

## Exploring SAP Supplier InfoNet

By Jason Busch, Executive Editor, Spend Matters  
and Thomas Kase, Lead Analyst, Spend Matters

*This is a collection of posts originally published on the Spend Matters blog between July 26, 2011 and August 24, 2011, consolidated exclusively for SAP.*



### Examining SAP Supplier InfoNet (Part 1)

In the early years at Spend Matters, I remember being impressed by the concept of Open Ratings, a vendor that sat between the software and content worlds. Open Ratings' solution attempted to predict whether or not a supplier would remain financially viable based on a combination of financial, credit and related inputs. Although their execution was not always perfect -- and they were held hostage by some of their content providers over third-party data until D&B, one of their major content sources, finally acquired them -- it is clear that Open Ratings was the pioneering solution voice in the supply chain risk management sector.

Today, the original vision of Open Ratings lives on in a new SAP solution, *Supplier InfoNet*, which takes the same premise of Open Ratings (i.e., combine multiple indicators, in this case operational, demographic, news, and financial data), and layers them on top of opt-in industry social networks built upon the sharing of aggregate data on a multiple tier level. By bringing in today's dynamics of social networking and information sharing (albeit in a controlled, secure manner) into the mix, SAP has taken the concept of Open Ratings to an entirely new level. You will learn more about the details in this multi-part series.

SAP's InfoNet is already in pilot deployment in some A&D and industrial manufacturing companies and, as the next verticals to pursue, SAP believes it is a logical fit with high tech, consumer goods, automotive, and oil and gas manufacturers. As a caveat, the solution fundamentally relies on a networked business model to provide value, so companies with supply bases dissimilar from the industries SAP currently pursues would find little or no immediate value from the network capabilities of the solution, until additional, more relevant, industry data pools are started.

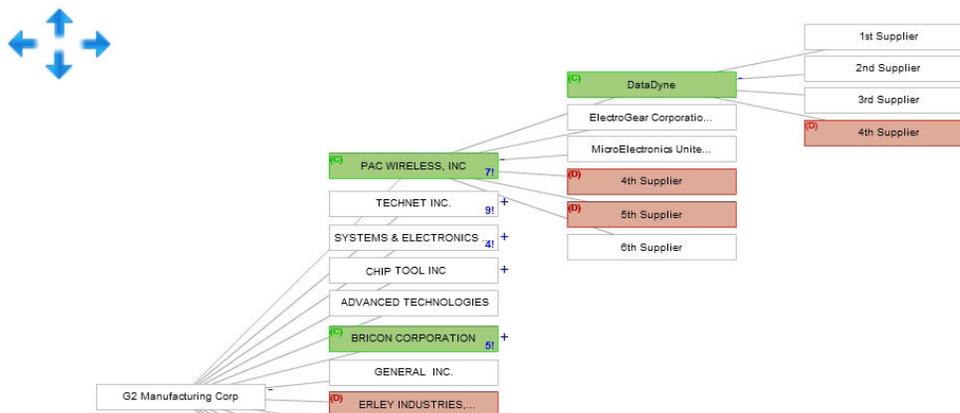
The concept of data pooling across competitors and industries is certainly not new. Companies give trade data (receivables performance information) to providers like D&B, Equifax, Experian and Cortera as part of doing business. Yet data pooling of supplier performance metrics is a relatively new phenomenon, especially the standardization of KPIs across companies to create a baseline view of aggregate operational performance, and trending of a supplier based on a company's own thresholds of good or bad performance -- which is precisely what InfoNet does, but more on this later.

InfoNet has transitioned from a test/beta product inside SAP to a commercial offering in North America. But it's so new that the awareness of what it is capable of is not well known -- even inside SAP. At Sapphire we spoke with people on SAP's Spend Performance, Sourcing (including Supplier Management) and SRM teams who were only tangentially aware of how InfoNet actually worked.

But they (like us) were quite intrigued. Before Sapphire started, we sat down with David Charpie, VP of the Global Business Incubator at SAP (who runs the InfoNet project and has business/P&L ownership) and Vineet Seth, who is running product management and marketing for the offering, to take a detailed look. As part of our discussion, we spent over an hour on a live demonstration. We'll share the results of what we learned in this multi-part post, first covering some product background and later getting into how it actually works.

