# Situational Awareness

Do you have the Emotional Intelligence for it?

#### Abstract |

This paper explores the relationship of situational awareness and emotional intelligence of portfolio, program, and project leadership. Included in the paper is an introduction to situational awareness, emotional intelligence, SAGAT, recommendations and details about the workshop exercise. Situational awareness plays a critical role in effective decision making, and more so in complex and challenging portfolio, program and project management environments. Emotional Intelligence (EI) is the study of how in tune a person is with his or her own emotions and the ability to understand emotions of those around himself or herself. Through the use of a live training simulation, an individual's level of situational awareness and their emotional intelligence will be determined.

Key words | Situational Awareness, Emotional Intelligence, SAGAT

## Introduction

Below are taglines or headlines that have appeared in trade periodicals and the newspapers. One might wonder, where are the leaders and the project/program/portfolio managers? We in the project management discipline can help leadership identify, eliminate and/or minimize strategic goals not being met.

Manufacturing plant left unable to recover - cause robotics not used.

IT industry leader loosing margin - no longer able to react quickly to the market. Applications development leader in downward spiral - leadership lost sight of industry changes.

As the above headlines suggest, the business world is uncertain and continues to change rapidly. No industry is immune to the shifting nature of competition and consumer demands. Companies' leaders cannot rely on their competitive advantages to sustain them; thus leaders should be aware of business situations. Questions the employees maybe asking themselves in these companies and others with similar scenarios are as follows: Was leadership not aware to developments in the market place? Was leadership arrogant? As a market leader in the industry, did leadership think the company was not vulnerable?

Project/Program/Portfolio managers can assist company leadership by understanding the situational awareness and the proper emotional intelligence to provide the necessary leadership. Portfolio managers need to clearly understand the company's strategic goals. Situational awareness of the enterprise needs to be understood by the portfolio manager. The program manager reviews the program for strategic goals but also needs to understand the enterprise and how the projects can be correctly implemented as a program. Finally, the project manager must understand what strategic goal the project will help to implement or actually implement. Understanding the professional landscape helps the project manager understand the politics of his or her project.

In today's high pressure dynamic environment, managers want to know the following: What is the impact to our bottom line? What are the profits? Can we meet our quarterly goals? Often the challenge for management while playing its company's old game is that a new game begins. When there is insecurity in the marketplace, the traditional management approaches of executing a strategic plan requires an additional set of capabilities.

The project management professional needs to have the proper Emotional intelligence quotient to understand the situation of the enterprise. Those that are unable to correctly understand his or her emotions and those that impact the project, program or portfolio. Those with a higher emotional intelligent quotient will likely be more perceptive in understanding how important stakeholders perceive his or her opportunity.

Emotional Intelligence is the ability of leaders to use their emotional cues as well as those around them to enhance effective and/or exceptional performance (Boyatzis, 2009; Chrusciel, 2006; McCleskey, 2012). While emotional intelligence quotient is the results of an Emotional Intelligence test that provides a person's ability to understand his/her own emotional recognition and that of others (Chrusciel, 2006).

Situational awareness (SA) is the byproduct of military combat, and is applicable to the three military branches: air force, army, and navy. However; where does situational awareness apply outside of the military?

Situational Awareness is the perception of reality without any human bias such as attitudes, beliefs, cultures and values. Understanding the current state of affairs and the changes occurring within this state are the center of SA. Knowing exactly what is occurring around an individual. Alertness of an individuals' capabilities, competition, customers and evolution of an industry are key awareness elements. It is a continuous cycle because situation's changes as we experience it. SA is a learned skilled and it helps to develop a mental picture which individuals can use to anticipate the future (Endsley, 2004). It's challenging to maintain and easy to loose. SA is the precursor to decision making (Endsley 1997). In other words, accurate SA leads to good decisions (Stanners & Tin 2005).

Situational Awareness is comprised of three levels (Endsley, 1995). Level 1 is the perception of the elements in the environment. Level 2 is the comprehension of the current situation. Level 3 is the projection of future status. Projecting into the future is often difficult for an individual to accomplish and requires training and practice for an individual to become adept (Gasaway, 2013).

Endsley's three phase model (Exhibit 1) asks the questions "What are the current facts" (Perception)? "What is actually going on" (Comprehension)? And "What is most likely to happen" (Projection)? Across these three levels situational awareness is measured via: performance or query methods, subject ratings, simulation, and physiological measures (Gawron, 2008).

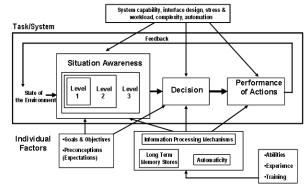


Exhibit1: The Situational Awareness Model (Endsley, 1995).

