SOLVED: How to Meet Project Due Dates Without Increasing Costs!

Traditional Project Management versus the Next Generation in Project Management

EXECUTIVE SUMMARY

Current Situation: Why are Projects Late?

Understanding why projects are late and do not meet their Due Dates is only part of the challenge, there are costly overruns to consider. Extensive preparation and impeccable planning do not guarantee on-time delivery. By the time Project Managers using the Critical Path Method (CPM) discover the accumulation of undetected task slippage during execution, the cost of recovery is unacceptably high. Recovery costs include expediting, scheduling additional resources, re-assigning resources from other important projects, cutting scope to meet the project due date, requests for additional funding, not to mention long hours and employee stress levels.

Figure 1. Success Rate of Change Projects (Standish Group, Chaos Study. 2011)

Problem: Recovery Efforts are Costly!

The undetected task slippage is often only revealed in the last third of the life cycle of a project, when there may not be sufficient time remaining to avoid costly recovery efforts, if a recovery is even possible. Combinations of the above result in constant re-prioritizing of tasks with increased velocity, leading to project uncertainty, instability and chaos.

Studies show Organizations using traditional Project Management methods have a very high project failure rate and this begs the question: *"Why are traditional Project Management methods and software not questioned?"*

Solution: Identify Slippage Immediately!

Early visibility and real-time detection of Task slippage is critical during project execution. Project Management software should assist and support Project Teams by pinpointing exactly where and when intervention is required, instead of limiting or burdening the Team. Technological advancements have transformed the Project Management software industry. Exepron is the next generation in real-time Project Management software that provides leading indicators of impending problems. Exepron's embedded intelligence removes the complexity of Project Management software, making Advanced Project Management accessible to all.

Results: Projects Completed On Time!

Organizations applying Critical Chain Project Management have shorter project schedules and achieve significantly improved results with on average 95% of projects completed before the planned total project duration. Any company that can improve their project performance by completing projects on time, to scope and within budget has a strategic corporate advantage.

Financial Value: Calculate the $ Value

Executives and Managers should calculate the opportunity $ Value generated in top and bottom line growth by completing more projects in a year, without increasing costs!

Traditional Project Management

"Rear View Mirror Approach"
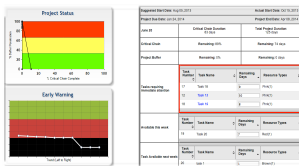
Problem: Undetected Task Slippage Accumulates

Traditional Project Management methods and software records historic, lagging or past efforts, which is essentially a '**rear view mirror**' approach, leading to decisions based on historic records of outdated project data. The bulk of the tasks in a project may only be scheduled in the last third of the project due to the integration and convergence of the majority of dependency chains. Management decisions based on the early project history may not be relevant to later Task activity. The project history does not consider or may not apply to the future workload.

Advanced Real-Time Project Management

"Front Windshield View"

Solution: Detect Task Slippage Earlier in the Project Life Cycle

Updating tasks in Real-Time increases Management's visibility of real information and therefore control of the project workload. This forward looking '**front windshield view**' of the current status of a project in Exepron ensures Task Slippage is detected early, while there is sufficient time to recover.

Informational Dashboards with embedded intelligence provide CEO's, Executives, Project Managers and Project Teams with the visibility of timely and real-time information to identify precisely where to intervene as task slippage occurs. Project Managers know early enough exactly which few tasks are delaying the entire project and where to focus corrective actions or recovery efforts, while there is still sufficient time to intervene. The forward looking Early Warning Chart tracks the Work in Process (WIP) tasks and the remaining future workload, while the embedded intelligence calculates the probability of meeting the Project Due Date. Decision-making is now based on leading indicators and real-time information.

Figure 2: Project Dashboard
http://www.exepron.com
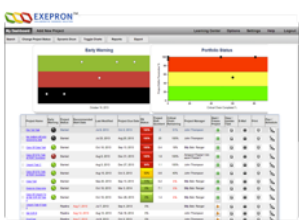
Traditional Project Management

"Unresolved Resource Contention"

Problem: Unresolved Resource Contention

During Planning, traditional Project Management methods and software schedules the Critical Path, the longest chain of Task dependency without considering Resource Contention. The Critical Path Method (CPM) assumes an unlimited quantity of available resources. This Project Management method of scheduling runs the risk of an impractical, non-executable project schedule given the limitation of available resources during Execution. How does a Project Manager de-conflict the resource requirements and allocation in a complex multi-project portfolio?

