

THE IMPORTANCE OF EARLY WARNING SIGNS¹

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INTRODUCTION

Companies have known for a long time that projects can and will have issues and there are often early warning signs that require assessment. Failing to address the early warning signs, and not doing it quickly, can lead to project failure.

Additionally, companies are no longer working on just traditional projects using the waterfall methodology. The risks associated with the new types of projects and their accompanying processes and methodologies have generated significant growth in the importance of early warning signs.

Fortunately, there has also been growth in project risk management, project metrics, and metric measurement techniques to allow organizations to make better identification of early warning signs of trouble and implement quicker solutions. A continual mindset shift in organizations towards this proactivity, directly contributes to increasing the likelihood of projects success.

THE EARLY YEARS

In the early years of project management, companies relied heavily upon periodic project health checks to determine overall project status and identify the causes of issues. The diagnostic health check tools were intended to identify problems and find solutions before they could escalate into larger issues. Although this was done with good intentions, many companies struggled. Periodic health checks were frequently performed monthly, or sometimes at longer intervals. This quite often delayed decision-making and the problems became worse.

As an example, if scope creep were the issue, it often took more than a month to conduct the relating health check and make a decision. When new features were added, there were serious issues with available resources, schedules, approvals, and quality. Regulating scope creep became expensive. Some fast-moving and

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high-risk projects began conducting health checks as frequently as weekly or bi-weekly when needed. More adaptable ways of working started making frequent health checks much more frequent and as an inherent part of the project teams' common practices. Also, the health checks looked primarily at only time, cost, scope and risks. Today we know that there are many other factors that can identify early warning signs of trouble.

THE GROWTH IN EARLY WARNING SIGNS

Most projects rarely fail overnight without some early warning signs indicating that there are problems needing resolution. Sometimes, project teams wait until the colors on the project dashboard go from green to yellow and then to red before acknowledging that there are problems and only then take action. There are almost always early indications, sometimes small, that issues exist. Even though there might be numerous early warning signs, some team members tend to ignore the signs, refuse to disclose the risks in what they see, tend to be highly optimistic that the issues will go away, and continue leaving problems unresolved. This almost resembles what could be referred to as a "Denial Culture."

The existence of early warning signs of trouble does not mean that the projects will fail. The signs give us the opportunity to manage projects proactively. The risks occur when project and organizational leadership refuse to hear about the early warning signs or do not trust the data and persist in using a reactive leadership style that can later result in significant and often unnecessary changes in the direction of the projects. Not taking early action and just knowing that the indicators exist can result in a project failure rather than project revision.

Project teams generally recognize issues before they are revealed on dashboards and in reports. If project managers and governance personnel refuse to listen closely to team members concerns, the attitude of the team members and support for the project can be significantly reduced. A deterioration in the working relationship between the project manager and team members accompanied by signs of stress is also an early warning sign of trouble.

There are many situations that function as early warning signs such as:

- Unclear or constantly changing requirements
- Scope creep
- Unclear or constantly changing constraints

- Constantly changing priorities
- Poor involvement or disengagement by stakeholders and vendors
- Delayed or resistance to critical discussions and decision-making
- Frequent changes in project leadership or key team members
- Team members silence or defensiveness during discussions
- Team members burnout
- Lack of risk management practices
- Finger-pointing and shifting of blame environment

Good project leadership continuously monitors the early warning signs and quickly addresses the issues. Failing to address the issues in a timely manner can negatively affect client confidence, decision-making, morale and recovery efforts.

Projects do not often go as planned. Sometimes it is difficult to see the entire project and components that may be struggling. Effective project leadership must prepare for uncertainties to arise even when identifying early warning signs. Organizations are now treating many early warning signs as metrics to help avoid disasters and provide proactive project leadership. The metrics can provide an indication of the changes taking place in the early warning signs.

There are quantitative and qualitative early warning sign metrics. These metrics can help us prioritize the severity of the risks and the time required for resolution. Early warning sign identification, especially when treated as metrics, is now becoming a critical component for project success and could enhance our prediction capabilities. Figure 1 shows this dynamic nature of interaction between the 3 components in play when it comes to early warning signs: preparation, prevention, and prediction.



Figure 1 – Working with Early Warning Signs

Early warning signs today are both quantitative and qualitative indications related to project status. Quantitative metrics generally come from direct measurements and status reporting activities whereas the qualitative metrics that involve human behavior come from observation, collaboration, surveys, and team exercises.

Qualitative measurements can appear in almost all performance domains but focus mainly on the resources' performance domain in the **PMBOK® Guide**, 8th edition, by considering the human side of project management and how unwanted team dynamics can prevent project success. To properly address early warning signs, we should design a balanced list of quantitative, qualitative and behavioral issues.

