

The Daily Huddle: How to Increase Safety, Quality, and Improve the Schedule on Construction Projects

By Edouard P. Junod, PMP and Aaron Pankonin, PMP

Executive Summary

Founded in 1969, Project Management Institute (PMI)[®] has spent the last 40 years developing processes to successfully manage projects. What once started as concepts of methodologies now has a proven track record of success. Today, over 420,000 practitioners still struggle to communicate the benefits of PMI processes to stakeholders. Project managers must balance the Project Management Bodies of Knowledge (from *A Guide to the Project Management Body of Knowledge [PMBOK[®] Guide]*) to deliver complex projects with tighter schedules, reduced budgets, ever-increasing risk, and assure the stakeholders that PMI processes actually add real value. Balancing these challenges requires the flexibility and leadership that are inherent in a project management professional. The Daily Huddle is a tool and technique used to improve project delivery without additional cost or time.

Construction, project, risk, and safety managers implement safety management plans to mitigate the risks encountered on construction projects. These risks include damage to materials, equipment, construction work in place, minor incidents or injuries to employees, accidents that lead to employee lost time from work, and even death. All of these risks have negative financial impacts on a project and can be avoided. The old attitude that injuries or deaths are an expected result of construction projects is being replaced by the goal of an incident and injury free (IIF) workplace. Table 1 demonstrates an increased focus on safety that has helped the construction industry achieve a three-year decline in total recordable cases according to the U. S. Department of Labor, Bureau of Labor Statistics.

Year	Recordable Cases (Number of cases per 100 workers)
2006	5.9
2007	5.4
2008	4.7

Table 1: Construction Industry Recordable Rates: U. S. Department of Labor, Bureau of Labor Statistics, Oct. 29, 2009: USDL-09-1302.

These data show a positive trend in safety performance but it is still higher than the national average of 4.2 recordable cases in all industries.

Safety risks are not limited to construction projects and can have devastating effects on a project, regardless of the type of industry. Table 2 provides data indicating recordable cases across other industries, that affect more than construction personnel.

Industry	Year		
	2006	2007	2008
Goods Producing	5.9	5.4	4.9*
Manufacturing	6.0	5.6	5.0*
Information	1.9	2.0	2.0
Financial	1.5	1.4	1.5
Professional and Business	2.1	2.1	1.9
Education and Health Services	5.4	5.2	5.0*
Leisure and Hospitality	4.6	4.5	4.2
State and Local Government	-	-	6.3*
Public Administration	-	-	9.0*

Table 2: Construction Industry Recordable Rates: U. S. Department of Labor, Bureau of Labor Statistics, Oct. 29, 2009: USDL-09-1302, *Indicates incident rates higher than the construction industry.

Many accidents can even occur outside the workplace, and if a stakeholder is injured it can have a critical impact on the project delivery. The risk of losing a key employee on a project can affect anyone at any time, and a project manager should take the necessary steps to minimizing this risk.

This paper will provide the tools and techniques that will improve project delivery and is highlighted by the following:

- Improving communication
- Focusing on safety
- Providing quality performance while maintaining scope and schedule deliverables
- Reducing potential delay claims
- Reducing contractual general terms and conditions' penalties

The term is called the Daily Huddle (DH) and is achieved by improving communication with all team members through participation in brief daily meetings called “plan for tomorrow” (PFT) and a morning “huddle-up.” The project manager leads this cultural change of planning versus reacting. This change requires executive support, stakeholder buy-in, project manager leadership, and participation from the project team. Cultural changes include bottom-up communication, decision making, and balancing safety and quality with production and project schedules. The DH,

like other project management tools, is most successful when implemented during the development of the project management plan but it also has proven success in remedying troubled projects that are failing during the execution phase. The plan must be understood by all stakeholders and is not too complicated for only a few experienced individuals to implement.

The Daily Huddle

Everyone plans for today; start planning for tomorrow



Figure 1: This chain-link figure symbolizes links of the project management knowledge areas, with the addition of safety together, with the Daily Huddle, this keeps the links strong, resulting in a successful project. A broken link by either a stakeholder or one of the processes creates weaknesses in the project and a potential failure.

Planning for the Daily Huddle

The Daily Huddle was originally developed to improve jobsite safety but it is also a useful tool to bring balance and flexibility to the bodies of knowledge. The chain-link figure above symbolizes the bodies of knowledge linked with the new concept of safety. Project managers must be agile and maintain the strength of each chain in the link. The DH is a simple, but proven method to balance these challenges on a project. The main components for the DH are identifying the chairperson of the board (COB), implementing the huddle-up and plan-for-tomorrow meetings, and tracking critical issues. To begin the Daily Huddle (DH), the project manager develops a brief written procedure that is applicable to his or her specific project and how to integrate it into his or her project management plan.

