

Triage in Change Management to Improve Project Success and Business Outcomes

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Abstract

Experienced project managers know that change impacts most projects. The key to success is to ensure that ongoing changes throughout the project's life do not negatively affect its successful outcome. This requires that changes are efficiently evaluated to make decisions appropriate to the business and the project. The most efficient change management execution is found in hospital emergency rooms, on battlefields, and during disaster relief efforts. What they all have in common is the use of triage.

The concept of triage has been around the medical industry for nearly a century. Most emergency rooms triage patients upon arrival and have documented multi-level advisory systems or processes to ensure emergency room efficiency while protecting the patient. Triage in the context of change management is the assignment of urgency to a change to allow for an appropriate response to each change.

This paper examines the use of Triage to enhance existing change management practices by creating a "Change Impact Index" (CII) as a tool in change management triage. The CII is used to rate each change regarding business acuity, impact, and associated use of project resources. This multi-level scale is unique in its enhancement of a typical change management process by addressing acuity, project need, and resource impacts. Each level on the CII scale forces a defined resolution/action process.

The use of triage in change management enhances project success rates, improves project management agility, and is instrumental in supporting business needs and outcomes...

Introduction

Just as in the life of every person, change is inevitable; so too, during the life of every project, changes and/or adjustments are unavoidable. This fact has long been recognized by the experienced project manager, if not feared.

Heraclitus of Ephesus was a pre-Socratic Greek philosopher who lived from 535 B.C. to 474 B.C. and was known for his doctrine of change being central to the universe. [1] The following is a quote from his teachings: "There is nothing permanent except change." [2]

The impact of changes throughout the life of a project can cause delays, incur additional costs, involve personnel changes, or, worse, lead to the cancellation of the project. The key to success, then, is to limit the negative impact of change. This attempt to manage change is change management.

In the project management field, change management can best be understood as the process of managing scope, budget, and quality to achieve a successful outcome: on time, under

budget, and adhering to quality standards. It is the method for controlling any changes to the components outlined in the project management plan.

The goals of change control[3]:

1. Prompt, efficient change implementation
2. Effective communication
3. Avoiding unacceptable risks and losses
4. Minimizing interruptions in business
5. Provide change justifications
6. Meet target deadlines
7. Eliminating duplicate changes

Though every organization has official processes for handling changes, efforts have been made to standardize these processes. Currently, several models of change management exist. Among them are [4]:

John Kotter's 8-Step Process for Leading Change

- Establish a sense of urgency
- Create the guiding coalition
- Develop a vision and strategy
- Communicate the change vision
- Empower employees for broad-based action
- Generate short-term wins
- Consolidate gains and produce more change
- Anchor new approaches in the culture

Change Management Foundation and Model

- Determine need for change
- Prepare and plan for change
- Implement the change
- Sustain the change

Deming Cycle of Plan-Do-Check-Act

- Plan—establish objectives and processes
- Do - implement the plan, execute the process, make the product
- Check - study actual results and compare against the actual results
- Act- enact new standards

The above models typically refer to enterprise change management. They are general, bare bones simplifications applied to project change management. Project change is best understood through more detailed frameworks, such as those developed by the Project Management Institute and published in A Guide to the Project Management Body of

Knowledge (PMBOK® Guide), 2000 Edition. This guide includes a framework for integrated change control, represented in the following graphic.