Advanced Real-Time Project Management

"Resolves Resource Contention within a Project"

Solution: Resource Allocation in a Multi-Project Portfolio

Exepron calculates the longest chain/path of Task and Resource dependency (the Critical Chain), which includes resolving Resource contention within a project during Planning. Exepron's **inventive forward-looking intelligence** and advanced embedded algorithms resolves the resource loading challenges presented by a Multi-Project Portfolio.

In addition, Exepron synchronizes the release of Pipeline Projects sharing a common resource pool in a Multi-Project Portfolio. The staggered release of projects into an active portfolio minimizes resource contention and is the key to **maximizing the throughput** for the entire Portfolio of Projects.

Figure 3: My Dashboard
http://www.exepron.com

Problem: Safety Time embedded within a Task does not provide adequate Project protection!

If the safety time embedded within each Task during Planning is sufficient, why are most projects still late? Planned embedded safety time within a task is invisible during project Execution. Task slippage accumulates and creates an unseen domino effect as task slippage is passed on from one task to another during Execution.

In the last third of the project life cycle, the embedded task safety or contingency time is often insufficient due to undetected, accumulated task slippage. As the Due Date approaches, most tasks become urgent and high priority, resulting in project instability, increased stress levels, escalating recovery efforts and increased costs.

Solution: Visible Safety Time, know where to Focus in Real-Time!

During Planning in Exepron, Users remove the task Safety time and schedule only the expected **Touch Time** for each task. Exepron's powerful embedded intelligence will automatically aggregate and re-insert the safety time in the form of visible Buffers. Feeding Buffers are located at strategic integration or convergence points with the Critical Chain. A Project Buffer is inserted at the end of the longest chain of dependency to protect the project due date. Buffers provide visibility and display the consumption of the Safety time to ensure the early detection of Task slippage. Buffers are the control mechanism for the entire project.

Informational Dashboards and Task Priority Tables display the current status of all projects and are designed to meet the needs of all levels of Management.

During Execution, Exepron cuts through the complexity of managing projects by displaying only relevant, **critical information** required by Senior Managers and Project Managers. Exepron is a powerful Project Management decision application. Base your decisions on real-time information and position your Team for success!

Traditional Project Management

"Embedded Task Safety Time is Inadequate"

Advanced Real-Time Project Management
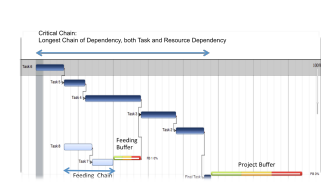
"Visible Safety Time is Aggregated in Buffers"

Figure 4: CCPM Schedule
http://www.exepron.com

Exepron Testimonials: Projects Completed Earlier with Exepron!

➡ "Ellwood National Forge has successfully used Exepron for two years to accomplish machine installations, machine rebuilds/upgrades, new product start-ups, plant shutdowns. It has proven to be a robust tool to manage our workload and improve our on-time performance. Exepron will take your projects to levels of management control, visibility, on-time performance, and budget control above the norm." [1]

➡"Veripos: Projects are now flowing through the system at a more consistent rate. Products are now being delivered between 25% and 40% quicker than they were previously. Main benefits: Increase in project throughput; Smoother task handover from one resource/department to another; provides a view across our entire project portfolio; everyone views the same up to date status; charts within Exepron now provide Managers with an early warning system." [2]

➡ "Aviro RMS Group: In just 2 months of using Exepron, every completed project finished sooner than planned, on average over 50% sooner. The software helps, it's really about the way we now focus on what needs to be done, with whom and on which projects, in real time, that is making the difference. More and more we are improving our ability to identify and head off problems before it's too late." [3]

➡ "NeoGrid, Brazil: Since we started using Exepron we have much better visibility of our projects allowing better management of our projects. It is easy to focus the Teams effort to guarantee meeting the due dates. Updating the project tasks and getting real time information of status and managing risk of meeting delivery dates is incredibly simple." [4]

