Why Do Projects Succeed or Fail?

The Project Execution Maturity Model

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Projects In Less Time
Taming project complexity

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Discover what *Really* Makes a Difference

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CONTENTS

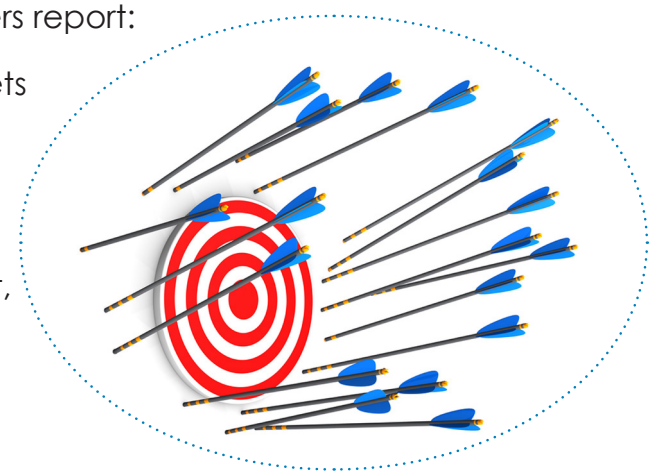
INTRODUCTION

Instead of Changing Plans, Change Behaviors

For too long, project managers have believed that the right planning leads to the right results.

Yet time after time, independent research shows that the current approach to project management fails to produce the outcomes managers expect – and clients want. Researchers report:

- A staggering 39% of IT projects with budgets over $10 million USD fail.
- Only 2.5% of the companies successfully complete their projects.
- IT projects found that 44% run over budget, 7% ran over time, and 56% delivered less value than expected.
- Projects typically overrun the schedule by almost 70%.



What's Going Wrong?

Despite the industry emphasis on better planning processes and improving project skills, projects are not getting better.

We know that between planning and execution, there is a gap – a wide gap. Inside that gap, there are conflicting priorities…a multiplicity of tasks in progress…a misalignment between what is measured and what is meaningful…a failure to identify and adjust for risks…undetected obstacles and bottlenecks that block

progress…and more ground-level factors that have not been, and cannot be addressed by planning alone.

It is clear the traditional solutions are not working. The key to improving project performance is not planning, but execution – creating and sustaining processes and behaviors that deliver consistent, quantifiable results.

Fortunately, the processes and behaviors to deliver consistent execution results are well defined and quantified. These processes and behaviors form the Project Execution Maturity Model.

The Model assesses three levels of execution capability:

- Basic Collaboration,
- Improved Coordination, and
- Integrated Planning and Execution

Basic Collaboration

- ✓ Priority Control
- ✓ Control Work in Progress
- ✓ Functional Goals Alignment
- ✓ Collaborative Execution

Improved Coordination

- ✓ Remote Collaboration
- ✓ Managed Schedule Risk
- ✓ Delivery Promising
- ✓ Managing Bottlenecks
- ✓ Delivery Date Management

Integrated Planning & Execution

- ✓ Probabilistic Planning
- ✓ Capacity Management
- ✓ Subcontractor Integration

Each level of maturity is a reflection of the organization's capability to manage activity and time.

The main emphasis of Basic Collaboration is task velocity or flow. Improved Coordination emphasizes meeting deadlines and extends capabilities to remote work groups. Once an organization has established a foundation of appropriate behaviors and focused communications, Integrated Planning and Execution focuses on creating and executing detailed, optimized plans.

Achieving greater maturity drives greater value. Pinnacle Strategies' research since 2011 shows that moving from ad-hoc to Basic Collaboration significantly increases financial performance:

- Productivity increases by more than 20%.
- The rate of value creation (project completion) grows by nearly 30%.
- Significant gains in on-time deliver performance are achieved.

Similarly, further gains can be found as the organization moves to Improved Coordination and Integrated Planning and Execution.