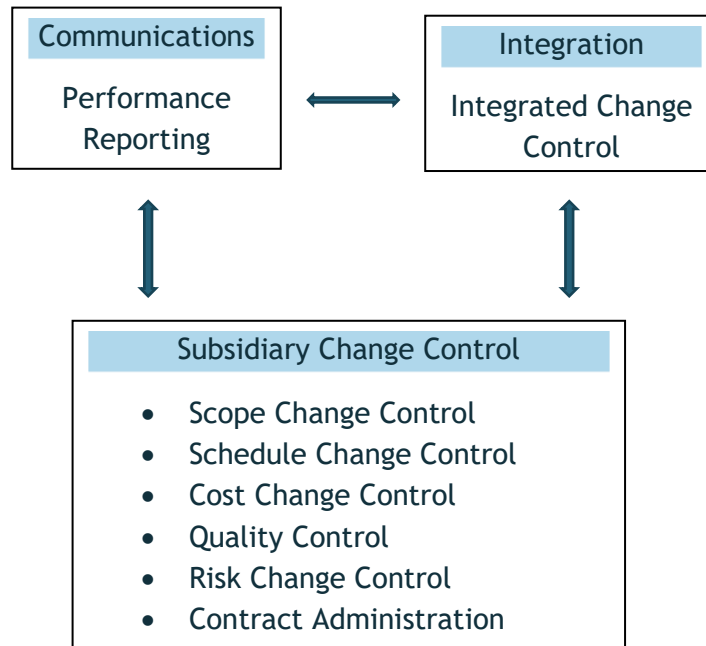
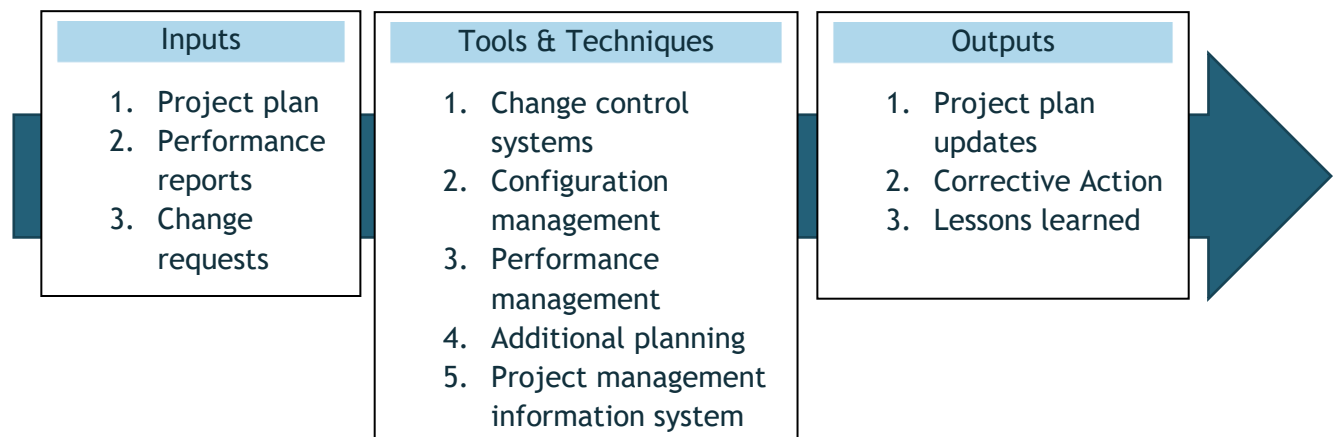


Figure 1 Coordinating Changes Across the Entire Project



Integrated change control is concerned with a) influencing the factors that create changes to ensure that changes are agreed upon, b) determining that a change has occurred, and c) managing the actual changes when and as they occur. The original defined project scope and the integrated performance baseline must be maintained by continuously managing changes to the baseline, either by rejecting new changes or by approving changes and incorporating them into a revised project baseline. Integrated change control requires:

- ★ Maintaining the integrity of the performance measurement baselines.
- ★ Ensuring that changes to the product scope are reflected in the project scope definition.

★ Coordinating changes across knowledge areas, as illustrated in Figure 1. [7]

While all these provide directions on the change process flow and the goals to be considered when change is initiated, a practical working chart of the approval process is not represented. The authors will present their process, based on over 20 years of experience, in the following graphic.

