

Scheme of World-class Quality Safety

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Establishing a safety program to prevent injuries is not only the right thing, it is profitable too. Failure to view safety as a competitive advantage will inhibit the ability of any business to meet the challenges of the global economy. Research shows that adopting quality safety programs will positively influence the business organization's financial bottom line with a \$4 to \$6 return for every \$1 invested in safety programs. In line with the strategies of adopting quality safety programs, this paper addresses the following: 1- The integration of quality and safety in the Safety Management System (SMS). 2- The foremost critical success factors in the process of adopting an SMS. 3- How an SMS might be deployed in a strategic quality approach. 4- The payback from adopting quality safety on the business organization's performance.

Field of Research: Management

1. Introduction

Since the beginning of the 21st century, the global business environment in all industries has experienced the increased competitiveness in the marketplace, known as "a global competitive market." This energetic trend has inspired all industries to pursue new strategies to confront that competitiveness and uphold their share of the marketplace.

Nowadays there is a keen interest in quality and safety, as firms seek world-class leverage in penetrating the market while at the same time satisfying their business's internal and external customers (Aravindan, Devadasan and Selladurai, 1996), i.e., the employees who reside within the business environment and the individuals in public who make use of, or receive, the products or services of a business organization (Wikipedia:customer, n.d.).

In effect safety is well grounded in quality in performing dealings in all spheres within the business environment (Aravindan, Devadasan and Selladurai, 1996). This fact results in a simple mathematical truth: if quality goes up, safety will be positively improved and vice versa. A living proof can be observed in the aviation industry that has technically complex and critical operations (Byron, 2007). Yet when turbulence hits at 25,000 feet, it is comforting to think about the quality standards that have helped today's aircraft manufacturing industry achieve a strong safety record, enabling a skilled pilot to land safely after a mid-air emergency. We cannot help but think of the rigorous, quality training that produces such pilots (Waikar and Nichols, 1997).

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Accordingly quality and safety are leading success factors in today's business environment; their management has become strategically and tactically important for gaining a competitive advantage.

2. Strategic and Tactical Impact of Quality and Safety

Quality is reckoned as a competitive weapon in the business environment (Forker, Vickery and Droge, 1996). Principally it aims for customer satisfaction, which is a critical success factor for all industries. Essentially the customer is regarded as a genuine catalyst for business improvement while the customer's voice can be engaged in new product development to pinpoint the competition's technical gaps. Hence business organizations that are unable to partner with their customers to satisfy their needs will inevitably undergo a drop in market share, have sold assets returned, and in certain sectors, lose their license to operate (Dale, 1999).

Empirical studies revealed, among producers who held less than 12% of the market, those with exceptional product quality averaged Return On Investment (ROI) of 17.4%, while those with customary quality averaged 10.4% ROI, and firms with inferior quality had ROIs of only 4.5%. Quality improvements enhanced financial measures of profitability through reductions in cost and enhancement of market share. This indicates that higher quality can lead to better business performance (Forker, Vickery and Droge, 1996).

On the other hand, safety is the state in which all hazards are eliminated (Safety, n.d.). In reality absolute safety, where there are no accidents or incidents, can hardly be achieved, unless serious efforts are applied to be successful. This is exclusively attributable to the human factor in 80% of accidents. Indeed despite the best efforts to create a safe business environment, individuals make errors or deliberately engage in unsafe behaviour causes violation based on their performance level as illustrated in Table No. 1.

Table No. 1: Individual Performance Level vs. Error and Violation Types

				Individual Performance levels		
				Skill-based	Rule-based	Knowledge-based
Violation Types	Routine/Optimizing Violations	Situational Violations	Exceptional Violations			
Error Types	Slips and Lapses	Rule-based Mistakes	Knowledge-based Mistakes			

Either error or violation alone may not be damaging but the act of violating takes the violator into regions in which subsequent errors are much more likely to have bad outcomes. This relationship can be summarized:

$$\text{Violations} + \text{Errors} = \text{Injury, Death and Damage}$$

Actually when a bad safety outcome takes place, it may involve a single party within the business environment. Stopping at the indirect cost and lost time for an individual treatment, a bad safety outcome still dramatically impacts the whole business (Byron, 2007). According to the National Safety Council, the total cost of worker compensation for employers in the United States of America (USA) was \$111.9 billion in 1993. To put this cost in perspective, employer injury bills exceeded \$1,250 per covered employee in 1993. This represents about 62 cents per worker per hour. If a company, for example, earns a 10% net profit on sales, it must sell \$12,500 of goods and services per employee per year simply to cover its injury costs. Workers' compensation programs pay for lost wages and medical expenses incurred as a result of work-related injuries or illnesses (Ansari and Modarress, 1997).

