As early as 1915, Henry Gantt realized that coordinating projects with hundreds of activities is difficult. Therefore, he invented Gantt charts that make it easier to plan and monitor projects. The next major advancement was the Critical Path Method (CPM), a way to focus planning and analysis efforts on the longest activity sequence that determines project delivery.

Today, a variety of software programs take advantage of these breakthroughs by planning and tracking unprecedented levels of detail. Still, most projects are late, and project planning and tracking is seen largely as an administrative chore that does not help execution. Why?

This paper not only answers why, but also presents a breakthrough that finally solves the problem of late projects. Known as Synchronized Project Management, it is setting new performance standards across all types of projects from engineering and development to heavy manufacturing and construction.
Shortcoming of Traditional Project Management: Schedules are Fixed, Reality is Not.

Many projects begin with a perfect plan. Exact start and end dates are calculated for every task, and everyone knows what to do and when to do it. Project managers know when the project will finish, and resource managers know which and how many resources they will have to supply, and when.

The Problem:
Plans are not respected by reality. Tasks take longer than expected, vendors are late, requirements change, approvals are held up, and on and on. Managers respond by abandoning the project plan and re-setting priorities for their teams—but those instructions are localized and out of sync with the priorities of other groups. No satisfactory options are available to maintain synchronization under traditional project management.

Setting day-to-day priorities using “fixed” schedules is difficult. While a few options are available under “fixed schedules” to deal with a changing reality, they are also riddled with problems.

For example:

- **Schedule variance metrics.** Late-to-start and late-to-finish metrics can be used to prioritize tasks, but they only tell you how far behind the original schedule these tasks are, not how much impact they have on final delivery.
- **Critical path / slack analysis.** It is more helpful than schedule variance metrics, but fails to account for the resource dependencies that exist within a single project and across a portfolio of projects. The result here is the same: the analysis tells you to work A, but you know you should work B.
- **Frequent rescheduling.** Frequent rescheduling is not an option because small changes in reality can create big changes in schedules, causing instability and even more multitasking.

People realize that these options don’t help either. Invariably, each department / team develops its own priorities based on incomplete information and based on who is shouting the loudest.

Local Priorities Create Major Inefficiencies.

When priorities of different groups and teams are out of sync, people start tasks but cannot finish them. The following inefficiencies result:

- **Multitasking:** People either don’t get the inputs they need from other departments in a timely manner, or are constantly pressured to do “more urgent” tasks first. They stop their current tasks and start others, and a cycle of multitasking begins. When workers multitask, they incur switching costs. It takes them extra time to reorient and get back into rhythm. Quality suffers, as well. When managers multitask, even small decisions can take days. And instead of spending, say, a quality 15 minutes with people, they can afford only a rushed and ineffective 2-3 minutes.
- **Loss of Predictability and Control:** In a multitasked environment, managers can’t foresee when a task or project will finish because they don’t know who will work on what and when. As a corollary, managers also lose control because they don’t know when and where to intervene.
- **Increase in Management Overhead:** Significant management overhead is needed to run the myriad of meetings for resolving priority confusion and conflicts, and to fight fires.
- **Big Issues Ignored:** When managers are busy fighting fires, they can’t pay attention to the big issues and uncertainties that arise.
Flexible Schedules are Needed to Maintain Synchronization.

Just as rubber helps foundations withstand earthquakes, flexibility helps schedules accommodate reality. Instead of mandating exact start and end dates for every task, flexible schedules adjust to reality and keep priorities synchronized in execution. Flexibility in schedules works like this:

- Instead of trying to keep everyone busy, release projects (and work-streams within projects) into execution based on the most limited resources. This not only reduces multitasking but also exposes capacity to deal with uncertainties in a timely manner. (Fig. 1)

- Build explicit time buffers into the project plans. These buffers are unscheduled blocks of time at the end of projects and work-streams; they provide flexibility to deal with uncertainties as and where they happen. When people are not measured to fixed start and end dates at the task level, and know that they will not be multitasked in execution, they typically give tighter estimates and project plans even with buffers are shorter than plans without buffers. (Fig. 2)

- Monitor buffers to prioritize everyone’s efforts. Tasks on work-streams that are consuming the buffer the fastest are given the highest priority. Individual contributors work on only one task at a time and are given the next task based on the priority order. Managers and support resources also follow the same priorities, and expediting efforts are focused on recovering the buffer that is being consumed the fastest. Thus, all efforts are automatically synchronized towards project completion. (Fig. 3)

Here’s the critical difference between traditional project management and synchronized project management. Traditional project management creates fixed schedules for tasks, but the end date keeps moving out. Synchronized project management keeps task schedules flexible, but the end date remains fixed. Even though certain tasks might take longer than planned, projects finish faster than usual.
Link Between Faster Projects & Business Performance

<table>
<thead>
<tr>
<th>Project Types</th>
<th>Examples</th>
<th>How Faster Projects Improve Performance</th>
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| Project Based Businesses           | • Equipment Manufacturers  
• Maintenance (MRO) Operators  
• Engineering Service Providers | • Do more projects using same resources  
• Win sales and charge premiums                                                  |
| New Product Development            | • High Tech  
• Pharmaceuticals                                                   | • Capture market share and charge premiums  
• Segment the market with more products                                         |
| Infrastructure Projects            | • New Factories  
• Power Plants  
• Roads and Bridges                                                   | • Start generating return on investment faster                                     |
| Internal Projects: Maintenance     | • Airlines & Defense Depots  
• Power Plants, Oil Refineries, Steel Plants, etc. | • Increase productive uptime                                                        |
| and Repair of Captive Assets       |                                                                                      |                                                                                   |

Implementing Synchronized Project Management

Synchronization Software

Specialized software is required to create flexible plans and use that flexibility in execution to keep priorities synchronized. It provides priority reports to all task managers and role-specific dashboards to project managers, resource managers and executives.

Task Managers
• Which tasks to execute  
• Which tasks to prepare for

Executives
• Are operations hitting targets?  
• Where to intervene if not

Resource Managers
• What are the upcoming bottlenecks  
• Which bottlenecks are critical  
• Where do you have extra resources to move?

Portfolio Managers
• Which projects are in trouble  
• Where should I intervene in the schedule?
Business Process Design

Even though software is necessary, synchronized project management is more than just installing new automated systems. To take full advantage of the software’s capabilities, business processes have to be simplified and managers coached to operate in a new reality.

For example:

- The plethora of priority and status meetings, many of them ad hoc, are no longer needed. In a synchronized environment, fewer meetings are required, and they can also be more structured.
- Project plans under traditional project management are either too detailed, or just a set of milestones and many disjointed spreadsheets. Now you need only one simple plan that meets everyone’s needs.
- With better synchronization, you can manage capacity and improve processes systematically. Turning these possibilities into reality also requires you to adopt simple and structured processes.

Transitioning from Traditional to Synchronized Project Management

The concept of synchronized project management is straightforward. That said, a transition to synchronized project management is best done with professional guidance to set improvement goals, design simpler business processes, achieve organizational buy-in, create effective project plans and coach managers. Experienced implementers will help you avoid pitfalls and realize the full benefits of synchronization.

Realization is the largest provider of Synchronized Project Management solutions, including software as well as implementation services. We have been serving clients across industries and in all major regions of the world since 1999, and are proud of the many industry awards our clients have received for setting new standards of performance in projects – including the Shingo Gold, the Franz Edelman Award and the US Air Force Chief of Staff Excellence Award. We have helped them generated $3.5 billion in additional cash and profits by finishing their projects 20-50% faster. For more information, email us at info@realization.com.