THE PMBOK® GUIDE, 8th EDITION, AND EARLY WARNING SIGNS _____

The newly released 8th edition of the **PMBOK® Guide** has introduced seven performance domains. The project management community can expect to see publications in the future that identify early warning signs that can be aligned with each performance domain as shown briefly in Figure 2. There can be quantitative and qualitative early warning signs attributed to each performance domain.

Figure 2. Domain-Related Early Warning Signs

PMBOK® Guide, 8th Edition PERFORMANCE DOMAINS	TYPICAL EARLY WARNING SIGNS
Schedule	Missed milestones
Finance	Outside of the established budget
Scope	Changes in the requirements and constraints
Risk	Increases in sensitivity and number of risks
Stakeholders	No buy-in and not actively involved
Resources	Unavailability of needed resources
Governance	Frequent changes in leadership and governance

The new edition of the **PMBOK® Guide** also identifies other important activities that can attract early warning signs if project implementation challenges occur. Some of the other susceptible practices include:

- Creation of business value and being outcome focused
- Being principle-focused
- Being stakeholder-centered
- Being people-centered

- Tailoring project management to specific applications
- Being adaptable and flexible

The viewing of the early warning signs attributed to the above topics as well as the seven performance domains may be restricted to specific stakeholders as needed.

WHO GETS TO VIEW THE EARLY WARNING SIGNS? _____

Project teams are now becoming cautious as to who gets to see the early warning sign information. In the early years of project management, all status reports were in written format, and the same status report was provided to everyone. If there were special topics that the project manager wanted only a select number of people to see, they would appear in follow-up memos or discussed in one-on-one sessions. The risk in showing everyone the same information, especially early warning signs, was that some of the viewers might overreact to the information and make the situation worse before the project team could implement corrective actions.

Traditionally, the majority of the early warning signs, especially the quantitative signs, were identified in reports. Today, companies are using crisis dashboard reporting systems where the dashboard is customized for specific viewers to assist them in effective decision making.

To illustrate the need for customization, the resources performance domain in the **PMBOK® Guide** can be composed of quantitative and qualitative early warning signs. Quantitative indicators can identify issues such as a shortage of assigned resources or resources with the wrong skill sets. These quantitative indicators may appear on everyone's dashboard. Qualitative indicators, such as those shown in Figure 3, are related to unfavorable morale or team dynamics and may appear only on the dashboards for the project manager and governance personnel who are able to provide counseling for certain individuals or project teams. There are other qualitative early warning signs related to behavior such as team members that demonstrate:

- Toxicity
- Team friction
- Laziness
- Decision-making biases
- Procrastination

The project manager must decide who is allowed to view each of the early warning sign metrics related to organizational behavior. Partnership with Human Resources might be useful in addressing some of the early warning signs.

The benefit of using crisis dashboards is that the information can be updated daily and customized for specific individuals, including key stakeholders. Crisis dashboards can also be designed for governance personnel who have the authority to make quick decisions to resolve behavioral issues.



Figure 3. Team Dynamics Early Warning Signs

As a few of these dashboard metrics could be political in nature, a great amount of caution must be considered before deciding who is allowed to view the behavioral early warning signs of potential trouble.

THE PATH FORWARD

Organizations are realizing that time is a constraint, not a luxury. The number of issues that can derail a project and cause it to fail has increased significantly with

the abundance of new types of projects being executed and the complexities of the environmental factors.

Early warning signs are now a necessity for effective proactive leadership. The use of early warning signs to improve team dynamics has increased significantly. Figure 4 shows the possible 4 building blocks for this proactive leadership of early warning signs.