3. Safety Management in Ancient and Modern Times

Managing safety is an ancient obligation as established by the Babylonian King Hammurabi, who incorporated a provision in his code of laws in the second millennium BC, ordering the punishment of the mason if the house he built fell down and killed the owner. That punishment was death of the mason if the owner died and death of his son if the owner's son died. On the other hand the modern safety management is the result of government regulations that necessitate making technical and human resource provisions in the name of safety. Yet, the ancient rules and modern regulations for managing safety both focus on a practical approach, rather than a scientific one for accident prevention; since neither addresses how to manage safety factors (Feyer and Williamson, 1998)

In the late 1990s, it was argued that satisfying quality, health and safety as basic life and business values is attainable with safety management systems (SMSs). In addition communities across the globe created the social driving force that resulted in the enactment of rigorous legislation and standards, in different countries, for different industries (Feyer and Williamson, 1998) and (Pun, Yam and Lewis, 2003). These varied business needs are now anchored in international and national safety standards. In turn many practitioners and researchers underlined safety management as a mechanism to minimize financial loss, comply with legislation, effectively allocate of safety responsibilities, and promote community goodwill (Pun, Yam and Lewis, 2003).

4. Integration of Quality and Safety in SMS

Comparing the concepts and techniques which gained worldwide acceptance for the quality improvement in all types of manufacturing and service industries under the name of Total Quality Management (TQM) and the process used to manage the risky events, would illustrate there is an obvious relatedness between both approaches while similar unwanted behavior incriminated in both accident occurrence and poor quality. Thus integration of TQM concepts and techniques, as established by the quality gurus into safety management is the outset for developing a quality based SMS.

Those TQM philosophies consider total quality as an organization-wide system approach that finds quality at the beginning of the manufacturing process and constantly improves it to meet the customer satisfaction. Also that philosophies bear out four absolutes, i.e., the definition of quality is conformance to requirements; the system of quality is prevention of problems; the performance standard of quality is zero defects; and the measurement of quality is the price of nonconformance or the cost of quality. Hence the development of

any quality-based SMS is anchored in the following seven safety management beliefs (Yu and Hunt, 2004):

- | | |
|---|--|
| 1- Safety is built at the beginning. | 5- Safety is conformance to safety requirements. |
| 2- All accidents are preventable. | 6- The goal is zero accidents. |
| 3- All employees are involved in accident prevention. | 7- Customer satisfaction in safety is the focus. |
| 4- Continuous safety improvement is the objective. | |

5. Recognition of the SMS

The positive standing of SMS has become well recognized by governments, employers and workers (ILO-OSH, 2001), while in profoundly industrialized environments such as Hong Kong where the rapid evolution of the manufacturing sector started in the 1970s (Law, Chan and Pun, 2006) several core industries recognized the public and government need for setting out effectual SMS as a proactive scheme to avert industrial accidents (Yu and Hunt, 2002).

The SMS has been advocated by the Technical Affairs Committee of The Institution of Occupational Safety and Health in the United Kingdom, which declared in 2003 that the developed countries are experiencing a shift from manufacturing to service industries coupled with new technologies, globalization, flexible work practices and an ageing workforce. Meanwhile, many developing countries are shifting from rural to industrial activities. Both scenarios present changing work patterns and associated hazards. The multitude of work-related risks requires a systematic approach to safety management. That organizational demand for safety standards further stimulated assorted international and regional standardizing associations to establish safety standards for various disciplines to facilitate the integration of quality, environmental and occupational health and safety in organizations (IOSH, 2003).

Toward improving their competitive edge in the marketplace, manufacturers and service providers worldwide have commenced development and implementation of their own SMS manuals in scales that cope with and satisfy their enterprise's demand. For example the U.S. Department of Transportation Federal Aviation Administration (FAA), Air Traffic Organization's Safety Services, which set Safety Risk Management Guidance for System Acquisitions. The guidance is to define the scope, purpose, objectives, and planned activities of the FAA's system safety effort, as it applies to Safety Risk Management for all system acquisitions providing air traffic control and navigation services in the National Airspace System (U.S. Department of Transportation "FAA", 2007).

