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Turnaround Excellence Through Organizational Transformation

Pete Shirley

Senior Consultant – Turnaround Consulting Services

AP-Networks

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Abstract: Approximately 1 in 4 turnarounds are considered to be total "train wreck" failures, and nearly 80% of all turnarounds do not meet established goals. Organizations with best in practice processes and procedures can find themselves mired in failure. The reasons for these failures can be complex, subtle and rooted in an organization's fabric. As such, teams often do not identify their functional shortcomings until it is too late to effect positive change.

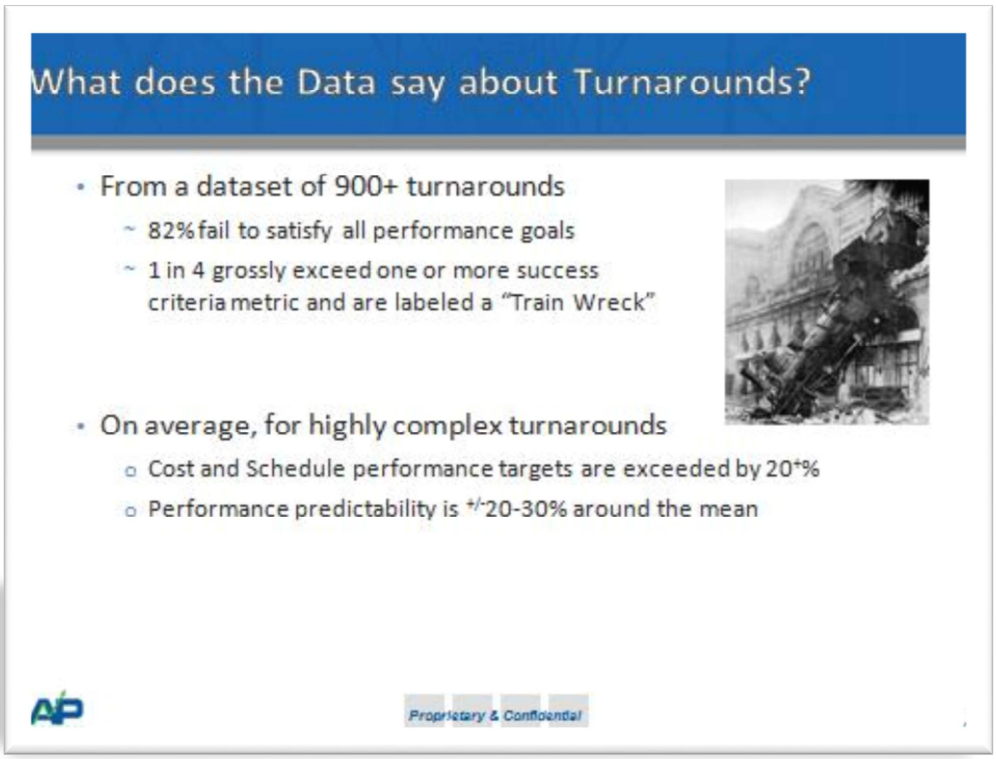
Most organizations have the physical tools and structure necessary to make the transition to high performance, but they often inadvertently undermine their own transition to high performance. Implicit goals that directly conflict with explicit goals, hidden dysfunctional reward systems, ambiguous priorities, strict deadlines, ineffective communications, and the site personnel's inability to identify and correct these problems "real time" are key detractors to turnaround success.

Born in the manufacturing sector to shorten product development times, cross functional teams have taken root in today's industry. Turnarounds are no different. The forming of a turnaround team is the first step to executing a turnaround. Using the statistic above, twenty five percent of the time it is the first step executing a disastrous turnaround. This paper discusses some of the more subtle atmospheric conditions which can negatively influence a team's performance with real life examples and provides some examples of tools that have been effectively used to steer teams back to success.

I. The Case for Improvement:

Most refineries and petro chemical plants in business today are staffed with dedicated, intelligent, and skilled personnel. These same personnel are tasked with planning for and executing turnaround events. Almost without exception, they form a team of experts to help prepare and set out to do their level best to succeed.

Why do so many teams staffed with so many good people fail so often?



Like an iceberg floating on the surface of the ocean, much of the conditions which persist and contribute to failures exist below the surface and are not easily recognizable to the casual observer.

Better performing teams lead to better preparations, which, in turn, lead to improved readiness. Improved readiness leads to predictable outcomes and competitive results.

The remainder of this paper introduces the basic fundamental element of turnaround teams . . . the team itself. It will then explore some prevalent "below the surface" conditions which tend to undermine team turnaround preparations. In doing so, and within the context of improved awareness of these "below the surface effects" it will introduce common tools available in the leader's toolkit that can be used to neutralize the subtle contributors to failure.

Each section will begin with an introduction which contains some theory as to why the topic is important. Common problems will be discussed. Within the context of the topic, common "tools of the

trade" that are used to guide an organization in the right direction are discussed. Finally, the "symptoms" section discusses some common manifestations of the topic discussed.

While each is written as a stand-alone section, they are additive and overlapping in concept and effect. Each section will build on the previous and contribute to the next.

II. The Team Concept:

The team concept: It is very unlikely that anybody reading this has never been the member of a team of some sort. Teams in today's businesses go by many different names. They can be cross functional teams, business teams, business unit teams, or any one of thousands of different names. They all share one thing in common. They are a group of individuals with specific roles, complementary talents and skills who are aligned with a common purpose. The typical refinery or petrochemical facility turnaround team consists of representatives from operations, maintenance, inspection engineering, reliability, process engineering, turnaround planning, materials, safety, environmental and contracts. There are turnaround core teams, turnaround steering teams and turnaround strategy teams. Each has its own responsibilities and demographics.