#### Measuring Situational Awareness

In order to objectively measure situational awareness, a SAGAT (Endsley, 1998) test is employed. Developed by Endsley (1998), the SAGAT test periodically and randomly *freezes* a simulation scenario- during which all visual displays available to the individual are temporarily blanked. Throughout the time of the *freeze*, a series



of questions are posed to the individual to assess their SA knowledge (Endsley, 1998). A SAGAT test provides an unbiased result of one's SA, which is measured across the three levels of perception, comprehension, and projection. SA answers questions such as: Is the SA picture the same for all levels of management and employees? What don't we know that we need to know? What are the facts? What is going on? What could happen?

Is the situational awareness picture the same for all levels of management and employees? Cuevas, Bolstad, Gonzalez, and Saner (2009) suggested that each person's position and duties in a company affected not only their level of situational awareness but also how it is translated into a team environment.

"Within the team environment, a leader should have the trust of his subordinates" (Mushonga, Thiagarajan, and Torrance, 2014). This is best achieved through cognitive trust- which can be defined as the trust established between a leader's character and the subordinate's perception. Dick and Ferrin (2002) noted that cognitive trust is based on numerous assumption applied by the subordinate. These suggest that the leader is "Reliable, has integrity, is predictable, will tell the truth, will act in a fair or just manner" (Dick and Ferrin, 2002).

#### **Emotional Intelligence (EI)**

Prior to Goleman's (1995) work, others used EI concepts, even going so far as to use the phrase prior to Goleman (Beldoch, 1964; Leuner, 1966; Gardner, 1983; Payne, 1985; Greenspan, 1989; Salovey & Mayer, 1989). Beldoch (1964) and Leuner (1966) used the term *emotional intelligence* while Gardner (1983), Payne (1985), Greenspan (1989) and Salovey and Mayer (1989) recognized there was another dimension to emotions other than a person's intelligence. This leads credence to the notion that EI is a powerful means to measure a person's emotional IQ in various dimensions and leads to the notion which Locke (2005) argued.

Situational awareness includes aspects of management. Consider the actions of Captain Sullenberger, the US Air pilot who landed on the

Hudson River in New York City. Upon assessing his environment, and recognizing the risk to the passengers, crew, and aircraft, Sullenberger understood the only option he had to meeting his goals of protecting the lives of the passengers and crew, was to make an emergency landing in the Hudson River. Upon deciding on a course of action, he began to communicate his plan to the co-pilot and the airport tower. Once he had successfully landed the aircraft in the river, Sullenberger's attention was solely focused on the safe evacuation of all personnel from the aircraft. His evacuation of the aircraft exceeded the expectations of the passengers and his fellow crew members - in that he was able to lead them all to safety by constantly assessing the situation as it developed, and taking control of the dynamic situation.

Goleman (2014) expanded his work on EI to include **mindfulness**. He contended that employees and especially executives were distracted because of the many tasks that needed to be done. Think about it, when in a meeting, were you really there? Or were you agonizing about answering emails, dealing with personnel issues, making decisions, among other things.

"This is mindfulness- the ability to work in the moment, with a person dedicating their full attention to the task at hand" (Goleman 2014).

Lazar, Kerr, Wasserman, Gray, Greve, Treadway, McGarvey, Quinn, Dusek, Benson, Rauch, Moore and Fischl (2005) studied the brains of volunteers that practiced non-chanting meditation. They found that there were structural changes in the brain. Areas responsible for "sensory, cognitive, and emotional processing" were enhanced.

Woollett and Maguire (2011) studied the brains of London taxi driver trainees prior to starting their training and after they passed. The training took 3-4 years, as the trainee needed to learn how the city was laid out and memorized the names of the streets. It was found that those that were successful had an increase in memory and an increase in gray matter in the hippocampus. Woollett and Maguire were able to show that the brains circuitry can continue to change well into



adulthood. This suggested that as humans we should become lifelong learners so our brains stay trained.

Tang, Holzel, and Posner (2015) continued with the research of meditation but focused on mindful meditation. Mindful meditation as described was a practice to reduce stress and promote health. Previously, there was no structured study to see if this specific type of meditation actually helped the brain. The preliminary findings were that indeed there appeared to be positive changes in the areas of the brain that regulate a person's attention, emotion, and self-awareness. They emphasized that more in-depth studies were needed to understand exactly what was happening in the brain and why it happened.

As with all new areas of research there will need to be many more studies. There needs to be studies on the actual brain chemistry. However, there will also need to be social science studies to see how to move findings into the business environment. Based on the research to date, it is quite promising what mindfulness will do for the future of business and project management.

#### Recommendations

Emotional intelligence and situational awareness are learned skills. SA is a dynamic, constantly evolving process rather than a sequential one. One might have excellent situational awareness one moment and very poor situational awareness the next, depending on the way in which the situation unfolds and one's effectiveness at integrating the available information in the ongoing process of perception, comprehension, projection, and prediction. Portfolio, program and project leadership skills of emotional intelligence and situational awareness requires constant practice and training.

#### The Workshop

Through the use of a live training simulation, your individual level of Situational Awareness and Emotional Intelligence Quotient will be assessed. To do so, we will present to you, information from a project, program, and portfolio. Each builds on the other. There will be short vignettes that provide information. Listen, take notes. Once the vignette is done it will not be projected again. Each vignette will be followed by a set of questions.