As another example is Saudi Aramco, which was accredited in 2006 as the No. 1 Oil Company in the world for the 18th consecutive year (saudiaramco, 2006). In 2005 Saudi Aramco began the implementation of its SMS, although safety has long been an integral part of Saudi Aramco's culture. The Saudi Aramco SMS manual is composed of a broad-based set of expectations governing how safety is managed. And by addressing each

expectation, managers can help achieve Saudi Aramco's vision of being an industry leader in safety (SA's SMS manual, 2005).

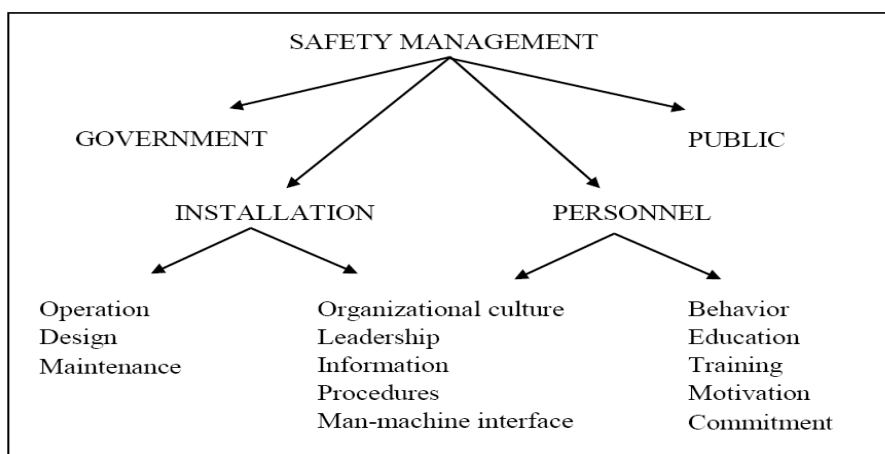
6. SMS Definition and Characteristics

Managing safety is really about risk management, and it involves judgment, assessing priorities and making decisions all of the elements of management in its more general sense. Likewise the SMS is composed of standards, procedures and monitoring arrangements that aim at promoting the health and safety of people at work and protecting the public from work-related accidents. And they are mainly intended to define the scope of work, analyze hazards, develop and implement controls, and improve feedback systems. Thus the SMS is defined as "a systematic approach to managing safety risks, including the necessary organizational structures, accountabilities, policies and procedures" (Byron, 2007).

The SMS liability is bonded to the corporate management that sets out a business's safety policy and defines how it intends managing safety as an inbuilt critical success factor for the overall business (Civil Aviation Authority, 2002). This is because the management of safety includes a number of elements, e.g., safety policy, job hazard analysis, and safety and health awareness; which merely provide guidance for the enterprise to manage risks and improve safety and health performance (Law, Chan and Pun, 2006).

A typical industrial SMS concerns four areas: 1) Government, 2) Public; which are marginal to businesses since they have very slender promise to directly influence them. 3) Installation, and 4) Personnel; which are the sectors directly managed by business. The installation and personnel sectors encompass essentials, e.g., operations, procedures, training, etc, see (Figure No. 1). While any one essential will pertain to a particular subdivision, all essentials are indispensable for SMS adoption (Kuusisto, 2000).

Figure No. 1: Typical Industrial SMS Areas of Interest



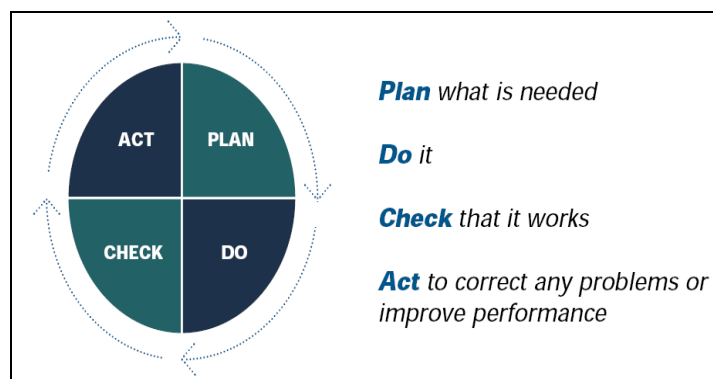
Correspondingly a world-class SMS delivers the following paradigm elements:

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|-----------------------------------|--|
| 1- Leadership and Accountability | 7- Contractors, Suppliers, and Others |
| 2- Risk Assessment and Management | 8- Emergency Preparedness |
| 3- Communications | 9- Incident Reporting and Analysis |
| 4- Competency and Training | 10- Community Awareness and Off-the-Job Safety |
| 5- Asset Integrity | 11- Continuous Improvement |
| 6- Safe Operations | |

These elements are equally important to an effective and comprehensive quality safety framework that defines practical and scientific approaches for the system implementation to accomplish the safety and loss prevention obligations with respect to the corporate values and policy (SA's SMS Manual, 2005). This advancement in safety management within the SMS takes into account changing the axiom of safety first, to safe production, and even at a world-class performer similar to Saudi Aramco, it has been formulated as safety is equal. Absolute safety first has a good resonance, however; safety should not be considered a discrete issue. Rather, it must become a basic value of the business. Changing safety first, to safe production or safety is equal, becomes the only standard that emphasizes the idea that it is fine to produce as hard and as fast as possible, as long as it can be done safely (U.S. Department of Labor, n.d.).

As a general rule the SMS is a businesslike approach to safety that has at its core the elements of the Deming wheel: Plan, Do, Check and Act, see (Figure No. 2), which supports the principle of continual improvement (IOSH, 2003) and is corresponding to all management systems, in terms of including the business goals, planning, and measuring performance. Additionally it is woven into the fabric of the business organizations since it becomes part of the culture and the way people perform their jobs. Thus the SMS exclusively emphasizes the 4 Ps; i.e. Philosophy, Policy, Procedures and Practices (Transport Canada Civil Aviation, n.d.).

Figure No. 2: Deming Wheel: PDCD



7. SMS Critical Success Factors

The SMS is a centric and focused management system that links safety to planning, organizing, directing, and controlling the business assets, i.e. the people and other properties, for the benefit of a predetermined business vision. Therefore to accomplish the desired safety outcomes, the main characteristics of that system include process attributes. This means that safety requirements must be built in to the system's design. Those requirements include (AFS-800, 2006):

1. Responsibility and authority for accomplishment of required activities.
2. Procedures to provide clear instructions for the members of the organization to follow.
3. Controls that provide organizational and supervisory controls on the activities involved in processes to ensure they produce the correct outputs.
4. Measures of both the processes and their products.

Meanwhile success in a business organization's safety performance depends, to a great extent, on the existence of a positive safety culture and quality safety leadership, which are interrelated success factors. The positive safety culture generally is the way in which the business organization conducts its activities, and particularly in the way it manages safety. The culture significantly adds force to the business safety performance through holding safety as a main lever for all the business's activities. That performance chiefly rests on the shoulders of the business management, because safety emanates from the communicated principles of the top management. The result is that all staff exhibit a safety ethos that transcends departmental boundaries, by demonstrating quality safety leadership practices. In effect the safety culture emulates the environment in which the SMS will work, and the leadership is the control mechanism. Hence the safety culture resembles the landscape where the SMS will be situated and the leadership is the key that can bring the SMS to peak performance (Transport Canada Civil Aviation, n.d.).

7.1 Safety Culture

Safety culture within the business organizations can be described as one of the following:

1. Major constituent values.
2. Not a priority.
3. Safety is unimportant.

The culture of an organization tunes everything in the safety arena. In the positive safety culture that ponders safety as a major constituent value, the culture itself says to the business employees that everything you do about safety is important. It tolerates all employees' participation to shape and advance the business by saying to the employees; "we want and need your help." Such culture urges creativity and innovative solutions. As the second type of culture is swinging, in the latter, almost nothing will work; all the safety initiatives are seen as boring and a waste of time. In effect the third culture rejects new ideas even it forces the employees to never use their brains at work (Roughton and Mercurio, 2002).

The organizational safety culture is a major component affecting organizational performance, defined as: "the product of individual and group values, attitudes,

perceptions, competencies, and patterns of behavior that determine the commitment to and the style and proficiency of, an organization's health and safety management" (Kuusisto, 2000).

