HCM Application Integration in the Cloud:

Techniques, concerns and mobile apps

This White Paper takes a look at application integration from an HR business perspective, describes the different techniques and examines whether it is a sustainable strategy for HCM in the light of emerging technologies.
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Introduction

The Human Resource (HR) business community expects Human Capital Management (HCM) system to contain a module to support each area of the HR business practice. The reality is no single HCM system can ever deliver all the right modules to satisfy 100% of any client’s HCM systems requirements. Until recently the only solution was to incorporate modules from multiple suppliers into an overall HCM integration architecture. Integrating applications always introduced challenges and now there are even greater challenges to connect to remote applications residing in the Cloud or in the company’s own data centre. Apart from connecting systems with different data structures there is Cloud-to-Cloud navigation across firewalls and security gates. This White Paper looks at some of the techniques, technologies and the implementation methods and examines the issues and administrative impact, from an HR business perspective, as well as examining application integration as a sustainable strategy to provide a platform for the new wave of mobile technology.

The reason application integration is so important at present is because it not only addresses processing inefficiency, such as multiple instances of data maintenance and system administration, but it is crucial for the new wave of mobile technology that is about to change the way HR performs the business practice. Whilst mobile technology is currently focusing on social media integration and exploring new ways of communication and collaboration it will not be long before the focus shifts to business applications. The new software delivery method, using mobile devices such as iPads, Androids and BlackBerries, will bring into play HCM applications such as workforce intelligence that have not shared the spotlight before. For any published workforce information data accuracy is essential for confidence and credibility and that means the underlying applications that produce information based on workforce analytics and headcount reporting will be dependent on a single source of the “truth”. From a data architecture viewpoint that also means data must be consolidated into a central database.

This White Paper will also look at the role of Master Data Management (MDM) as a means of identifying a single source of the “truth” and how it influences architecture patterns. However, even when the right data sources are identified the way an HCM application is designed, stores and processes data impacts the reliability of information.

From a mobile application perspective this White Paper will look at the suitability of the integration architectural options to provide the right platform on which to build applications.
Creating a Single Version of the Truth

Creating a single “version of the truth” is a challenge when using one system but when pulling data from multiple sources the process becomes far more complicated. Nothing destroys credibility quicker than to report figures that change when the same reporting period is revisited. There may be explainable reasons and that is why procedures must be put in place by the business to ensure control over the process and system audit capability must exist to track where the discrepancies occur.

First step when introducing procedures is to establish the right source to report the “version of the truth”. In many organizations the responsibility to input new starters and terminations is done by the Payroll Department. That could be a problem. If real time reporting is a requirement then the closure and opening of pay periods may interfere with the process. An employee’s commencement record may be held until a pay is run in case the new starter draws more salary than they are entitled to. Similarly with an employee’s termination the transaction may be held back until a payroll is run so the employee draws salary for that pay period. The right source is the System of Record in an integrated architecture.

The next step is to determine how data processing is to take place and who will do the data entry. If self service is a feature of the HCM solution then what will be made available to the employee to update. If decentralized processing is part of the data maintenance produce then what systems require update and what should take precedence. For example, if a person terminates is the system of record updated first and any point solutions updated later. Where a file transfer is the means of interface then the procedure must involve updating both in a timely fashion so the synchronization of records will not be compromised.

If a data warehouse is part of the company’s information architecture then what data is to be reported from that source? Data warehouses are usually not updated real time so if that is going to be the source of the “truth” then the timing of reporting must be established. Usually there is periodic reporting to supply some form of workforce information and analytics to inform the shareholders how the business is going. Often there is regression analysis involved to give a trend. For example, what are our numbers today compared to this point last month or last year. For this reason it is necessary to have a time period assigned to each record in order to report and be able to recreate the status at the data of interest. To record a date a person joined the company or moved to another position (job) is easy. Maybe that figure appeared in a Board report or annual report. But what happens when an error is discovered. For example, someone may have left but the termination was not actioned and a termination date not entered. Or perhaps a person on extended absence was terminated retrospectively, or perhaps a person was accidently put on the wrong position number and recorded in the wrong section or department in the report. How can we recreate the headcount without days of searching for the discrepancy? And it must be done or the whole headcount reporting process loses credibility. Most HCM software products cannot handle this type of timeframe recording. They either do not have a correction mode or they create multiple periods of employment or position occupancy. Not all systems have the same record processing capability.
Before technology comes into play the business must have clear procedures in place to capture the data needed to report a single “version of the truth” otherwise technology cannot help.
Difference between Integration and Interface