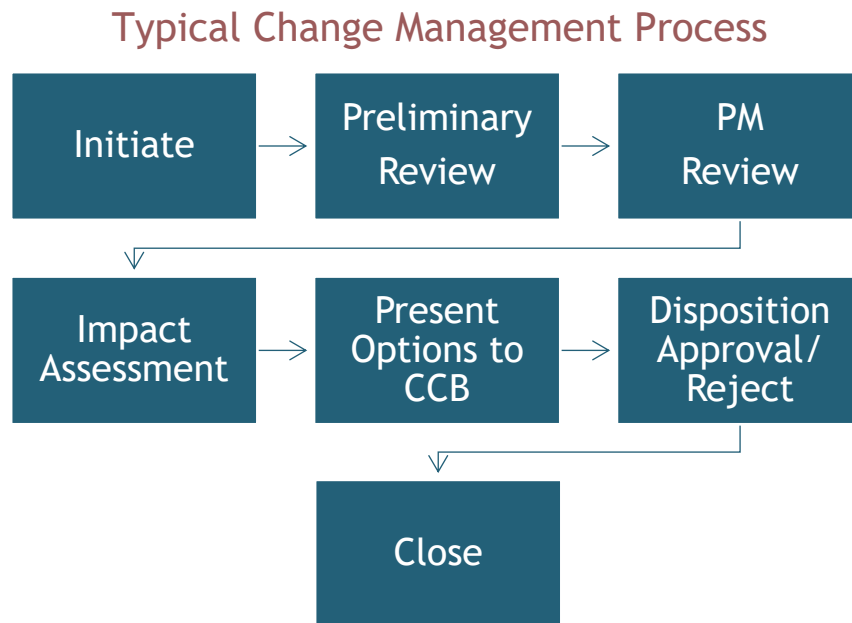


Figure 2

Implementing solutions, improvements, or additional funding involves organizational approval. As demonstrated in Figure 2, there are several steps in the usual chain of command and formalities involved that are often prohibitive to the timely implementation of actions. If all change requests, no matter how urgently needed, must go through these steps, the time factor can greatly affect the success of the change and possibly the project. This is where a Change Impact Index, adapted from triage practices and incorporated during the preliminary review, should be used to bypass the usual progression in predetermined cases. Understanding these adaptations as they will apply to change management requires an understanding of triage.

What is Triage? A Brief History of Triage.

The definition of triage according to Merriam-Webster's dictionary:

1. *α*: the sorting of and allocation of treatment to patients, and especially battle and disaster victims, according to a system of priorities designed to maximize the number of survivors

b: the sorting of patients (as in an emergency room) according to the urgency of their need for care

2. : The assigning of priority order to projects on the basis of where funds and other resources can be best used, are most needed, or are most likely to achieve success

The origin of the word “triage” is the French word “trier,” which was originally applied to a process of sorting, probably around 1792, by Baron Dominique Jean Larrey, Surgeon-in-Chief to Napoleon’s Imperial Guard. Larrey was credited with designing the Ambulance Volante, a flying ambulance. Baron Francois Percy also contributed to the organization of a care system for the ongoing management of casualties. From the French Service de Santé emerged not only the concept of triage but also the organizational structure necessary to handle the growing number of casualties in modern warfare.[5]

Across the Atlantic, 70 years later, in 1862, after the Civil War Battle of Bull Run, the removal of wounded from the battlefield took a week. As a result, General George McClellan appointed the assistant surgeon of the Army medical department, Jonathan Letterman, the liberty to do whatever was necessary to provide the men with the care needed. Letterman created the country’s first ambulance corps and established a new triage method for war-wounded. The ambulance crew would rush onto the battlefield, give first aid and/or remove the wounded for treatment to a nearby field hospital, and if necessary, from there to a large offsite hospital where the wounded could receive long-term care without the chaos of battle raging around them. In the 1862 Battle of Antietam, his team had the battlefield cleared of wounded within 24 hours! His methods saved thousands of lives during the battles of Gettysburg and Fredericksburg. In 1864, by an Act of Congress, Letterman’s system was adopted by the U.S. Army. [6]

Hospitals in the U.S., U.K., and Europe began incorporating triage in their emergency rooms by the early 1900’s. [5] According to Wikipedia, the application of triage trickled into business processes in the 1990’s. [6] However, since the dawn of time, any successful business has used some form of triage to make necessary adjustments in finances, time, personnel, project, and other investments. The process was usually less defined than modern triage.