In the following pages, we identify the twelve elements that drive effective project execution excellence, giving you a measurable means to assess your status, to target areas of improvement, and to make meaningful progress in the way you deliver projects.

LEVEL 1:
BASIC COLLABORATION

Basic Collaboration

- ✓ Priority Control
- ✓ Control Work in Progress
- ✓ Functional Goals Alignment
- ✓ Collaborative Execution

Improved Coordination

- ✓ Remote Collaboration
- ✓ Schedule Risk Management
- ✓ Delivery Promising
- ✓ Managing Bottlenecks
- ✓ Delivery Date Management

Integrated Planning & Execution

- ✓ Probabilistic Planning
- ✓ Capacity Management
- ✓ Subcontractor Integration

Getting a Grip: Basic Collaboration

The main emphasis of Basic Collaboration is on task velocity and synchronizing the team. Achieving maturity in Basic Collaboration produces:

- Significant increases in project velocity
- Shorter project durations
- Consistent on-time delivery performance
- Productivity improvement of >10%

Priority Control

A priority control system maintains consistency of project and task priorities, aligning local priorities with goals and commitments that unite the efforts of the entire project team with an objective, transparent understanding of when project deliverables are required.

Priority Control can be seen in organizations where:

- There is a single prioritization system which reflects the global focus and is used for all projects and supporting tasks.
- Project priorities are regularly reconciled among the affected stakeholders.
- There is a clear escalation process in place to resolve priority conflicts.
- There is one person accountable to manage project and task priority.

Control Work in Process

To control work in process, managers establish and enforce pre-release criteria to match work releases with the rate of work completion and to ensure no work is started that cannot be finished.

Controlled work in process can be seen in organizations where:

- Clear criteria exists for work release (nothing is released that cannot be completed).
- A clean start or full kit process exists to manage inbound work.
- Targets are established for total system work in process.
- Project managers and leaders meter the work (projects) into the system, staggering the release based on global priorities and resource loads.

Engineering team increases output by 21%

A Houston-based engineering team created a visual board in order to see all the work in the system. They then began weekly action meetings to identify and solve problems, increasing velocity of work completion. This improved collaboration led to increased control over the work in process, enabling engineers, drafters, and even an engineering intern to set limits on work levels and it ensured no work was released before all information required for completion was available – thus ensuring rapid completion. Armed with accurate process information, the team was able to relieve the bottleneck in engineering, moving it downstream into the supply chain and assembly, increasing total system output by 21%.

See the complete case here

Functional Goals Alignment

The project team must share a common goal and a view of the rules of the game. When functional goals are aligned, each member of the team is free to act in the best interest of the project, without conflicting goals from functional or other areas. This eliminates the source of much internal conflict and speeds decision making and action.

Metrics focused on global throughput and on the achievement of project objectives are regularly collected, analyzed and applied to leadership and local decision-making.

Aligned goals can be seen in organizations where:

- The project's goal is clearly defined.
- The main performance criteria for supporting project team members is meeting the project goal.
- There is a distinction between necessary conditions and the goal.
- A transparent process to reach the goal exists.
- Measurements reinforce the process behaviors needed to deliver the goal.
- Metrics are regularly presented to leaders who align the near term plan and acclivities to drive business results.

Collaborative Execution

Superior execution demands *informed* collaboration, where individuals and teams can see beyond the limits of their own tasks to the overall direction of the project. There can be no disagreement about the status of the project. The roles and accountabilities of each team member must be clear. They must focus on what needs to be done now, rather than dissecting what has been (or not been) done in the past.

Collaborative Execution can be seen in these behaviors:

- Project teams focus on what needs to get done for the project to move forward, not on what has already occurred.
- The entire team's efforts are aligned towards a common goal, rather than emphasizing individual contributors working independently.
- The team is engaging to solve problems. When challenges are encountered, the entire team works toward resolving the issues. Team members recognize that their individual activities may need to take a backseat to ensure the entire project moves forward.
- All stakeholders meet regularly to focus the team on the global priorities, actions that need to be worked on now, issues that may impact project flow, and escalation required.
- Team members are comfortable making execution improvement recommendations.