Selecting the Chairperson of the Board

The COB can be any member of the project team but should be selected by the senior field superintendent. The selection of the COB is the first cultural change, because the selection is made to encourage the field and office staff to coordinate efforts and make sure each department understands the issues of the day. It is the senior field superintendent's responsibility to ensure the COB, no matter how inexperienced, receives proper training to lead the huddle-up. An experienced field engineer, foreman, project administrator, or superintendent will be present at the huddle-up meeting to provide support to an inexperienced COB. The success of the COB lies in the face-to-face interaction between the field and office staff, individual accountability, and the authority to pause and/or stop a work activity. Important attributes of the COB are the ability to communicate to the field staff and advise senior staff of issues or concerns at the huddle-up.

The key to a successful huddle-up is the COB's ability to communicate information to the field personnel and vice-versa. The mission of the day is communicated and concerns from the field or office staff are conveyed to all personnel. Individual project accountability and ownership are reinforced every day. Safety, quality, and production are reviewed to help support the project's targeted daily mission. The senior field superintendent also allows the owner's team members to participate as a COB with support from the project team. This also allows the owner to receive daily input on any issues

or concerns and provides a medium used to disseminate information from the bottom-up, top-down, or both.

The primary characteristics of the COB's position are the autonomy and authority of the individual that the senior field superintendent and project manager instill in the COB. The majority of COBs are superintendent level personnel, a project engineer, an engineering manager, controls staff, or a project administrator. All office staff is required to participate in the huddle-up, including project controls staff. Mentoring field and office staff as a successful COB enhances the individual's leadership skills and experience. Experience as a COB provides the office staff with a hands-on understanding of the field production team's concerns, issues, and conflicts, which plays a significant part in developing future leaders in the industry.

The Daily Huddle Meeting Schedule

The daily huddle requires another change in culture; a culture where the project manager has the discipline to prepare and implement a plan versus the typical culture of waiting for a problem to occur and then reacting to the problem. This planning change is implemented during the execution phase of the project by holding daily meetings to coordinate work activities. A typical DH work-week schedule will resemble the schedule shown in Table 3.

The construction day begins with the subcontractors developing their pre-task plans (PTPs) for that day's specific

Daily Huddle - Schedule of the Day						
Previous Day – p.m.		Current Day – a.m.			Current Day – p.m.	
1:30	2:00 – End of Day	7:00	7:15	7:30 – Lunch	1:30	2:00 – End of Day
Plan For Tomorrow (PFT)	Monitor Field Activities	Crews arrive on job-site	All crews gather at their respective white boards and sign in. Review and approve Integrated Work Plan	Monitor Field Activities	Plan For Tomorrow (PFT)	Monitor Field Activities
	Coaching	Superintendent/Foreman review the day's activities and individual PTPs	COB addresses safety concerns brought up in PFT	Coaching		Coaching
	Coordination with other trades	Bend and Flex	COB calls each subcontractor to state the day's activities and areas they will be working in	Coordination with other trades		Coordination with other trades
	Update white board with activity changes		Go, No-Go Decision by COB. If yes, begin work. If no, clean up	Update white board with activity changes		Update white board with activity changes

Table 3: DH meeting schedule.

work activities. The subcontractors review these PTPs at the start of each shift with their workforce. Immediately after the PTP, all personnel assemble at the white board for the huddle-up meeting. The white board is a simple dry-erase white board conveniently located on the job-site; a sample is shown in Figure 1. Attendance is recorded and filed as a record of everyone's participation in the daily coordination. These daily meetings provide another cultural change—a true Integrated-Integrated Work Process that includes bottom-up communication and decision making by those actually performing the tasks. Typical work plans involve single trades, but the Integrated-Integrated Work Process is different because it coordinates multiple trade contractors' work activities, among all participants in the project and across areas of the project, for an improved daily work plan.

