



**Keane**

Beyond compliance.<sup>SM</sup>

**Keane SCORE<sup>TM</sup>**

**A Technology Brief**

## Introduction

**Keane SCORE™** is a patent-pending integrated risk and compliance management tool that collaboratively automates and interlinks the three key processes common to enterprise governance, risk and compliance management:

- *Measure* - Risks, Assessments, and Cost Survey analyses
- *Manage* - Identification of and provisioning for risk mitigation or compliance processes
- *Monitor* - Maintenance, continuity management, reporting and event management

**Keane SCORE** delivers these three processes through a web based and Internet accessible software platform built upon a common, commercial and standards based foundation of software and hardware systems.

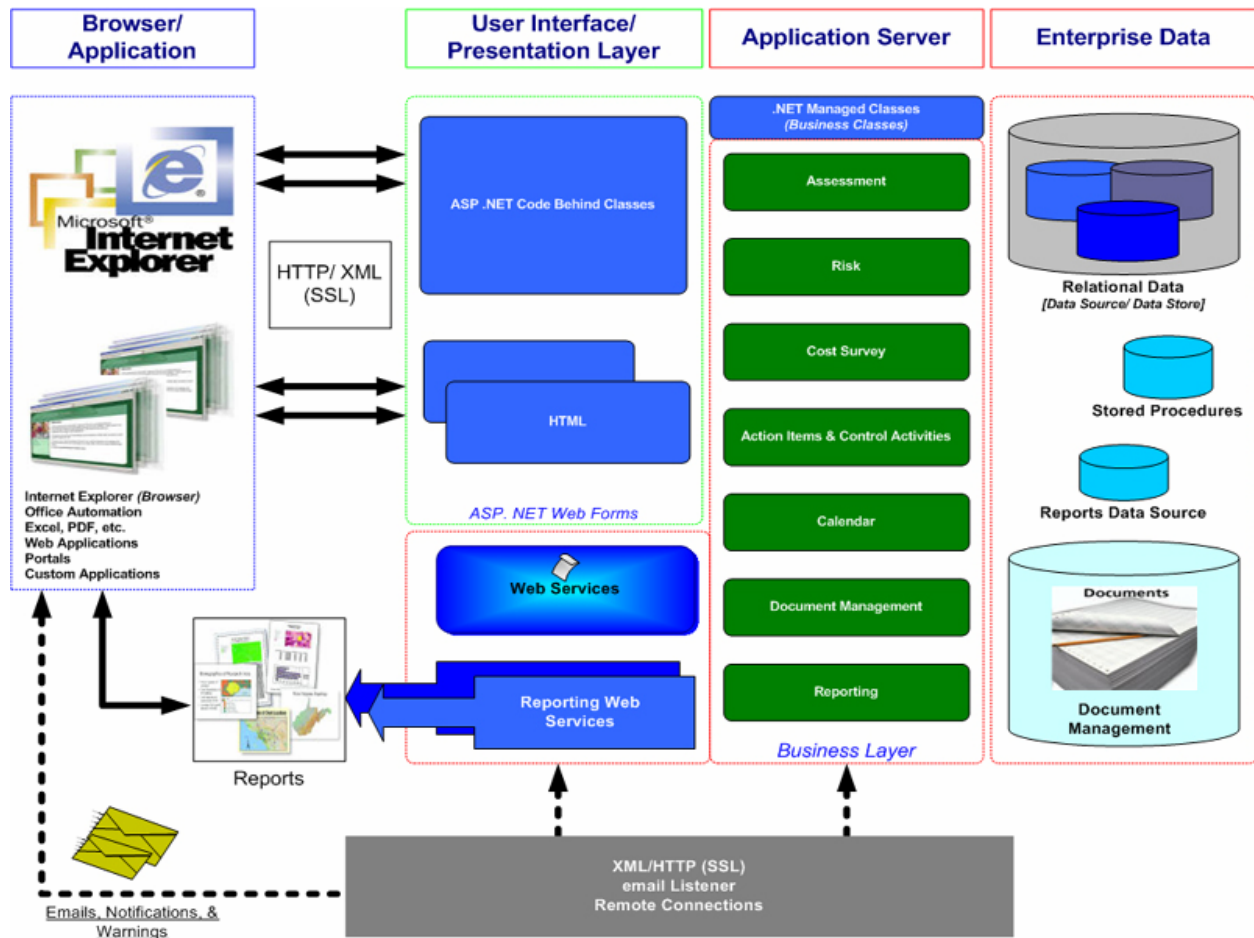
**Keane SCORE** is also uniquely adaptable to cater for a range of disciplines and circumstances through highly scalable and flexible architecture that allows the platform to be replicated and customized in multiple formats by its adopters.

