

BUSCANDO EL IMPULSO QUE EVITE LA ESPIRAL DESCENDENTE Y EL CICLO DE DUDAS

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AACE International
www.aacei.org

AACE
PERU
SECTION





Alder Caceres

**Ingeniero Senior Controlador de Proyectos en
Compañía Minera Antamina.**

Especialista Senior 19 años en Control de
Proyectos de Minería, he trabajado para:

Propietarios como BHP, BHP Billiton, XSTRATA,
Antamina;

Empresas de Ingeniería y Construcción como
SNC-Lavalin, GMI Ingenieros; IMCO.

Participe en: Expansión de Antamina, Cerro Verde
Sulfuros, Lagunas Norte,

Prefactibilidad La Granja.

Con experiencia en Control de Proyectos, Planner,
Scheduler, Estimación, Control de Costos, Análisis
de Contingencia, Riesgos, Gestión de Cambios y
Construcción.



INTRODUCCIÓN

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Compartiendo mi Experiencia



CONTEXTO

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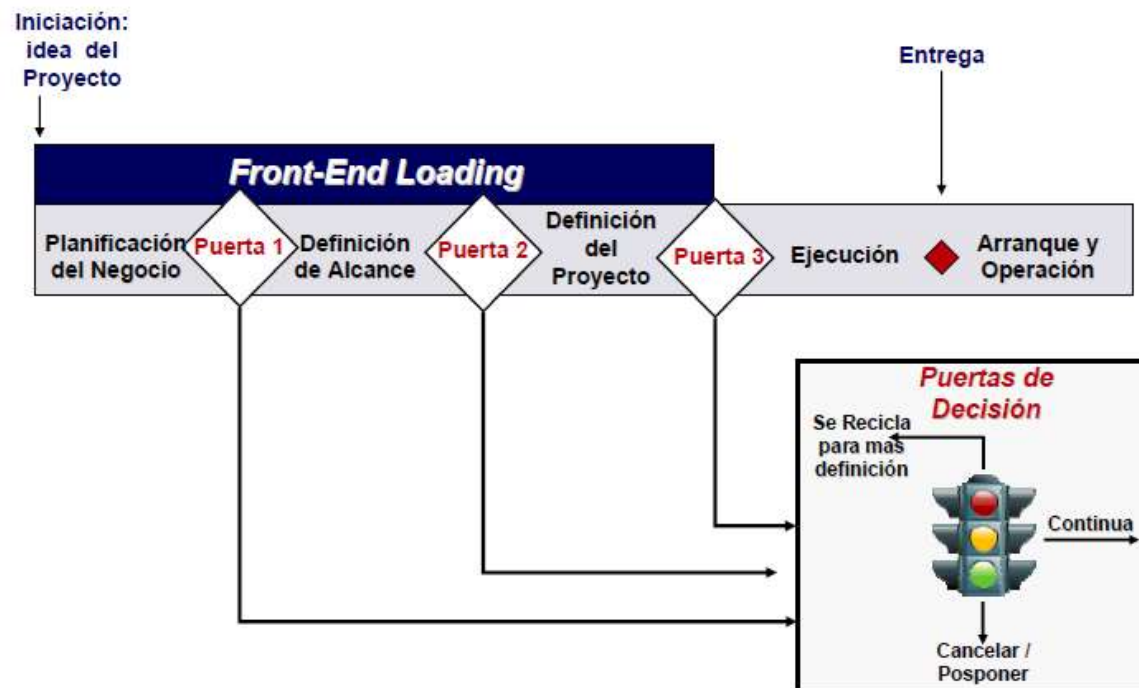
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Aquí inició todo