The intention of this paper is not to cover team theory in detail but to give a general overview of the value teams and to introduce some key stages in the team formation process.

Some teams perform better than others. The reasons are complex, but it should be noted that high functioning teams (teams that function at a high level) are often tight knit, focused on a single goal, show high levels of collaboration and produce superior results.

Teams are needed in the turnaround environment because the work is fast paced requiring vertical collaboration (multiple sequential processes are re-arranged to happen in different orders) and chronological collaboration (many things that would traditionally happen one after the other happen in parallel). There is so much information that no single individual can possibly process it all and successfully execute a turnaround. This is where teams come in.

The ability to rapidly process information, consider many options and make better decisions is a key benefit that teams have over the traditional hierarchical model.

So, what's the problem?

Most teams do not reach levels of high performance.

In order to reach high performance, teams go through four basic stages of development on the road to high performance. Unfortunately it is easier to keep a team from performing than it is to cultivate success.

Phase	Forming	Storming	Norming	Performing
Description	Team members get to know each other. Exchange information, build trust, clarify goals and expectations.	Similarities and differences are revealed. Conflicts surface as appropriate roles are identified and responsibilities are clarified.	Team members recognize and agree on information sharing. Relationships are strengthened, member obligations are agreed upon. Normal behaviors are established (meeting attendance, on time, etc).	Team members actively work towards project completion. Actively help each other and fill in the gaps when needed.

Negative behavioral traits, unclear goals, personnel turnover and a myriad of problems can exist to keep teams from reaching the performing phase.

Some of the key "higher level" elements that are present to make teams strong are a strong sense of camaraderie. Members feel a sense of inclusion and they get along. Successful teams also have a strong sense of achievement. They have a common purpose that is cultivated by a sense of external threat and eustress (positive stress). Successful teams also have a sense of equity. They are expected to make decisions and they value each other's individual efforts and capabilities.

Tools of the Trade: The team phase table is revisited here to show some common tools that are available to leadership that will enable them to help teams reach a higher level of performance.

Phase	Forming	Storming	Norming	Performing
Description	Team members get to know each other. Exchange information, build trust, clarify goals and expectations.	Similarities and differences are revealed. Conflicts surface as appropriate roles are identified and responsibilities are clarified.	Team members recognize and agree on information sharing. Relationships are strengthened, member obligations are agreed upon. Normal behaviors are established (meeting attendance, on time, etc).	Team members actively work towards project completion. Actively help each other and fill in the gaps when needed.
Tools of the Trade	- Roles Responsibilities and Expectations. - Team charter outlining purpose and goal. - Documented decision rights. - Turnaround premise (basis) document. - Teambuilding (ice breaking) exercise. - Positive work environment. -co-locate team members.	- Meeting routine with standard agenda. - Open discussion of status of reaching team goals. - Monitor contributor behaviors and performance. Remove team destroyers. - Flexibility to adjust RREs as appropriate.	- Reinforce attendance expectations. - Modification of milestone assignments as appropriate. - Stick to standard routine and meeting frequency. - Required meeting attendance.	- Get out of the way.

Symptoms: There are some common symptoms which are indicators that a team is not or will not reach high performance levels. Some considerations are the following:

1) Team members don't like each other.
2) The atmosphere is one in which team members become defensive and withdrawn limiting their contribution.
3) The team develops "norms" or normal group behaviors that negatively impact cohesion. For example:
    a. Meetings do not start on time.
    b. People routinely miss meetings.
    c. There are constant interruptions.
    d. It becomes acceptable to miss deadlines for deliverables.
4) Meeting follow no set agenda and members feel they are not productive. Nothing gets resolved, items are tabled, action items are not set with responsible individuals and due dates.
5) Ownership of the team's mission accomplishment is limited to a few "core" individuals. This can be evidenced by meeting activity being carried on by a few key personnel while the remainder of participants warm chairs
6) One or multiple members exhibit team destroyer behaviors (nitpick, threaten and warn, withhold input, find only problems, finger pointing, etc). This may be evidenced by direct

observation of these behaviors or the fact that problems are only resolved when certain people are not present.

7) Frequent turnover of personnel (often due to new assignments internal to the company, or attrition). This in and of itself is not a symptom of poor team performance, but it is a frequent contributor.
8) "They" blame mentality.
9) Team member offices are geographically spread out and they are not close enough together to gel as a team.

III. Effective Communications:

Effective communications is a cornerstone to success: Within the context of this paper, communication is the sharing of ideas (both good and bad). The best of people with the best of intentions make decisions at all levels within an organization based on their interpretation of the information which they have available to them.

Accurate and effective communications in its many forms is the cornerstone of alignment and is a significant factor affecting turnaround performance.

"Making good decisions is a crucial skill at every level."

Peter Drucker

Vice Admiral Zumwalt, former Chief of Naval Operations, was the first commanding officer in the US Navy to use a form of communications known as "The Plan of the Day", or PoD. The PoD is a very simple document, usually one page long which is posted throughout the ship. It discusses the day's schedule, the ship's goals and lists any upcoming events of significance. The PoD turned into a simple but powerful tool because it allowed every sailor onboard, from the Captain to the new recruit, to know what was coming up, feel included and make personal decisions which supported the ship's goals. The PoD is so powerful that it is a common practice in all US Navy vessels to this day.