LEVEL 2:
IMPROVED COORDINATION

Basic Collaboration	Improved Coordination	Integrated Planning & Execution
✓ Priority Control	✓ Remote Collaboration	✓ Probabilistic Planning
✓ Control Work in Progress	✓ Schedule Risk Management	✓ Capacity Management
✓ Functional Goals Alignment	✓ Delivery Promising	✓ Subcontractor Integration
✓ Collaborative Execution	✓ Managing Bottlenecks	
	✓ Delivery Date Management	

Expanding Control: Improved Coordination

The main emphasis of Improved Coordination is on delivery date performance and if necessary, integrates remote teams into the collaborative execution process.

Improved Coordination maturity moves the team beyond local execution competence and extends it to remote teams and other stakeholders. The emphasis continues to be on flow and velocity, but with additional management scope: a more sophisticated priority management system based on schedule risk, the active management of critical capacity elements, and automation of critical processes. More stakeholders are engaged, and progress accelerates further.

Achieving maturity in Improved Coordination can be seen in organizations where:

- Dispersed teams successfully collaborate.
- Teams understand their project's level of schedule risk and effectively work together to minimize that risk.
- Teams "attack" obstacles immediately to ensure project success.
- Project velocity significantly increases.
- Project durations shorten.
- On-time delivery performance is consistent.
- Productivity improves by >20%.

Remote Collaboration

To facilitate collaborating over distances, organizations need both a practical toolset for sharing information and a productive mindset for sharing common goals. Once established, however, even organizations with the most widespread locations can act effectively within one aligned global workflow.

Remote Collaboration can be seen in distributed teams where:

- Basic Collaboration strategies are successfully replicated beyond geographic or organizational boundaries
- A common view of the work status, issues, and work plans exists
- Decision making processes in remote locations reflect global organizational goals
- Project resources are effectively shared and managed across geographic boundaries
- All stakeholders understand the relationships between current project status and organizational goals
- Project and task completions, issues, and escalations are analyzed to learn, to reduce variability and to improve project and task performance

Improved Coordination quadruples output, cuts lead time by 23%

A manufacturer of subsea oil and gas technology found itself the victim of success: the company discovered that they were seriously behind the critical completion dates for its new single-phase flow meters. The problem? Each meter depended on key parts from five different sub-suppliers in different countries, which were then assembled and tested by two additional subcontractors (also in different countries).

To support collaboration, the manufacturer held tightly choreographed, virtual meetings using an electronic visual project management board that allowed the team to see for themselves the overall progress of the project and their role within its execution. With a shared and real-time visibility into every link of the workflow, the team was able to detect delays early and take corrective actions before a problem affected the project delivery. As a result, flow and delivery reliability were improved with a quintupling of capacity, quadrupling of output, and a 23% reduction in lead time, resulting finally, in on-time and in some cases, early delivery.

Managed Schedule Risk

Unless a means of identifying and mitigating delivery risk is available and used effectively, projects are doomed to bad surprises, delays, constant firefighting, and unachieved objectives. Armed with advanced knowledge of schedule risk, managers can proactively adjust priorities and resource assignments to ensure timely project delivery.

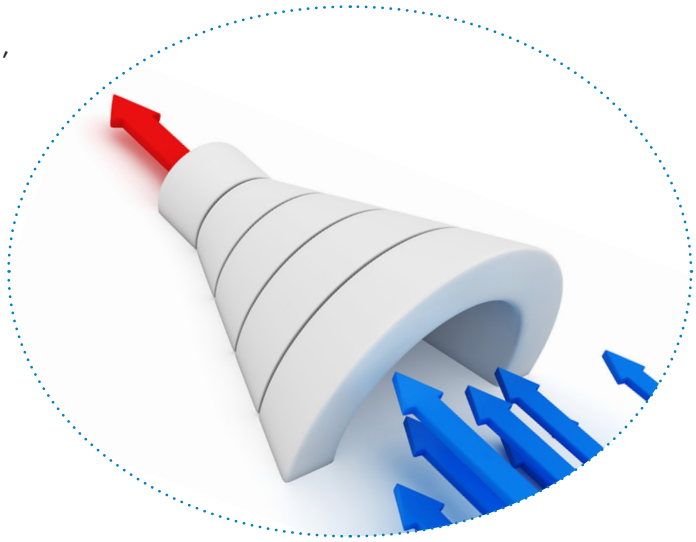
An organization is effectively managing schedule risk when:

- The work duration for tasks on the critical path is separated from the safety duration.
- Variability in task duration is accounted for using time buffers at the project level.
- Task duration safety time is explicitly managed.
- Schedule risks are normalized across the project or portfolio and the level of risk is used to prioritize resource assignment and activity.

Managing Bottlenecks

To systematically identify and then remove progress constraints – the bottlenecks – the entire team needs tools for visualizing project status that instantly expose these obstructions. Instead of arguing over causes or blames, the team can re-assign resources to where they are most needed and most helpful, facilitating the rapid progress of the entire workflow.

An organization that is effectively managing bottlenecks:



- The workload for resources is roughly (i.e., good enough) determined by looking across all projects.
- Capacity is identified within the project resource pool.
- Resource shortages are identified.
- Resource allocation is aligned with customer contracts and milestone delivery dates.
- Available capacity for future work is identified.
- The level of work information is presented to key stakeholders to align resource plans.

Delivery Date Management

The dates that drive work priorities must be consistently managed

to preserve changes in customer requirements, synchronizing internal information systems to external requirements. Without a single driver of priority in the organization, other priority systems crop up, some effective, most not – creating hidden multitasking.

An organization is effectively managing delivery dates when:

- Project and milestone delivery dates are the sole driver of priority.
- Processes and procedures to ensure delivery date integrity are in place.
- Dates are accurate expressions of customer expectations or organizational commitments.
- Dates in internal IT systems relating to sales orders, work orders, etc. are accurate and aligned.

Delivery Promising

Clients and customers want to know in advance: when can they expect their project to be complete? But an accurate answer is only as good as your understanding of the entire system's capacity – the number of resources available to address the volume of tasks at hand.

Mature organizations maintain a constant watch over project timeline and they control schedule risk. They have the ability to make the minor daily corrections, based on an understanding of the work to complete the projects and of the safety time to cover duration variation, that prevent major problems further along the workflow.

In an organization that is effectively promising delivery dates:

- Date estimates are fairly accurate since the project duration estimates reflect the impact of

shared resources.

- Management of project activities considers portfolio-wide impact.
- Portfolio-wide actions are taken when needed to assist in project due date performance.
- Project on-time delivery, and actual project lead times are used to determine normal project completions.

LEVEL 3:
INTEGRATED PLANNING & EXECUTION

Basic Collaboration	Improved Coordination	Integrated Planning & Execution
✓ Priority Control	✓ Remote Collaboration	✓ Probabilistic Planning
✓ Control Work in Progress	✓ Schedule Risk Management	✓ Capacity Management
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Making Ongoing Improvement: Integrated Planning & Execution

At this point, organizations that have improved execution behaviors will have earned numerous rewards in increased productivity, increased rates of on-time delivery and reduced lead times. The next series of improvements moves from the tactical to the strategic, from managing projects to managing businesses.

Managers will find their time occupied primarily shaping the future – planning for and managing risks and resources, and developing process capability for ongoing improvements.

Probabilistic Planning

The fundamental difference between traditional project planning and Probabilistic Planning is the emphasis on identifying and managing uncertainty during execution. It uses statistical methods to quantify and manage uncertainty and schedule risk.

Probabilistic Planning also quantifies the impact of risk events on delivery schedules—which improves management decision-making to control those risks—and thus on the overall financial viability of the project and the portfolio itself.