Critical Chain Project Management (CCPM) Success Stories

➡ **Mazda Motor Corporation Power Train Development Division**

TOCICO Conference, Germany, June 03, 2013. "Mr. Mitsuo Hitomi, Executive Officer, Mazda Motor Corporation Power Train Development Division gave the keynote address. Critical Chain Project Management enabled Mazda to quickly develop their innovative SkyActiv capability. He described the last chance for Mazda to survive by developing technology that would achieve low fuel consumption from an internal combustion engine that would rival a hybrid engine, no compromise in driving pleasure, affordable for all customers. Product development cycle had to be cut in half for Mazda to survive.

Results: Starting with Critical Chain Project Management education in 2007, momentum grew within the company for holistic project management until the development project duration was cut by half. Mr. Hitomi described how this new technology was applied in a multi-project environment with all projects delivered with full scope, on time." [5]

➡ **Shea Homes** "To stay on top of a competitive market, homebuilder Shea Homes wanted to build more houses in less time, without spending additional money.

Results: After implementing critical chain methodology, the homebuilder reduced build times by 42 percent, significantly increasing ROI.

Plus, the company could offer customers a guaranteed move-in date, a significant competitive advantage and marketing tool." [6]

➡ **Maintenance Center at the Marine Corps Logistics Base, Albany, Georgia**

"The Maintenance Center was struggling to complete equipment repairs on time and was faced with an increasing backlog of work. In the center's heavy equipment repair and overhaul lines, asking for "plus-ups," or additional time to complete the work, had become a normal way of doing business.

Results: Repair cycle times for the MK-48 were reduced by a factor of 3, from an average of 167 days to an average of 58 days. Work in process levels were reduced from 550 percent of demand to 140 percent of demand.

The cost to repair products also went down by 25 to 30 percent, mainly because the reduction in delays resulted in more throughput without any increase in the cost of repair.

The capacity for the MK-48 line is much more flexible and can work with a rate of 10 units per month to as high as 23." [7]

➡ **Rio Tinto Alcan Alesa** "An engineering company that designs and commissions ship unloader and conveyer systems for ports around the world, a majority of projects were running behind schedule.

Results: Once the organization got back on track, it was able to complete more projects with the same amount of resources, boosting its bottom line.

The firm reported a 31 percent increase in throughput, and the completion of 40 percent more projects than the previous year within the first eight months of implementation." [8]

Conclusion: The Next Generation in Advanced Project Management Software

➡ Project Management is an integral part of any organization and Exepron resolves many of the problems experienced with traditional Project Management methods and software.

➡ Exepron is the Next Generation in Advanced Critical Chain Project Management software; the real-time embedded intelligence removes the complexity of Project Management, making Advanced Project Management accessible to all.

➡ Due to advancements in technology, Exepron has removed the limitations of traditional Project Management software. Project Teams are now able to focus on completing projects on time, within budget and to specification in Multi-Project environments.

➡ Executives can establish effective Project Management skills as a core competency to manage change and enable sustainable company growth, a significant strategic corporate advantage.

Questions & Answers

Real-Time Dashboards

Will this Project finish on Time?

Early Warning Chart is a leading indicator for pro-active intervention of the future workload, calculates the probability of meeting the Project Due Date.

Provides Answers for?
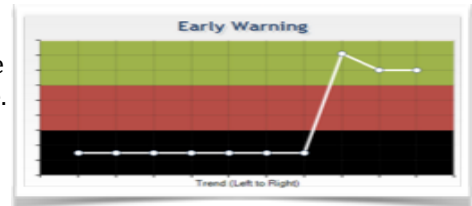
Program Managers, Project Managers, Task Managers.

Figure 5: Early Warning Chart (http://www.exepron.com)

When should we Start the next Project?

The Dynamic Drum will provide a suggested Start Date for each project in a Portfolio of Projects.

Provides Answers for?