Below is a graphic used by first responders and emergency rooms. It is a guideline for sorting patients by immediate need, based on their ability to be effectively and rapidly stabilized with the resources at hand.

START TRIAGE

(Simple Triage and Rapid Treatment)

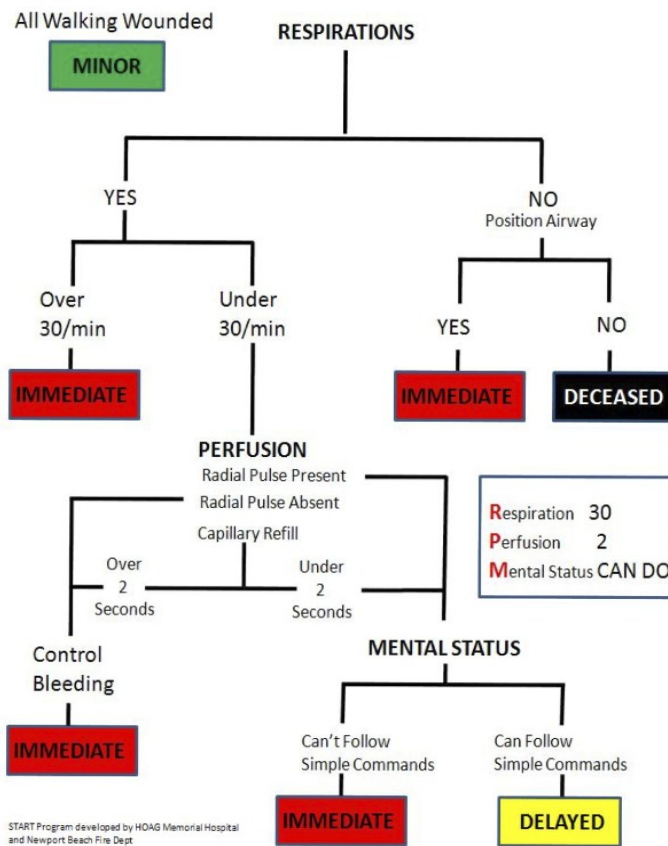


Figure 3 <http://medictests.com/wp-content/uploads/2011/04/startflow1.jpg>

Such a chart, posted for reference, is important for a standard for confident snap-life-or-death decisions in a crisis by medical staff. Worldwide use of such a guide by hospitals, medics, and first responders supports the use of a quick reference tool to standardize the triage of changes within a project, as well.

Implications of A Change Impact Index (a standard model for triage in change management).

Establishing a modified triage guide—the change impact index—for projects would allow organizations and project teams to have a prearranged evaluation process that prioritizes changes based on varying levels of decision-making consideration. Thus, the need for approval from the entire official chain of command before any change can be corrected or executed is circumvented when appropriate.

Consequently, the project manager would have more authority and control over change management, maximizing the efficiency of the process. Also, the project team would become involved in the triage process of evaluation, which becomes a team-strengthening, learning agility, and leadership-readiness exercise.

As a result, individual members of the project team would take ownership of the project when given the freedom to make decisions on necessary changes within their jurisdiction and skill level. And the whole organization would spend less time and man-hours in the approval process.

With such benefits, establishing a change impact index for frequent reference during the preliminary review is as important to the life of a project as the use of a triage chart for quick reference in hospital emergency rooms is to the life of a patient.

The Change Impact Index

During the preliminary review within the typical CM process, as shown in Fig. 2, the CII would be referenced. Keep in mind the concept of triage is to determine immediate need for change based on the ability to effectively and quickly execute it with the resources at hand, or within scope, budget, and schedule.

In the E.R., patients are treated according to urgency, with life-threatening conditions treated before limb-threatening conditions, which are treated before mental health conditions. Whatever can be done to stabilize a patient is done immediately in the emergency room. Some patients need no further treatment, but others must be sent to the O.R., the I.C.U., or admitted for additional care during the healing process.