You will recognize the correct behaviors when:

- Project planning considers resource availability across projects and throughout the portfolio.
- Task duration estimates are treated as forecasts rather than commitments
- Schedule-risk time buffers are clearly stated and managed
- Execution is based on deliverables to be produced
- Monte-Carlo or other probabilistic analysis methods are employed to evaluate risk

Probabilistic planning reduces lead times by >30%

In product test and evaluation, a global organization recognized the need to mitigate the risk and build some contingency (buffers) into its schedule. By applying Critical Chain Project Management (a probabilistic planning and execution methodology), the company's teams were able to mitigate risks, accept some schedule slips, and maintain on-time delivery. Calculated buffers absorbed most risks and provided the project team with an early warning system that identified emerging issues. Most importantly, it provided the entire organization's portfolio of projects with a prioritization system for all the work, applying resources based on what was best for the portfolio, not just individual projects. As a consequence of their new system, on-time deliveries increased while they reduced the lead time by more than 30%.

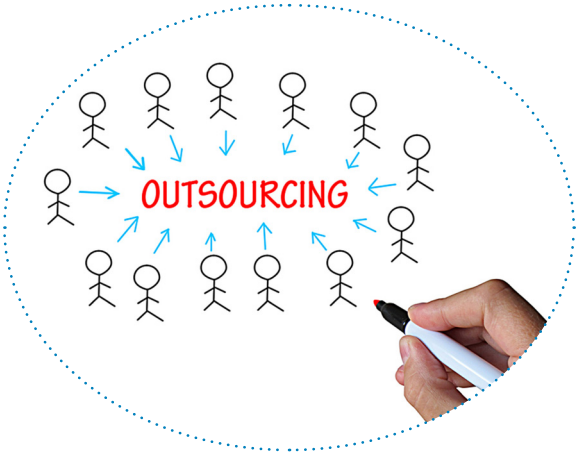
Capacity Management

Effective project management requires an accurate understanding of resource availability, visibility into current and future workloads, and an ability to make informed management decisions based, not only on anticipated project loads, but also on the changing needs of the entire organization.

You will recognize effective behaviors when:

- There is one standard model for assessing capacity across the organization
- Management has visibility into both the resources present and the resources needed
- Reserve capacity is available—there are not just time buffers, but resource buffers
- Resources that are scarce or difficult to obtain are managed well (not wasted)

Subcontractor Integration



Effective subcontractor management encourages productive execution behaviors to external parts of the workflow, aligning their interests with those of the company. Typically, this is done in two ways: one, by providing visibility into the suppliers' workflow to enable early identification of problems and two, by working collaboratively with them to synchronize their work to the project's work.

Signs of appropriately managed subcontractors include:

- Subcontractors are subordinating their efforts to the goals of the entire portfolio.
- Only the most critical suppliers are found on your projects' critical chain
- Critical suppliers are measured using the project execution maturity model
- EPM teams are deployed to manage highest risk subcontractors
- Contractual arrangements (especially payment) are in line with project level schedule requirements

CONCLUSION

Assessment for Action: Confidence in Execution

Better execution does not require an ideal plan, but a realistic assessment of where your organization is today, where it needs to go, and how to get there.

By acquiring new skills that move your organization from ad hoc project "non-management" to control of projects, portfolios and, eventually, continuous strategic improvement, organizations replicate success, project after project.

You can begin by gaining insight into where your organization stands right now. Each of the twelve elements described in this paper can be scored to quantify your current status. By collecting data from multiple participants – including resources, managers, and executives – you can measure the relative amounts of alignment and deviance within your organization, crucial insights that expose the areas in greatest need of improvement.

About Mark Woeppel

Mark Woeppel designs and delivers innovative strategies to help organizations improve productivity. He works with leaders to change execution results in projects, operations excellence, and business processes by improving collaboration, streamlining workflows, and improving management focus to lower costs, increase throughput, and release hidden capacity.

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