Sistema de Aprobación por Fases

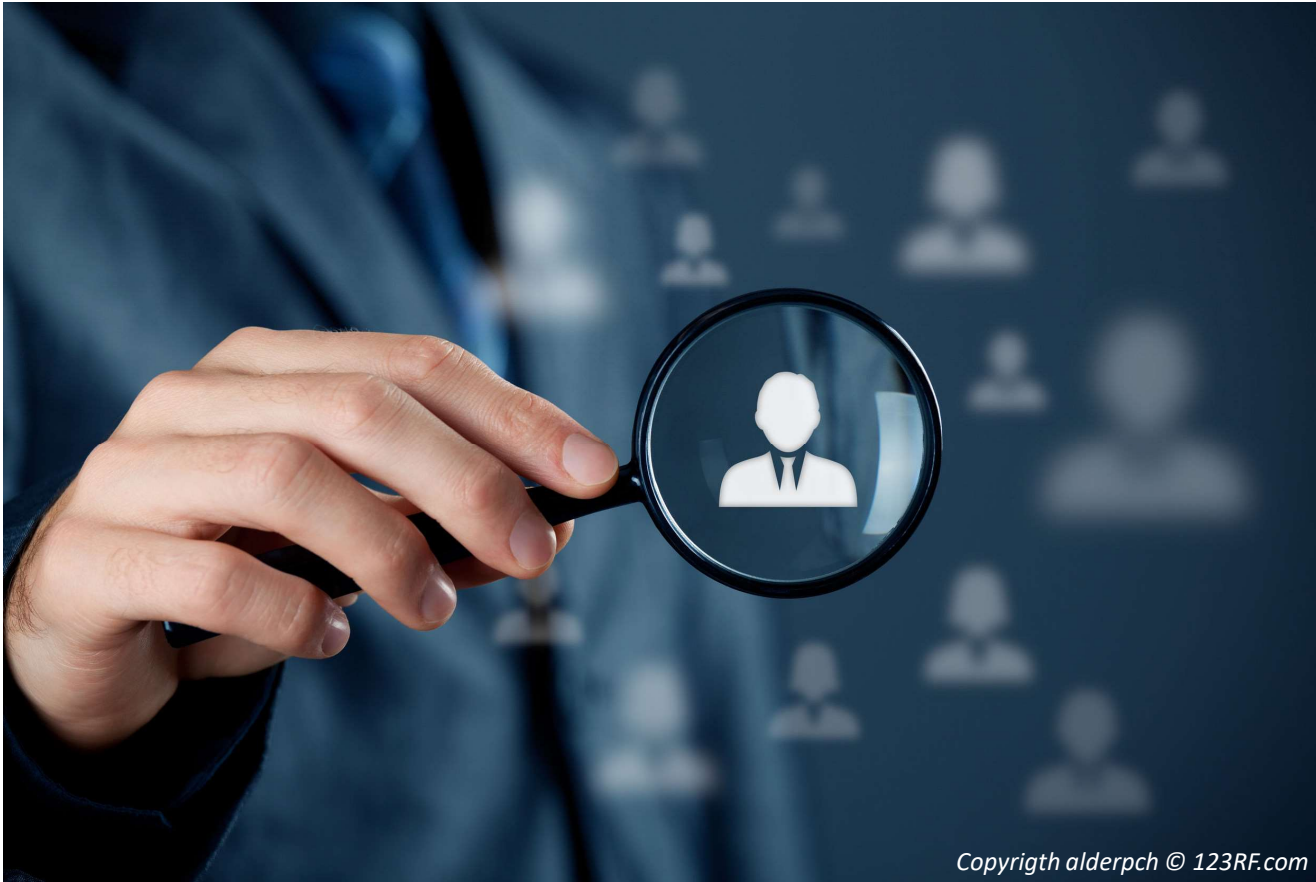




*"Este es
modelo, a*



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¿Qué salió mal en las Movilizaciones?



¿Algo puede salir mal al inicio?

A hand holding a magnifying glass over a white silhouette of a person in a suit. The background is a blurred image of a person in a blue suit. Three text boxes with red square icons are overlaid on the image.

INCONGRUENCIAS REITERADAS DEL TRISEMANAL Y LAS VISITAS A CAMPO Y REUNIONES SOSTENIDAS

SE PRESENTÓ EL CRONOGRAMA DE LA OFERTA CON ACTUALIZACIÓN DE FECHA, SIN APERTURAR NIVEL DE CONSTRUCCIÓN

LA LÍNEA BASE DEL CRONOGRAMA SE APROBÓ DESPUÉS DE DOS MESES DE INICIO

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¿Qué salió mal en Ingeniería?

The background of the central graphic is a dark blue image of a hand holding a magnifying glass over a white silhouette of a person in a suit. Five text boxes are overlaid on this image, each preceded by a small yellow square.

EXISTEN OBSERVACIONES DE FORMA Y FONDO A LA INGENIERÍA

EL EPC QUIERE GENERAR PLANOS EN 2D SIN CONSIDERAR LOS TRABAJOS EN 3D

LOS ENTREGABLES DE INGENIERÍA A SUMA ALZADA CREAN DISCORDIA

EL 30% DE LOS DOCUMENTOS PASARON DE REV B A OTRAS REVISIONES Y DESPUÉS A REV 0

EL EPC NO SINCERA LA FECHA DE CULMINACIÓN DE INGENIERÍA, LA QUE SE DA UN AÑO DESPUÉS

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¿Qué salió mal en la Ingeniería?

