

CHALLENGING OLD PARADIGMS: NEW ROLES FOR RAIL SAFETY MANAGERS

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INTRODUCTION

Mark Twain once observed about the medical profession that because the only requirements for practicing medicine were ignorance and confidence, nearly anyone could do it. We cannot afford to manage safety through ignorance; this is the era of confidence and competence. Ignorance and safety cannot co-exist. Unfortunately, ignorance has been a dominant feature among a number of safety managers.

It would be difficult to understand railway safety without understanding railway history. In other words, if you want to understand history you must look at the bigger picture (not people or things). For example, if you want to understand the history of Germany, don't look at Hitler, but you should look at white supremacy. If you want to understand African history, look at slavery.

The advent of railroads in the 1820s was a "killer application" (Downer and Mui, 1998). A killer application is one that alters the way society functions. With railroads, people could travel only between fixed points on the same track, based on a dictated timetable. The fixed plans, fixed rail, fixed stations and the fixed time schedule created a fixed mindset among railway employees and management. Rubinstein and Firstenberg (1999) observed that railroads created a monolithic organisation, with no room for maneuverability. Today we must be mindful of the fact that the value is shifting from trains to integrated logistics. This calls for our paradigms to change, but old habits die-hard!

The primitive railway placed more emphasis on utility rather than safety. In the beginning wagons were drawn by horses and safety was not an issue. With the advent of steam locomotives in the 1830s which resulted in increased speed and weight of trains, safety became an important element (Shaw, 1978).

In the past, we must admit, that safety endeavours have lagged considerably behind, the emphasis was only on speed and power. Who has to change, safety or safety managers? Safety would never improve if people do not change. We really have to change our paradigms.

Deming threw down the gauntlet to all safety managers: "Management must feel the pain and dissatisfaction with past performance and must have the courage to change. They must break out of line, even to the point of exile among their peers. There must be a burning desire to transform their style of management" (Dennis, 1997).

It is axiomatic that safety management is in a crisis. Why do organisations choose to perish rather than taking heed of Deming's challenge? Firstly these organisations cannot learn and because of their none learning ethic they are learning disabled. Secondly, suffer from what (Sheedy et al, 1996) call "paradigm paralysis", their central nervous system has been damaged.

Railway safety suffered a great deal because of a Newtonian mindset. Newton believed that the world was mechanistic and limited (Korten, 1999). All our organisational structures were based on this theory. The railroads in particular were founded on the Newtonian theory (everything was fixed), no one was allowed to step across the line. Everything was confined to the box, safety was no exception. It is cheering to note that the world is not mechanistic, it is an infinite set of possibilities (the world is limitless). This was further enhanced by astronomer, James Jeans, "The universe begins to look more like a giant thought than like a great machine"(Sheehy, 1996).

It is important to note that safety is not a new management responsibility. The code of laws of the king of Babylon king Hammurabi (Circa 220 BC) prescribed punishment of overseers for injuries suffered by workers. The first five books of Moses in the Old Testament also contain safety laws (Dennis, 1997).

Why do we still use ancient methods to manage safety? Our paradigms have not yet changed. If we change our paradigms, safety will also improve. To achieve this, we need safety managers with Emotional Intelligence (Mathebula, 1999).

1950'S MENTAL MODEL FOR BUSINESS

Science has a profound impact on how we construct our world. As a result we shape and direct our organisations according to the science of our time. Inherent in the old mental models are three mechanistic metaphors: universe as clock, brain as computer, and learning as tabula rasa (blank slate).

In the 1950's workers were not expected to disrupt stability, the workforce was highly controlled. The events were not reasoned and messages were also managed. One way top down communication was the name of the game. People were deeply engrossed in activities, not in processes and strategies. In addition, the pyramid structure was commonplace followed by the box approach.

Troubleshooting became a norm; end-of-the-pipe thinking involved an emphasis on accident investigation. This type of mindset also entailed an emphasis on regulatory compliance. More resources were expended on accident investigation and not on accident prevention. Those who violated the rules were severely punished by management.

Dennis(1997) observed that increased supervision and heavy discipline do not improve safety at all. Coercive power cannot improve safety performance. Our paradigm has to shift from a machine-based "clockwork" conception of the universe to a complex adaptive system perspective. The employment of the systems approach is vital in reducing entropy in safety management.