In change management, some changes need not go through the process at all and can be delegated to team members. These changes would not affect the cost, schedule, or quality, and would still meet specs. A Change Order of Record can be used to track them. This pre-initiation step will make the change management and triage process more efficient. Although this does not technically change the process, it does add a step of consideration. The new process is demonstrated in the figure below.

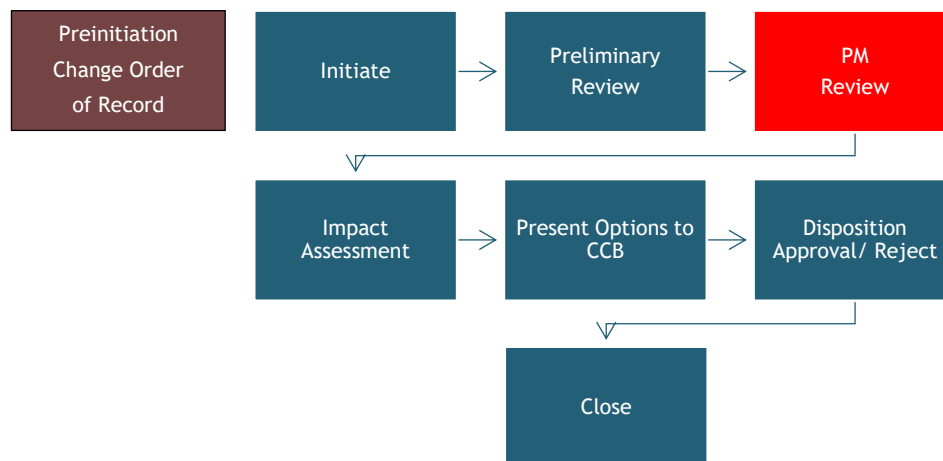


Figure 4

Some changes can be “stabilized” by the Project Manager and/or the Project Team when they fall within a reasonable range of the scope, budget, and schedule. Other changes will require immediate “surgery” or intensive care and need further immediate approval from the Change Control Board. The CII establishes the parameters by which changes can be “treated” through the typical change process, or by the PM and project team, or will require an exception meeting of the CCB.

The overview of the Change Impact Index is shown in Fig. 5 below.

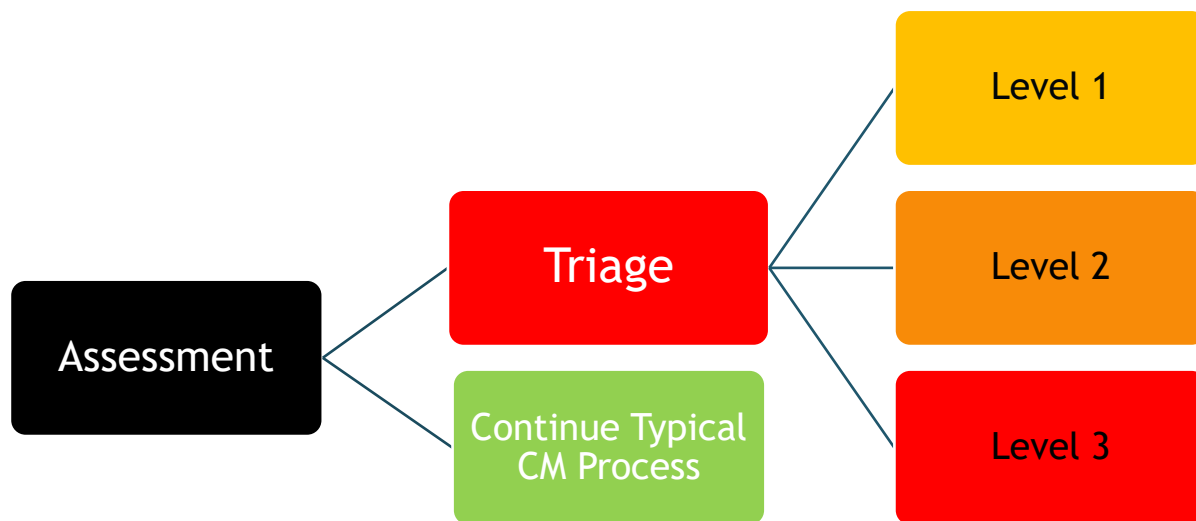


Figure 5: Change Impact Index Overview

Triage Results:

- Level 1: The project manager can make an immediate decision. Give go or no go.
- Level 2: PM must connect with the technical lead/other to arrive at a decision. Can still give a go-or-no-go.
- decision.
- Level 3: Needs Change Control Board approval via an exception meeting.