The background of the central graphic is a dark blue image of a hand holding a magnifying glass. Inside the lens of the magnifying glass is a white silhouette of a person wearing a suit and tie. The background is slightly blurred, showing faint outlines of other people.

LOS TURNOS DEL PERSONAL DEL OWNER IMPACTAN REVISIONES DE INGENIERÍA

LA INGENIERÍA SERÁ DESARROLLADA POR TRES CONSULTORES Y NO UNO

RETRASO DE 30 DÍAS EN LA PRESENTACIÓN DEL ANÁLISIS DE ESTABILIDAD DE TALUDES

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¿Qué salió mal en la Gestión de Cambios?

A hand holding a magnifying glass over a white silhouette of a person in a suit, set against a dark blue background with faint network icons.

REDUCCIÓN DE ALCANCE DEL EPC

TODAS LAS AMPLIACIONES DE PLAZO SON RECHAZADAS

MÁS DE 80 SOLICITUDES DE CAMBIO SIN CERRAR POR TEMAS DE PLAZO Y POR VARIOS MILLONES DE DÓLARES

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¿Qué salió mal en los Plazos?

A background image showing a hand holding a magnifying glass over a white silhouette of a person in a suit. The background is dark blue with faint, out-of-focus icons of people.

■ LA ING. DETALLADA PARA LAS OBRAS TEMPRANAS FINALIZÓ 8 MESES DESPUÉS

■ LA ING. DETALLADA FINALIZÓ 10 MESES DESPUÉS

■ LOS TRABAJOS TEMPRANOS FINALIZARON 04 MESES DESPUÉS

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¿Qué salió mal en los Contratos?

An infographic with a dark blue background. A hand holds a magnifying glass over a white silhouette of a person in a suit. Four text boxes with colored squares (yellow or green) are arranged around the central image.

VARIOS MILLONES DE DÓLARES EN PENALIZACIONES POR MÁS DE 25 HITOS CONTRACTUALES

REDUCCIÓN DE ALCANCE DEL EPC

MÁS DE MIL CARTAS DEL EPC Y MÁS DE 250 DEL OWNER

CAMBIOS DE PERSONAL CLAVE SE PRODUJERON A LOS 3, 4 Y SIGUIERON HASTA LOS 18 MESES

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La Espiral duró Aprox. Año y Medio



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La Organización tuvo serias Dudas



Las **Prioridades** contribuyeron al Ciclo



La Importancia de este proyecto en el portafolio cambió sustancialmente.

1

Los actores principales tienen como prioridad el Plazo y Costo, ninguno cede, ambos dejan de estar
Alineados con la Organización

2

Las **Prioridades** contribuyeron al Ciclo



El equipo de proyecto
está alineado al Líder
del Proyecto y se
prepara para
escenarios mayores de
la resolución de
Conflictos.

¡Quieren Justicia!