The fixed railway mindset chimed well in the 1950`s. Our major problem today in the railway is value shift. The value has shifted from trains, trucks, and planes to Integrated Logistic. The mental models of the 1950`s no longer hold water. The value shift in the railway industry compels us to look at safety from a new perspective. The fixed railway mentality is not a solution to our problems. Workers are injured, liabilities grow, assets are destroyed, and the morale is at low ebb and profits decline. This situation warrants the attention of all rail safety managers.

We are at the cusp of a new era. We can no longer afford to employ a fixed mind in a flexible world. The clockwork organisation does not address safety. We definitely need a change of paradigm. The universe definitely looks like a giant thought not like giant clock. Safety managers must realize that the emperor has no clothes, many safety leaders today are ignoring the fact that the organizational system they represent is no longer functional.

MENTAL MODEL FOR BUSINESS IN THE NEW MILLENNIUM

Let me borrow language from Peter Drucker: “The organization is, however, more than a machine, as it is in Fayol’s structure. It is more economic, defined by results in the marketplace. The organization is, above all, *social*. It is people. Its purpose must therefore be to make the strengths of people effective and their weaknesses irrelevant”.(Drucker, 1996).

The organizations of this millennium are simply described as “virtual”; you can describe what they do but cannot see them. The safety manager should understand the dynamics of managing in this new age. The workforce has changed completely (workers’ rights are now a priority). The priorities for this new age are the following: speed of response, quality, continuous big changes, and battle for market share, multicultural management, participative management and globalization.

This millennium would call for a multiviewpoint and multidisciplinary approach on the part of rail safety professionals.

TABLE 1

MENTAL MODEL FOR CHANGE AT SPOORNET:	
Domestic South African company	World Class Global Company
Competition	New entrants into the market
Quality as a Product	Quality as a way of managing
Portfolio of Separate Strategies	Integrated business strategies
Comparing ourselves to ourselves	International benchmarking
Customer as end point	Customer as boss
Order driven	Value Driven
Compensation- reward for all	Performance related pay

Spoornet Industry program (1996)

CREDIBILITY AS A FOUNDATION

Mathebula argued (1999) that safety is undermanaged and underled. While we have argued that much has changed in organisations, it is important to note that in creating a new management paradigm, there are some key principles which remain unchanged. James Kouzes and Barry Posner (1995) researched characteristics that employees most admire about their leaders. Since the early 1980 the top four characteristics have not changed. These characteristics are **honesty, forward-looking, inspiring and competency**. They refer to these four qualities as *credibility*.

Smith and Kelly (1997) argue that leadership is based on six dimensions: conviction, character, care, courage, composure, and competence. It was William Chiat (1998) who once wrote: "Therefore, we believe credibility is a characteristic, which underlies all aspects of the role and competencies of an effective manager. Unless one can establish credibility with their employees, the rest of the discussion is meaningless".

More often than not, managers misinterpret competency as the ability to do the job of each person they supervise. Competency refers to the manager's ability to manage as a capable and effective leader. "Functional competence" argue Kouzes and Posner may be necessary but insufficient; the leader is also expected to bring added value to the position..."Expertise in leadership skills...the ability to challenge, inspire, enable, model and encourage must be demonstrated as well, if leaders are to be seen as capable". For this reason, understanding and integrating the roles and competencies of a safety manager are critical issues to their effectiveness and the success of the organisation.

ROLES OF RAIL SAFETY MANAGERS

Sociologists say that he who occupies a status must also play the role. What is the role of a rail safety manager? A number of people would say the role of a manager is to *plan, organize, coordinate, and control*. It is very difficult to put these four functions into practice. Mintzeberg (1998) noted that the four words once introduced by Henri Fayol tell us little about the role of a manager. A number of managers start off by carving out a wrong plan. They go on organizing this faulty plan. They also take infinite pains to coordinate the plan and then take control over an erroneous plan. Safety managers do not have to be trapped into the four words. The role of a rail safety manager goes beyond the four traditional roles. If rail safety managers confine themselves to this four-cornered box, safety performance would not improve. Rail safety managers must step across the line for the common good of safety.