The figure above shows the compounding effect that "Team Alignment" can have on turnaround performance. Effective communications is the cornerstone of good team alignment. A team with the highest level of planning status can expect, on average, a 40% increase in overages if team members are not aligned.

"Actions speak louder than words" and people listen. Communications generally takes the form of written or spoken word, but there is, almost without exception, the presence of very subtle and often unintended forms of communications. These "below the surface" communications can lead to decisions being made and action being taken which is not consistent with turnaround success. A negative and emotional reaction to bad news communicates to the messenger that he or she should only bring good news. Senior leadership not attending safety audits communicates to middle management that safety audits are not worth their time. A chance meeting between senior leadership and an individual contributor in the hallway without a kind "hello" communicates that senior leader is angry at the individual contributor and leads to defensiveness. The leadership team holding on to permission levels appropriate for middle management communicates that they do not trust middle management decisions. Delays in approval of documentation by senior leadership communicates that the issues addressed in the documents are not important, that efforts to produce the documents were wasted and that the policies expressed in the documents do not need to be followed.

The potentially damaging impact that communications can have on goals and actions is explored further below.

Tools of the Trade: The following items are have been used to effectively communicate to organizations:

1) Company-wide broadcast of upcoming turnaround related events. This often takes the form of strategically located monitors broadcasting a looped slideshow, company newsletters which include key turnaround information, or strategically located message boards.
2) MBWA: Management by Walking Around as it's commonly referred to is senior leadership leaving the confines of their office to conduct desk visits. Listen to people's concerns, understand the problems, reinforce the positives and show general interest.
3) Periodic meetings with structured agendas are critical. Most turnaround organizations have weekly core meetings of varying levels of functionality. They more often than not fall flat when it comes to the steering team and strategy team. The resulting situation for the turnaround core team is one of responsibility without authority. Their span of influence often does not reach to the key contributors which are crucially needed for preparations. Periodic, dedicated meetings which follow a set agenda are crucial to keeping the leadership engaged and knowledgeable of turnaround processes. This improved knowledge and understanding of the turnaround's preparation status will help bring resources to bear in the right spot.
4) Town Hall Meetings: A town hall meeting is a structured meeting where senior leadership (often the site manager) assembles each shift individually, and day workers to discuss the upcoming turnaround. He or she expresses (through words and actions) the importance of the event.
5) Leadership communicates priorities with actions. Milestone reviews, audit participation, periodic attendance at core team meetings.
6) Celebration of successes. This is crucial to reinforce positive performance and reinforce recent changes. Some organizations fall flat here when leadership does not want to celebrate wins because of past failures. This generally occurs in highly political environments where leadership is disconnected to the event. It communicates a level of distance and isolation to those who are working hard to achieve success on future events.
7) Readiness reviews. A readiness review is an independent assessment of a turnarounds preparation status by an entity that is not directly involved in the turnaround's preparation. One value of the readiness review is that it provides a "cold-eye" look at the current status of the event's preparation. When done correctly these reviews deliver a factual message directly to leadership that is not encumbered by internal politics. TA managers have indicated that although they already know the status of the event's readiness, the reviews help reinforce the communications of that status to the leadership team and provide external validation for resource assignment.
8) Co-location of team members. This is probably the single most effective thing that can be done to build team cohesiveness and improve communications.
9) Publish meeting minutes with the expectation that each team member communicate meeting status to his/her subordinates as appropriate.

Symptoms:

1) The site relies on "trickle down" communications. If there are no formal communications channel that is designed to reach the entire site with a consistent message, then the only way for the message to get out is informal water cooler talk. Half truths, inconsistencies and many other problems can be headed off with a proactive communications plan.

"A lie gets half way around the world before the truth has a chance to get its pants on."

Winston Churchill

2) Meetings and communications are not tailored to the audience (time wasters). This often manifests itself in long meetings in which each person's contributory part lasts mere minutes. For the rest of the time they must sit and listen to items of which they have no interest or involvement. This communicates to the individual that the meeting organizer does not care about the individual's effective use of time and would rather schedule meetings for his or her own personal convenience.
3) Efforts are silo'd. This can take many forms, but one of the most common is that capital projects planning and turnaround planning are two entities separated by a common purpose. Each group is waiting for the same thing from the other group, but neither picks up the phone and dials the other.
4) Misaligned due dates. Often different departments are working off of different deliverable due dates. The most common (again) is a misalignment between turnaround planning and capital planning, and it typically takes the following form: capital is expecting issue for construction drawings to be issued at 15 days prior to feed out, while the turnaround team is expecting to receive all IFCs 60 days prior to feed out.
5) Meetings notes are not kept or published.
6) Action registers are not maintained.
7) The only people who know the TA status are the TA manager, maintenance director and planners.

IV. Goals, Goal Alignment and Stealth Reward Systems

What is it and why is it important: Goal alignment is the alignment of personnel around a series of common goals. This section lightly brushes over goal theory and formal (explicit) goals, but rather concentrates on the concept of implicit goals and associated rewards systems which influence people's actions.

The up side:

"Any goal improves performance over no goals at all."

Edwin A. Lock and Gary P. Latham

Goals are linked to action if people understand them, they believe they can accomplish them, they have a strategy to carry them out, and they are committed to them.

The down side: Goals can be confusing.

Explicit goals: Goals in the traditional sense are handed out by one's supervisor in the form of a written or verbal communication. These, I will call explicit goals. These goals are explicit in the sense that someone stated "this is your goal . . . ." to another person.