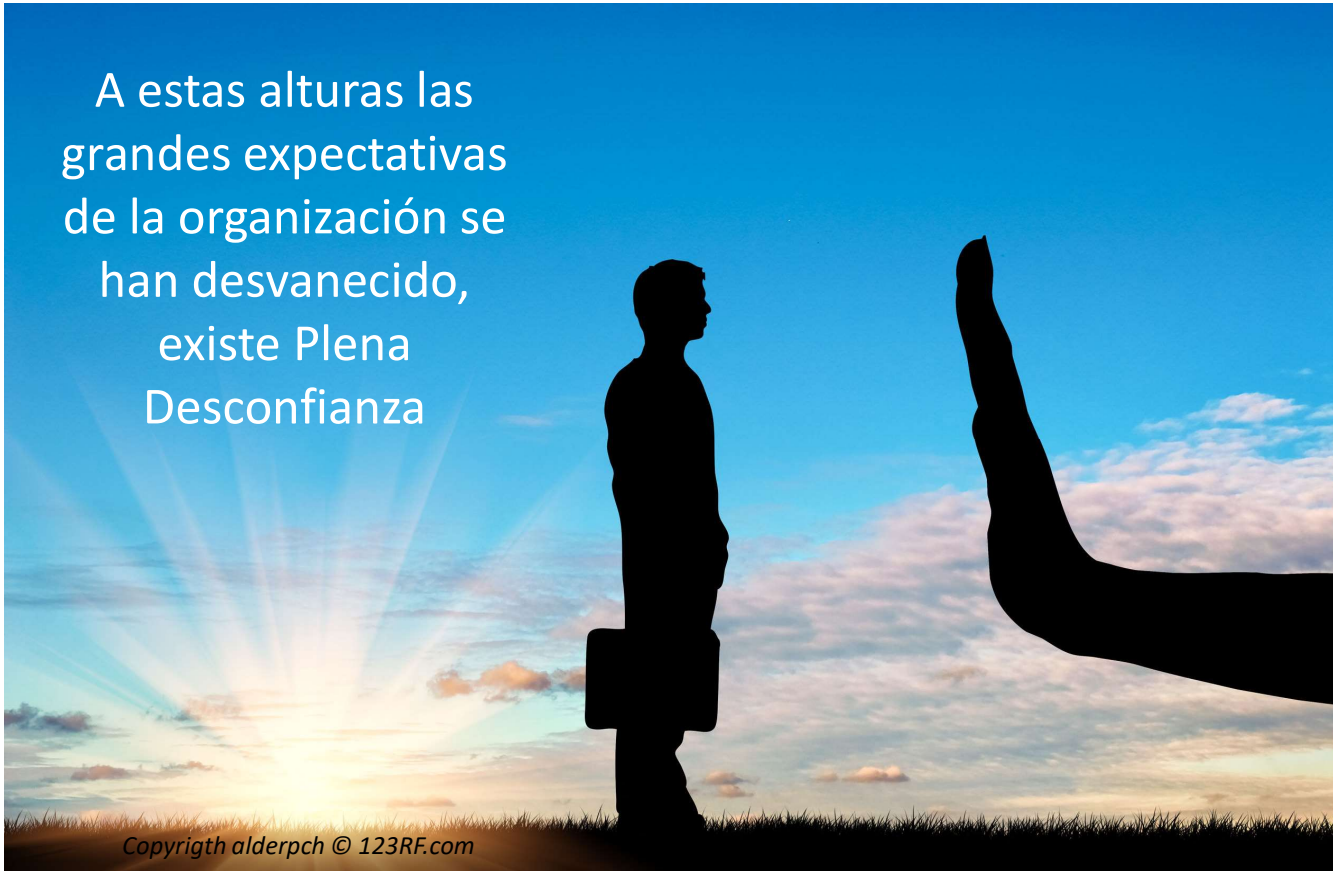


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Cómo el Liderazgo contribuyó al Ciclo



A estas alturas las
grandes expectativas
de la organización se
han desvanecido,
existe Plena
Desconfianza



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Cómo el **Plazo** contribuyó al Ciclo



¡Un Año de Retraso
en las Ingenierías!

¡Incumplimiento de
muchos Hitos
Contractuales!

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La **Comunicación** contribuyó al Ciclo



Se escuchan especulaciones y rumores negativos hacia el proyecto

1

Se abrieron canales de comunicación a otro nivel

2

Un día para tomar Decisiones



¿Y si cancelamos el proyecto?

¿Continuamos con el EPC?

Quiénes se van?



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CONCEPTOS PRINCIPALES

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MITSloan
Management Review

SPRING 2017
ISSUE

Karen A. Brown
Nancy Lea Hyer
Richard Ettenson

Protect Your Project From Escalating Doubts

Important projects can easily get caught in a downward spiral if key stakeholders start questioning the project's progress and withdrawing support. Savvy executives should be aware of common issues that can cause stakeholder skepticism — and take action to avert the “cycle of doubt” before it takes hold.

Vol. 58, No. 3 | Reprint #58339 | <http://mitsmr.com/2kxaty0>

Understanding the Cycle of Doubt

A project's post-launch reputation influences the level of favor it enjoys among those whose energy and support are critical to delivery of results.⁶ Shifting organizational priorities, changes in leadership, and distrust of information about the project's progress can scuttle a project's reputation and, ultimately, its chances for success. These negative forces can act together, trapping the project in a downward spiral. A senior leader at a Fortune 500 chemical company summarized the problem of negative momentum this way:



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Vol. 50, No. 3 | Reprint #98399 | <http://mitsmr.com/2kenyD>

When a project's status suffers, it can be starved of the fuel it needs to move forward. The process is self-perpetuating, resulting in the dynamic we call the cycle of doubt. (See “The Dynamics of the Cycle of Doubt.”)

Regardless of the status of time, cost, and performance metrics, an infusion of doubt can degrade a project's reputation, leading to a downward spiral that can feed on itself. But the spiral can be averted or reversed with the right diagnostics and appropriate actions.