1. COMMUNICATOR ROLE

Communication is good business. Communication is essential for creating a safe working environment. We live in an ever-changing environment in which communication is vital. Communication eases the pain of change. Information hoarding by management is indeed a thorny issue. In a number of organizations there is a strong undercurrent of anger, frustration and resentment directed toward invisible management. The wellspring of safety performance comes through the disclosure of information to employees. Our South African managers think of power in zero-sum ways. If they have power, others do not. If others do, they don't. A number of them think that information hoarding enhances oneself and diminishes those who do not have the information. This era calls for safety managers to disseminate information as soon as possible to their employees. Most managers forget that this is the information age. Employees have a right to receive information on time. For example, if there is a collision or a derailment it is up to the manager to communicate to all his employees. Imagine what could happen if the weather bureau could decide to hoard the weather details from the public. People would be soaked in the rain, they may suffer from oppressive heat or they may catch pneumonia. Why should the bureau keep the public informed about the weather? So that we can wrap up warmly or bundle up. Workplace values today parallel societal values. People expect democracy in the workplace in the form of a stimulating working environment and transparency. Rail safety managers cannot operate on a hit or miss basis in our ever-changing environment. They have to enact the role of a communicator. Communication is the glue that holds an organization together.

2. ENERGIZER ROLE

People make safety possible. The rail safety managers should be excellently equipped in energizing their employees. Rail safety managers must be “high touch” with their employees during this “high tech” era. People do not perform well when they are not motivated. Managers must create a supportive and a safety work environment to foster desired behaviors and outcomes. Employees should be given the authority to make decisions. Employees should also be allowed to make mistakes because mistakes are part of the learning curve.

Pepsi CEO Wayne Calloway said that his company had celebrated occasions where people failed publicly. His argument was that he wanted them to take risks (Farkas et al, 1995). Rubinstein and Firstenberg (1999) in their book, *The Minding Organization* encourage people to learn from errors. “Experience” they write, “is not only to know what will work...but also to know what will not work. Railway safety has always been characterized with the box approach. Policies and procedures that fail to energize employees must be replaced with simple versions (Nelson, 1997).

3. PREVENTIVE ROLE

It is a known fact that “prevention is better than cure”. We should move from accident investigation to accident prevention. Accidents must be proactively prevented. Huge efforts are expended to investigate accidents. The role of a safety manager must be a preventative one. Resources are being wasted to investigate accidents. These resources should be directed towards the prevention of accidents. The paradigm must shift from investigation to prevention. Dennis (1997) stated that traditional safety management tends to be reactive, not proactive. Reactivity does not improve safety performance.

4. COUNSELLOR ROLE

The counseling role is of overpowering importance in safety management. The heroes of the future would be those who would be enacting the counseling role, devotedly and concernedly. The manager should know whether an employee needs counseling or coaching. It would be mistaken and shortsighted to coach an employee who does not need coaching or to counsel one who needs coaching. A leader provides counseling when he realizes that a follower understands exactly what needs to be done and how it needs to be done, but does not act. Rail safety managers must consistently monitor their employees. Confusing the two roles could frustrate an individual or leader (Dickens and Dickens, 1991).

5. COACH ROLE

Rail safety managers should understand knowledge management. Knowledge management is lacking among a number of safety managers. A number of incidents happen due to the lack of knowledge on the part of the employees. A leader provides coaching when employees need to do something but does not know how to accomplish the task at hand. (Dickens and Dickens, 1991). The safety manager should be in a position to draw a line of separation between counseling and coaching. Rail safety managers need to coach their employees for the collective good of safety performance.

6. DISCIPLINARY ROLE

When sin began, retribution set in. Disciplinary measures should be taken when employees do not conform to safety requirements. There is a lot of literature on the elimination of the hierarchy in favor of the all channel network organization. The hierarchy is associated with rigid rules and procedures. On the other side of the coin, we must strike a balance between a hierarchy and the network. Rubinstein and Firstenberg (1999) maintain that we need both hierarchies and networks. They further argue that networks are prevalent in new organizations, on the other hand, it is interesting to note that hierarchies are prevalent and useful when ideas are to be implemented. Discipline should be correctional not punitive. Discipline provides the behavioral framework in an organization. Joubert (1998) believes that discipline is vital for trust, risk assurance, good governance, behavioral order, protection of rights, goodwill, integrity, ownership and asset management. The safety manager should properly enact the disciplinary role, without discipline everything would fall apart.