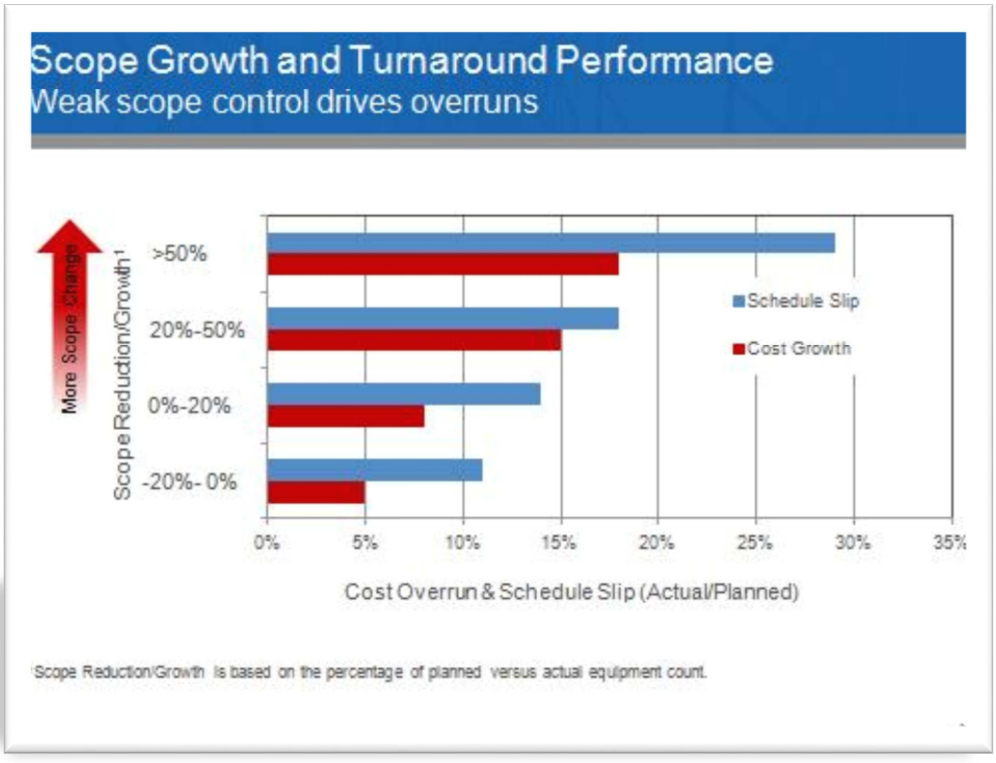
Implicit goals: Implicit goals are more subtle. As the title suggests, they are often implied and not directly stated. These implicit goals often conflict with explicit goals and incentivize individuals to take action (sometimes unwittingly) which may be contradictory to the overall well being of the organization. Implicit goals are communicated through actions, communications and rewards systems.

What we hope for in people's actions and what we reward are often contradictory. In the action of explicit goals, implicit goals can become dominant drivers in the determination of people's actions, or when explicit goals are undermined (unintentionally) through leadership's actions. Quite often goals (both explicit and implicit) contradict themselves leading to inaction or the wrong actions.

With that in mind, it is very common that leadership hopes for turnaround success, but inadvertently lays the groundwork for failure through a conflicting reward system.

For example:

Statistically there is a clear link between scope growth, schedule slip and cost overrun. Sites often go through monumental, yet ineffective efforts to prevent scope growth.



"I've set a final due date for scope freeze! I've told everybody to get their scope items in! Why do we have scope growth?"

Consider the following:

1) An explicit goal is stated to obtain a high state of readiness resulting in a highly predictable cost and schedule for a turnaround. To do this, the turnaround team is assigned the task of building milestones and cutting off scope at 12 months prior to the event in order to conduct detailed planning.
2) Conflicting implicit goal: At T-12 months, highly energized daily turnover meetings with leadership focus on immediate operational concerns. Additionally, operations day supervisors (who have been ignoring e-mails from the TA manger) do not believe TA planning efforts should start this early. The implication that TA scope generation is a low priority is reinforced by the reluctance to gather scope.
3) The result: The TA never obtains a good repair scope until approximately 60 days prior to the event. There is a significant amount of approved additional work requests (>95%). They are legitimate items, but the lateness of their entry greatly increases costs and schedule.

Example 2:

1) Explicit goal: The site leadership has set a goal of having a leak-free startup and has decided that an improved flange assembly process is required.
2) Implicit conflicting goal: The engineer assigned the responsibility for writing the new flange assembly process has implied based on the TA timing that he needs to complete the new assembly process before the equipment on the unit starts to be re-assembled.
3) Result: The plan is implemented during the first week of the turnaround. New gaskets, bolts and washers must be expedited. The pre-purchased material is no longer authorized for usage. In the confusion, some material is double and triple ordered. There is a significant amount of additional costs and delays.

To explore this further, people's actions are often influenced by informal rewards systems. The table below lists several common conflicting reward systems.

We hope for	**. . . but we often reward**	**What we receive**
Early scope definition	Unrelated shorter term activities.	Late influx of work scope that should have been identified months earlier.
Teamwork	Individual Effort	People make decisions in their own best interest at the detriment of the team.
Meeting attendance	Crisis Management	Misaligned team, high level of absenteeism, poor communications.
Candor; surfacing of bad news early	Reporting good news, agreeing with the boss (social climbing).	Bad news is never reported. Decisions are made in a vacuum.
Smooth integration of key initiatives.	Individual effort needed to generate the initiative.	Steep organizational learning curve, inefficiencies, rework and additional costs.
Cross organizational alignment of turnaround deliverables.	Performance of these deliverables without any recognition of their interlocking nature.	Cascading effect of late deliverables and associated lack of readiness.
Reliable plant with predictable failure scenarios.	The crisis management cowboy (person who stayed late and fixed the crisis). Associated overtime.	Reactionary culture with little interest in fixing systemic problems.
Be told what is really going on (good and bad).	Reward only success and punish failures.	Personnel fear the appearance of failure. Failures are framed as successes, or obscured.