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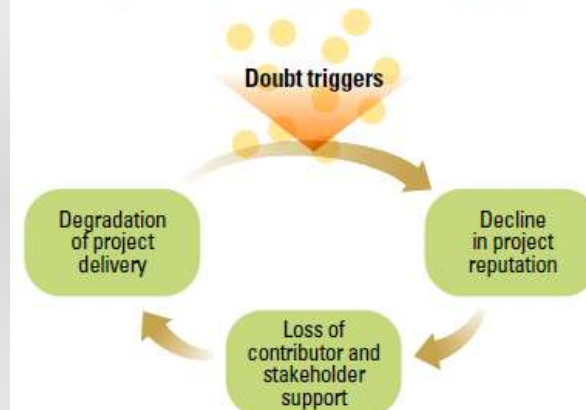
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THE DYNAMICS OF THE CYCLE OF DOUBT

Many projects are launched with high praise and promise but lose traction and momentum during project delivery, once the real work is underway. This self-perpetuating downward spiral can cause contributors to distance themselves from an effort that is losing support, cannot overcome inertia, or worse, is derailed.





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1. Prove the concept. When the stakes are high, viability is uncertain, and strong resistance or apathy are possibilities, project leaders can generate enthusiasm and pave the way for a successful large-scale effort by proving value in limited and successive stages. Of course, the option of a pilot may not be

2. Keep it short or break it up. Shorter projects are less likely than longer ones to be victims of diverted attention or changing priorities, because shorter projects hit the finish line before they can be overshadowed by new initiatives. A senior project

3. Dedicate and, if possible, colocate the core team. For initiatives significant enough to justify a dedicated team, assigning members full time and collocating them has demonstrable advantages. It signals organizational commitment, accelerates momentum, and compresses delivery time, all of which



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4. Beware the rush to action. Potentially great projects can be compromised if there is pressure or misguided enthusiasm to initiate tasks before appropriate planning and risk assessment have been completed. One recent study found that great projects — those that exceed expectations and create superior value for their organizations — begin with a “long period of project definition” dedicated to clarifying the need for the project, planning the best execution method, and assuring stakeholder buy-in.¹²

5. Communicate with integrity. Every project leader we interviewed stressed the importance of communicating with integrity and with an appropriate rhythm. The transparency of today's business environment, fueled by the instantaneous nature of digital communication, leaves the project leader and teams with no place to hide. Facilitating honest, authentic engagement, while not overwhelming stakeholders and contributors with information and updates (or starving them of information), is the best



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6. Enlist both project ambassadors and high-profile supporters. The project champion is a central figure whose leadership credibility and visible support can generate consistent enthusiasm among important stakeholders. However, we also heard in our interviews that a major initiative needs a “platoon of advocates” — the right combination of people whose

7. Revitalize the project with outside resources. We repeatedly heard from our interviewees that organizations are naturally ambitious and almost always take on too many projects, stretching their internal resources. When this happens, the project leader should consider engaging outside contractors to pick up some of the work that would otherwise be done by overcommitted team members. Doing so can gener-



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8. Know when to change course. Some project leaders admit that, for projects with flagging momentum, they often felt compelled to stay the course, driving their projects into the ground. Stepping back, taking stock, and making changes where needed might have rescued the project. Breaking this unproductive pattern requires strong leadership: the

9. Have the courage to pull the plug when warranted. Sometimes a leader must accept that a project's reputation and momentum are beyond salvage. The project has spiraled so far down the cycle of doubt and performance has degraded to such an extent that the best course of action is to acknowledge defeat, capture and communicate the lessons learned,

REVIRTIENDO LA ESPIRAL DESCENDENTE

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Las partes comprendieron que la nueva oportunidad tendría que ser cimentada en base a la **COLABORACIÓN Y CONFIANZA**

1

Muchos recursos de las partes fueron sustituidos

2

Se implementaron **PRÁCTICAS RECOMENDADAS** con cierres semanales. Como resultado más de un año sin ampliaciones de plazo de mutuo acuerdo.