Some questions have a right or wrong answer, other questions may have a preferred answer, while other answers will depend on how you absorb the information. At the end of the workshop, we will provide you our answers. There will be time to discuss at the end of the workshop. We look forward to learning with each of you.



# Do you have the Emotional Intelligence for it?

# About the Authors

Marie Sterling, MBA, PMP

Ms. Sterling strength is in building capabilities for strategic growth. She has delivered in the past fifteen years strategic planning, change initiatives, and operational leadership. This arises from her experience in the Canadian Armed Forces, private enterprises and the Project Management Institute (past Congress speaker). Sailing and racing, and hiking in the Canadian wilderness is her passion.

Wanda Curlee, DM, PMP, PfMP, PgMP, PMI-RMP

Dr. Wanda Curlee an Associate Professor at American Public University. Her business career spans several industries. Dr. Curlee volunteers with the Project Management Institute's certification and standards teams. She currently is a core team member of the Program Management Standard (4th edition). Dr. Curlee has published three books. She earned four credentials: PfMP, PgMP, PMP and PMI-RMP. Dr. Curlee is the mother of three children who have served or currently serve for the US Military.







### **References**

- Boyatzis, R. (2009). Competencies as a behavioral approach to emotional intelligence. *The Journal of Management Development*, 28(9), 749-770.
- British Library, Management and Business Studies Portal, Mary P. Follett, Retrieved on December 05, 2014 from http://www.mbsportal.bl.uk/taster/subjareas/busmanhist/mgmtthinkers/follett.aspx
- Chrusciel, D. (2006). Considerations of emotional intelligence (EI) in dealing with change decision management. *Management Decision*, 44(5). pp. 644-647.
- Endsley, M.R. (1995). Toward a Theory of Situation Awareness in Dynamic Systems. *Human Factors*, 37(1), pp. 32-64.

Endsley, M. R. (1998). A Comparative Analysis of SAGAT and SART For Evaluations of Situation Awareness. Chicago: Meeting of the Human Factors & Ergonomics Society.

Endsley, M.R. (1997). The role of situation awareness in naturalistic decision making. In Zsambok, C.E. & G. Klein (Eds.). Naturalistic decision making. Mahwah, NJ: LEA.

Endsley, M.R. (2004). Situation awareness: Progress and directions. In S. Banbury & S. Tremblay (Eds.), A cognitive approach to situation awareness: Theory and application. Aldershot, UK: Ashgate Publishing.

Gawron, V. J. (2008). *Human Performance, Workload, and Situational Awareness Measures Handbook*. Boca Raton: Taylor & Francis Group.

Goleman, D. (2014). A more mindful workforce. *LRP Publications*. Retrieved on June 26, 2016 from http://www. Breonline.com/HRE/print.ihtml2id=534357064

Lazar, S., Kerr, C., Wasserman, R., Gray, J., Greve, D., Treadway, M., McGarvey, M. Quinn, B., Dusek, J., Benson, H., Rauch, S., Moore, C., & Fischl, B. (2005). Meditation experience is associated with increased cortical thickness. *Neuroreport*, 16(17). Pp. 1893-1897.

- Mayer J., Salovey P. & Caruso D.R. (2002). Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). Multi-Health Systems, Inc. Toronto, Ontario.
- McCleskey, J. (2012). Emotional intelligence and leadership: A review of the progress, controversy, and criticism. *International Journal of Organizational Analysis*, 22(1), 76-93.
- Mushonga, S. M., Thiagarajan, P., & Torrance, C. G. (Summer 2014). Fairness in the workplace: The Mediating role of trust in the relationship between supervisory justice and work outcomes. *SAM Advanced Management Journal*, 79(3).

Onwubiko, C., & Owens, T. (2011). Situational Awareness in Computer Network Defense: Principles, Methods and Applications. Hershey PA: Information Science Reference.

- Saner, L., Bolstad, C., Gonzalez, C. & Cuevas, H. (2009). Measuring and Predicting Shared Situational Awareness in Teams. *Journal of Cognitive Engineering and Decision Making*. Retrieved on Dec 05, 2014 from: http://www.casl.umd.edu/sites/default/files/SanerEtAl-2009.pdf
- Stanners, M., & French, H. T. (2005). An Empirical Study of the Relationship between Situational Awareness and Decision Making. Edinburgh: DSTO Systems Sciences Laboratory.
- Tang, Y., Holzel, B., & Posner, M. (2015). The neuroscience of mindfulness meditation. *Neuroscience*, 16, pp. 213-225.
- Vincenzi, D. A., Wise, J. A., Mouloua, M., & Hancock, P. A. (2009). *Human Factors in Simulation and Training*. Boca Raton: Taylor & Francis Group, LLC.

Woollett, K. & Maguire, E. (2011). Acquiring "the knowledge" of London's layout drives structural brain changes. *Current Biology*, 21(24-2), pp. 2109-2114.



