Enterprise Behavioral Risk Management:
The Next Generation of Workplace Risk Management

A Web-enabled Psychosocial Solution Gauges
Propensity for Workplace Errors

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Workplace accidents happen. Often. And 91% of these accidents are a result of human error .[1] Human error caused such disasters as the running aground of the Costa Concordia off the coast of Italy, the explosion of the Deep Water Horizon oil platform in the Gulf of Mexico, and the Copiapó mining accident, which kept 33 Chilean miners underground–and in the headlines–for 69 days. Workplace accidents of all types know no boundaries. Consider just a few statistics from three industries alone[2]:

Aviation
• 2 unsafe plane landings at O'Hare Airport every day
• 38,000 commercial aircraft land in an unstable condition every year
• 10 billion dollars direct cost in ground damages to aircraft every year

Healthcare
• 500 incorrect surgical operations every week
• 50 newborns dropped at birth by doctors every day
• 99,180 accidental deaths in Medicare hospitals every year

Business and Finance
• 22,000 checks deducted from the wrong bank accounts every hour
• 114,500 mismatched shoes shipped every year
• 200,000 documents lost by the IRS every year

The full cost of human error in every sector is diverse, unforgiving, and critically important. It can include all of the following, and more:

• Loss of life
• Brand and reputational damage
• Employee injury
• Environmental disaster
• Equipment damage
• Operational inefficiency

• Loss of trust
• Customer dissatisfaction
• Falling share price
• Increased insurance rates
• Weakened leadership
• Low staff morale

[1] Bleetman et al, 2011.
[2] IATA (2010); FSF (2011); Briefings on Patient Safety, (January 2008).

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The Inherent Limits of the Enterprise Risk Management Paradigm

The truth is that accidents don't just *happen*. They occur due to human behavior, which is not random but largely dependent on what is happening inside a person's head. Researchers have found that peoples' reduced levels of awareness to specific factors can measure their likelihood to cause an incident in the workplace. Exposure to workplace accidents is directly related to:

• The overall level of reduced awareness of the workforce, and
• The percentage of employees deemed unsafe.

Traditionally the owners of an organization's behavioral risk have been safety and compliance personnel. Threats associated with employee behavior have typically been handled with SMS (Safety Management Systems), and in some instances, audit programs. Human error statistics, taken from various sources over the years, have provided the empirical evidence that SMS systems have no real capacity to gain meaningful insight into the psychological and social processes that drive non-compliant behavior.

By virtue of their fundamental design, SMS systems are limited to the data they capture. In other words, the typical accident and incident reports that populate an SMS are not designed to examine the psychological and social factors that shape decision-making. This gap is particularly apparent in the moments leading up to an accident, incident or near miss. The next step in the analytical framework (i.e., root cause analysis), although more descriptive and qualitative, remains extremely vulnerable as a result of the inherent biasing effect associated with recalling past events.[3] In the end, the SMS program is at its best when it can quantify the frequency of event types and identify contributing factors, some of which will be behavior-based.

At this point in human history, it is the responsibility of an ERM framework to identify, quantify, and ultimately control all risks within an organization. *But* the full authority of a robust ERM program is compromised by the inability of SMS and embedded audit programs to identify and quantify the psychological and social drivers for non-compliance.

To eliminate the threats associated with human error, a new approach to the existing ERM paradigm is required: namely, EBRM.

[3] Nisbett & Wilson, 1977.

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EBRM: The Natural Evolution of ERM

Enterprise Behavioral Risk Management (EBRM) is the natural evolution of the ERM framework. It provides a new methodology for reducing workplace errors by identifying and mitigating the psychological and social factors that lead to risky attitudes and behaviors.

The *behavioral* component of EBRM seeks to demonstrate how non-compliant behavior functions across the four pillars of ERM (Hazard, Operational, Financial and Strategic). Previous approaches to accident prevention have focused simply on the outcomes of behavior.

EBRM targets the psychological and social processes that drive behavior. By doing so, it obtains critical insight which, mapped to the ERM pillars, provides new perspectives on and understanding about how human behavior impacts enterprise risk. Since the power of risk management rests with its ability to quantify and ultimately control risk variables, control over the psychological and social drivers that lead to human error is the next frontier for ERM.

Evolve to EBRM with Presage

The Presage solution offers a patented, web-enabled application capable of psychosocial testing. Major benefits of the Presage solution are that you have:

1. Accurate, quick, and efficient identification of the psychosocial behaviors driving non-compliance.

2. An early warning detection system with near-real time analysis and diagnostic precision.

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Two Guiding Principles of EBRM

There are two essential guiding principles for EBRM to deliver on its promise:

1. EBRM must know what behaviors to quantify and ultimately control.

2. The EBRM methodology dictates that a continuous surveying solution be implemented in order to accurately monitor and assess how targeted behaviors impact risk and compliance in an organization.