Tools of the Trade:

1) Personal annual goals for all team members have turnaround performance as a factor. This includes top management.
2) A concerted effort is made to tie milestones across multiple departments into a single list that can be verified and communicated to the organization. This should have integrated timing, responsibility for completion divided amongst the various managers, taks assigned by person with hard due dates.
3) Premise document outlining TA goals that is endorsed by the TA team. This communicates leadership's stance on the importance of the TA and its goals. Especially important is its value in communicating scope collection timing, responsibilities, and criteria (what's in/out).
4) Strong extra work process (with teeth).
5) Have each steering or strategy team member, as a routine, brief the status of his/her department's deliverables to the turnaround. This is intended to have a trickle-down effect of goal alignment across the multiple departments.

Symptoms:

1) Poor turnaround meeting attendance (at all levels).
2) No single milestone plan. When asked, nobody can produce it.
3) Milestones are not met. Existing patterns in missing milestones often indicate goal misalignment.
4) Nobody outside of the TA core team can provide any details about the event.
5) There is no premise document, it is not endorsed by the strategy team or it has not been widely distributed.
6) Team members, when asked, do not know what their assigned deliverables are or when they are due.
7) The flood gates for scope open 30-60 days prior to the TA starting.
8) The TA team cannot get any deliverables from anybody outside of the TA team without senior leadership involvement.

V. Personnel and Resource Assignment:

Resource Assignments: Resource assignment, within this context, is the method by which personnel are given the task to and made available for participation in turnaround preparations. Conceptually it is very easy to understand, but in practicality it is very difficult to accomplish. The first sign of resource gridlock is often the TA manager's proclamation "I asked for the people, but have received none" and the second is the functional managers statement "I've received the request, but I can't give them up until I know what they are going to do."

If the goals are misaligned, then it is very difficult for functional managers to let go of vital resources needed to support their non TA goals. It is often very challenging to get resource assignments far ahead of the turnaround. Resource assignment then becomes intricate dance involving senior leadership, the TA manager and the functional managers.

If one approaches resource assignment like a negotiation, the victor is often the person who is better prepared and who can better communicate his needs. To this end, a formal document can be used to formulate and communicate resource needs.

Tools of the trade:

1) Resource plan: This document often takes the form of a spreadsheet. The vertical access is the role while the horizontal access is the timing. The data that fills in the spreadsheet is the level of commitment. It is not an organizational chart.
    a. Estimates level of manpower needed, the level of dedication and the timing.
    b. Based on milestones.
    c. It is approved by the strategy team (leadership team).
    d. Competing initiatives are folded into the plan. For example if an engineer is 100% assigned to a PHA audit from February to March then she cannot be assigned 25% to turnaround preparations during the same time period.

e. Red boxes (similar to out of specification log readings) provide a visual clue to highlight key shortages.
f. Continual monitoring. Once the resource plan is implemented, it is important to revisit the staffing levels periodically.

Symptoms:

1) There is no resource plan.
2) Requests for manpower are not met, discussed or addressed.
3) Milestones are behind.
4) Vacancies in key support roles.

VI. Decisions:

Everybody makes decisions. If one thinks of an organization as a giant information management system, then each person within that organization is handling some information and making decisions about what to do with it.

"Most discussions of decision making assume that only senior executives make decisions or that only senior executives' decisions matter. This is a dangerous mistake."

Peter Drucker

We all make decisions every day, but surprisingly 50% of all organizational decisions are considered failures after the fact. There are many contributing factors, but the method at which a decision is reached is a key contributor. *In Surprising but true: Half the decisions in organizations fail,* Paul C. Nutt found that decisions made by edict have a 35% success rate while decisions made employing a collaborative discovery process are nearly twice as likely to be considered success.

An example of a common decision by edict vs. a decision employing a collaborative decision process is as follows: Recent market changes have necessitated a major sustainability project be implemented in the turnaround coming up six months from now. The market conditions necessitated the project, and the first major decision was how to implement it. Due to funding constraints, the edict was made by the corporate capital group to turn the project over to the site for execution without support from the project engineers. The result was that the site experienced significant delays during execution when the original design engineers were not available to answer questions. A better collaborative decision would have been for the project to provide site engineering support during execution.

Approximately two thirds of the failures observed by Mr. Nutt had managers who imposed solutions, limited the search for alternatives and used power to implement their plans. This is not surprising when you consider that each of us is limited by our cognitive abilities, personal bias, and our ability to process what information we have available to us.

Expanding this concept a little further, consideration of team members as decision makers lends credence to the concept that functional teams (teams in which contributors effectively communicate and collaborate) with effective communications are more likely to be successful.

Some key contributors to bad decisions are the following: Personal bias, faulty or incomplete communications, framing, risk seeking and social pressures.

Framing: The way a problem is presented to the decision maker has a tremendous amount of influence on the decision. The framing for failures and future decisions often takes this form: "Our contractors performed very poorly, so we are using different contractors next time." Another frame of the same event would be the following: "Our planning team could not prepare the details necessary for our contractors to execute the job. Therefore they were not able to execute as well as they had hoped."

