

# Sage Employer Solutions | White Paper

Sage Employee Analytics—  
The Next Service Level of Human Resources





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*Accurate and timely employee information is crucial to driving operational efficiency.*

*Information should be actively pushed.*

## Introduction

A deep recession always does both harm and good. It's like a wildfire: Initially, the devastation and destruction comprise the only visible outcome, but in the long run, it gives room for new growth.

The most recent recession put a lot of pressure on human resource professionals to do more with less people, and meanwhile be of strategic influence to the rest of the organization by optimizing the investment made in its main asset: employees.

Employees drive the business success of the company. Information about employees—their activities, their skills, their development, performance metrics, and the associated costs—are critical to understanding many aspects of the business, such as the true effort driving the profit or loss of a product or project. Having accurate and timely employee information is crucial to managing employees, controlling costs, and driving operational efficiency.

The conflict between the need for information and the security of that information has historically meant that HR is the gatekeeper of information flowing to others. Many information requests are very specific, so there is no standard solution. HR evaluates each request, decides what is appropriate for that situation, and creates a specific custom report or file in order to deliver that information. This is cumbersome and time-consuming and often means that the request is never successfully completed.

The HR department, in creating custom reports when requested, is reactive by nature: The manager or executive will only receive valuable information when he or she asks for it. The real challenge is to turn this around: The information should be actively pushed to the manager with clear indications if thresholds are breached and immediate attention is required.

Alternatively, IT can get involved to set up a systematic feed of information to another system to make the information readily available. The IT department typically works with the users and HR to make sure the data they extract is appropriate, and that the security is correctly implemented within the separate system so that end users do not see data which they are not allowed to access. Again, these data feed connections are time-consuming to develop and are usually for a single purpose, so they are usually limited to those with a very high payback. In addition, there is always the concern that the security will not properly flow through to the other system and won't take into account the regular internal changes as to who should have access to specific information. For example, when managers change, the old manager should no longer see the information and the new manager should see it automatically. This tends to be a complex system for IT to create.

The end result of this is that employee information largely stays bottled up in the HRMS and is never used to its fullest potential. If you go to executives, managers, and operational leaders, they will all give you a list of data and metrics that they would like to have but do not get today. How do we uncork this HRMS bottle and let the information flow freely?

## Sage Employee Analytics

Sage Employer Solutions recognizes the needs of modern HR professionals. Therefore, within Abra ESS (Employee Self-Service), we have created an innovative technology for the dynamic sharing of information and employee analytics that empowers HR professionals to securely provide on-demand Sage Abra workforce data to executives, managers, and others. The data distributed is tailored to the specific needs and security profile of each user. This capability allows data to become insightful business intelligence, allowing decision makers to develop informed business decisions. Employee Analytics is a technology within Abra ESS that:

- **Empowers HR, without IS support, to define and manage what information their internal, in-organization clients can see.** HR remains the guardian of employee data without an ongoing burden, because a one-time specification can handle all potential users. *Intuitive and easy for HR to use, there is no need for extensive training or technical knowledge.*
- **Protects sensitive HR data.**
  - Secure access is controlled through the same user logon authorizations used for all of Abra ESS.
  - Security is based on reporting relationships, such as managers only seeing employees that report to them; and the relationship is automatically determined in real time with the request, so no special security needs to be set up or maintained and no one ever accidentally sees incorrect information. Abra ESS intrinsically knows about an employee's personal information, which employees report to which manager, as well as all employees below a senior manager.
  - HR can assign users to special roles, from executive access to whole companies or to custom-designed subsets of the organization. This further opens dynamic information sharing for use in other situations where access is not determined by direct managerial reporting relationships. This is still data-driven to minimize ongoing maintenance of security roles.
- **Keeps information up to date without HR intervention.**
  - The information is dynamically refreshed every time the user accesses it. Users never have to request an updated report.
- **Lets the users decide where, when, and how to use the information without HR involvement—always controlled, of course, by the security roles defined in ESS by the HR department.**
  - Live web links connect users to the information they need.
  - Information is available at any time, from anywhere an Internet connection is available.
  - Information is immediately available in web-standard HTML pages for display in Abra ESS, web portals, company intranets, or directly from any browser, including mobile devices.
  - Information is immediately available in Microsoft® Excel® through a web query. Abra ESS also provides a downloadable IQY file that is Excel's feature to automatically connect Excel to web data without the end user doing anything more than opening that file and logging in.
  - Information can be programmatically used in any tool of choice that can use a standard web service, such as Crystal Reports®, other web-enabled products, or custom programs.