1. Targeted Behaviors

Building on nearly 20 years of continuous research into a human factors concept known as situational awareness, the Presage analytics team has significantly enriched its understanding of this critical phenomenon. Situational awareness can be defined as an employee's pre-requisite psychological state for knowing all potential threats to compliance and safety within their operational theater. The industry's challenge with situational awareness is that it is a theoretical construct, and therefore offers very little meaning in most practical situations.

To create true relevance for situational awareness in practical situations, Presage has mapped the behaviors that define this psychological state. Situational awareness now translates to the user (namely the worker) in practical, user-friendly terms they can understand and assess themselves on. By leveraging statistical reliability and construct validity, Presage has demonstrated that situational awareness can be accurately measured through nine distinct, yet inseparable, types of awareness. Most importantly, each of these nine awareness categories can be measured across diverse business units, including individuals, work groups, departments, organizations, or market segments.

2. Web-enabled Continuous Surveying: Diagnostic Precision in Measurement & Reporting

Once the targeted behaviors have been identified, Presage surveys employees on their competencies in relation to the nine different awareness factors. The power of web technology is in the speed of data capture, analysis, and reporting. Presage leverages these efficiencies by continuously surveying an employee population. Approximately 4 times per year, while requiring only 12 minutes of their time, employees respond to questions regarding their awareness competencies across these distinct awareness factors. This process enables Presage to not only identify tar-

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geted contributing threats across multiple demographics (e.g., shift, tenure, gender, last training date, etc.), but also monitors the dynamic changes in these behavioral – awareness risks as they change over time and space.

This methodological design enables the Presage solution to act as an early warning detection system. Early in the assessment process, the Presage solution targets precisely who is at risk, why they are at risk, and what mitigations or corrective actions need to be put in place before the identified threats become accidents in the workplace. Figure 1 shows the methodology in greater detail:

Figure 1.

The Presage Process

Employee Surveys
Regular Psychosocial Awareness Data Collection

Event Reporting
Ongoing Accident/ Incident Analysis

Presage Database

Historical Analysis
Analysis of Historical Accident and Incident Data

Analysis
Presage Patented Anaytical Engine

Change
Measurable Improvement in Awareness Levels and Safety Behavior

Reporting
Presage Dashboard

Intervention
Strategic Mitigations and Corrective Actions

Early Warning

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The Business Case for EBRM

Industries need a different tool and methodology for managing the direct and indirect costs associated with human error. Existing SMS and ERM solutions cannot correctly identify and mitigate the drivers for human error, as demonstrated by the empirical evidence cited here and in countless publications by recognized industry experts and councils.

This is where the Presage solution stands apart.

Uniquely positioned both as a disruptive technology and complementary process to existing SMS, the Presage solution offers its customers the next generation solution to effectively target, control, and mitigate the psychological and social drivers of human error in ways that were never possible before.

ROI can be measured through an array of different metrics, especially those that are critical to success factors in every industrial sector. These will include:

- the capture and storage of behavioral risk information
- reduction in accident/incident frequency and severity
- savings associated with direct and indirect cost of human error
- savings on insurance premiums
- employees feeling safer and acting more responsibly in their decision making

Our own customer experience has empirically supported the former, with the most notable KPI indicator improvement being the reduction in *severity*. Not surprisingly, the Presage solution has found its early home in what is termed "high energy state" environments, (e.g. aviation, utilities & mining). Characteristic of these environments is the fact that when a worker makes a mistake, it usually has severe consequences. By design, the proactive nature of the Presage solution targets and mitigates the behavioral threats which lend themselves to catastrophic outcomes well before they come to fruition.

The safety industry as a whole is ready for the Presage solution and for the incremental benefits it can provide in terms of safety culture and awareness. For corporations, the Presage solution represents the opportunity to significantly improve and advance their own critical capacity to reliably and proactively reduce human error risks in the workplace. In addition, as evidenced here,

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these companies also gain multiple levels of benefits across their various internal and external business interests.

Presage enables each company adopting its solution to gain a distinct reputational advantage–a firm place among the leaders in international workplace safety standards–because these companies are doing their utmost not only to minimize corporate vulnerability and exposure, but they are also doing their utmost to protect their employees and their communities by forestalling the potential for everything from small incidents to major disasters.

With the Presage solution in place working for you, your company's mission and vision will be more capable than ever of staying fully on course. When potential problems are seen and curtailed before any real issues actually arise, your company's focus on future growth and achieving success will be that much clearer. The Presage Group will help your company evolve on your terms, before an incident tells you that you should have seen it coming. Presage has the capability and technology; it's time for companies to evolve now.