"And whether you're an honest man, or whether you're a thief, depends on whose solicitor has given me my brief."

Benjamin Franklin

Risk Seeking: People tend to seek the more risky solutions in the absence of quantifiable probabilities and data if the decision is framed as a choice between two losses.

Social Pressures: Individual members tend to conform to the group framing and decisions, this amplifies the above effects.

This can manifest itself when decisions are made which negatively impact a turnaround's chances for success and often takes the form of new initiatives.

The decision to implement an initiative can significantly impact an organization's ability to accomplish the task at hand because people do not understand them. Organizational learning occurs when significant changes take place and the way things used to get done is replaced by the way things are going to get done.

Consider the following: Most TA mangers are "do-ers" with proven track records of success. They have a high internal locus of control. A new corporate policy on permit writing has just been finalized with the direction to implement as soon as possible. The Health, Safety and Environmental manager is a strong proponent of implementing the new policy in time for the turnaround two months from now. The HSE manager frames his pro argument to state "We don't want any injuries resulting from not having this policy in place. We need to do this ASAP." The HSE manager's goals are partially misaligned with the TA manager. The TA manager wants a safe turnaround (either with or without the new policy), but he also has responsibilities to execute on budget and on schedule which the HSE manager does not share. If, in turn, the policy implementation was framed as "The new policy is complete, but the organization isn't ready to effectively implement it before the turnaround and it may add $2 million in lost productivity. Additionally our safety record from permits was flawless last turnaround."

Finally, the site manager pipes up and says "Why can't you implement this policy effectively now? You are the TA manager and ops managers. Get it done!" (decision by edict). The ops and TA managers do not believe this policy can be effectively implemented, but they follow through as directed. Fearing over-budget the TA manager pads his estimates in an attempt to cover the additional costs he fears will be coming (hope for cost effective estimate, receive padded estimate).

Tools of the trade:

1) Improve the chances that decisions are adopted by the organization and not undermined (either intentionally or unintentionally).
    a. Managers make need for action clear at the outset.
    b. Set clear objectives.
    c. Get people to participate in the decision process when possible.
2) Explore the trade-offs and risks associated with certain decisions.
    a. What is the impact on scope?
    b. How will this impact the ability to optimize the schedule?
    c. Can the organization absorb the changes and still function?
3) Understand and accept the financial risks associated with late changes.
4) Institutionalize initiative management by establishing a policy to cut off new initiatives 6 to 9 months prior to the TA.
5) For those initiatives which are implemented, organize a cross-functional team to explore the new initiative and work out the operational details of how it to be executed. Who does what, what goes where, who keeps what, etc.

Symptoms that the patient is on life support:

1) Decisions are not made in time for action to take place.
2) Individual team contributors do not feel empowered to make decisions.
3) When asked, team members blame "them" for bad decisions or decision they do not agree with. This indicates disenfranchisement of middle management and/or poor communications on the justifications of decisions.
4) The organization suffers from "analysis by paralysis." No decisions are made because enough information is never available.

Strategy Team:

Why it's so important: Teams, goals, resources, communications and decisions are all key contributing factors to turnaround success, but the single most important factor is the involvement of the site's strategy team. More often than not, the strategy team closely overlaps with the leadership team giving them a significant amount of influence on turnaround success (or failure). The goals communicated by the leadership team through word and action, their level of interaction, accessibility and overall demeanor is critical to establishing a sense of commonality and cooperation that allow the teams to flourish. To successfully carry out these roles, the leadership team itself must be functional and disciplined.

Some key roles of the strategy team include the following:

1) Crystallizing the mission of the team as defined by senior management
2) Establishing the mission relevance to the broad organizational goals
3) Identifying key stakeholders and their expectations
4) Listing requirements for integration with organizational group/units
5) Devising resource allocation plans around team goals and needed links
6) Determining performance management metrics.

Tools of the Trade:

1) Meeting routine that is periodic and dedicated exclusively to the turnaround.
2) Provides oversight to the steering team by periodically attending meetings. The best practice is to assign RLT members to attend steering team meetings on a rotating basis.
3) Leadership team members discuss the status of milestones that are assigned to their departments. This builds shared ownership and accountability.
4) Comprehensive premise document that is signed by all steering team members.
5) Aligned departmental goals with TA success reflected in individual performance targets.
6) Strategy team charter is complete, signed and active.
7) Approved and functioning resource plan assigning resources to the turnaround.