The chairperson of the board leads the meeting and begins by addressing the safety concerns relevant to the work. The COB calls on each subcontractor to ensure that all activities (work, deliveries, housekeeping, etc) are accurately represented on the white board and updates are reflected as needed. Activities are reviewed by project area to determine an increased risk due to the overlap of subcontractors and

their activities. Any tours, including owner's tours, must be coordinated and recorded on the white board. This informs all personnel that people who are not familiar with the site-specific risks will be on the job site. The COB also uses this time to communicate to all of the stakeholders any new pertinent announcements and/or policy modifications. Color coding is used on the white board to indicate risk, as follows:

- **Green:** No overlapping safety issues present
- **Yellow:** Multiple contractors working in close proximity to each other
- **Red:** Safety hazard is in the area; examples may include welding, overhead work, elevated work, energized electrical work, etc.

Subcontractors who are absent from the huddle-up are not allowed to begin work in that area until the work is coordinated with all parties at the white board. This is important, so claims and risk managers can identify that all parties are aware of the activities and daily coordination. It is also a useful tool if an incident occurs, because this will validate whether the individual was aware of the risk and violated known procedures or directives. Contractors

CONTRACTOR	ACTIVITY	SOUTH	WEST	COMMENTS	COLOR CODE
WCG - TIM	• AFFIRM SOFFIT • STAIR #1 BARBERS • CARPET CAP AREA • SOFFIT LEANING	X	EAST X	• MULTIPLE LIFTS • BARRICADES IN PLACE	YELLOW
ACCLP - MIGUEL	• TRASH REMOVAL • PUMP WATER • PLACE CONCRETE FORMS @ SUCTION	NORTH X SOUTH X	EAST X WEST X	• FORKLIFT	GREEN
GEORGE - ART 99/1616	• TRASH REMOVAL, MISC. DELIVERIES • TUNERS TO FLY UP TO 4TH FLOOR EXH FANS	X	X	• FORKLIFT • FORKLIFT	GREEN YELLOW
CHAMBERLIN - DEMAS	• CAULKING & WATER PROOFING • AREA 'C' CONC. @ 8:00 AM	X	X	• PC & FOUNDATIONS (2) • BACKHOE PUMP & TRUCK	GREEN GREEN
PATRIOT - TIM 519 273 5719	• MISC. MATL TO BLDG. • STAIRS TO CLUB (STAIR #6)	X	X	• REMOVE LIFTS • FORKLIFT	GREEN
KLEINFELDER -	• OBSERVATIONS, TESTING, SAMPLING	NORTH X SOUTH X	EAST X WEST X	• DAILY ACTIVITY • LIFT IN USE & BARRICADES	GREEN
P.B. - KEAT BARBER DANIEL LOPEZ	• WORK @ LOADING DOCK / STAIR #1 • DELIVER INSULATION TO 4TH FLOOR	X	X	• BRON TRUCK / DOCK FRAMING • UNLOADING	GREEN GREEN
LASCO -	• DUCTS BANK, MISC. DELIVERIES	X	X	• UNLOADING, FORKLIFT, PICKUP	GREEN
MERIT -	• EXCAVATION, BACKFILL, TRENCH BOXES	X	X	• HEAVY EQUIP, BARRICADES	YELLOW
REL - 975 2470	• LOADING DOCK CANOPY / ROOF	X		• OHS - MATL ELEVATOR SET	GREEN
NATL -	• MIX & TRANSPORT MORTAR FOR STAIR #5	X	X	• FORKLIFT IN USE	GREEN
BEATTY -					
CONTACTS	ACCLP SUPT. - GARY S. [unclear]			ACCLP MIKE [unclear]	DATE
	CMRR - STEVE [unclear]			SAFETY - [unclear]	

Figure 2: Sample jobsite white board.

found in violation of this policy are issued a safety violation. The huddle-up meeting is also used to address any agenda topics from the previous day's "plan-for-tomorrow" (PFT) and issue any warnings or violations to the contractor. Safety concerns can cause an immediate stop work order until the issue is remedied. A leading indicator (e.g., poor housekeeping) may be reported as an initial warning until corrected, a work pause, or a stop work order, depending on the severity and at the COB's discretion. At the conclusion of the meeting, the COB will give a "go"/"no-go" decision for the day's work to start. This is another cultural change of only pausing or stopping those who have not complied with the plan instead of traditionally stopping all work. This minimizes delay claims and production issues by reducing work stoppages.

Immediately following lunch there is a subcontractor coordination meeting in which updates or changes to the day's work plan are implemented. At 2:00 p.m., a PFT meeting is held with the superintendents and foremen. The agenda for this meeting is to address safety concerns, quality issues, and work activities to be covered at the next day's huddle-up meeting. This continuous communication keeps

all team members aware of changing events throughout the day. Critical events from this meeting will be tracked in a format similar to that shown in Figure 3.