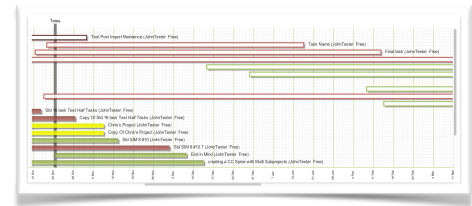Executives, Project Sponsors, Program Managers, Project Managers.

Figure 6: Dynamic Drum (http://www.exepron.com)

Which Projects require attention?

Portfolio Dashboard and individual Project Dashboard - displays the real-time status of every project in the Portfolio.

Provides Answers for?

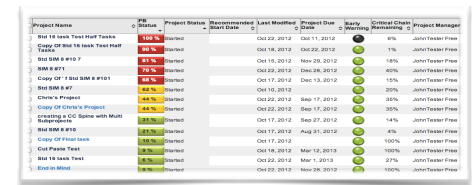Executives, Project Sponsors, Program Managers, Project Managers.

Figure 7: My Dashboard Table (http://www.exepron.com)

Which Tasks require immediate attention in order to recover lost time?

Project Dashboard Table - displays exactly which tasks require immediate attention and displays the work priorities.

Provides Answers for?
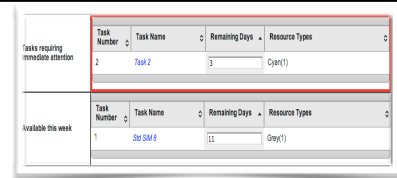
Program Managers, Project Managers, Task Managers.

Figure 8: Project Dashboard
(http://www.exepron.com)

Which Task should Resources be working on now and which task is next?

Resource Manager Report - displays the Task priorities for daily and weekly Resource allocation.

Provides Answers for?

Program Managers, Project Managers, Task Managers, Resource Managers.

Figure 9: Resource Manager Report
(http://www.exepron.com)

What is the current and future Resource loading?

Resource Loading Tables and Charts - display the current and planned resource load.

Provides Answers for?

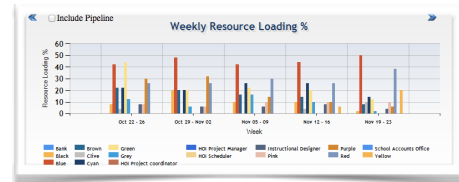Program Managers, Project Managers, Task Managers, Resource Managers.

Figure 10: Weekly Resource Loading % Chart
(http://www.exepron.com)

Why Exepron? The Next Generation in Advanced Project Management!

Exepron's user-friendly, innovative, real-time, forward looking embedded intelligence reduces the high cost and removes the complexity of project management, making Advanced Critical Chain Project Management accessible to all.

Testimonials: http://www.exepron.com/exepron-testimonials

Figure 11: My Dashboard (http://www.exepron.com)

About the Author: John L. Thompson is co-Founder of Exepron and owner of Global Focus LLC, a business consultancy specializing in positioning Organizations for sustainable growth and business turn-around. He has led numerous Companies through Facilitated Analysis, Training and Implementations in many diverse Industries worldwide. John has over 20 years of experience in all Theory of Constraint applications, including Critical Chain Project Management, Strategy & Tactics, TOC Thinking Process, Marketing & Sales, Supply Chain Distribution, Production and Throughput Accounting. John was a Certified Associate of the late Dr. Eli Goldratt and is a founding member and past Chairman of the TOCICO, the Theory of Constraints International Certification Organization. John L. Thompson and Daniel P. Walsh are the co-Founders of Exepron. For additional information, you can reach John at johnt@globalfocusllc.com

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[4] Garibaldi, Erico da Silva. PMO Coordinator, NeoGrid, Brazil.
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[5] TOCICO Original Press Release, TOCICO Conference, Germany, June 03, 2013. Mr. Mitsuo Hitomi, Executive Officer, Mazda Motor Corporation Power Train Development Division.
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[6] Hunsberger, Kelley. Dealing with Constrained Resources? Critical Chain Project Management can set you on the Right Path. *Chain Reactions*, PM Network, January 2012.

[7] Srinivasan, Mandyam & Jones, Darren & Miller, Alex. Corps Capabilities, TOC and Critical Chain Methodologies aren't just for Manufacturing anymore. *APICS Magazine*, March 2005.

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