**Keane SCORE** has been constructed to operate in an ASP or Application Service Provider model. The application and its modules are professionally hosted and administered, accessible securely through the web, scalable, and easy to integrate with other third party technologies.

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## Architecture

The **Keane SCORE** governance, risk, and compliance management software platform consists principally of individual and integrated application modules comprising Risks, Assessments, Cost Surveys, Action Items/Control Activities, Calendar functions, Document Management, Customization/Configuration tools, Dashboards, and Reporting capabilities.



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**Keane SCORE** is based on commercially available software and system building blocks: Microsoft .NET™ Framework, Microsoft SQL Server™, Microsoft SQL Server Reporting Services™, and standard web services building blocks. All interactions, user, management, and maintenance of **Keane SCORE** are conducted optimally through the Microsoft Internet Explorer™ web browser interface. Integration with other systems is enabled through Web Services supported via XML/SOAP, identity management through LDAP, a variety of integration connectors and message buses, and standard email interfaces.

### **Platform**

#### *Status and Events Dashboards*

The **Keane SCORE** Status Dashboard is a constant real-time representation of the Risks Index, Assessment Scores and Cost Survey results. This dashboard appears on every page and section of the system while the user is manipulating the system. The **Keane SCORE** Events Dashboard is a real-time representation of items in the Action Items and Calendar Modules, and system generated events. The Calendar and Action Items Modules are the main drivers of the **Keane SCORE** Events Dashboard and the Dashboard is present only on the front page or entry point to **Keane SCORE**.

#### *Modules*

### **Risks Module**

The Risks Module assigns inherent and active risks, sets and organizes risk hierarchies, calculates continuous updated risks index values, and validates through enhanced document management and controls features to be embedded and interdependent with Actions Items

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managed by the system. The Risks Module identifies and manages risk inherent in a certain type or class of a **Keane SCORE** Client and identifies and assigns a rank and baseline index value to specific risks relating to a particular **Keane SCORE** Client or **Keane SCORE** Client Group, over and above the inherent risk. The Risks Module has the ability to set and quantify the relative accomplishments of risk based goals through objective setting and benchmarking.

### **Assessment Module**

The Assessment module is a series of questions and answers (referred to as an “assessment”) that are grouped into four segments known as principal assessment groups or PAGs – Human Resource, Electronic Environment, Finance and Enterprise, and Physical (or as may be designated). A combination of the sector, username, role, and industry group set that the customer is engaged in, and/or via a custom measurement or descriptor, determines the question and answer sets or “assessment” that will be delivered to the user. Assessment answers can have relationships with other assessment answers, events in the Action Items Module, and survey questions or responses in the Cost Survey Module. A response to one or more of the assessment questions can be customized to trigger or cause another assessment question’s answer to be selected or changed automatically. Assessment answers can be customized to trigger or cause an event to occur in the Action Items Module, and this event is called an Action Item. Assessment answers can effect or cause changes in the response section of the Cost Survey Module.

Assessment results are displayed in the system for each of the four principal assessment groups and in an aggregated overall result, which is a variable and customizable combination of the individual results.

### **Cost Survey Module**

The Cost Survey Module comprises of a set of customizable questions that a user answers by assigning cost figures in four categories: Actual, Estimated, Soft Dollar or Opportunity Cost. The

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responses are manually completed by a user; however with respect to the opportunity cost option the system functionality displays an equation that includes probability of loss, maximum loss, and Vulnerability Factor. While the first two fields in the equation are manually completed, the Vulnerability Factor is pre-determined by an inverse multiplication of the Assessment score in the principal assessment group to which the Cost Survey item applies.

### **Action Items Module**

The Action Items Module has an expandable display of fully customizable recommended mitigation actions (set originally by an Administrator) that have either been caused or “triggered” by a response to a certain Assessment question, or that a user has manually set. Action Items are listed in a summary fashion of two categories: Active or Deleted. An Action Item is a management or mitigation action that is deemed to be necessary or advisable. Once an Action Item is manipulated or changed by a user this may re-trigger a change of an Assessment answer to a particular question or questions, thus also changing the Assessment results for a particular user. Prior to this event, the user is given an option to review the potential change in the Assessment and either accepts or declines the system directed update.