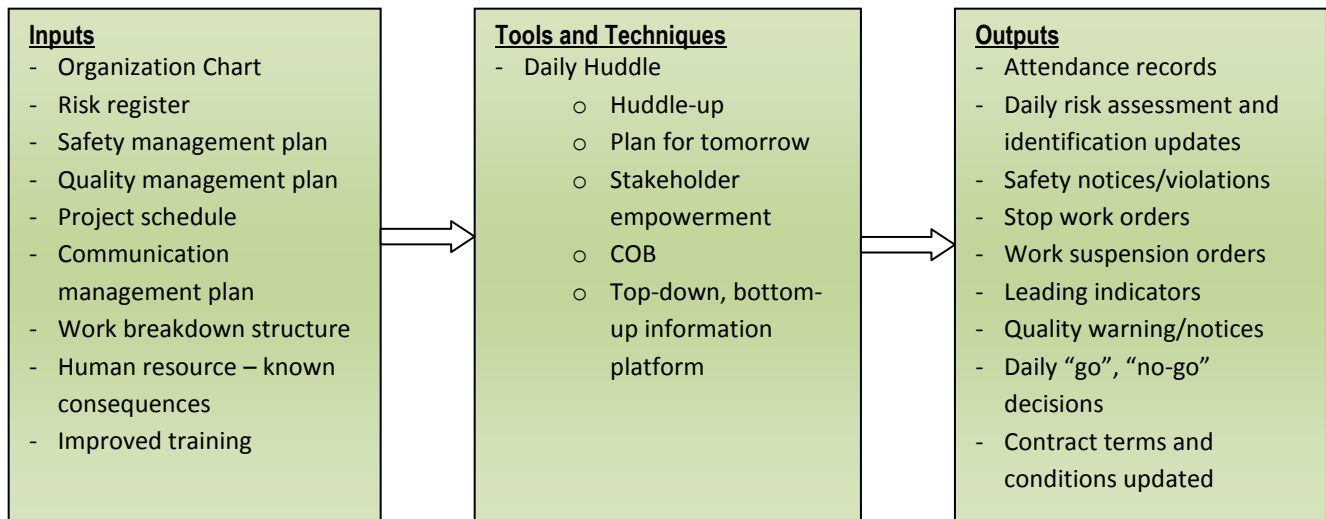
The huddle-up meeting is a great communication tool and can be used to address other project issues such as weather, environment, security, quality, or schedule. The huddle-up meeting provides a format to communicate coordination, quality, security, and schedule issues that must be addressed and, like safety, critical issues may require a work pause or stop work order until they are remedied; a warning may be issued for lesser events. The project team maintains schedule control through this daily coordination and by monitoring actual activities against baseline schedule activities. The DH process has been proven successful even when implemented mid-stream on troubled projects.

A Project Manager's Implementation of the Daily Huddle

A project manager should view the DH as a tool and technique for project management and, ideally, should be implemented during the planning phase of a project. The DH will mitigate risks identified in the risk register.

Plan For Tomorrow - Critical Issue List						Milestone date	9/30/09
Key: Yellow = Date is within 7 days. Red = Date has been missed. Green = Completed task							
Date: 6/30/2009						92	
#	Category	Description	Owner	Notes	Date Required	Date Complete	
1	Design	30" panel cans needing to change to 20"	Len Javis	Directive to Will Altmore to purchase 20" panels asap. Should be on site 7-8	7/8/09		
2	Design	Heat trace for chillers NIC in YEM/REA. Confirm if in design or required.	Len Javis	Appears to be a gap when the chiller location changed. Len Javis to review RFI 612 which required heat tracing. Sent email to Van Watkins (AVC) drawings and specification. Holding up YEM insulation.	6/30/09		
3	Construction	Install filters on SUS D, E, F	Aaron Smith	Install approved filters on outside of grills on SUS D, E, F approved by Vendor. Installed SUSD on 6-26, finish E&F 6-29	6/29/09		
4	Design	Resolution of soffits in 1st floor east corridor. Must have access above ceiling	Len Javis	Len spoke with Darrel Night; suspended ceiling above single and double doors. Not shown on RFP response. AAAP/ABC to clarify.	7/1/09	6/29/09	
5	Design	Rebar in mechanical shaft maybe in conflict with steel/duct.	Clair Rodgers	Clair spoke with Jim O; ok to bend rebar only if necessary. Clair prepared a confirming RFI to allow rebar bending.	6/24/09	6/24/09	
6	Construction	Xypex application condition in CUB at SUS-D	Clair Rodgers	Discussion on condition of the xypex installation between Darrel Night (AVC) and Core Contractor.	7/15/09		
7	Construction	CES lab casework and YEM PSP duct interference	Clair Rodgers	Do we have a conflict with the casework and PSP duct?	7/3/09		
8	Construction	No rock in rooms 9017 and 0015	Richard Bengal	Review why no rock in rooms.	6/29/09		
9	Design	RAC Unit on second floor may have working clearance issues.	Len Javis	Received an email from Owner on 6-25 referencing inspection document 1355. Len Javis/Ken Mendy and Ed Junod reviewed conflict. Len to review with YEM, REA and Mr. Bengal to resolve.	6/29/09		
10	Design	Mech shaft conflict duct/steel	HB	Terry Moss contacted HB on Saturday. Will review issue on Monday with Premier, YEM, AAAP & HB	6/29/09	6/29/09	
11	Contract	Elevator contractor not attending PFT and threaten not to return to work	MG	Mary Griffin had meeting to discuss change orders; Contractor not very cooperative. Ed Junod sent notification directive to attend PFT. 6-29-09 Company not on site. Len Javis directed Elevator company to return on 7-6-09 when permanent power is available.	6/30/09		