## Sage Employer Solutions

*Employee Analytics allows data to become insightful business intelligence.*

*The information is dynamically refreshed every time the user accesses it.*

## Security

Making sure that sensitive employee data can only be accessed by those who are authorized is always a priority. However, regulating employee data access is a constantly changing and often complex procedure. In most cases *who* a user sees is based on the latest status of the employees, in terms of whom they report to, in what organization they reside, what type of job they hold, or other dynamic information. This is what makes it almost impossible for other systems to easily define and enforce security.

On the other hand, information in views created by the Abra View Builder is protected by the security architecture and technology built into the ESS functionality.

The level of employee security is either automatically defined by the organization's hierarchy or easily custom-defined by the HR user. Given the Abra HRMS intrinsic knowledge of the current employee information, security can be easily defined for which employees an end user sees, even if the basis of that information is not shown in the end results. This ease of use and instant security are what allows HR to have confidence in the security of their data.

A user who wants to view Employee Analytics data is always required to first log on to the system. This is independent of the platform or application used. Every time an Excel® sheet with Employee Analytics data is refreshed, and every time the data is accessed via a web browser, the user must log on. The information presented in the report will only be information the user is authorized to see.

## Under the Hood

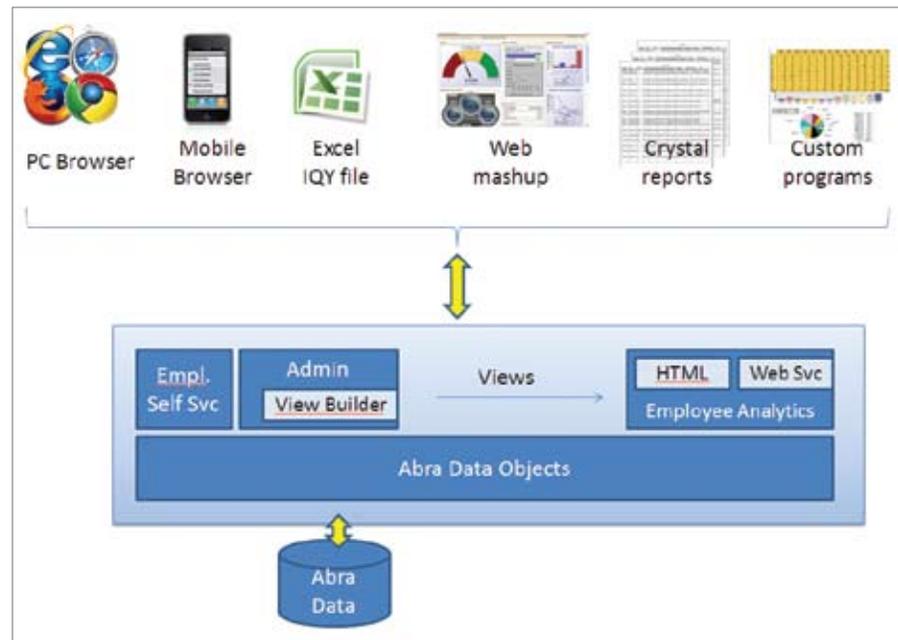


Figure 1: Sage Employee Analytics architecture

Employee Analytics is added into the overall Abra Employee Self-Service (ESS) offering from Sage Employer Solutions. There are several key elements of the Abra ESS functionality that are also used for Employee Analytics:

- It is included in the same Windows® web server as the other parts of Abra ESS, simplifying deployment. Both the administrative and end-user elements of Employee Analytics are presented through the web, just like Abra ESS.
- It uses the same user authentication and credential management as Abra ESS, which provides the entire user and password management functions.
- Reuses the same Administrator roles and function as the rest of Abra ESS, so any authorized HR user can access the Employee Analytics administrative functions.
- Reuses the Abra Data Objects that underlie all of Abra ESS. This is a special function that takes the more complex underlying data structure of Abra HRMS and presents it in a simplified form for the admin user to easily pick data to include in the view. The Abra Data Objects is one of the key reasons that any HR user can go in and understand how to include data by simply checking a box next to the desired item, ignoring any underlying data complexity.
- HTML views can be easily added into Abra ESS employee screens to provide customized information. When added into Abra ESS, there is no extra user sign-on required, since the system already knows who the user is from being inside Abra ESS.