When multiple products are involved in an HCM system architecture the solution is usually referred to an “integrated” solution. However, it is usually a loose description for how applications interact with each other and what the architecture is really describing is a series of interfaces. So what is the difference between an integrated solution and an interfaced solution?

An integrated application architecture has ONE database and an interfaced application architecture contains MULTIPLE databases. That is, an application interface is where multiple systems exist with data stored in multiple locations and copies of data are transferred. Application integration is where multiple products with multiple functional features combine into one solution and data is maintained in one system with one database. Almost all HCM “integrated” solutions marketed today are really interfaced solutions if that definition is applied. For the purposes of this White paper we will continue to call instances where data is exchanged between systems an integration.
Integration Architecture Options

The most common integration architectures are:

1. Fully Integrated Single System
2. Point-to-Point,
3. Data Hub,
4. Common Integration and Development Platform (CIDP), and
5. Fully Integrated Component Assembly (FICA).

1. Fully Integrated Single System

The most common form of integrated systems in the 90s was one monolithic fully integrated system. Fully integrated usually meant Payroll was included in the application. Now that single “integrated” solution is seen as inflexible and usually unable to satisfy more than 70% of companies’ system requirements.

Diagram 1 – Fully integrated application architecture

Implementation of the Architecture
The system is usually easier to roll out than a solution that involves multiple products. The singular nature of the application makes it adaptable for mobile computing providing it meets all the other criteria related to Cloud based availability and compatible design.

Issues
The one system single supplier model usually costs a lot more to purchase and implement, depending on the deployment model (SaaS or On-premise) and costs more to modify and takes a lot longer to change in response to business change.

System administration involving security controlled access to records and database structuring, to reflect the company’s organization hierarchy, is a problem because data ownership and system administration responsibility may not reside with the same business unit.
Integration Solution
The inclusion of multiple modules in the design of the system got around the problem of multiple standalone systems. Data duplication and system maintenance effort was reduced.

(2) Point-to-Point

Point-to-point application integration is where it all started. As it became obvious to HCM project teams that one product was not going to solve all needs additional products started to creep into HCM system solutions. Maybe the reason was functional deficiency in the main product or simply a case of a department could not wait for the main product to be implemented. Often departments considered their HR practice and processes different to the rest of the organizations and a separate solution was required. The following diagram illustrates the resulting architecture.

![Diagram 2 – Point to Point application integration](image)

Implementation of the Architecture
Transfer of data between applications is usually based on the antiquated file transfer method. Web services could be used but the effort to build multiple interfaces makes it impractical.

Issues
- There was no central point of reference for corporate reporting of workforce information.
- Multiple administrators were responsible for each additional system and that impacted on data access and security rules, as well as data structuring that defined jobs and organization unit interpretation.
- The same data item could be maintained in each system
- Requires a separate data warehouse
**Integration Solution**

By joining applications and transferring data between systems, multiple data entry could potentially be reduced, but none of the other issues were solved.

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**Data Hub**

As the process of exchanging data between systems matured, new approaches emerged to manage the art of data integration. The most notable is Master Data Management (MDM) and it has been practiced by thousands of organizations productized by software vendors. The center point of the MDM architecture is the Data Hub, illustrated in the diagram below.