Figure 3: Critical issue list.



The DH is integrated with quality management, communication management, time management, cost management, procurement, human resource, and risk management. The risk management plan will include the DH as a tool and technique for identifying safety hazards and work conflicts. The project team also uses the meeting format to manage and mitigate known risks and to identify unknown-knowns on the project.

The DH is useful for establishing the means for effective and timely communication. The daily meeting format provides simple verbal communication between all critical parties through top-down/bottom-up and bottom-up/top-down communication. It provides a place to coordinate work and resolve conflicts in a timely manner. The DH supports the control and monitor function of the plan-do-act cycle, as shown in Table 4.

Results and Benefits from the DH

Implementation of the DH is simple, no cost, and low-risk. The results from this process will include:

- Reducing safety incidents
- Reducing administrative efforts to document non-compliant issues (safety, quality, schedule, procurement).
- Reducing contractual terms and conditions violations that can lead to fines and or penalties.
- Fewer quality issues/rework
- Increased productivity due to:
 - Better material deliveries
 - Improved housekeeping
 - Less material handling
 - Fewer contract violation letters and improved contract administration

Knowledge Area	Control and Monitor Function from DH
Integration	Provides daily format to integrate work activities of multiple trade contractors for support on an Integrated-Integrated Work Plan.
Quality	Immediately notify contractors of deficiencies and track them until they are satisfactorily resolved.
Cost	Cost requirements are achieved by improved coordination, meeting schedule requirements, and reduced reworks.
Risk	Reduce the number of contractual violations and penalties. Daily means to monitor risk register.
Communication	Top-down and bottom-up communication. All parties are in communication on the project.
Human Resource	Help the project team to improve individual performance and for individual project violations.

Table 4: DH supporting the control and monitor functions across knowledge areas.

The project management team will see benefits to the project from the DH, which are highlighted by:

- Effective, timely, open communication
 - Safety issues, security, deliveries, energizing equipment and testing, changing conditions
 - Bottom-up communication
- Increased employee confidence
- Integration of office and field staff
- Improved team morale
- Flexibility
- Balances the *PMBOK® Guide*
- Inexpensive (example: 1/8" white panel purchased for \$24 to make the white board)
- Follows the keep it short and simple (K.I.S.S.) principle
 - The 7-page quality Corrective Action Plan was more successful than a 3-volume quality assurance plan
 - The 7-page Daily Huddle was more successful than the 2,000-page OSHA/DOE 10CFR851 document

Case Study Data:

In 2004, a high-profile transportation project, on track to install \$1 million dollars of new work per day, was shut down by the owner's representative due to quality concerns. The existing quality assurance plan included three volumes of checklists and procedures and included three full-time quality assurance inspectors, in addition to the part-time owner's inspectors. In spite of this effort, the project quality failed and the project team was required to implement a corrective action plan (CAR) to get work back on track and gain the owner's confidence. The CAR had to correct existing deficiencies and assure the owner that no repetitive deficiencies would be allowed in the future. With risk mounting from the potential delay claims, the program director relied on his Project Management Institute (PMI) training to lead the team to developing a plan and returning to work seven days later.