Business organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in efficacy of prevention measures. When building a culture of safety, the management must create the environment that enables safety to be a core value of the business organization, and more importantly, within the hearts of the individuals who work there. That environment can be achieved through the following:

1. Demonstrate that safety is a core value versus simply a priority.
2. Establish a clear and compelling safety vision.
3. Consistently communicate a strong personal belief in safety.
4. Create the environment that encourages people to provide feedback; all feedback, not just safety feedback.
5. Measure, communicate and reward progress in achieving the company's safety vision.
6. Display the courage to make the difficult decisions necessary when even a top-producing manager violates safety.

(Anderson, 2008)

7.2 Safety Leadership

The safety leader, either at the manager or supervisor position, bonds the management and employees within organizational structure top-down or in reverse. "Never underestimate the influence supervisors have on your workforce, and in the eyes of the employee, the supervisor is the company," says Buckingham and Coffman, authors of *First Break all the Rules*. Even if the organization has generous pay and a renowned training program, the company that lacks great supervisor leadership will suffer. Therefore to inspire employees to higher levels of safety and productivity requires the leader to apply quality safety leadership (Facility Safety Management, 2004). Actual leadership is trouble-free to explain, but not to exploit, since most leaders strive for safety but practical day-to-day circumstances, e.g., time pressures and economic constraints, seem to conspire against quality safety leadership (businessballs, n.d.) and (Little, 2006).

Principally leadership is about behavior first and skills second. People tend to follow the good leaders as they are trustful and respectful, rather than being skillful (businessballs, n.d.). Within the context of Islamic culture, Prophet Mohammad, God's prayers and peace be upon him (PBUH) was seen as "a sincere leader" as indicated by Thomas Carlyle (*Why Muhammad.com*, 2008). Prophet Mohammad (PBUH) provided the best guidance for Muslims by being an exemplary leader, e.g., his modesty, mercy, magnanimity, patience, responsibilities and leniency. In effect, all of his demeanors show him to be "the greatest leader and inspirer the world had ever seen," which Michael Hart, a contemporary American scientist, affirmed in his ranking for the three most influential persons in history. Hart placed Muhammad (PBUH) at the top of his list of one hundred humans (*Al-Jumu'ah*, 2007).

Theodore Roosevelt said "people ask the difference between a leader and a boss; the leader works in the open, and the boss covertly. The leader leads and the boss drives." Real leadership is different from management, in addition to having management skills, safety leadership further relies on the leader's qualities (businessballs, n.d.). Research indicated that theoretical and practical knowledge, along with consulting over 65 seafarers and shore managers about everyday safety leadership challenges, concluded the safety leader ought to master the four patterns with the incorporated ten qualities shown in Table No. 2 (Little, 2006):

Table No. 2: Leadership Patterns and Qualities

<ul style="list-style-type: none"> ▪ Confidence and Authority 	<ul style="list-style-type: none"> ▪ Motivation and Commitment
<ol style="list-style-type: none"> 1. Instill respect and command authority 2. Lead the team by example 3. Draw on knowledge and experience 4. Remain calm in a crisis 	<ol style="list-style-type: none"> 8. Motivate and create a sense of community 9. Place the safety of crew and employees above everything
<ul style="list-style-type: none"> ▪ Empathy and Understanding 	<ul style="list-style-type: none"> ▪ Openness and Clarity
<ol style="list-style-type: none"> 5. Practice tough empathy 6. Be sensitive to different cultures 7. Recognize the crew's limitations 	<ol style="list-style-type: none"> 10. Communicate and listen clearly

"Given the current state of our societies, creating future leaders who act ethically and responsibly, who balance the desire for economic development and prosperity with the need to protect and preserve the natural environment, and who bring a spirit of creativity and innovation to their vocation is not a luxury we should aspire to; rather, it is a necessity that we must achieve", said Mr. Abdallah S. Jum'ah, Former President and CEO of Saudi Aramco (Brundage, 2008). Thus despite the fact that some individuals have innate leadership qualities built in their character, yet the leadership qualities still can be developed (businessballs, n.d.). Reinforcement and development of the innate and the acquired leadership are mandatory in the course of training quality and safety leadership, which was proven as a best practice ensures quality leadership skills applicability on the job in injury prevention for the success of any safety program whilst "with skilled safety leadership, the simplest safety programs can produce great results" says Dr. David Richey, Industrial Psychologist (Facility Safety Management, 2004).