![Diagram 3 - Based on Master Data Management and Governance – MDM Customer Data Hub](image)

**Implementation of the Architecture**

The Data Hub is designed to introduce a **System of Record**. The surrounding applications are referred to as **Point Solutions**. The System of Record is the single **Version of the Truth**. Data exchange between applications is usually FTP (File Transfer Protocol) or Web service.

If placeholders are built into the System of Record then no additional data warehouse is necessary for HR reporting.

**Issues**

Although there is now one central point for reporting data, some of the Point-to-Point issues still remain. They are:

- Multiple administrators were responsible for each additional system and that impacted on data access and security rules, as well as data structuring that defined jobs and organization unit interpretation.
- The same data item could be maintained in each system.
The architecture still incorporates multiple databases so without one single database it is still an interfaced solution.

**Integration Solution**

Although interpretations of the “Version of the Truth” vary Data Hub architecture does acknowledge the role of a central database and real time feeds into the database are intended to keep the data current. The Data Hub is the HCM contribution to an Enterprise data Warehouse.

**Common Integration and Development Platform (CIDP)**

One of the main problems associated with a System of Record is the central system accepting data from the point solutions must have a corresponding field to accommodate the data. Building custom fields in the majority of systems is a time consuming, fragile and costly exercise. There must be a flexible environment in which to build custom fields and a simple database structure to find and report on the fields. There are many development tools available and quite a few hosted platforms but the Force.com development platform is the best solution for end user development.

The diagram below illustrates how data can be imported from multiple systems and integrated on a common platform for ease of custom extensibility.

**Implementation of the Architecture**

The MDM principle of Data Hub, System of Record and central Version of the Truth still exists in the CIDP architecture. In the diagram above the System of Record is still in the architecture but the incoming data from multiple systems is accommodated in the Force.com custom objects and not in the System of Record.

HR Cloud Solutions believe an integration facility to join applications is not sufficient. They believe it doesn’t matter how many applications are integrated together you will never satisfy all HCM requirements at a point in time and integrated solutions are not future-proof. Their team has many
years of experience in HR system implementation and they believe the combined functional capability of the system of record plus third party add-ons still does not achieve the expected functional fit and when requirements change the situation gets worse. Not only are the incumbent systems unable to adapt quickly to change but complex integrations make the change process even slower and more costly. The end result is what was intended to make systems more functionally rich end up becoming an impediment to change. The answer is to include an application development capability into the platform features. Business users should be able to build custom applications to quickly respond to changing business needs.

There are a growing number of development platforms emerging but the only one that is designed for business users is the Force.com platform. Like the social media and customer relationship management applications HR users should have the opportunity to build mashup solutions. Mashup is the term used to describe applications that draw data from two or more systems. User developers are able to build custom objects and insert fields that match their business needs. HR Cloud Solutions supports the process by providing a Component Assembly Model, or common data model, for developers to start building HR apps. In fact, HR Cloud Solutions even offers a pre-built set of custom objects and fields to help developers accelerate the development process.

**Issues**
The multiple system administrator roles still exist. Data is held in parallel and it is still possible to get out of synchronization with records.

**Integration Solution**
The ability to build field place holders for incoming data is made easier by the flexible Force.com development platform.

It created a data warehouse for information reporting, based on a common platform.

**HR Cloud Solutions Implementation of the CIDP Model**

![Common Integration and Development Platform (CIDP) Diagram](image)
Diagram 5 – Implementation of the CIDP application integration architecture

The CIDP architecture includes:

- Workday, for a state-of-the-art Software-as-a-Service solution with an inbuilt integration capability.
- Add on third party products, especially for local payrolls, and a database platform for plug in application assembly,
- HR Cloud Solutions HCM Mashup Builder framework product for custom development.

In the architecture mentioned earlier data is entered in one place only: The data validation and business rules are programmed into the system at the point of entry. Security governing control of access to create, update or delete data is governed by the system owner. The common data elements are joined through published APIs and data arriving at the platform is stored in the database, but not processed or amended in any way. Additional data is custom developed on the same platform and there is no data redundancy because data is stored in accordance with a common data model.