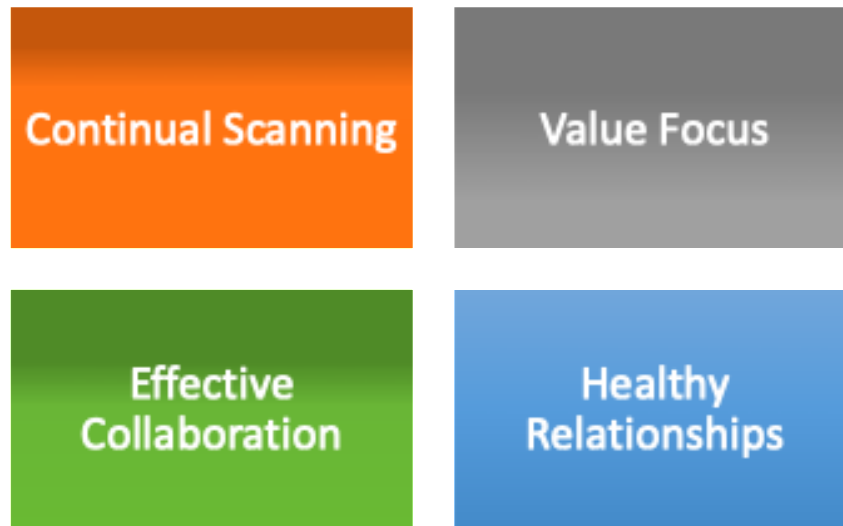


Figure 4. Proactive Leadership of Early Warning Signs

Proper project sponsorship and the investment in building the adaptive cultures and open mindsets, are critical to the success of achieving this proactive shift. The use of crisis dashboards has increased the importance and acceptance of identifying early warning signs. Most project problems have solutions provided the problem is identified early and the right people are involved.

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Dr. Harold Kerzner is Senior Executive Director for Project Management for the International Institute for Learning (IIL). He has an MS and Ph.D. in Aeronautical and Astronautical Engineering from the University of Illinois and an MBA from Utah State University. He is a prior Air Force Officer and spent several years at Morton-Thiokol in project management. He taught engineering at the University of Illinois and business administration at Utah State University, and for 38 years taught project management at Baldwin-Wallace University. He has published or presented numerous engineering and business papers and has had published more than 60 college textbooks/workbooks on project management, including later editions. Some of his books are (1) Project Management: A Systems Approach to Planning, Scheduling and Controlling; (2) Project Management Metrics, KPIs and Dashboards, (3) Project Management Case Studies, (4)

Project Management Best Practices: Achieving Global Excellence, (5) PM 2.0: The Future of Project Management, (6) Using the Project Management Maturity Model, and (7) Innovation Project Management.

He is a charter member of the Northeast Ohio PMI Chapter.

Dr. Kerzner has traveled around the world conducting project management lectures for PMI Chapters and companies in Japan, China, Russia, Brazil, Singapore, Korea, South Africa, Canada, Ireland, Germany, Spain, Belgium, Poland, Croatia, Mexico, Trinidad, Barbados, The Netherlands, Sweden, Finland, Venezuela, Columbia, United Arab Emirates, France, Italy, England, and Switzerland. He delivered a keynote speech at a PMI Global Congress on the future of project management.

His recognitions include:

- The University of Illinois granted Dr. Kerzner a Distinguished Recent Alumni Award in 1981 for his contributions to the field of project management.
- Utah State University provided Dr. Kerzner with the 1998 Distinguished Service Award for his contributions to the field of project management.
- The Northeast Ohio Chapter of the Project Management Institute gives out the Kerzner Award once a year to one project manager in Northeast Ohio that has demonstrated excellence in project management. They also give out a second Kerzner Award for project of the year in Northeast Ohio.
- The Project Management Institute (National Organization) in cooperation with IIL has initiated the Kerzner International Project Manager of the Year Award given to one project manager yearly anywhere in the world that demonstrated excellence in project management.
- The Project Management Institute also gives out four scholarships each year in Dr. Kerzner's name for graduate studies in project management.
- Baldwin-Wallace University has instituted the Kerzner Distinguished Lecturer Series in project management.
- The Italian Institute of Project Management presented Dr. Kerzner with the 2019 International ISIPM Award for his contributions to the field of project management.

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Dr. Al Zeitoun is a Future of Work, business optimization, and operational performance excellence thought leader with global experiences in strategy execution. His experiences encompass leading organizations; delivering their Enterprise Digital and Business Transformation; guiding fitting frameworks implementations; and using his empathy, engineering insights, and collaboration strengths to successfully envision new business models and execute complex missions across diverse cultures globally.

In his recent role with Siemens, he was a Senior Director of Strategy responsible for driving the global program management practices, Master Plan governance, and enabling the Strategy Transformation processes and priorities.

In his position, as the Executive Director for Emirates Nuclear Energy Corporation, Abu Dhabi, UAE, he was responsible for creating the strategy execution framework, achieving transformation benefits, governance excellence, and creating the data analytics discipline necessary for delivering on the \$40B complex country energy mission roadmap.

At the McLean, USA HQ of Booz Allen Hamilton, Dr. Zeitoun strategically envisioned and customized digitally enabled EPMO advisory, mapped playbooks, and capability development for clients' Billions of Dollars strategic initiatives. Furthermore, he led the firm's Middle East North Africa Portfolio Management and Agile Governance Solutions.

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