

Using Dependency Mapping to Visualize Project Interrelationships ¹

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Dependency mapping can be an effective project management tool if decision-makers play to its strengths. Those using it strategically can visualize interrelationships in workflows, giving them insight into their processes' scope, speed and risk.

The Benefits of Using Dependency Mapping for Projects

Dependency mapping uncovers the relationships between teams, resources, deliverables and tasks, enabling project managers to identify potential bottlenecks early on. For example, instead of pausing progress while waiting for materials to be delivered, they'll know to place their order one week in advance, mitigating a delay.

A comprehensive overview tells them how much time and how many resources they need to progress, ensuring they can allot an adequate amount for each step. Optimizing allocation helps leaders ensure they don't go over budget or experience unexpected delays, streamlining their workflow and potentially increasing their time to completion.

Visualization helps reduce miscommunications. It [makes data points more accessible](#) to clients, stakeholders and non-technical team members, ensuring minor details aren't overlooked. While documenting dependencies in a traditional text-based format technically works, it often results in unspoken confusion and misunderstandings.

Dependency mapping benefits staff just as much as project managers. Approximately [29% of employees agree](#) a lack of visibility is a significant productivity obstacle, underscoring the importance of making process status accessible. Elevating their level of oversight to ensure minor details aren't overlooked is among the easiest ways to increase efficiency.

Clearly illustrating how each task and milestone are interconnected establishes a singular, unambiguous progression path, improving interdepartmental communication. Teams that share knowledge and objectives coordinate better and interact more effectively, meaning no more quick check-ins or clarifying questions on subject matter that should be fundamental.

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Administrators must identify all internal and external dependencies to define interrelationships between every element within the work's scope. Is a delay inevitable if a critical team member takes a sick day? Will a client's feedback on deliverables affect the timeline? Even if these variables aren't within their control, they must account for them.

Those working on multiple jobs simultaneously must consider interdependencies — also known as cross-project dependencies — to determine how the completion of one could affect another. Identifying correlations between these variables involves understanding why they affect one another and what can be done.

Once project managers determine these links and figure out their impact's extent, they must work out their logical order based on time or strategic importance. For example, design prototyping must come before client feedback. At this stage, they create a visual representation — a map, graph, chart or diagram — plotting completion pathways and dependencies.

Common Types of Dependency Maps to Choose From

Several types of dependency maps exist, each with unique visualizations and considerations. For instance, a Gantt chart represents relationships between tasks through the lens of time. The bar chart's x-axis is the number of weeks or months in the schedule, with blocks illustrating when tasks must be completed.

A work breakdown structure is a hierarchical decomposition. Its descending levels [have increasingly detailed overviews](#) that offer more insight into dependencies. In the context of web design, the first level would be to create a website. The following steps would be to secure a URL, design user interface components and so on.

Ideally, a dependency map should display scope, cost, time frame and risk level. This is the only way leaders can achieve a comprehensive view of interdependencies. However, this approach is still functional without as much information. As long as decision-makers have the basics — meaning process length and links — they'll have a more complete understanding.

Best Practices for Creating and Maintaining These Maps

Managers should consider who will get access to their dependency map upon creation. Relevant people should generally only include people working directly on the tasks. While third-party contractors, team members from other departments and clients impact processes, they don't necessarily need access to workflows.

One of the best practices for maintaining a dependency map involves regularly updating it as the project's scope evolves. According to one survey, [63% of business owners](#) plan up to one year in advance. While this tactic is common, it isn't practical — even with adequate planning, unexpected variables can sway team members off course.

In addition to updating dependency planning periodically, decision-makers should consider leveraging interactive elements. Whether they provide sticky notes or color-coded digital checkboxes, giving staff a way to mark their progress, clarify misunderstandings and record event specifics is a good recordkeeping tactic.

Manually creating a dependency map is time-consuming and complex. Business leaders must brainstorm how variables like task completion, stakeholder behavior and worker availability could impact milestone completion. For particularly complex cases, decision-makers should consider leveraging software tools.

Best practices for selecting the right software include considering complexity, leveraging interactivity, customizing data points and automating progression. While companies [can use a simplistic digital spreadsheet](#) to create and edit a work breakdown structure, advanced tools are ideal for complex or long-term use cases.

Playing to Dependency Mapping's Strengths

While dependency mapping is an effective strategy, its success relies on coordination and commitment. Simply creating a map and being aware of dependencies isn't enough to mitigate delays. Team members must continuously communicate, update and report.

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