Each component in the architecture has its’ role. There is no conflict. For example, the HCM Mashup Builder is not a substitute for the HCM system of record if advanced processing capability is required. Built on the Force.com platform it is ideal for fast user custom development but has its’ limitations for prime-time computing. Whilst the HCM Mashup Builder uses native Force.com features it would be necessary to use Apex code and VisualForce to enhance the usability and performance of the product.

In the Common Integration and Development Platform illustrated above the data in the Workday and third party products is mapped to the data structure in the foundation platform built with either Force.com (now) or Database.com (Later). The data structure is defined by a published standard, the Component Assembly Model, and Application Programming Interface (API) joins are similarly published. HR Cloud Solutions provide a supporting collaborative Wiki for developers and a database of over 700 products functional capability as part of the ecosystem.

Workday’s Integration Cloud Platform

Workday has recently announced two products aimed at solving the integration problem. They are Workday Studio and Enterprise Interface Builder (EIB). The former is for technical people and the latter is for business users. The two products represent a departure from the previous model where third party integrators would build the integration between a client’s system of record and any third party applications. The Workday strategy is to build the integration capability into their application and develop packaged integrations to partner products. They already have some in the marketplace to products like Patersons (payroll), Taleo, Ceridian, Cornerstone OnDemand and several others.

On the positive side it makes sense to support integrations as part of the application service delivery and take advantage of the multi-tenant architecture where clients move to new versions in a painless exercise. Similarly clients with packaged integrations would automatically inherit changes without intervention from internal IT resources.
On the downside Workday is designed as a “hub” for other products to integrate to and being a global product it needs third party extensions. The architecture follows a hub and spoke design where the spokes reach out to direct integrations. However, direct integrating products often have their own family of further integrations. So the immediate layer may be able to integrate with the Workday core application but the outer layer is left out in the cold. To attempt to incorporate all the peripheral systems into the integration architecture could become ridiculous: Instead of Cloud-to-Cloud integration or system-to-system it could result in integration-to-integration.

Whilst providing an improvement application to application integration is no longer a solution. Application to platform integration is the way of the future. The characteristics of an integration platform should include published application programming interfaces (APIs), a common data model and application custom development capability.

(5) Fully Integrated Component Assembly (FICA)

The only application integration architectures suitable for the next generation of business applications, including mobile computing, are the Common Integration and Development Platform (CIDP) and the Fully Integrated Component Assembly (FICA) approach. Both architectures apply the MDM philosophy of a central System of Record and single Version of the Truth. In the FICA data model below the Person object becomes the System of Record. All other components that reference a person join to the common Person object.

From a mobile computing perspective, the uniqueness of the FICA approach is the ability to drag objects into the iPad application. The objects are fully integrated with ONE database - so successful mobile application operation is not dependent on the complex integration architectures with multiple databases.

Implementation of the Architecture
The metadata is derived from a common data model. The Component Assembly Model (shown below) is the source of data information.

![Diagram 6 – Fully integrated component assembly platform application integration architecture](image)
The method of integrating data is based on the same principle as a relational database. Tables are joined via a key. In the case of the Force.com development tool data is stored in “objects” but in reality they are object tables. The custom developer is able to join objects and create a fully integrated application. The diagram below uses the Salesforce.com description to illustrate how objects are joined.

Diagram 8 – Force.com object join model
The main issue is the newness of the architecture and acceptance of the Force.com application as a business application development tool.

Integration Solution
The solution is simple. It can be user controlled and overcomes the complexities of joining remote applications. The advantages are:

- One database
- Integration through table joins
- Single source of the truth
- Single source of data management
- Inside the firewall
- Component assembly on a single platform
- No external messaging
- No connectors (Open database Connectivity (ODBC) ) Java Database connectivity (JDBC) – use APIs
- No adapters and no point solutions
- No message brokers
- No hub and spoke design
There are two popular ways of transferring data from application to application. They are FTP (File Transfer Protocol) and Web services

(a) File Transfer Protocol

The art of transferring data from application to application via file transfer has come a long way since the flat file days. Earliest attempts at flat file data transfer often involved files where the precise start and finish characters associated with data elements had to be known by the receiving party in order to map the incoming file to the receiver’s data structure. Later comma delimited files were used to avoid the problem of one character incorrectly mapped in the interface flat file corrupting the whole database. Fields were separated by commas. The files did not embed any information to describe the fields to ensure they were correctly mapped. Then came the HR-XML data transfer standard with schemas used to describe file content and further clarify the file transfer process.