8. Deploying the SMS through SQM Approach

Safety strategies are critical to world-class competitiveness, as companies that fail to utilize a strategic approach to company safety will be less successful over the long-term. Business success necessitates the right environment as infrastructure reinforces business presence and growth in the marketplace (Ansari and Modarress, 1997). Education, which Mr. Abdallah S. Jum'ah, Former President and Chief Executive Officer (CEO) of Saudi Aramco, underlined as "a key for the future success," can nurture quality safety as an infrastructure for businesses to excel (Al-Bassam, 2008). An example was the first step in bringing Russian quality management practice up to world levels, when the need to build educational institutions was raised to facilitate training in TQM and enable implementing quality management techniques in the Russian environment (Dickenson, Rogerson and

Azarov, 2000). Similarly, by looking at the qualities of the best-managed companies in the USA, there are eight qualities found in these companies. The first quality is the bias for action, which necessitates increasing knowledge (megan.kemp, 2004). The demand for education calls attention to the need of teaching quality safety concepts and approaches adopted at the world-class corporations in the schools, institutions and training centers. This undertaking characterizes a long-term strategy that supports not only businesses, but its influence extends to benefit the nation and individuals at all levels of society as today's students are tomorrow's business generation. In addition, both quality and safety are life concepts, no-one would strive for non- safety or non-quality.

With regard to business affairs, the adoption of a quality based SMS as a strategic decision puts emphasis on the seven strategic quality management (SQM) core concepts:

- 1- Customer focus.
- 2- Leadership.
- 3- Continuous improvement
- 4- Strategic quality planning.
- 5- Design quality, speed and prevention.
- 6- People participation and partnership.
- 7- Fact-based management.

These SQM concepts aim to satisfy the customer, continuously improve the processes and systems to increase the quality of products and services and stay ahead of competition. The quality based SMS is a lifelong strategic priority, and any drawback in its implementation capacity may come back to hinder making that vision a reality. Therefore; embracing the SMS implementation scope with these pivotal concepts is a must. They can be thought as spokes in a wheel, which is climbing the quality safety hill. The basic goals are to improve value for customers and compete strongly in the marketplace (Rao Tummala and Tang, 1996).

9. The Payback of Adopting Quality Safety

A winner of the Baldrige award said "management realized that the most important assets at the company were the employees. The decision was made to prioritize safety, the most important concern of the associates as the first and most important measurement category, followed by internal customer satisfaction, quality and business performance. Since that time, accidents have decreased by 72%; lost time due to accidents has decreased by 85%; and lost work days have gone down by 87%. Customer satisfaction ratings are at 95% and growing, profits are up, and workers' compensation costs have dropped from \$92,000 to \$13,000" (Shaw, 2003).

Within the business environment of Saudi Aramco which embarked on adopting the SMS in 2005, although safety has been a part of company tradition since it was founded in 1933 (PetroRabigh, n.d.). The Yanbu' Natural Gas Liquids (NGL) Fractionation Department (YNGLFD) is one of the model SMS adopter organizations. On three occasions the YNGLFD has won the Exceptional Safety Achievement Recognition Program award, administered by the Saudi Aramco Loss Prevention Department, and awarded by the President & CEO. Actually YNGLFD has heavily engaged in implementing the SMS, which further dramatically influenced the department's Key Performance Indicators as traced from the start of 2005, the time of launching Saudi Aramco SMS to the end of the third quarter of 2009 (YGPD Web site, n.d.) and (saudiaramco: At A Glance, n.d.).

Businesses in quest of a competitive edge in the marketplace should contemplate adopting an SMS as it is too easy in a demanding business setting to overlook requirements or repeat mistakes from the past. The quality based safety management, which is set apart in well recognized SMSs during the first decade of the 21st century, facilitates complying with the legal obligations (Business link, n.d.), whereas these SMSs are typically systematic, proactive and explicit for managing safety affairs (Kohli, 2007).

