

# *Systems Triage Framework*

## **Introduction**

The *systems triage* uses the *medical triage* as its model. *Triage* is a rapid assessment of circumstances, identify necessary actions, consider available resources, and define priority of response. The *systems triage* like a *medical triage* is a Systems Walk-thru Analytical Technique (SWAT) approach that adapts to specific conditions. The *systems triage* applies to any enterprise, company, organization, department, process, or project.

The global 24/7 domain is creating a *new normal* where the future is like a fog. Thru the mist you see things close at hand, while distant images are shrouded in mystery. How you respond in this disruptive climate determines your future success. Like the first responders in a *medical triage* the initial encounter needs a background where you make a quick assessment, identify priorities, and define an action plan. *The priority is stabilizing the situation!* A visit to your general physician also requires a *triage* of your symptoms and issues.

Both the first responders and general physicians require a generalist framework. They need a polymathic understanding of the circumstances to sort, prioritize, and define the necessary actions. They are troubleshooters! Tests, vital signs, metrics (analytics) are an element of the discovery and treatment process. Identifying specialists to resolve the condition will result from this *triage*. This applies in enterprise circumstances as well. The *systems triage* is your starting point to navigate the fog of uncertainties.

## **Background**

Operational issues and constraints exist in times of global stability. In a 24/7 global atmosphere changes provoke structures and process disorganization. In a medical crises you must assess the entire person. This includes searching for wounds, asking questions, taking vital signs, deciding treatment priorities. Operational issues are potentially fatal in a disruptive environment. If you are struggling with problems, your immune systems are vulnerable to threats.

The *digital culture* is transforming the way organizations operate. New and different methods are available for organizational processes. Establishments must respond to the changing socio-economic environment. Institutional failure and operational disruptions are warning signs telling you that change is in process! Turmoil and disruptive situations can occur at any time and in different circumstances. The global socio-economic crisis is a structural change. The pundits speak of a *new normal*. Largely this is a valid identification of the era all *enterprises*, especially business and conventional institutions such as banks, manufacturing, and small and large businesses are facing. We are in a period of transition. Emerging ideas, technologies, and the means for achieving successful outcomes is changing.

The rapid pace of change requires agile responses. In a swift moving 24/7 socio-economic sphere, *time* is a critical aspect in defining how to achieve success. *Systems triage* offers you a way of overcoming the confusion of conflicting events and ideas in order to transform chaos to order.

The key points in this era of transition are:

- Modern economic theories are subject to reevaluation.
- The digital revolution is a continuation of the industrial revolution.

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- Institutions are going thru a *renaissance*.
- Business models have opportunities for doing business in a different ways.
- The commercial enterprise has new methods for delivering customer value.
- Profitability must satisfy all stakeholders and especially the customer value.
- Technology is presenting you with new means of doing things.
- New processes and different channels are available, where you can create new opportunities.
- Computer technology is extending *thinking capabilities* giving rise to *virtual* methodologies.

## *Explaining the Triage*

The *systems triage framework* is an agile approach to identify issues and define action plans for resolving operational issues. The *triage* is based on the medical *triage* which is essentially the capability to rapidly assess a situation and determine a course of action. While the medical *triage* is for emergency trauma situations either on site or in ER, the *systems triage* applies these principles to any operational situation. A *systems triage* is applicable to a company, department, process, or subject within an organization. Medical outcomes focus on the viability of a person. Systems outcomes refer to a series of processes where the outcomes are *effective* and *efficient* thru-put. In a digital culture the *triage* includes information technology. Computer systems are an intricate part of contemporary organizational processes.

Just like the medical *triage*, the *systems triage* applies a sense of urgency, identification of constraints or threats, the action requirements, and the priority for the action plan. The *triage* is a process when critical events are competing for resources in a deteriorating situation that calls for swift and critical thinking. The *triage* is not meant to solve the problems and issues. The *triage* focuses on identifying the core issues, determining their priority or urgency, and defining action plans to resolve these issues. Subsequent projects or changes are steps beyond the *triage*. It is important not to confuse these two objectives. An effective *triage* gives you the confidence that you are concentrating and applying resources to the right actions.

