Connecting Human Resource Data for Unified People Analytics
From Many to One

SAP was the first major software vendor to integrate HR (Human Resources) functions into its ERP systems in 1979. However, the first complete HRIS (Human Resource Information System), was introduced by PeopleSoft in 1987. The HRIS at the time was considered to be the Holy Grail for HR, as it could handle everything from payroll to performance evaluations. Many competitors followed suit and the space quickly became a multi-million dollar market.

If everything HR had stayed in the HRIS, then reporting and many other functions would have been easy tasks. But alas, as every other area of business continued to evolve and automate, so did HR. Specialized systems for recruiting, performance management, time and attendance, and other key areas started to pop up, with better features and functionality than the HRIS system provided. HR departments started spreading out their purchases into disparate systems to get better return on their investment. IDC (International Data Corporation) estimates that the typical corporation has 23 different HR/Talent systems on average.

This evolution however came at a price. In the new environment, much of the data needed for planning, analysis, and continuity are spread across multiple systems and platforms. An individual system like recruiting management might have great drill down analytical reporting for time to hire, or offers accepted, but how are you going to know how good the candidates selected from a particular job board performed long term at your company? Or, even if they even stayed around?

This paper offers a four-step process to enable your organization to not only pull together these disparate systems for unified reporting, but offers methodologies to produce actionable insights into your workforce.
Inventory the Data

Assess Cross Application Needs

Read the Trends

Predict Success

STEPS 1-4
Step 1: Inventory the Data

If you were to sit down and list all the functional areas your HR department has responsibility for, I imagine it would be tough to do it on one sheet of paper. And, the processes that go along with each of those responsibilities are likely built in a silo without regard to other germane applications. Some of those areas may be automated and some might still be running on a spreadsheet.

A recent study estimated 90% of large corporations have an applicant tracking system to help with recruiting, but over 50% still did compensation management on spreadsheets. There are varying degrees of automation for other applications, but even if a process has been automated, any reporting functionality is likely directed inward with little consideration for applications that support or run in parallel.

So, rather than simply writing out a list of your applications, put them into a diagram or flowcharting application. There are software applications available for this purpose, but PowerPoint SmartArt will likely be adequate. Once all the processes have been visually represented, and the corresponding software or legacy application assigned to them, it’s time to move on to step 2.

Step 2: Assess Cross Application Needs

Having identified all software applications and processes, it’s important to represent which ones need to work with each other. There can be varying degrees of how tightly integrated two applications need to be, but generally the connections are either two-way or one-way.

Two-way integration between disparate systems is of course the more complex. This is the case when two applications need to be constantly feeding information back and forth to perform calculations with one another. For example, a performance management system often requires tight integration with a career management system. Use of the performance system will help determine how well an individual is performing and can pass the information to the career system. As a result, this may trigger in the career system to notate that employee is now eligible for promotion. Putting the employee
on a new career track may signal back to the performance system an alert that new goals need to be set. Usually for this type of integration an API (Application Programming Interface) is necessary.

A one-way integration is much simpler. In this case, one application passes information to another but nothing has to be processed and sent back. A common example of a one-way feed is when one or more calculating applications send data to a reporting engine, which will then visualize the data. This visualization can come in many forms: a list, graphics, and/or organizational charts. Since the reporting engine is not processing but only rendering data, nothing needs to be fed back to the originating systems.

An API can be useful in a one directional feed, but often a simple connector or automated file upload can accomplish the process with considerably less development. The file upload is usually used in the beginning of an implementation, as data often needs to be cleaned, particularly if the data is coming from a legacy system such as a spreadsheet. Many of the better established HRIS applications, such as those form SAP and Oracle, have entire industries built around developing connectors to extract data for reporting purposes.

The reporting engine is the key to the unified vision. It might take years to integrate all your various applications with bi-directional feeds, but a solid reporting engine can be set up to take feeds from all applications much more quickly, and render holistic data in a manner that will help in making actionable decisions.

It’s important to be meticulous in documenting the steps and feeds in pushing data to your reporting engine. However, once there is a repeatable process, it can be automated and won’t have to be done again. Then it’s on to step 3.
Step 3: Read the Trends

There are many types of reporting engines with differing specialties. 90% of US companies deploy applications that provide some kind of metrics. Metrics can be best described as snapshots in time. Examples of common HR metrics are; turnover, average salary, percent of high performers, etc. These values help judge the health of your workforce, and consequently your business.

However, to get meaningful insights into workforce or people data, it’s necessary to find an engine that can produce analytics. Analytics are the trending of metrics. When metrics are trended, patterns become clear that enable insights as to whether an organization is heading in the right direction, or not. Has turnover been on the rise over the last 6 months? Does that coincide with a new benefits policy? Has production gone up over a period, can that be tied with the hiring of a new general manager? Analytics provide insights for actions that will improve chances of success.

According to a 2016 study by Bersin by Deloitte, less than 25% of organizations use any type of HR analytics. Those that do are again limited to metrics within a given application. Once all of the data has been connected, as in Step 2, it’s possible to get a more holistic view of the health and direction of a workforce.

Consider a recruiting system that can report on where the majority of new hires to an organization were discovered. Then combine the data from a performance management system that can report over time on how these different groups of employees are performing. The cross trending of the two produces actionable data that directs recruiters not only to where they will find the most candidates, but those that will be the best employees. The result for an organization is lower turnover and recruiting costs, with higher production and profits.

Once the right data has been trended, resources can be optimized and inefficiency reduced. Then it’s time to step on the gas and invest resources to accelerate your business. Let’s move onto step 4.
Step 4: Predict Success

All trends don’t necessarily proceed on the same trajectory as their past would indicate, but it’s a good place to start. If turnover has been steadily rising over the past few months, and no new policy has been implemented, then it is logical to assume it will keep increasing. But if some event has happened and an aberration has appeared in the trend, that needs to figure in predictive calculations.

The simplest way to judge whether an event affected a trend is to overlay critical events with the associated workforce trends. Then in one view, the timing of an event is visible with the trend progression, and any anomalies can be spotted.

Another way to model is by incorporating employee survey data. In its annual survey regarding the retention of key talent in companies, the global HR association WorldatWork, assessed that the three things that most often affect employee retention are compensation, quality of life, and opportunities for advancement. So, if a survey finds 50% more of a company’s employees are likely to stay if allowed to work remotely, then this finding should be applied to any formulas.

In the development of predictive formulas, many organizations choose to employ data scientists to help build and incorporate the right factors for accurate modeling. Often software vendors have this type of talent on staff to augment their solution, but companies often choose to hire their own in-house data scientists, or consultants who specialize in the practice.

Gordon Gekko in the movie Wall Street said, “The most valuable commodity I know of is information.” However, information that is not collected, connected, presented, and interpreted properly might as well be a bunch of random numbers. But when all the steps are worked through, the organization can then make the leap to unified people analytics.