Essentially, the success of that quality's holistic management approach in meeting customer satisfaction and the realization of the most important areas of concern in advancing safety management, i.e., commitment to safety, employees' accountability for their own safety, and having safety excellence embedded in the business psyche (Williamson, 2008), have driven the harmonization of a variety of management systems, i.e., Quality Management and Occupational health and safety systems in the SMS as branded schemes of quality safety benefits (Shen and Walker, 2001):

1- Safety; through a quality management approach to control risk and provide an organizational framework that supports a quality safety culture, forms the core of the business's safety efforts and lends a hand to the business's management. In addition, a detailed roadmap is required for monitoring safety-related processes (AFS-800, 2006). Together these affect the operating business's assets in the following ways:

- Assure safe practices in operation and a safe working environment.
- Establish safeguards against all identified risks.
- Continuously improve the safety management skills of personnel, including preparing for emergencies related both to safety and environmental protection.

(Pun, Yam and Lewis, 2003)

2- Business; through providing the business management with a structured set of tools to meet their legal responsibilities, which in turn provide significant benefits. The SMS incorporates internal evaluation and quality assurance concepts that can result in a more structured management and continuous improvement of operational processes (AFS-800, 2006), which accordingly have added value to administering the business in the following ways:

- Avoidance of duplication from multiple individual systems.
- Eliminating the overlap of effort.
- Reduction in the fuzzy management boundaries between individual systems.
- Broadening the horizon beyond the functional level of any individual system.
- Sharing information across traditional organizational boundaries.
- Streamlining paperwork and communication.

(Shen and Walker, 2001)

10. Conclusion

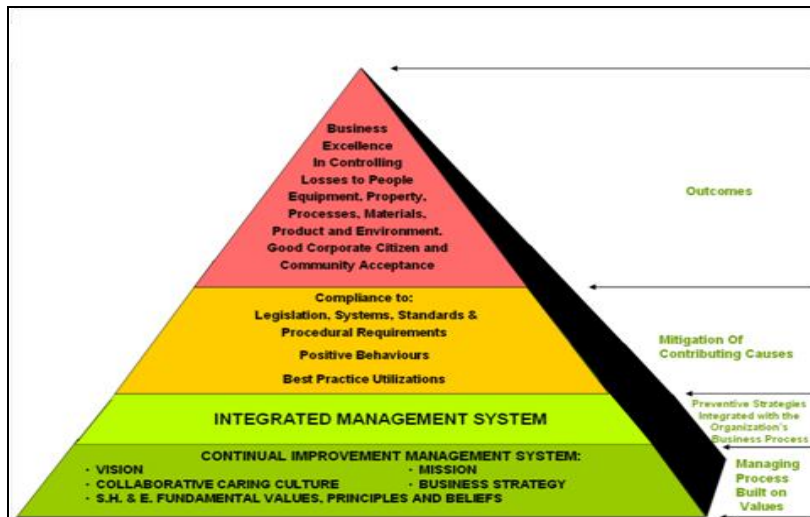
Statistics reveal there are over 2 million people killed each year in the workplace around the world, and over 268 million lost time incidents (Anderson, 2008). Such scary facts enlighten that keeping safety is a monumental challenge. Hence there is a real need for paradigm shift toward adopting quality safety at home, on the road and in the workplace

along with emphasizing the importance of educating current and potential employees and instilling a culture of quality safety. Mr. Khalid A. Al-Falih, President and CEO of Saudi Aramco, said “we need to enforce this in the employees joining us while we reinforce safety attitudes of the employees we have today” (Basam, 2008).

The integration of quality and safety in SMS represents a Business Excellence (BE) managing model as depicted in (Figure No. 3) (Shaw, 2003). The model includes the key practices in the BE models, which according to the European Foundation for Quality Management, are based on a set of eight fundamental concepts: results orientation, customer focus, leadership and constancy of purpose, management by processes and facts, people development and involvement, continuous learning, innovation and improvement; partnership development, and public responsibility (Wikipedia, 2007).

Researches inform adopting quality safety programs will positively influence the business organization’s financial bottom line with a \$4 to \$6 return for every \$1 invested (Horseman, 2008) and (Roughton and Mercurio, 2002). Thus the reason why businesses ought to be interested in the SMS as a scheme of world-class quality safety is that it is simply a better way of doing work, in a safe manner, while maintaining quality that produces more for less (Vanguard, n.d.). This model shows a positive influence can manifest itself in the employees’ thoughts, feelings, satisfaction, interaction and affective reactions within the business environment (Ooi, Abu Bakar, Arumugam, Vellapan and Loke, 2007).

Figure No. 3: Business Excellence Managing Model



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