7. DIRECTOR ROLE

This is one of the important roles for safety managers. In this case the leader is supposed to be a torchbearer. He must provide a vision that others will follow. In this case the safety manager envisions the future, and specifically mapping out how to arrive at the future (Farkas et al, 1995). This is a proactive role; this role needs a leader who can see behind the “hills”. A number of safety managers are deeply engrossed in accident investigation. To reverse this situation, safety managers should provide a vision. Without envisioning safety performance would suffer. Rail safety managers need to envision the safety scenario. This is a major weakness in the railway. Rail safety managers must take heed of Peter Druker’s advice: “you cannot build performance on weaknesses” (1999). Safety manager should develop a” mindsight” vision. The safety manager should ensure that his organization does not suffer from paradigm paralysis.

8. MONITOR ROLE

Safety performance should be monitored at all times. Quinn et al (1996) argued that monitoring is not tantamount to surveillance. They maintain that monitoring is vital for maintaining high performance in both individuals and groups. Monitoring should answer the following questions: what are the core processes that are vital for my work? How effectively are we conducting these activities? Are we getting better at them? Mathebula (1999) maintains that monitoring is like a reverse gear, it enables the organization to revisit its activities. A rail safety manager should always enact the monitoring role. Good monitoring is effective information gathering on safety performance. This involves the gathering of statistics on safety performance and addressing deviations.

9. INNOVATOR ROLE

We live in an ever-changing environment. The safety manager should also be a change agent. Managers are responsible, as Kouzes and Postner(1995) state, for challenging the process: “search out new opportunities to change, grow, innovate, and improve”. A safety manager should understand the impact that change has on individuals and how he can help individuals to cope with change. There is a human cost of ignoring emotions on the job. For example, in a gas plant division in Canada accidents were a commonplace because safety managers didn’t understand the impact of change on individuals (Goleman, 1998). The safety manager should initiate and implement change. The safety manager should also be in a position to delegate. According Covey (1989), they’re two kinds of delegation. Gofer delegation, is where you tell a person what to do and how to do it. On

the other side, stewardship delegation, where you tell a person what to do, but you do not tell him how to do it.

10. FACILITATOR ROLE

This role compels managers to work with a group of people. This calls for a leader to manage interpersonal conflict. Today's organizations are project driven; the leader should be in a position to build a team, which will accomplish results. There are different types of teams, for example, cross-functional teams, corrective teams, self-directed teams and continuous improvement teams. It should be understood that it is difficult to build relationships because we tend to function more easily as individuals. The safety manager should also understand a team life cycle. For example, **infant stage, adolescent stage, young adult stage, established performer stage and disbandment stage** (Capezio, 1998). A number of rail safety managers are failing when it comes to the facilitator role, in their view they think that this role should be played by the human resources department. It is high time for African safety managers to move from teams to tribes. In a tribe, you have the folklore, tribe loyalty and tribe accountability; these elements are difficult to find in a team. A safety manager should know the difference between a team and a group. Interviewees in the *Harnessing the potential of Group* survey established the difference between a group and a team: "The word group tended to be associated with collections or sets of people with certain common characteristics, while the term team tended to be attached to those groups that are cooperating together for some shared purpose"(Thomas, 1997). The safety manager should know how to work with a group or a team. This role needs a manager who exercises Emotional Intelligence.

COMPETENCIES

These roles should be matched with a number of competencies. It is very difficult to enact a role if you do not have the necessary competencies. These competencies must eventually lead an organization to a competitive advantage.

Table 2 provides a matrix, which matches the competencies with each of the 10 roles.

Collaboration: Ability to help others find consensus on issues or disagreements.

Diagnosis: Ability to research, reveal, and understand the root causes of organization, process, or team problems.

Feedback: Communicating and insuring authentic two-way communication.

Self-Awareness: knowing one's internal states, preferences, resources, and intuitions

Self-Regulation: Managing one's internal states, impulses, and resources.

Motivation: Emotional tendencies that guide or facilitate reaching goals.

