agenda, what was discussed and what decisions were reached. This visual format makes it easy for them to scan their notes later and quickly understand what needs to be done. Compare this to a multi-page document, where you must read through the whole thing to understand what's going on.

Dashboard Mind Map

Dashboards are mind maps that contain links to the critical information that a project manager needs to do his or her work. This type of mind map may include:

- Links to current and archived project mind maps
- A link to the firm's internal phone directory
- Links to project pages on the company's intranet
- Links to administrative resources, such as timesheets, work statements and expense reports
- A daily personal to-do list

- Access to regulatory and other standards information they must refer to in their work
- Access to corporate processes and procedures
- Mind map templates for meeting agendas, engineering tests and other repetitive tasks

Several of the project managers we talked to have created their own customized dashboards to help them manage their workload. They report that these visual planning tools help them keep all of the key reference information they need close at hand and to switch quickly from one project to another—with very little downtime. Considering the trend toward a greater number of smaller projects, dashboards are a very useful tool for today's extraordinarily busy IT project managers.

Project Execution

Many of the IT project managers we talked with use project maps to keep track of the mountain of information associated with each of the open projects they manage. Topics and tasks may be color-coded to indicate task progress (red for behind schedule, yellow for in danger, and green for on track). Icons and symbols can be used to visually group related pieces of information together, and to facilitate filtering of the project map to focus on specific types of information. These mind maps also commonly contain links to external documents, web pages and individual emails, which saves these busy project managers a lot of time.

During project planning and implementation, mind mapping software helps project managers make context-based decisions:

- What comes first?
- What should come next?
- What's missing?
- What's out of place?
- What should the division of labor be for this part of the project?

In other words, by providing project managers with a big-picture view of the project as well as a way to drill down into the details, it enables them to more effectively adapt to changes as they occur.

Another common scenario in IT environments is working with outside vendors and suppliers. In these cases, it is even more important to understand and document project needs, manage expectations and keep the project on track. One project manager we talked to utilizes her software's calculation capabilities to track actual vendor spending versus budget in real time. Seeing this data in the context of the project map helps her make better decisions and manage vendor budgets.

The project managers we talked to emphasize the importance of delivering frequent project updates to stakeholders in the formats they're comfortable with. This may include mind maps, documents, spreadsheets or Gantt charts. Mind mapping software can easily output project status to any of these formats.

Reference Materials

In today's fast-moving project management environment, PMs do not have time to search for information. They need to organize themselves to move quickly and confidently. Using mind maps to organize reference information such as corporate best practices, compliance data, government regulations and processes/procedures is one way that they do that. Mind maps enable them to keep all of this important information in one place.

One project manager told us that he maintains a mind map with links to archived projects. Within each of those project maps, he includes an absolute URL that links to the archived project folders on the company's network. This makes it possible for anyone opening this mind map to be able to quickly access all of the project's files.

Project Triage

One of the companies we talked to utilizes a project office as a company-wide support resource to assist PMs within the company's numerous divisions and locations around the world. Frequently, the project managers who work in this project office are called in to "rescue" projects that have stalled or have run into problems.

As part of the fact-finding process, one project manager told us that he uses his mind mapping software to gather information about stakeholders, team members and leaders, problems and current status. This enables him to quickly build an accurate, integrated picture of the project, so that he can identify the steps he needs to take to fix it.

Conclusion

As you can see, mind mapping software is uniquely designed to help IT project managers overcome these challenges and be successful in today's fast-moving, turbulent business environment. Digitally-produced mind maps are infinitely adaptable and enable project managers and teams to view project data from multiple perspectives. This helps them plan better, anticipate and solve problems faster and do an excellent job of communicating with project stakeholders.

Project management today requires much more than managing tasks. As we've seen, mind mapping software can help project managers to to brainstorm, take notes, gather, organize and distill information, maintain efficient dashboards that enable them to nimbly manage multiple projects and priorities, and get organized with all of the knowledge and references they need just a few clicks away. In short, mind mapping software is a must-have tool that enables them to be more productive, efficient and successful in their important, multifaceted roles.

About Mindjet and MindManager

The sponsor of this white paper is Mindjet, the parent company of MindManager, the world's leading mind mapping software for individuals and organizations. With over 3,000 customers and 2 million paid users, including 83% of the Fortune 100, MindManager enables brainstorming and creative problem solving, improves communication and information management, and gives users the ability to plan and complete projects more efficiently and effectively. MindManager Enterprise combines Mindjet's leading mind mapping and visual planning tools with patented data integration features, as well as flexible communication options to support project coordination and knowledge sharing across the organization.

Mindjet is headquartered in San Francisco with offices throughout the U.S., U.K., France, Germany, and Australia. Learn more by attending a live webinar and by downloading a free 30-day trial of MindManager at www.mindjet.com.

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Appendix - More About Mind Mapping

A mind map is a diagram used to visually outline and organize information. It starts with a central topic or image, to which associated words and images are added, arranged in a nonlinear fashion around it. Mind mapping is aligned with your brain's associative powerful capabilities, which makes it an ideal tool for brainstorming, planning and problem solving. Mind mapping software enables you to rearrange topics at will and add rich metadata to them, including files, links, symbols, images, colors, tags and other attributes that add meaning and context. Topics can also be converted into tasks, so that you can use mind mapping software to plan and manage projects.

Some mind mapping software includes tools for adding financial calculations or flowcharts, so that all project-related information can be maintained and displayed in one place.