Charpie and Seth shared with Spend Matters that they see three major value propositions for Supplier InfoNet:

1. First, it can help organizations benchmark their own supplier performance on a continuous basis in a manner that is anonymized for privacy -- something which should help drive participation, generate a neutral third party point of reference and remove privacy-based legal concerns
2. Second, it can provide predictive indicators a few months in advance when something is amiss (operationally or financially) with a given supplier and could cause potential supply disruptions, providing, in theory, the maximum possible lead time to take action with the greatest degree of certainty
3. Third, InfoNet provides visibility into a company's extended supply chain vendor performance, multiple tiers down



It is important to note that companies do not have to run SAP to use Supplier InfoNet -- one of the customers in the beta test is in fact an Oracle shop. SAP goes through an on-boarding process not dissimilar to a spend analysis data classification when loading customers in the InfoNet system. Surprisingly, InfoNet has not had a challenging time getting companies to share information based on the relationships they have with organizations. Relative to Open Ratings, Charpie suggests, “it is quite miraculous how responsive customers are to sharing their data...at the start of the program, companies who said ‘we won’t share data’ were out-numbered more than two to one. Now it is the rare situation where a company feels exposed.” In the early days of Open Ratings, this was not the case, Charpie observed.

As part of the InfoNet on-boarding effort, suppliers have the chance to challenge company-provided information (either basic company details or actual past performance data) to make sure the data is accurate. On the buy side, organizations aren’t providing sourcing-related information to SAP as part of the InfoNet initiative. They’re providing actual, systems-based supplier performance data that comes directly out of ERP/MRP. This sharing of information is a prerequisite to join the Supplier InfoNet network. SAP further enriches the structured information (more on the fields/types later) with unstructured and third party data (from free newsfeeds, blogs, articles to subscription-based and other premium content) to provide an even more holistic view of suppliers and to improve the predictive models. In Spend Matters view, InfoNet has gone significantly further than anything Open Ratings was ever able to accomplish based on its more limited ability to incorporate unstructured data, sentiment analysis (e.g., from articles) into a predictive scoring capability on a multi-tier level.

## Examining SAP Supplier InfoNet (Part 2)

When building Supplier InfoNet, SAP’s stealth development initiative that launched the application did not take advantage of much off-the-shelf SAP technology (outside of BI) such as the classification engine in Spend Performance Management. Rather, they built their own solutions from scratch -- as an example, in the case of classifications, InfoNet leverages machine learning technology and adaptive matching as part of a content factory that processes the inbound customer files to be loaded into the application. This matching system learns preferences much like other classification tools, but allows greater flexibility than many solutions on the spend analysis side. For example, a company might not want to treat “Marriot” as a single entity, but rather might care to look at individual franchises. Another likely example is Caterpillar, which could be represented as a group of individual dealers. In addition, the system can come up with suggested matches and linkages based on patterns it recognizes and learns.

With InfoNet, SAP has to address a major challenge in how to best normalize KPIs and systems data across companies. David Charpie, VP and Global Business Incubator at SAP shared with Spend Matters that their philosophy is “not to solve matching or KPI definitions at a corporate basis.” Rather, he observes, “we believe the right answer is to step back in looking at the problem by letting each individual (or organization) define what they want a KPI to be.” For example, different users and companies should be able to define a KPI for on-time delivery as an item that arrives within a one-hour window or a one-day window (or longer). Currently, InfoNet addresses this issue at the organization level by working with customers during setup to understand their definition of the KPI in order to accurately portray their corporate view of the suppliers into InfoNet.

By leveraging SAP's in-memory technology, called HANA, Supplier InfoNet intends to fully realize this vision in a future release, letting individuals pick and choose their own KPI definitions (and modify them as desired) to allow them to personalize the performance results and benchmarks contained in the system to their own needs and requirements. This is critical because even within the same company, different facilities, business units and managers may hold suppliers to different standards based on specific contractual arrangements and programs (e.g., JIT vs. non-JIT).