3

Revirtiendo la Espiral



Las solicitudes de cambio tuvieron mayor
AGILIDAD

4

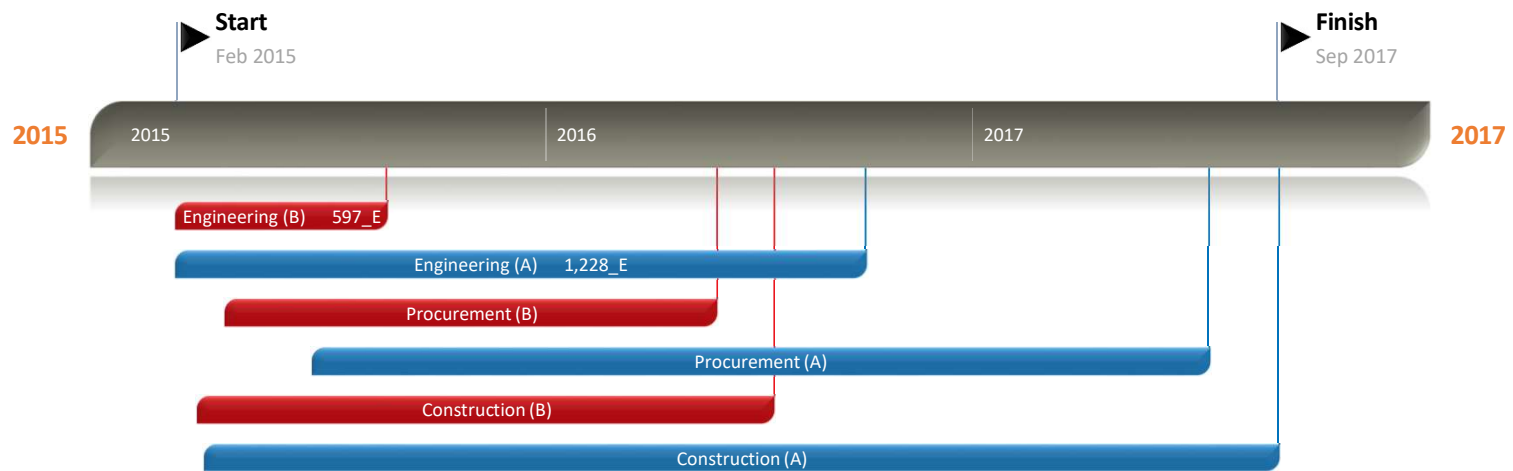
Los nuevos líderes crearon una buena
COMUNICACION

5

EL PROYECTO se completó en menos de un año
dentro del Master Schedule, dentro del CAPEX y
FUE COMPETITIVO