## The View Builder

The View Builder is a key part of the Employee Analytics technology and is used to define new views into the Abra HRMS database and to manage specialized user roles for access to the views. A view is a type of report, but differs from a report in the sense that a view is dynamic and always shows the actual data, whereas a report is a static and just a snapshot in time. There are several key functions of the View Builder:

- It allows the HR user to uniquely name the view, which is then used for all future references. As simple as this sounds, this is essential to the easy reuse of the views in many settings—as the user, with no further effort, has created external access to this unique view into the data. As soon as the name is defined, a unique web URL is displayed for reuse, as described later.
- The HR user defines the view for the specific role or roles within the organization; the employee, manager, senior manager, or custom roles can be added specifically for executives and other users.
- It allows the HR user to define which employee data is used, titles for the columns and sorting, grouping and filtering of information. Although this sounds fairly common, the key for dynamic information sharing is that the HR user is uniquely defining this view of HRMS information in a matter of minutes, with no technical assistance.

*The HR user does not need to be aware of how the end users plan to use the information.*

*The HR user need not worry as to whether a web mashup will display inappropriate information.*

## The Output

These unique view definitions are used by the Employee Analytics service to present the information in any of a variety of ways. A powerful feature of Employee Analytics is that the HR user does not need to be aware of how end users plan to use the information. Once defined, the view can be used in any of the above described ways and they can feel confident that no user is gaining unauthorized access to any information or employees than the user should have at that point in time. Some of the possible uses are:

- **Employee Analytics automatically provides a web-native HTML view of the information to be reused, anywhere.** The HR user defines column headings and some basic formatting information as part of the view definition, so that this is directly usable in many cases. Some examples of this are:
  - As mentioned previously, this can be displayed directly in Abra ESS.
  - The web URL provided in the View Builder is directly reusable in any browser on a PC or mobile device. The HR user can send that exact same URL in an email to anyone in the company. When the user clicks the URL, a browser session will open, they will be asked to log in, and then their unique information is displayed. That URL can be saved as a favorite by the end user to go back to that view any time they want, such as seeing a list of emergency contacts in their mobile device.
  - The View Builder also has an option to create and download an IQY file. These are available to the HR admin user in View Builder or to any end user as an option from the HTML web page they see. This IQY file can be opened then or emailed as an attachment to anyone in the company. There is no employee information in the IQY file so it can be safely sent to anyone. As soon as the user opens the file, Excel starts, asks for the log-in, and then presents the data in Excel. Once opened, users can make any changes they want and then save it as their own Excel workbook. At any time in the future, they can open that Excel workbook and ask Excel to refresh the data—and the information will be instantly updated to be current. Although end users could manually create the same web query in any Excel model, the IQY makes initial use extraordinarily easy.
  - In combination with process automation software like HR Actions® for Sage Abra or KnowledgeSync for Sage Abra, emails can automatically be generated to alert managers of actions to take, or about a threshold breached containing the URL to the relevant information. Thus, data and information becomes actionable and managers or employees are proactively informed by the system.
  - A relatively new concept for web development is the web mashup<sup>1</sup> which allows the combination of information from multiple sources in a new end application for the user. Dynamic information sharing allows for this either through the direct use of the HTML output or the web service function (described next). With a web mashup, the possibilities for solving an end need are endless, because it lets you combine information from multiple sources on another web server or in the user's browser itself. Again, the HR user need not worry as to whether the ending web mashup will display inappropriate information, even though there is no indication given as to the end format.

<sup>1</sup> [Wikipedia](#): A mashup is a web page or application that uses and combines data, presentation, or functionality from two or more sources to create new services. The term implies easy, fast integration, frequently using open APIs and data sources to produce enriched results that were not necessarily the original reason for producing the raw source data.

Employee Analytics also presents the views in a web service for programmatic access. The exact same view is automatically presented to developers using web services as an equivalently named operation and method call in the WSDL<sup>2</sup> description of the web service. This widely used web standard allows for very broad reuse of dynamic information-sharing views. Some examples are:

- As previously mentioned, the web service can be called for a web mashup.
- Crystal Reports<sup>3</sup> is provided with Abra HRMS and includes the ability to connect to a web service as a data source. This powerful reporting tool can be used to produce reports for end users who are reusing the information from one or more Employee Analytics views, as well as information from any other data sources available to it. This could be a highly formatted listing of the information or a summarization of the data, including graphs. These polished reports can be reused in many ways:
  - The resultant report can be added into Abra ESS to provide a polished, web-based report to any ESS user based on their role.
  - The HR user can reuse these same reports inside Abra HRMS. Although possible before with Crystal Reports, in this fashion the HR user can take advantage of some improved ease of use in selecting data for their reports, significantly decreasing the effort to produce some reports.
  - For an additional fee, you can use SAP<sup>®</sup> Crystal Dashboard Design and other Business Objects tools to create powerful dashboards and information visualization either embedded in the Crystal Reports or separately.