(b) Web Services

The second method of exchanging data between applications is Web services. An integral part of Web service operation is the Enterprise Service Bus (ESB). The ESB is a component of Service Oriented Architecture (SOA) and there is a whole family of components and Application Programming Interface protocols that participate in a real time data exchange mode. The very simple diagram below illustrates how the ESB exchanges messages and communicates with the various HCM modules (specialty applications).

![Diagram 9 – Enterprise Service Bus as an application integration component of Web services]
The entire Web service operation can be complex and the HR business professional does not need to know exactly how things are done – only the outcome is important. For those who require a more detailed explanation the ESB is an important part of the ETL (Extract, Transform and Load) process. The diagram below illustrates the important role the ETL plays in the information flow as Web services and FTP (File Transfer Protocol) send data through the Data Hub Services Platform. It is here that data is cleansed by checking the business rules that applied to data in the sending system and makes sure the rules conform to the data validation taking place in the Data Hub. For example, a person’s data of birth may not have a rule applied by the sending system to ensure an incorrect date is not fed in, such as the date the entry is made in the system. The receiving system may validate the date by coding that checks date of birth is at least 15 years earlier than the date of system update. That type of translation sits in the Rules Engine shown in the diagram below.

![Diagram 10 - Based on Master Data Management and Data Governance’s diagram - Conceptual Data Hub components and services architecture view](image-url)

The following diagram illustrates what happens within the ETL step shown in the diagram above.
Diagram 11 - Based on Master Data Management and Data Governance's diagram – Data Hub architecture – Data Zone view
Mobile applications are themselves a form of portal integration that accesses numerous back end applications. In the diagram below the Force.com database contained in the HR Cloud Solutions’ HCM Mashup Builder is configured to form data sets relevant to the HR practitioner’s area of responsibility. The iPad program in the iOS (Internetwork Operating System) calls the URL (Uniform Resource Locator) data set.

Diagram 12 – Data source for iPad application

The back end database resides on the Force.com development platform. It is constructed in accordance with the Component Assembly Model described earlier (see diagram 7) which allows for selected objects to be packaged and downloaded to a client’s Salesforce.com installation.

The fully integrated nature of the FICA integration architecture and the component design of the Force.com database is ideal for iPad development. The flexible nature of the component design allows for a new data set to be configured on demand and accessed by iPad application.

iPad, or tablet, deployment of HR applications is the way of the future and the design of the back end database will become critical. Generally HR applications are fairly bland by design. They are transactional in nature and are good at getting data in and reporting data coming out but the expectation of a user community used to games and social media is for something more. They want more to their apps than just straight processing power, they want something that supports their daily tasks and that is why a platform that delivers a broad range of features is more suitable.
Summary of Integration Issues

To the HR professional integration only becomes a problem if it means entering data in more than one system or going to multiple sources to obtain what appears to be common information. They are not interested how the integration process operates – only the outcome. They want to consolidate information from whatever source to produce a report for an employee that combines data about their compensation package, their performance and bonus payments or their past training and positions held at the time of training. However, there are far more detailed issues and common problems when the integration problem is viewed from an administrative, performance and data integrity viewpoint.

Potential Integration Problems and Questions HR Should Ask

1. **Latency** (slow response time): If we are trying to achieve real time integration the virtual connection between two computing platforms (Cloud-to-Cloud) is not an issue. We know that can be done using standard APIs such as SOAP, REST, and JPA. However, it is expected that response time is instantaneous and any delay will result in poor user acceptance, especially if there is a high transaction volume. That level of speed may not be seen in the early versions of Cloud-to-Cloud integration products but it is not a show-stopper.