6

Timeline



RECOMENDACIONES

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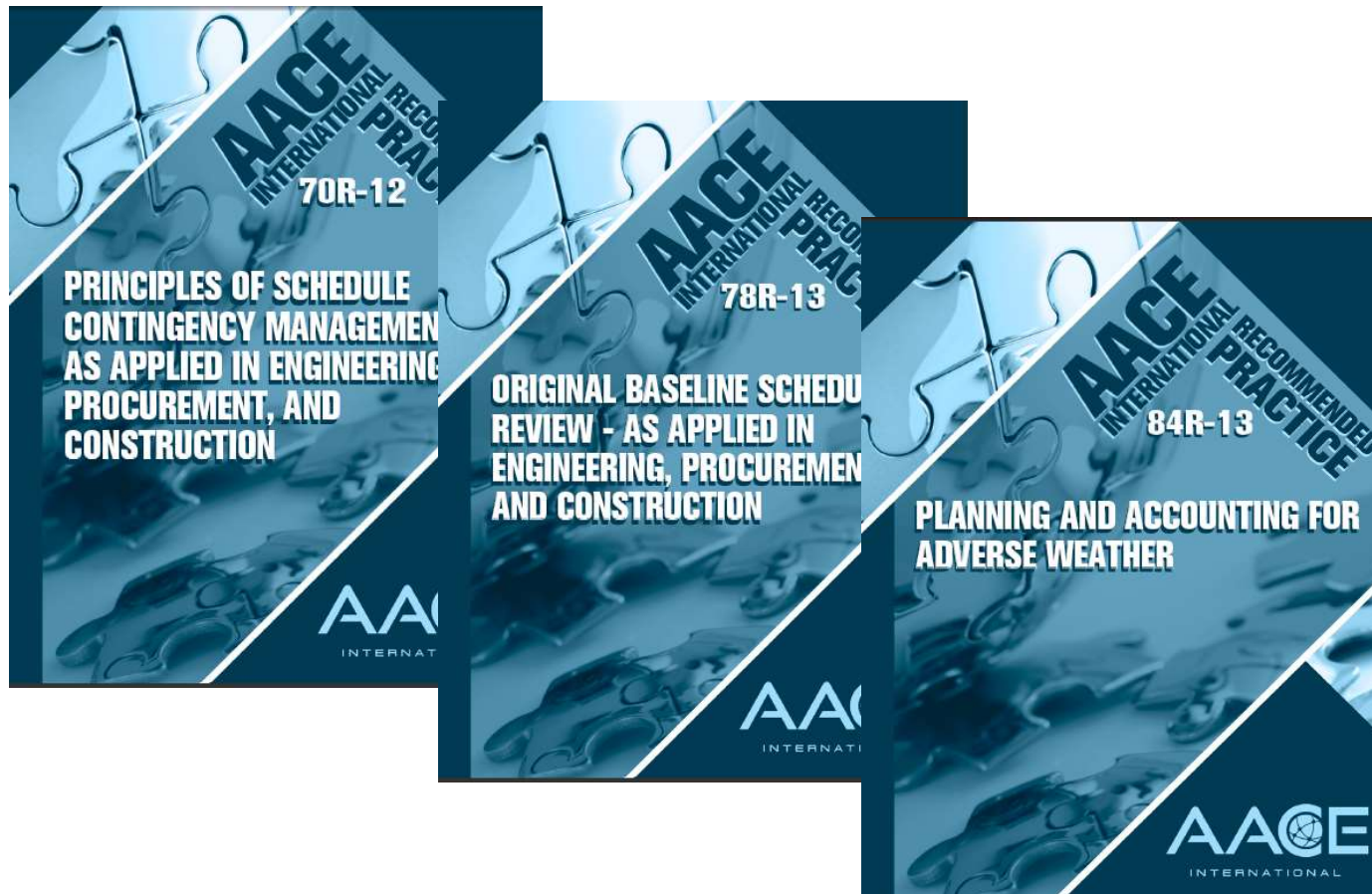
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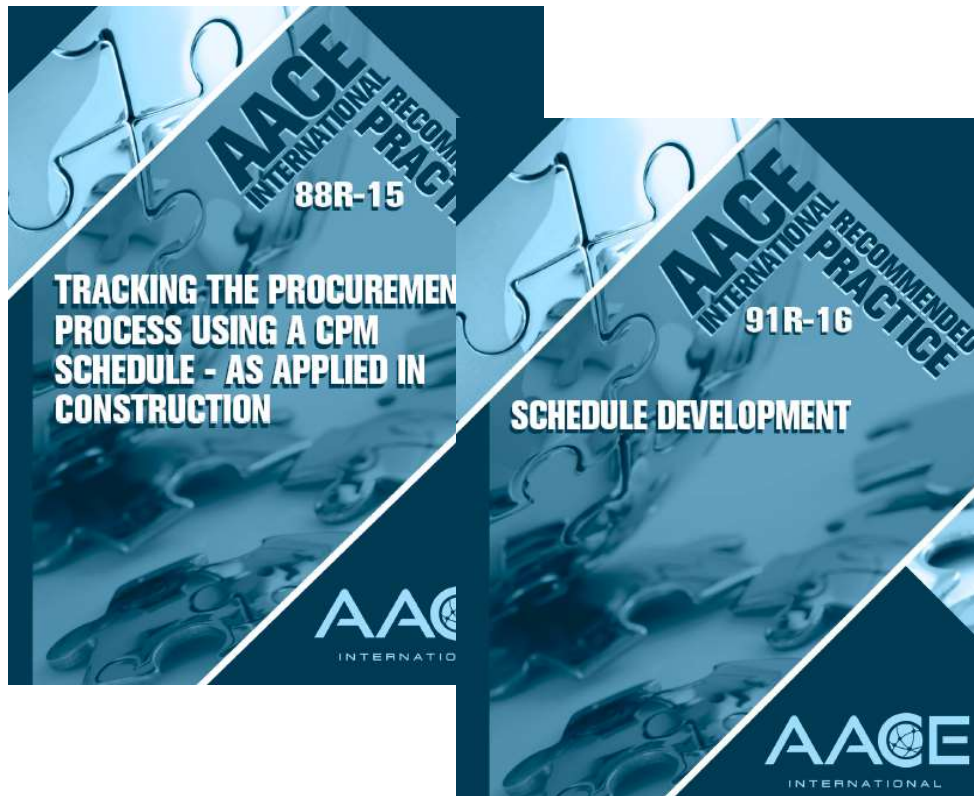


Firmando el Contrato











PS.2324

Evaluating CPM Schedules for Best Practices: A First Principles Approach

J. Gerard Boyle¹; Andrew Podolny; and Dr. Wail Menesi

Abstract—There are now several guides meant to assist the industry in evaluating critical path method schedules. For example, various analytical programs have been built to check for compliance with the DCMA 14-Point Schedule Metrics which are intended to assist in finding indicators of schedule problems. The GAO Schedule Assessment Guide offers ten best practices associated with a high quality and reliable schedule. Although there are many similarities amongst these offerings, there are also significant differences which have not been resolved, and this lack of consensus has not benefited the practice of scheduling. The first part of this article makes the point that some of the lack of consensus can be resolved by rigorously imposing a clear definition of what a CPM schedule is. Once this is established, certain essential characteristics present themselves as sine qua non for a CPM schedule. Even with clear definition of the minimum requirements, scheduling software presents unique challenges which must be overcome. The next step after establishing that a schedule is CPM compliant is to establish best practice criteria.