The actual assessment tool used to determine whether a change decision is triaged or sent through the typical CM process needs further development. A comparison can be made between Triage applications in hospitals and in project management.

In emergency rooms, triage factors considered are:

- Is there respiration?
- Is there a pulse?
- Is there profuse bleeding?
- Mental status: Can simple instructions be followed?

In change management, triage factors are:

- What drove the change?
- What is the impact on the project?
- What is the impact on stakeholders?
- What is the size or scope of change?
- What is the urgency of change?

The CII for assessment, as shown in Fig. 6, will be constructed from the aforementioned factors and will include the major considerations within each factor.

Assessment to decide Triage or Regular CM Process during Preliminary Review				
Driving Change	Impact to Project	Impact to Stakeholders	Size of Impact	Urgency
Nice to have	Function	Single	Below 5%	Delay Ok
Tech	Schedule	2 or more	Above 5%	A.S.A.P.
Political	Cost	Global	Above 10%	Now!
Required	Quality			
Regulatory				

Figure 6 CII Assessment Guide

Indication of Color Code:

Black: Factors to be rated according to Impact of Change

Green: Typical Change Management Process

Green and Orange: Level 1

Orange: Level 1

Orange and 1Red: Level 2

Orange and 2 Red: Level 3

2 or more Red: Level 3

The Difference Between the Change Impact Index and a “Severity Level.”

Examine the following example of a severity level tool.

Operational Risk Management Severity [8]

- Catastrophic - Complete mission failure, death, or loss of system.
- Critical - Major mission degradation, severe injury, occupational illness, or major system damage.
- Moderate - Minor mission degradation, injury, minor occupational illness, or minor system damage.
- Negligible - Less than minor mission degradation, injury, occupational illness, or minor system damage.

Reference: Pocket Guide to Operational Risk Management

Severity level classifies risk. This helps understand how a change may affect a project. It is important in determining whether to approve or reject a change. A severity level may be used to influence the triage of a change within the Change Impact Index, but the CII does not influence the severity level.

The Change Impact Index prioritizes a change for triage in the decision-making process. It is used to speed up decision-making across varying levels of risk and impact.

In Summary

The typical change control process flow is not changed using the Change Impact Index but is enhanced by referencing the CII during the preliminary review. If the CII is consistently used to analyze and prioritize all changes, the approval process becomes more agile. The entire project team is more informed. The CII arms the project manager with more authority to make changes that fall within the Level 1 and Level 2 change assessment. And the Change Control Board will be aware that if an exception meeting is called, the change has already been triaged, and their approval or rejection is critical to the project's success. As a result, overall readiness for change improves, and the chaos often associated with change is organized for timely evaluation.

It is vital to understand that implementing triage through the Change Impact Index is not simply a project-oriented process. The culture within the organization must be changed to encourage decision-making at all levels. To establish trust, the entire organization should be educated and on board with the concept, prepared to support the triaged decisions made after the change has been properly assessed using the Change Impact Index.

References:

[1] <https://en.wikipedia.org/wiki/Heraclitus>

[2] http://www.searchquotes.com/quotes/author/Heraclitus_of_Ephesus/

[3] Change Control Procedures Document; Global Network Infrastructure: Core Network Engineering, GTE Internetworking

[4] https://en.wikipedia.org/wiki/Change_management

[5] Robertson-Steel, I. (2006). Evolution of triage systems. *Emergency Medicine Journal: EMJ*, 23(2), 154–155. <http://doi.org/10.1136/emj.2005.030270>

[6] [Michael Franco](#) "The History of First Aid in the Army", 30 March 2011.

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[8] *Reference: Pocket Guide to Operational Risk Management;*

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