2. **Data synchronization**: Cloud-to-Cloud via API and Web services is real-time integration. There are many systems that integrate today through file transfers at scheduled times but they require regular dumps to check the data accuracy, but real-time integration using Web services brings new challenges.
   a. What happens when there are different business rules: That is, the validation intention may be common but they may be programmed by two different development tools. For example, we know there are SQL queries, stored procedures, triggers and workflow capabilities within Database.com and we know the Apex code with the Force.com platform can replicate the most complex rules programmed in other systems but how do we know they align without thorough testing? There could be a situation with the same data element has different business rules. See diagram 10 to illustrate the role of a Business Rules Engine to address the problem.
   b. Error trapping: If there is a reject at the back-end (due to different validation rules) what error message does the user receive? The error message from the back-end product or a translated version on the system used to input the transaction.
   c. What happens if the server goes down on one system and not the other: How do we know the data base hasn’t been corrupted? Also, there is professional credibility: Does the legacy system have to look bad because the receiving system is down? Will vendors accept operational dependency on another product? What happens to the data updates if the front-end continues to operate? Will a disaster recovery plan fix all that?
   d. How do you reconcile data? Can databases be easily reconciled if they are using different organization structures and other areas of incompatibility?
   e. Can you report from both databases? Apart from data structures does the platform system offer a data warehouse extension to its product to accommodate data not
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held in both systems? If more than two systems are involved the issue becomes more important.

f. What about data corrections? If a user makes a mistake and the record history is affected, is there a correction mode that would be recognized by all integrated systems. That is, if a file transfer program is coded only to pick up data changes will a correction be picked up and how will it impact reporting and data alignment?

g. How is record history processed in each system being integrated? Is it possible to reconcile systems at a previous point in time?

h. Is there a real time integration and simultaneous database updating and record locking? What happens if two users try and update the record at the same time?

3. **Security**: There may be separate administration units looking after access to data and there may be a situation where access is granted to users in one system but access to the same data is denied to users of another system. There may be different security system structures based on different interpretations of the organization’s hierarchy or capability of the system to store multiple levels. The physical security issues introduced due to portability and the use of unsecured wireless networks when travelling is an important issue. In practice users often need to be assigned multiple security access, passwords unless there a single sign-on facility.

4. **Data Privacy**: Are all the companies with products integrated in the Cloud-to-Cloud architecture bound by same privacy laws? Note, remote hosting in different countries may be subject to different privacy rules.

5. **System Administration**: What about the interpretation of the company’s hierarchy and creation of data structure to reflect reporting lines, such as organization units and positions? If the two or more databases are to be kept aligned does the HCM System Administrator manage all systems and create the same data structure and classifications entity in all systems? What about workflow? Are the systems set up to send the right message to the right person from all systems? The integrity of HR workflow processes is dependent upon routing consistency because that is the most visible system component if things go wrong.

6. **Training**: Is training required on all systems for users/administrators? There needs to be multi-skilling in both the user area and IT if two or more systems are going to be supported or even when hosted by external bodies. The dependency on key resources raises important risk issues if people leave the organization or are promoted to new jobs.

7. **Different User Interfaces**: Does the different appearance of screens matter? In some instances it does not because different units within HR access different areas of the system. For example, the recruitment unit may never look at the comp & benefits screens and vice versa. However, if it becomes an issue, what system becomes the default appearance and is it possible to replicate other screens from a technical and copyright perspective?

8. **Language Translation**: Where systems are integrated and data is collected from countries with different languages there is a need to store data and report data in a common language. English is the accepted international business language so it makes sense to use English if the company’s headquarters is in an English speaking country.