The web service can be used in any tool of your choosing as long as the tool knows how to reuse a web service. This includes all modern programming languages and many end-user tools. There is no real limit to the possibilities if there is a knowledgeable user of these tools available to create these solutions.

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<sup>2</sup> [Wikipedia](#): The Web Services Description Language (WSDL, pronounced 'wiz-del') is an XML-based language that provides a model for describing web services.

<sup>3</sup> [SAP Crystal Reports](#): the de facto standard for the design and generation of reports from a wide range of data sources.

Information can be delivered in the format of choice of the recipient.

## What It Means

The applied technology described above results in an easy-to-use and extremely versatile tool for providing employee information that can be delivered in the format of choice of the recipient.

The implication is that manager A can integrate and view his or her information on an iGoogle™ page, manager B views and analyzes his or her information in an Excel spreadsheet, and manager C views his or her information on a mobile device such as an iPad®, iPhone® or Blackberry®. A view created just once will show the information relevant to the person who accesses the information, and in the format of their personal preference.



Figure 2: Sage Employee Analytics in multiple formats

## Sage Employee Analytics: Unique and Innovative

There are other HRMS products that offer HTML and web access to their information. So what makes Abra ESS with Employee Analytics different?

- 1. The HTML pages and web services are not predefined by the software provider, but are created on the fly.** Most HRMS products providing such web access create a predefined library of HTML pages and web services for users of their products. That means they are very broad, general-purpose functions that expose almost all data and have no special security filtering. It leaves it to the end user or developer to enforce security. Although some other products open the HRMS to web access, the development cost of reusing the defined reports is very high. Sage Abra ESS provides a few sample views to get started, but the whole intent is to make it very easy and safe to open the HRMS information to other users. Each view is the equivalent of hours of programming that involves selecting the desired data, formatting, sorting and filtering the information, and defining the security. Abra ESS could end up with hundreds of such unique definitions, which is totally impractical in most systems today.

**2. Same view is used in many modes with no effort by the Sage Abra user.** In most systems, the programmers decide what mode, HTML, or web service, is used to provide the information. Providing multiple modes just adds that much more effort to their development. In Abra ESS the view is automatically available in either mode. The result: personalized information presented in the recipients' formats of choice, on their devices of choice.

**3. The views can be created and shared with no technical expertise by the HR user.** Most custom web services or HTML pages involve use of some programming tool to determine the content. That means that most HR users must turn to their IT group or external consultants to provide such access. With View Builder, any HR user should be able to create custom views in a matter of minutes with little to no training.

**4. The built-in security, as described in the *Security* chapter, will give the HR user a high level of comfort.** The HR user can freely define the Employee Analytics views using the View Builder, without the need to worry about security and authorization levels at that moment. The authorization check and clearance is done at the moment of delivery of the data. Information to which the recipient has no viewing rights will simply be filtered and not displayed. This can and will vary per recipient. The HR user can rely on the roles and security levels, once they are defined in the ESS architecture.

**5. The Employee Analytics view is accessed as a simple URL reference to Abra ESS for easy redistribution.** In traditional web HTML page deployment, a technical user decides where a certain HTML page will be uploaded on the web server and then passes that information to other users or systems. Besides the extra effort, additional security rights are necessary to post files to the web server. With dynamic information sharing, there is no physical web page to place on a web server, just a URL that tells Abra ESS which view should be displayed. The view is created in real time and presented to the user. There is no need to involve a webmaster and there is no need for the HR user to have web server access.

## Summary

There is a growing need for employee related information at all levels of the organization. With the Abra ESS Employee Analytics technology, users of Sage Abra HRMS can provide crucial information very easily and quickly with complete confidence in the security of their information. On the receiving side, employees, managers, operational leaders, executives, and IT staff can get the information they need in many ways and many formats, whatever best fits their needs.

Sage Abra HRMS with Employee Analytics truly turns the employee data into a resource for the company, to make employees and managers more productive and the company more successful.



## About Sage North America

Sage North America is part of The Sage Group plc, a leading global supplier of business management software and services. Sage North America employs 4,000 people and supports 3.2 million small and mid-sized business customers. The Sage Group plc, formed in 1981, was floated on the London Stock Exchange in 1989 and now employs 13,400 people and supports 6.3 million customers worldwide. For more information, please visit the website at [www.sagenorthamerica.com](http://www.sagenorthamerica.com).

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