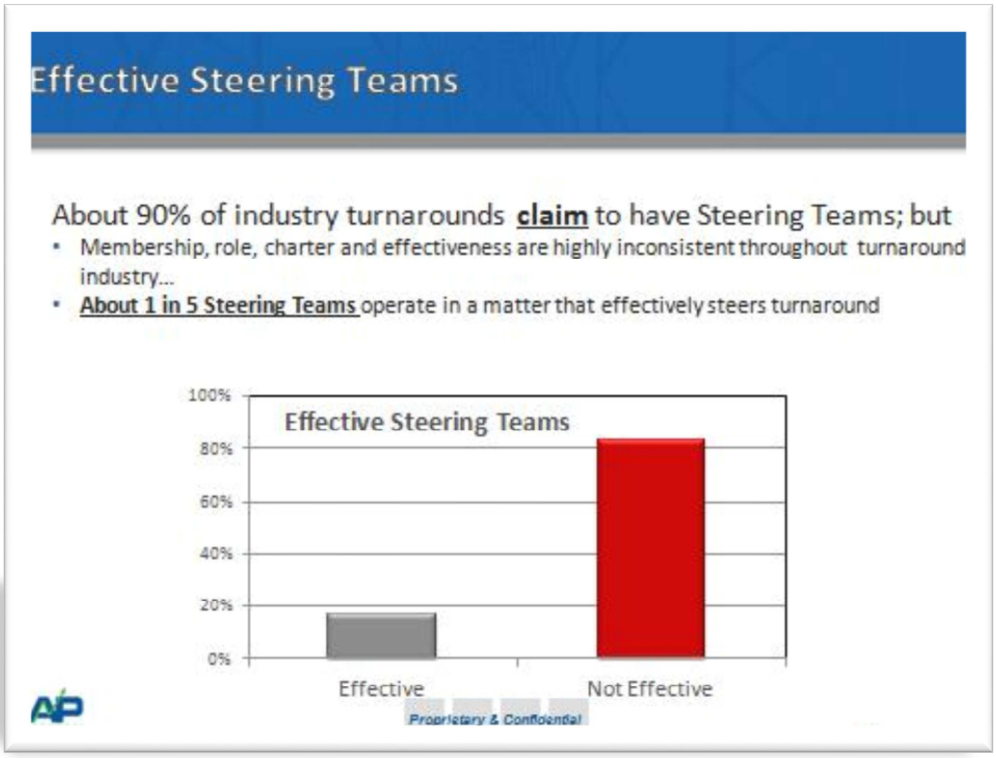
Symptoms that the patient is on life support:

1) RLT too busy to meet to discuss the turnaround.
2) TA meetings are ad-hoc, or a sub-set of other periodic meetings.
3) Finger pointing, bickering.
4) Abdication of responsibilities.
5) Lack of attendance and contribution is tolerated.
6) Can't reach a quorum necessary to make a decision.
7) Are TA meetings ad-hoc and only when called by the TA manager.

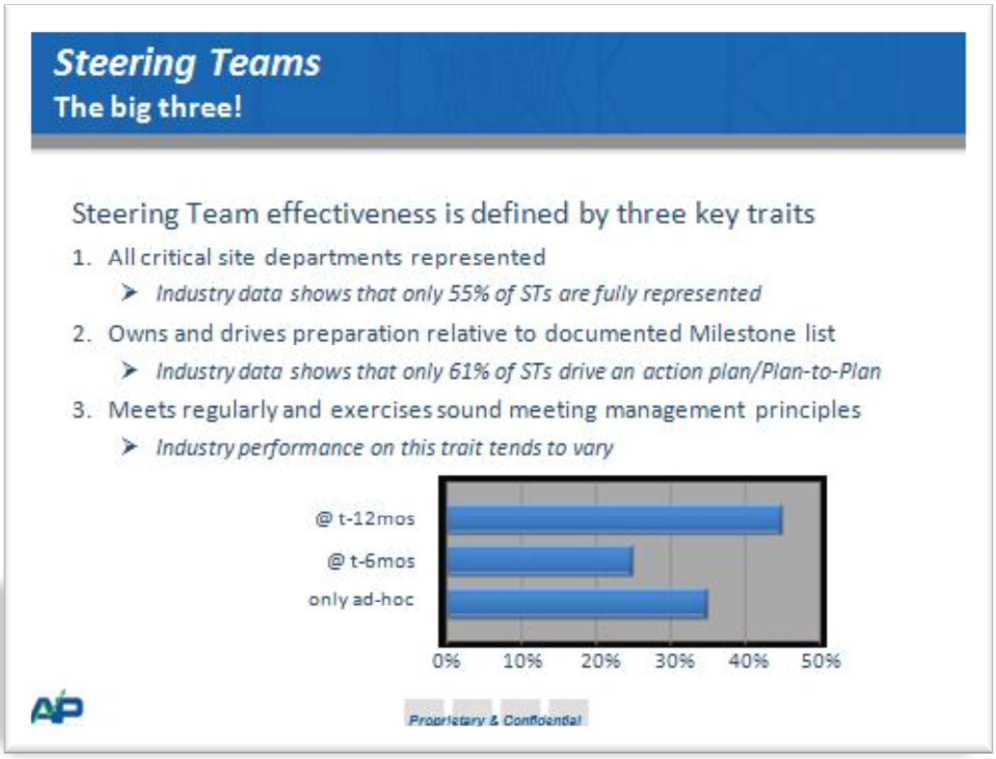
Steering Team:

Why it's so important: The steering team is typically a group of middle managers who share direct functional responsibility for turnaround performance. While team composition fluctuates, it is often composed of managers in the following disciplines: inspection, safety, reliability, asset management, projects, and process technical.

The steering team primarily functions as the source of tactical guidance for the turnaround preparations. They provide resources, scope approval, buy-in to the current level of readiness, drive milestone accomplishment, and act as a communications conduit.