9. **Data Ownership**: In many cases the data being exchanged will come from systems owned by different departments in the organization with different hierarchical reporting lines. For example, payroll data may be part of the Finance department, personal details may be corporate HR and Occupation Health and Safety data may be part of the Safety department.
Who has the responsibility to build position and organization data and determine who can see what? By passing data from one department to another, via an integration operation, data that is restricted in one department may be available to members of another department without a legitimate need to know. For example addresses, marital status, age, salary, etc.

10. **Retention of Legacy Systems**: Companies are obviously not about to throw out legacy systems and replace them over-night with new systems. However, by continuing to include legacy systems in the integration architecture there is a need to keep maintenance payments going, manage version updates, keep resources trained to operate and administer legacy systems, and incur any complexity to integrate On-Premise to Cloud applications.

11. **System of Record Extensibility**: In Hub and Spoke application integration data is stored in a central System of Record. That means, for ease of reporting, the System of Record must have corresponding field for all incoming data. That means extending the original system’s data model. That is not always easy to do.

The solution to the issues above is not solved through technology alone. The solution requires governance and administrative controls to be put in place by the business.

### The Capability of Cloud Platforms to Host Future Applications

Many of the options and application components depend on the remote hosted application mode: That is, the Cloud. What are the risks and future of Cloud computing?

There is no foreseeable limit to prevent applications being built and hosted in the Cloud. The Cloud uses banks of servers positioned in data centres. Data centres are massive installations. There is capacity to build infrastructure solutions in the Cloud to accommodate all of the services within the physical boundaries of data centres – massive computing power and host. Data centres are now assembled from modules rather than built from the ground up. Modules can be installed within weeks and the capacity of a Data Centre doubled in weeks rather than years.

### Conclusion

We need to realize that integration was a patch to a problem when the need to add applications to the company’s HCM system architecture first emerged 30 years ago. Since then every generation of technology has added complexity to the integration process. Now we are faced with another new technology called mobile computing. This White Paper has highlighted some of the problems and described some of the options. The decision now is whether to continue to build better integrations or look for a more suitable long term solution.

From an HR and company management perspective, to have confidence in HR information there must be a robust and reliable means of exchanging data that is administratively manageable. The reality several current methods of application integration are extremely complex and tend to be very fragile. They can easily be undone by any number of factors in the technology linkages and once built cannot be guaranteed to work forever. The integration operation may be affected by changes to the
database, such as new fields added to one of the applications, and the modification to programs can be costly. The current trend not to disturb the interface because it works successfully today is no guarantee that it will not require change.

Therefore application integration between remote disparate systems is not a suitable long term solution. The most common integration architectures are not adaptable to the requirements of mobile computing. If HR is to embrace the new mobile technology it will have to review the underlying data architecture and method of system delivery if they wish to be seen as a reliable source of information and able to provide a consistent “version of the truth”.

To achieve a sustainable and creditable source of workforce information HR must put in place a set of procedures governing the collection and processing of data. A single “version of the truth” is not possible without the HR business taking ownership and responsibility for data accuracy and time delivery.

Overcoming the data integration issue is a vital step in getting to where HR wants to be: A properly designed integration platform has the potential to turn the HR professional into an instantaneous source of company information (which is the way it should be), able to answer any question at any time with the most current information at their finger tips. It will not give the HR Director a seat at the Board table (the Holy Grail during the last decade), that is too time consuming – it gets better than that: It will place the HR Director a short text message away when management require input to strategic decision making processes and because the information requested is at his or her finger-tips the response can come back as fast as it takes to type a text message or even share an iPad screen with the requestor.

For more information about Cloud-to-Cloud integration, and appropriate strategies, contact us at info@hrcloudsolutions.com. HR Cloud Solutions and their network of global partners provide services to define requirements, select the right mix of components or HCM products from the marketplace.

HR Cloud Solutions offers a packaged set of HCM objects suitable for the FREE Force.com application builder and an extended version containing pre-built templates for a complete SaaS HCM application.

HR Cloud Solutions also offers membership of a Community to assist the collaborative development process as well as providing a marketplace for component product.

Visit www.hrcloudsolutions for more details.