## **Abstract**

The *triage* is a rapid assessments and prioritization of actions for any situation. The following is an overview of the *Systems Triage*.

## *Framework*

The framework for the *systems triage* uses a seamless blend of skills as the structure for addressing a subject of interest. The key points of this framework include, but is not limited, to the following.

- Rapid assessment (less than a week)
- Analytics to construct enterprise circumstances
- Find the vital few via Pareto analysis
- Understand processes as thru-put velocity
- Identify critical paths & constraints
- Establish action plans & priorities



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## ***Approach***

The approach to the *systems triage* is an iterative process which incorporates the following techniques. The approach utilizes the *Socratic method* of discourse to stimulate *critical thinking* within a total system perspective.

- Analytics – financial/logistical – use accounting balances to obtain matching transactions.
- Interviews – subject stakeholders – insights and perspectives from people involved.
- Walk-thru – physical/logical – understand the physical and virtual conditions.
- Analysis and synthesis of the subject – apply *critical thinking* to separate symptoms from core problems.

## ***Benefits***

- Quick results – identify & define situation
  - Generalist perspective – contextual understanding
  - Objective assessment – impartial analysis
  - Confirm/discover core issues

The *systems triage* is an organizational tool that is useful for periodic checkups, catalyst for improvements, and essential for company issues. In this transformative era, the *systems triage* ensures that your enterprise has the agility, capabilities, and capacity to respond to change. Socio economic institutions are experiencing a *renaissance*. While the purpose of the enterprise does not change; the *knowledge age* is altering the structure and processes. The next section describes the background of an evolving and transformative era.

## **Framework**

The framework for the *systems triage* utilize a synergetic coalesce of assessments, analytics, and interviews.

## ***Rapid Assessment***

This is an essential part of the *triage*. It must be quick, to avoid distractions. Just like the medical triage you treat it as an emergency. The limitation avoids the *triage* becoming a project or engagement. The primary focus is distinguishing among symptoms to identify essential issues. The idea is to understand the various issues, and determine the priority for addressing the key points, to stabilize the situation. Just like a medical emergency, the focus is on defining the problem, its seriousness, tacking action and priority for that treatment.

What you are looking for is the critical circumstances impeding your ability to achieve your goals and objectives. *The moment of truth is results, all else is prophecy*. Making the triage a rapid assessment avoids clouding the study with ancillary subjects.

## ***Analytics***

An essential part of the *systems triage* is the analytics. Leveraging business intelligence transforming raw data to meaningful information that describes and defines conditions within your enterprise. You need to analyze data to discover both the issues and threats to effective and efficient operations. You need to use numbers to avoid ambiguity or parochialism. It is difficult for individuals to be totally objective. This is the reason you must depend on numbers. *Effective*

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*first and efficient later avoids paralysis thru analysis.* Quantification of the situation and circumstances is your best chance at objectivity.

You start with the financial statements. Using conventional accounting rules, provides common understanding across entities and provides you with the viability of the situation. The accounting information provide a baseline of confidence as to data integrity. Profitability and cash flow are the vital signs of any enterprise. From the financial statements, you drill down to areas of concern. When the *triage* is a company the statement of earnings gives your insight to priorities. What is most important, sales volume, margins, variable costs, or overhead?

If the subject is inventory, then inventory turns are the metric. Payables or receivables are days outstanding. Variable cost and overhead as percent of sales. In most cases, you will need the transactions or subledgers to the financial statements to perform the necessary analysis. When you must use subledger and logistic transactions you apply the *Pareto principle* (the 80/20 rule) to *separate the vital few from the trivial many*.

## ***Understanding***

Enterprise activities consists of processes, procedures, and resources. Understanding these activities as *thru-put* provide a perspective that achieves rapid insights. This allows you to grasp the critical paths and constraints of the activities. You apply the *Theory of Constraints<sup>1</sup> TOC* to identify constrains involving capacity, thinking, and coordination bottlenecks.