A few curious asides are worth mentioning regarding InfoNet. First, it raises some interesting legal questions around the sharing of information across entities without a supplier's consent. To make sure they do not run afoul of any privacy laws, the first thing SAP does is strip out information on individuals (e.g., sole proprietors) from the system. Secondly, SAP's machine learning analyses assess the value and integrity of each of its data sources to determine their ability to improve the accuracy of the predictions. The idea is to provide greater weight to those sources that are accurate and consistent indicators of future performance. This is then factored into how it rates, ranks and provides alerts around suppliers. The additional information this could potentially provide is staggering -- wouldn't you want to know who among your suppliers are consistently dishonest/ignorant? This could also have significant impact on a company's training allocation since it should be easier to find out who actually needs additional training. That is food for later though: back to supply chain.

Where does InfoNet change how SAP positions itself as a company? Perhaps with InfoNet, the best run businesses do not just run SAP (which is a catchy but questionable claim, regardless). They will now rely on SAP's networked business information to power their operational business decision-making and strategy setting. If this sounds like SAP is becoming a company that will have an operating unit (and value proposition) that looks closer to D&B and Bloomberg combined, that's exactly the direction InfoNet is heading. However, SAP shared with Spend Matter that they are not thinking of themselves as a "content business." The team wants to see the InfoNet functionality embedded in regular SAP solutions as a core value proposition in the future (i.e., sign up for SAP ERP in a manufacturing environment and you can opt into the SAP network for aggregated supplier, and maybe even customer, performance).

## Examining SAP Supplier InfoNet (Part 3)

InfoNet is geared around the construct of a social network, not just an enterprise performance management or front-end BI interface. It shows, for example, "which suppliers I'm following." On top of this, it layers the capability to manage alerts, suppliers, explore your supply chain network (at multiple tiers) and analyze network performance. Tabs enable users to select how they want to visualize their supply base, manage suppliers, view suppliers and select those they want to pay attention to. When it comes to the type of information InfoNet tracks, companies can get quite granular. For example, in the quality area, organizations can track quality at specific levels based on what they define in their systems including KPIs and metrics such as defective parts per million (DPPM), lot acceptance rates (LAR), fill rates, basic lead time, On-Time-Delivery (OTD) cycle time, etc.

Individuals can then set alert bands (e.g., red, yellow, green) based on what they deem to be acceptable levels for different metrics or KPIs based on supplier performance across the network. This is where InfoNet begins to deviate from every other solution in the market. To wit, when users

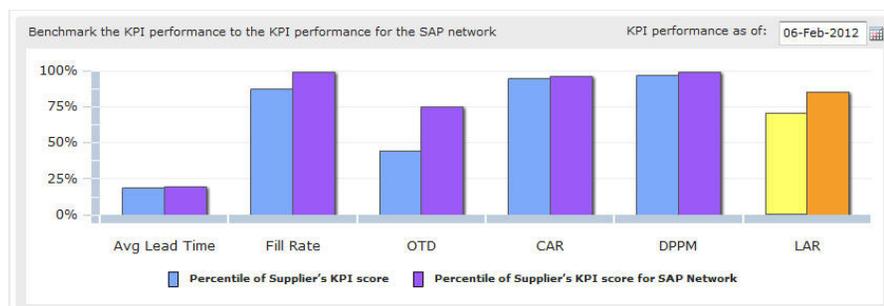
set alerts, they're monitoring not just how a supplier performs with them, but how the supplier performs in the entire network of those participating in the program.

When a user logs into the system to start receiving new information and alerts, they are presented with options for drilling down on changes in the overall supplier landscape, clicking on alert types, resolution states, alert severity, alert dates and descriptions, alert locations, etc. Alerting information is based both on systems data -- provided by those in the InfoNet network -- as well as structured and unstructured data from the web and third-party information. SAP would not share with Spend Matters what their specific sources of third-party data are, but did note that a core competency of the solution is to "collect, mine and display information" from aggregate third-party data sources. It's safe to say that given SAP's recent deal with Cortera, that D&B data is not included in the pool of sources, at least not officially.