### **Calendar Module**

The Calendar Module captures and displays Calendar items according to recurrence dates set in the Action Items Module, as well as items that a user may independently set in the Calendar module. The Calendar Module also functions as a typical electronic calendar system. The Calendar Module is one of the main drivers of the **Keane SCORE** Events Dashboard. A summary of each days calendar appears in this dashboard on the entry point of **Keane SCORE** displaying “Your Events for Today” which includes both manually set calendar items and all provisioning items which are either due on the respective day or that remain overdue for action

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and are thus not yet fully provisioned. This entry point display can be adjusted by the user to reflect notification preferences.

### **Reports & Documents Module**

The Reports & Documents Module includes access to the reporting capabilities and the document management systems. Currently **Keane SCORE** contains the pre-built or “canned” reports: These are reports that provide information about risk index, assessment and cost survey results, action item auditing, benchmarking, and login/email tracking reports. All of the reports are customizable by date range over any given period of time as may be selected by a user. The reports are created with Microsoft’s SQL Server Reporting Services infrastructure that delivers real time and historic information and are exportable to HTML with office web components, Microsoft Excel, web archive, Acrobat (PDF), TIFF file, comma delimited (CSV), or an XML file with report data formatted for downloading. The basic user report functions allows the continuous tracking and monitoring of risk profile, thus providing a consistent baseline measurement in key areas of the risk management process.

The Document Management System currently provides a repository for all documents in the system. All information on the documents located in the system for the user, can be found through this module; including the status of control - oriented documents, as well as the linkages between documents and assessment questions and/or action items.

### **Keane SCORE Features**

#### *Communities or Sectors*

**Keane SCORE** has built into its architecture a system hierarchy based on communities, or sectors which provide the ability for **Keane SCORE** to operate and maintain several different

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and independent, customizable, and simultaneous instances of its full capabilities and processes: Risks, Assessments, Cost Survey, Action Items, Calendars, and Reports. These communities are logically separated by a descriptor that is described as a Sector, Industry, or Vertical. Each individual community contains all of the functionality as described above in the Risks, Assessment, Cost Survey, Action Items, Calendar, and Reports modules.

In addition, within each Sector, a further functionality exists which allows assignment of relative weightings and scores to each of the four principal assessment groups within the Assessment module and Risks indexing details for either an individual or group of clients. This functionality determines the aggregate Assessment score for a client or group of users according to the industry or client group (or subset) applicable to such a client or group. This also allows for Risks Indexes to be set per industry or client group.

### *Community and Sector Reporting and Document management*

The Community and Sector Reporting mechanisms are accessible from the system database according to date range values over any given period of time as may be selected by a Sector Administrator or **Keane SCORE** system **Keane SCORE** System Administrator. The reports are created with Microsoft's SQL Server Reporting Services™ and are exportable to HTML with office web components, Microsoft Excel, web archive, Acrobat (PDF), TIFF file, comma delimited (CSV) or XML file with report data format for download. The function allows the Sector Administrator or **Keane SCORE** System Administrator to aggregate reports by client groups and thus creates broad baseline measurements across a portfolio of clients.

Document management for either Sector Administrators or **Keane SCORE** system Administrators allows the creation and storage of documents in an independent administrator module. This module includes additional functionality that enables administrators to

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simultaneously link such documents to individual client accounts which in turn will appear at the client interface when viewing provisioning items to which the documents have been linked.

### *Access and Roles System*

**Keane SCORE** utilizes a combination of usernames, passwords, and roles to provide access to the function and to set the rights and privileges for the access and the usability of the system. All roles within **Keane SCORE** have the ability to incorporate documents through electronic means. The system utilizes eight principal roles:

1. Client – Usernames assigned this role have the rights and access to fully managed the end user aspects of the modules and dashboards for one client (including designated subsidiaries) or customer instances.
2. Client Read Only – Usernames assigned this role have the rights and access to only view the end user aspects of the modules and dashboards for the single or multiple clients assigned to them by the Sector Administrator or Sector Manager roles. Read Only Clients have rights and access to run reports.
3. Client Department User – Usernames assigned this role have the rights to fully manage the end user aspects of the modules and dashboards as assigned to them by the Sector Administrator or Manager roles. Department Users can only answer questions that have been assigned to them by PAG (Principle Assessment Group) or PAG subset.
4. Client Manager – Usernames assigned this role have the rights to fully manage the end user aspects of the modules and dashboards of multiple clients or customer instances, but only as assigned by the Administrator. This role cannot modify the questions in the assessment and survey modules and cannot change the content of provisioning items.