An often-overlooked aspect of *thru-put* is the *hidden enterprise<sup>2</sup>*. These are resources, procedures, activities, or processes that do not add value to the *thru-put*. You often find these as stray legacy objects from previous attempts at solving process problems. The *hidden enterprise* is a natural constraint within any organization. It is the result of growth and contraction, capacity overloads, and response to change.

To achieve the necessary understanding in a short period of time you need to conduct interviews with the stakeholders and do a walk-thru the organization, factory floor, or other areas to get a sense of the climate and insight into the environment. Physical visibility to the surroundings will complement the analysis.

## **Approach**

The following approach is key to the *triage* methodology. The three basic segments of the *systems triage* require.

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<sup>1</sup> Goldratt, Eliyahu M. and Cox, Jeff, *The Goal*, North River Press Publishing, Great Barrington, MA, 1984. Anniversary copies and new releases are available the latest in 2006.

<sup>2</sup> Jeffrey G. Miller, Alfred J. Nanni, and Thomas E. Vollmann in *Rethinking the Manufacturing Equations with Just-In-Time* (Boston University Manufacturing Roundtable), and again by Miller and Vollmann in "*The Hidden Factory*" (Harvard Business Review, Volume 63, Number 5).

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## ***Analytics***

This is a critical part of the *triage*. This segment is necessary to arrive at an objective assessment of the situation. You do not have to do this first, but you must do this before you complete the *triage*. Depending on the situation, it may be better to do the analytics after the interviews and walk-thru. Physical observations and topics or issues from the interviews may suggest additional and specific analytics.

Depending on the *triage* you may start with logistic or subledger data. However, wherever you start all your financial data must match the general ledger or components within the general ledger. You also need to compare three to five years of data, to capture any anomalies with the business requirements. More than the current year will highlight volume and mix issues which will impact your business models.

Logistic transactions are critical to an effective *triage*. Depending on the area of concern you need to analyze sales, cost, inventory, etc. transaction activity. This activity should reflect the same time periods of the financial statements. Prior to the access to digital data, you had to use random and sampling techniques to understand a population. Digital transactions, especially internally make available the entire population. You use the *Pareto principle* to avoid overload. This principle will ensure you are separating the vital few (much more manageable) from the trivial many. The only reason to know the magnitude of the trivial many, is to understand how this may be misleading the *thru-put* as noise or distractions from the vital few.

## ***Interviews***

As critical as the analytics are the interviews with the stakeholders are equally essential. This part of the *triage* increases your understanding. It is like the trauma patients telling the medic where they are hurting and how they feel. It is the same with the organization. The stakeholders need to tell you how they feel, what is hurting them (impeding their ability to do an effective job), and what is good about their environment. This cannot be a session of complaining. However, you cannot squash critical comments. If you understand the critical comments within the context of the whole, you will quickly discern basic and core issues.

The purpose of the interview, is that your core competencies are within the DNA of you organization, your people. People are the catalyst for all operational activity. When you listen to the individuals living the organizational experience you find the constraints, bottlenecks, and *hidden activities* that are impeding performance.

## ***Walk-thru***

After conducting the interviews, you must physically walk the premises. In seeing the physical configuration and what may appear as insignificant items. Housekeeping, working areas, the factory floor, and the customer service area, all of this provide insights you cannot get from analytics or interviews. It is like the medic who sees the damage the patient cannot see.

The walk-thru takes many forms. It may be shifting thru papers, such as orders, quality reports, narratives, or walking the factory floor. Walking thru the offices and speaking to random people at work is often a major source of information. Body language is important in this walk-thru,

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these are observations that escape analytics and interviews. Looking at the loading and shipping docks lead to understanding you never imagined.