2011 AACE INTERNATIONAL TRANSACTIONS

PS.633

Improving Industry Planning by Classification of Schedule Types

Christopher W. Carson, PSP and Raf Dua

ABSTRACT— One scheduler says resource leveling is vital to producing a reasonable schedule, another says no one uses resources, let alone leveling. Scheduling discussions get passionate yet often schedulers in different industries do not seem to speak the same language. Some industries are naturally far ahead of others in the use of specific scheduling components, such as resources, EVM, or risk management, and those leaders are often the source for innovation in the use of those components.



2012 AACE INTERNATIONAL TRANSACTIONS

PS.858

Aerospace Versus Construction Scheduling: Different Yet Similar Approaches and Goals

**Thomas W. Barnhart, PSP, Carmelita Thorndike, PSP;
and Julie K. Owen, CCC PSP**

ABSTRACT— Some industries have a distinctly different approach for schedule development, management, maintenance and overall planning processes. While all industries have a common goal of an on-time, under cost, and properly functioning end product, different industries get to their end goal in their own unique ways. This paper will specifically review how the aerospace industry and the construction industry address the common planning and scheduling issues that all projects face. We'll compare and contrast these two industries practices, including benefits and drawbacks, in the areas of:



2016 AACE® INTERNATIONAL TECHNICAL PAPER

DEV.2136

Planning Engineer Qualification Parameters

Dr. Ali A. Shash; and Mohammad Ibrahim Diab Atmeza

Abstract—Planning is a seriously important and critical activity in managing construction projects. Proper planning leads to clarify objectives, enhance operation efficiency, understand project deliverables and avail a basis for monitoring and controlling project activities. The quality of a construction plan depends heavily on the level of capabilities and quality of the planning engineer who is responsible for setting a comprehensive plan for the execution of a construction project. This study aims to identify the parameters that qualify an individual to be a planning engineer for construction projects. Contractors in the Eastern Province of Saudi Arabia were surveyed regarding factors impacting the quality of planning engineers. Communication, decision-making, critical thinking, and analytical quality are among the most important skills that a planning engineer should acquire. This paper provides contractors with parameters to help them to recruit the proper planning engineer and/or to improve the skills of their planners.

Revistas





- ¿La red de programación está cerrada?
- ¿Las relaciones lógicas son apropiadas?
- ¿Existen lags negativos?
- ¿Tenemos restricciones?
- ¿Están cargados los recursos?
- ¿Hay actividades de larga duración?
- ¿Colocaron calendarios múltiples?
- ¿Analizamos las holguras negativas?



- ¿Las convergencias en la red son aceptables?
- ¿Si el cronograma del contrato es determinístico que probabilidad de término puede tener?
- ¿Si la probabilidad de término del cronograma del contratista es 10% deberíamos incluir Penalidades?
- ¿Deberíamos incluir bonos?



- ¿Estamos cerrando semanal, quincenal o mensualmente las posibles ampliaciones de plazo?
- ¿Qué análisis forense aplicaremos?
- ¿Reconocemos nuestros impactos a la ruta crítica?
- ¿Hemos conciliado los impactos del contratista a la ruta crítica?



- ¿Tenemos reglas claras y muy técnicas que facilitan las conciliaciones?
- ¿Comprendemos que la responsabilidad del proyecto es de ambos equipos?
- ¿Hemos logrado la colaboración?
- ¿Las Prácticas recomendadas ahora forman parte del estándar?



- ¿Cuántos y cuáles cronogramas deben ser informados semanalmente?
- ¿Estamos categorizando las causas de los cambios en costos?
- ¿Hemos sido claros en los alcances de las sumas alzadas?
- ¿Se están revisando los riesgos en las reuniones de cambios?



- ¿Realmente sirve el cronograma ofertado elaborado por un equipo de licitaciones del contratista?
- ¿Agregamos valor con información actualizada aún independientemente de la documentación oficial?



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para no trabajar bien,
para no vivir bien,
para no superarte.

**AACE ayudará a que tu proyecto sea exitoso y
tu vida profesional más fácil.**

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