Empathy: Awareness of others' feelings, needs, and concerns.

Social Skills: Adeptness at inducing desirable responses in others

Questioning or cross examination skills: Objectively gathering information by various questioning methods to stimulate creativity and learning.

Relationship Skills: Successful application of verbal and nonverbal communication skills.

Intervention: Ability to objectively diagnose a situation and know what action is appropriate to take.

Group process: Understanding of group development processes.

TABLE 2
THE RELATIONSHIP BETWEEN ROLES AND COMPETENCIES

TABLE 2(A)

ROLES	COMPETENCIES					
	Collabo- ration	Diag- nosis	Feed- back	Self- Aware- ness	Self- Regula- tion	Motiva- tion
Communicator	X		X			
Energizer		X		X	X	X
Preventive	X	X				X
Counselor	X		X			X
Coach	X		X			X
Disciplinary				X	X	
Director	X	X				
Monitor	X	X	X			
Innovator	X	X		X	X	X
Facilitator	X					X

TABLE 2(B)

ROLES	COMPETENCIES					
	Empathy	Social Skills	Ques- tioning	Relation- ship Skills	Inter- vention	Group Process
Communicator			X	X		X
Energizer	X	X		X	X	
Preventive				X	X	
Counselor	X	X		X	X	
Coach	X	X		X	X	
Disciplinary			X	X		
Director		X		X	X	
Monitor			X	X		X
Innovator	X	X		X		
Facilitator	X	X		X	X	X

CONCLUSION

Safety management needs thinkers of great thoughts and doers of great deeds. This would call for considerable dexterity on the part of safety managers. It is not enough to enact a role without mastering competencies associated with that specific role. The heroes of the future would be those safety managers who would move out of the stifling fog of old paradigms into the new paradigms. At SpoorNet we believe that education is vital for safety performance. Our managers are currently being trained to master different roles and competencies. We firmly believe that with excellently equipped managers all injuries can be prevented and all exposures can be safeguarded. The major challenge of this century is to move from a blame culture to energizing employees. Employees must be recognized emotionally and intellectually. As management we must acknowledge that employees are both appreciating assets to be developed and depreciating cost to be managed. We should continually search for ways to engage our employees for the common good of safety performance. In the words of the great poet T.S. Eliot:

**We shall not cease from exploring
And the end of our exploring
Will be to arrive where we started
And know the place for the first time**

ANNEXTURE A

DEFINITION OF CONCEPTS:

a) SAFETY

According to Bird (1996) safety is defined as control of accidental loss.

b) COMPETENCE

By competence, we mean not only all forms of available assets, capabilities and knowledge, know-how and skills, technologies and equipment in the organization, but also the coordinated deployment of the above assets and capabilities.

c) PARADIGM SHIFT

Change in approach or philosophy.

d) PARADIGM PARALYSIS

When people cling to failed paradigms precisely because it was yesterday's successful innovation. Whatever the cause, the result is paradigm paralysis (Sheehy et al, 1996).

e) EMOTIONAL INTELLIGENCE

Emotional Intelligence refers to the capacity of recognizing our feelings and those of others, to motivate ourselves, and to manage emotions well in our relationships (Goleman, 1998).

f) ENTROPY

Entropy means chaos, the tendency for things to deteriorate (Dennis, 1997).

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Challenging Old Paradigms: New Roles for Rail Safety Managers

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CURRICULUM VITAE

This serves to introduce Mabila Mathebula. He holds the following qualifications: BA (Vista), BA Hons in Sociology (Unisa) and MBA (Thames Valley). He started his career as a teacher at Pace Community College (1988-1993) where he headed the department of accounting. He joined the SABC (1993-1994) as a News Producer. 1995 saw him coming to Spoornet to head the Internal Communications function. He moved to Safety Management in 1997. He visited the following countries to benchmark safety with different railways: USA, Canada, Australia and New Zealand. He presented a paper last year in Canada titled “ Linking employee engagement to Safety Performance: A Human Assets Approach ”. He developed a safety pyramid for safety management. He also developed a programme on multicultural management. He is happily married to Joy. His avocations include writing, lecturing strategic management on part-time basis as well as motivational speaking. Although he is committed to academic excellence, he also extends himself extramurally.