## ***Action Plans***

The *triage* deliverable is a list of action items depending on the issues, constraints, and critical impediments from these discovery studies. Action plans need to include existing assets that you can employ to move forward quickly. You need to leverage your existing capabilities to overcome the impediments. One of the key factors of a *triage* is understanding how to use what you have to stabilize a situation. Time is of the essence, because things change. You exist in a dynamic environment and delay will complicate the circumstances.

Successful action plans require the following considerations. You must define the resources and target dates for each action item. Action plans must be part of your current operations. Special projects have their place. However, projects outside the operating environment miss the feedback necessary to understand if the solution is working.

When you focus on effective and efficient *thru-put*, keep in mind that it is easier to pull a rope than to push a rope. Lean operation processes and activities require a *pull* control. Establish target dates for when you wish to reach a completion. This is what you drive for. It is prudent to set checkpoints, which help you ensure that you will meet the completion date.

In developing the action plans you must consider management and information systems. The information systems are a critical element in this digital era. People rely on the digital world to get their jobs done. In a significant way, people do not have absolute control over their ability to execute their procedures. Many of the procedures and rules are deeply coded into the software that they need to perform their responsibilities.

## **Considerations**

There is additional consideration you will incorporate into the *system triage*.

### ***Management***

You coordinate *thru-put* via management and you need to consider the following points as part of the *triage*.

- *Management styles* – you may be blocking the situation by either micro managing, your attitude, or not communicating a direction
- You must give people the freedom in making mistakes. In essence, you have to create a *learning environment*. We learn thru trial and error.
- *Logistic constraints* are activities and behavior that create bottlenecks.
- *Processes* – the coordination of thru-put – are the processes ineffective or inefficient.
- *Structures* – how is your organization setup, are departments and deep vertical hierarchies impeding the velocity of the organization.
- *Operating procedures* – the policies, procedures, and rules for getting things done – are they constraints.

### ***Information Systems***

A major shift has occurred in information technology and you must be aware of its impact on your organization.

- Today computers are a mission critical element in business.

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- Effective computer systems must be a seamless part of the operation.
- Information Systems need to be part of the business strategy.
- Computers equipment is now a commodity. This means it is no longer a competitive advantage. Differentiation is the basis of competitive advantage, is achievable via applications. What are you doing differently that distinguishes you from the competition?
- Computer literacy is everywhere – a part of daily life, you cannot operate without this technology in the contemporary enterprise. Therefore, it must be an effective and efficient tool.
- Information systems cannot be a constraint and if not properly structured it becomes a significant *hidden enterprise*. Your computer applications can be a major constraint in running the business. Information overload or data integrity is a fatal flaw in your ability to be successful.

Part of a successful *business triage* will consider the potential of your existing software. You should identify its *effectivity*. Inventory existing software and validate its relevance. Technology, especially information technology is a critical component in the contemporary enterprise. You need to define an information technology roadmap that supports your business requirements.

A minimum requirement is that your software must provide you with the essential information allowing you to perform 80/20 type analysis. The software must also monitor the pulse of the organization – measurements to ensure that you are on target to your goals and objectives. Extensive and accurate databases are an essential ingredient to the rapid and successful *triage*.

Neither the age nor sophistication of your applications software is the key to success. It is the efficiency and utilization of your existing software that is the first priority.

### **Closing Thoughts**

The *systems triage* is not the panacea of success. It is *the* critical element of discerning weaknesses and issues that prevent you from achieving your goals and objectives. The *systems triage* is an agile approach to getting an understanding of your processes. This requires a generalist with a lot of experience in multiple disciplines. Subject experts and specialists along with conventional consulting may be part of the action plans. You use critical thinking, and a systems approach, to understand situations within the context of their circumstances. This approach protects you from focusing on the wrong objects. The *triage* promotes using existing capabilities and resources to achieve immediate improvements.

You can use components of the *systems triage* such as the analytics, interviews, and walk-thrus. Selecting part of the *systems triage* may be beneficial. Using existing data such as your financial data, subject to analysis, can improve your operational understanding.