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5. Process Manager – Usernames assigned this role have the rights to fully manage the end user aspects of the modules and dashboards of all system clients or customer instances. This role cannot modify the questions in the assessment and survey modules and cannot change the content of provisioning items.
6. Sector Manager – Usernames assigned this role have access and rights to create, delete, modify, and manage Users and Clients. The Sector Manager role cannot create, modify, or edit Sector Administrator or **Keane SCORE** System Administrator roles.
7. Sector Administrator - Usernames assigned this role have access and rights to create, delete, modify and manage any and all aspects of the system, its modules, dashboards, content, and business rules for particular business sectors, or communities, which are assigned by the system administrator. The Sector Administrator cannot create, modify, or edit **Keane SCORE** System Administrator roles.

### The ASP Model

Keane Business Risk Management Solutions has adopted an Enterprise ASP (Application Service Provider) focused model for delivering sophisticated enterprise wide risk and compliance management solutions. Many businesses do not consider IT or risk management technologies as a core expertise, and view self sourcing risk and compliance services and solutions as prohibitively expensive. Keane Business Risk Management Solutions is able to provide **Keane SCORE** and future governance, risk, and compliance solutions to business across the internet through the use of web services and industry accepted standards of internet architectures. Keane Business Risk Management Solutions' overall technical foundation coupled with the ASP model's ubiquitous access, low cost of entry, and low total cost of ownership

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allows Clients to leverage the internet and technologies such as XML to interconnect their enterprise risk and compliance systems to other mission critical business systems.

**Keane SCORE** is hosted to the highest possible levels of reliability and performance, in a resilient datacenter with round-the-clock systems management including onsite personnel trained in the areas of networking and systems management.

### **Microsoft .NET**

Use of the Microsoft .NET Framework gives Keane Business Risk Management Solutions the ability to create infrastructures with unprecedented levels of interoperability, manageability, reliability, scalability and security. The .NET Framework is an integral Microsoft component for building and running next generation applications and XML Web Services. The .NET Framework delivers business value with faster time-to-market, improved systems flexibility, and reduced costs.

### *Microsoft SQL Server & SQL Server Reporting Services*

**Keane SCORE**'s data store is built on Microsoft's SQL Server. SQL Server supports the rapid development of enterprise-class business applications and provides core support for Extensible Markup Language (XML) and Internet queries. Self-tuning and dynamic self-configuring features optimize database performance, while management tools automate standard activities. Graphical tools and wizards simplify setup, database design, and performance monitoring, allowing Keane Business Risk Management Solutions' database administrators to focus on meeting strategic business needs.

SQL Server Reporting Services is a comprehensive, server-based solution that enables the creation, management, and delivery of both traditional, paper-oriented reports and interactive, Web-based reports. An integrated part of the **Keane SCORE** framework, Microsoft's Reporting

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Services combines the data management capabilities of the **Keane SCORE** framework with the familiar capabilities of office automation software to deliver real-time information to support daily operations, compliance requirements, and drive business decisions.

### **Security & Confidentiality**

Software applications, especially those that are Internet-based, have developed from static channels designed to alter and orchestrate data into increasingly dynamic exchange systems that form the foundation of e-business. As the complexity and functionality of modern software applications have increased, threats to software from both inside and outside organizations have risen.

**Keane SCORE** employs a multi-layered approach to security through accounting for both physical and logical security. We apply the tightest security measures available within a hosted infrastructure environment. Our application platform is constructed with commercial security capabilities, leveraging internal system security features to ensure confidentiality between all customers' data elements. Sophisticated authentication systems ensure that only authorized users enter the system, confidentially access only their data and all usage is monitored and logged.

**Keane SCORE** leverages the inherent commercially successful and resilient security and confidentiality mechanisms built into Microsoft's .NET Framework, Advanced Server, and SQL Server technologies. **Keane SCORE** is also built around standards based security services, such as SSL for client and administrative browser interaction within the **Keane SCORE** application. Keane Business Risk Management Solutions has and will continue to implement powerful authentication, authorization, and cryptographic routines within **Keane SCORE**.