In 2008, a radiological research facility project was shut down when safety incidents reached an unacceptable level. The owner and contractor's safety plans were simply not effective, even though they had incorporated several best-in-class safety processes. Facing delay claims of up to \$110,000 per day in liquidated damages and potential fines from the Price-Anderson Amendment Act (PAAA) (10CRF820), can be a stressful situation and make many lose focus, but the PMP-certified program director developed a plan to get the project back on track by merging a corrective action plan for quality with a zero tolerance policy for safety to meet these safety concerns and initiated a zero tolerance policy for

repetitive quality deficiencies. The results and benefits after six months of implementation are as follows:

- Huddle-up meetings began in November 2008
 - 100% reduction in safety incidents
 - 19% reduction in the non-compliance reports written against the project
 - 25% increase in productivity
- Program implemented as a zero-dollar change order
 - Contractor's were notified that they could advise of additional charges or file a claim or submit notification to file a claim
 - After the first week back to work, senior management agreed the process was very effective and actually increased morale and productivity
 - No claims were filed for delays
 - After six months, contractors agreed that the DH increased productivity, safety, and quality

At the time of this publication, the Daily Huddle has been implemented in four other projects: two medical facilities and two aviation projects.

Conclusion: The Daily Huddle is a flexible tool for a project manager to balance the bodies of knowledge on a project.

After the initial implementation of the seven-page DH, stakeholders advised the team that the process was "too simple," despite the fact that their 2,000-page process didn't work. The team was faced with the challenge of how to manage repetitive deficiencies and develop a process that worked. The DH did work and it provided the project manager with the flexibility to manage the bodies of knowledge on a daily basis. The team had a process in place to communicate with the entire team several times throughout the day. The success is driven by several key changes in culture:

- Planning versus reacting
- Integration of office and field staff
- Integrated-integrated work processes (IIWP)
- Bottom-up communication and decision making, empowering those performing the task
- Pausing work or partial stoppages versus traditional full work stoppages
- Providing balance and flexibility to the *PMBOK® Guide*

PMP practitioners face the challenges of balancing the constraints of a project and delivering the final product. These efforts are hindered when stakeholders

either don't support or understand the PMI® processes. PMP® leadership is essential in overcoming the project team's natural resistance to change and implementing the *PMBOK® Guide* on a project. Maintaining balance and flexibility while implementing the *PMBOK® Guide* are a project manager's keys to success and are often the greatest challenges.

Definitions:

- Huddle-Up: Fifteen-minute morning meeting with the contractors to coordinate work activities for the day
- Plan for Tomorrow (PFT): Afternoon meeting in which superintendents and foremen discuss pertinent issues on safety, coordination, and quality. The team develops an agenda for the next day's Huddle-Up.
- White Board: A dry-erase board located near the work activity where key contact information is kept. The day's key events are listed on the board for all employees to review.
- Chairperson of the Board (COB): The person who leads the Huddle-Up meeting.
- Integrated-Integrated Work Plan: A change of culture concept to integrate multiple trade contractors' work activities among all participants on the project and across areas of the project for an improved daily work plan. Typically, a trade contractor only integrates his or her activities with the PTP process, not with other trades on the project.
- Pre-task plan: Contractor/trade-specific detailed work plan; developed daily by the person executing the work.
- Incident and Injury Free (IIF): The concept of maintaining a work place that is completely free from safety incidents or injuries.
- K.I.S.S. – Keep It Short and Simple

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About the Authors

Edouard P. Junod has an associate's degree in business management, a bachelor of arts degree in social psychology, and a master's certificate in project management from the George Washington University. He became a PMP® in 1998 and has over 35 years of experience on complex projects. Ed's career path is unique because it is not confined to one industry and his success can be attributed to his vision of what a PMP® can offer an organization. His success has followed him from the semi-conductor industry, to aviation capital improvements, to high-rise condominium construction, and a mission-critical radiological facility. More importantly, Ed has developed and trained two generations of project leaders. The first phase of development for the Daily Huddle began on an aviation project while working with Aaron Pankonin to resolved quality issues. Later, he modified the process to incorporate improved safety and project delivery. Ed is currently working as a private consultant.

Aaron Pankonin has a bachelor of science degree in mechanical engineering. He joined Ed Junod in 2000 on a semi-conductor project in New Mexico and again on an aviation project in Florida. Ed mentored Aaron's career as a project engineer and became a Certified Associate in Project Management in 2007. Aaron then earned his PMP® Certification in 2009. Over the last ten years, Aaron and Ed have collaborated to develop many white papers on project-related issues during their careers. Aaron is a commissioning authority and project manager in the aviation industry.