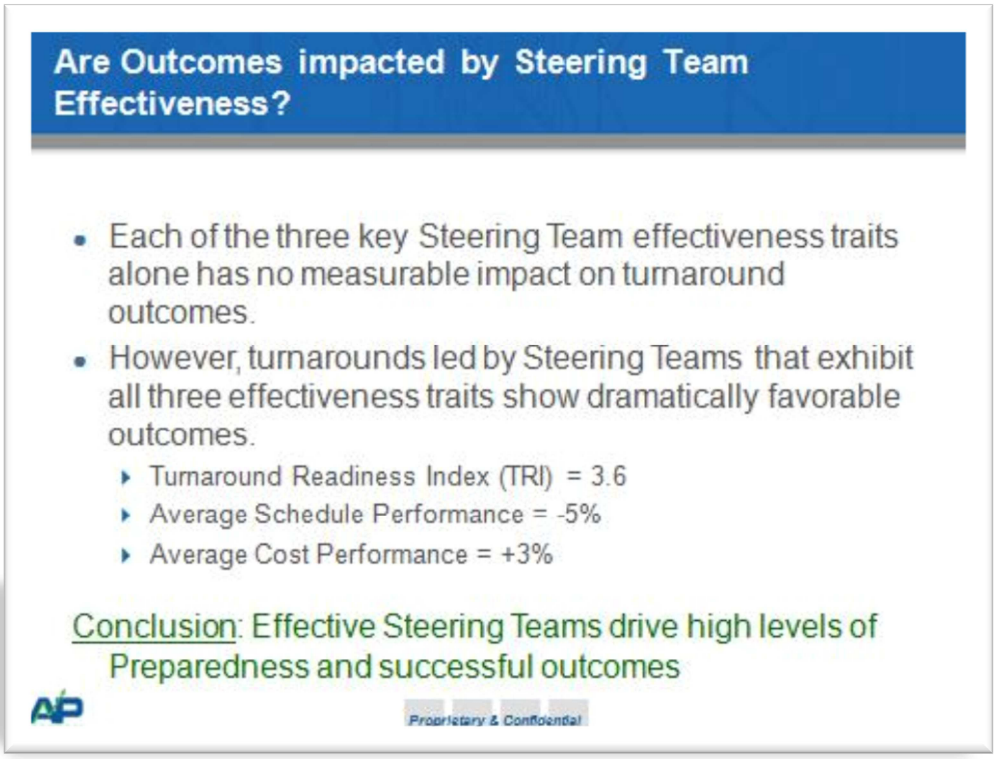


As the figure above shows, only about 1 in 5 steering teams operate in a manner that effectively steers turnaround preparations.



Ideally the responsibility for turnaround preparations is shared among the steering team members. Each functional discipline manager monitors the contribution of the contributors in his or her department and, as a member of the steering team, and helps ensure their success. In reality this is typically not the case. More often than not, steering teams are not functioning at this level and only a handful of members are briefed on the turnaround status or readiness.

As the figure below shows, steering team effectiveness improves dramatically when the big 3 traits (membership, owns preparations, meets regularly) are present.



Tools of the trade:

1) Standard meeting routine. This is typically on a monthly basis, but can be more frequently as the TA approaches.
2) Cross functional team with all site departments represented.
3) Milestones: Comprehensive set of turnaround preparation milestones that are inclusive of every department's contributions. They can be used to track progress, identify shortcomings and align the team on corrective actions.
    a. Responsible managers own their milestones.
    b. Push compliance through their departments.
    c. Ensure activities are being done on time.
    d. Do more than just look at red/yellow/green status, but really understand why things are behind.
    e. Routine when milestones are missed (talk with maintenance manager).
4) Steering team charter to lay out expectations for roles, meeting attendance, meeting frequency, distributed ownership and member functions.
5) Aligned personal goals.
6) Unified front and actions send a clear message to the team (i.e. push back on scope growth).
7) Carry forward lessons learned.
    a. Capture corporate knowledge and carry it forward to the next TA.
    b. Often lessons learned are very informal and splintered.
    c. Most steering teams have moved on by the post TA phases and lessons learned are never captured in an organized fashion.

Symptoms that the patient is on life support:

1) Only a few members of the team know the TA status or contribute to TA readiness.
2) Members are too busy to meet to discuss the turnaround.
3) TA meetings are ad-hoc, or a sub-set of other periodic meetings.
4) Finger pointing, bickering.
5) Abdication of responsibilities.
6) Lack of attendance and contribution is tolerated.
7) Can't reach a quorum necessary to make a decision.
8) Are TA meetings ad-hoc and only when called by the TA manager.

Closing

A healthy and functioning team is the cornerstone of success in the modern refineries and petrochemical plants. Through proper employment of various "tools of the trade" leadership can systematically cultivate an environment where team work is enhanced and performance is improved throughout the entire organization.

About the Author:

Peter Shirley – Senrior Consultant

Pete Shirley is a senior consultant based in the AP-Networks Houston office. Pete has twenty years of leadership experience in multiple work cultures including US Navy nuclear submarines, refining, petrochemical and associated service industry. This background gives him a wide technical understanding of multiple disciplines from both an owner and consultant perspective.

Prior to joining AP-Networks, Pete was the Vice President/Division Manager at United Laboratories International, where he led their global decontamination products and services division. Pete also has numerous years of experience as an owner. As the reliability section lead at Celanese Chemicals in Clear Lake Texas, Pete led the teams responsible for reliability engineering, inspections and turnarounds. He also served in many leadership and staff roles at Sunoco Northeast Refining including the roles of maintenance superintendent, turnaround manager and reliability engineer. While at Celanese and Sunoco, Pete managed several planned and unplanned turnarounds. Pete has also authored or presented technical topics at TINC, NPRA, Middle East PETROTECH, The International Refiner's Conference, Sulfur.com, and Coking.com.

Pete started his career serving as a nuclear engineering trained submarine officer in the US Navy. As a division officer, operations watch officer, maintenance duty officer and department head he gained extensive hands-on experience in leadership and management. Pete holds a BS in Mechanical Engineering from the University of Maryland at College Park and an MBA from the NYU Stern School of Business.