For example, in looking at the performance of a supplier, an alert might pop up that shows a recently filed lawsuit or bankruptcy. Like other well-configured supplier performance management tools that look at just internal data, InfoNet then allows users to look at the potential severity and impact of an alert based on such fields as the annual spend with a supplier and even the potential at-risk revenue that could result from a disruption.

Alerts are just part of the package. InfoNet excels in the area of predictive analytics, including directional trending of different predictive KPI metrics. In other words, the fields the system tracks and measures to look at past performance can be used to create a predictive metric that's based on past and current performance (and unstructured and third-party information) of the aggregate supplier data file. But the "gee whiz" factor does not stop there. The system can also show the confidence level of a prediction alongside a specific prediction date. For example, InfoNet can predict where PPM levels for a certain supplier will be a certain number of months out and can then share the confidence level of this specific prediction.

From a benchmarking perspective, users can deploy InfoNet to see how their suppliers are performing across a range of KPIs including average lead-time, fill rate, OTD, CARs (corrective action reports -- editor's note: we have never seen this acronym before), DPPM, LAR, etc. The system shows the percentile of suppliers meeting certain KPI metrics as well as the percentile performance of a given supplier both within the SAP network and for your organization.



Specifically, the solution allows companies to see how a supplier is performing for them, relative to their broader set of customers.

## Examining SAP Supplier InfoNet (Part 4)

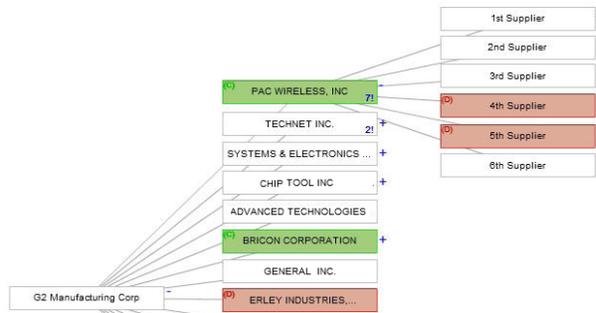
Using SAP Supplier InfoNet, it is easy to cross-compare supplier performance (based on either a company's own suppliers or across the aggregate performance of suppliers in the SAP Supplier InfoNet system). Granular drill-downs are available (e.g., by country, state/province, industry code, min/max revenue). Users can also use the visualization capabilities of the tool to generate heat maps that look at supplier performance and information and can more easily steer users -- compared to basic alerting, tables and charts -- to areas that require their attention. Using the heat map capability, for example, an organization might opt to group suppliers by industry or spend and then look at relative on-time delivery information or quality data (or number/type of alerts) based on color (green, yellow, red) and relative size/risk presented by the heat map.

It's then possible to drill into further information about suppliers (users can also begin a more specific query about a supplier through numerous other access points), examining fields ranging from the general (e.g., annual revenue) to the specific (e.g., KPI performance history, alert history) to the external (e.g., structured data such as newsfeeds and enrichment information on the supplier or a particular facility). Based on drilling down into this information, Supplier InfoNet helps users close the loop on what to do next, and goes beyond the presentation of past (and current performance) and risk analysis. In the future, additional integration points will enable InfoNet (and InfoNet-enabled SAP applications) to analyze and map the best path to resolving potential shortages, understanding specific alternatives when a supplier de-commits on a delivery, what customer orders are impacted by a supply chain event and which alternative suppliers are best suited to step in as temporary or permanent alternatives.

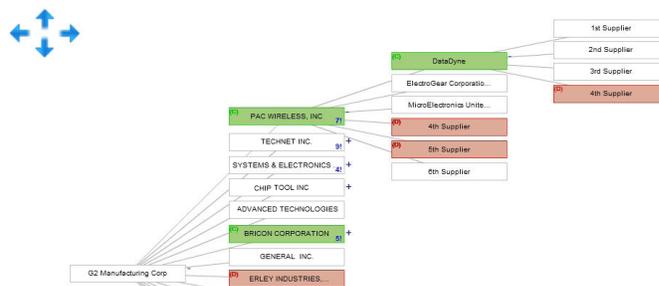
Yet all is not in the future. Already today, InfoNet can display related strategy effectiveness KPIs based on similar situations that may have occurred in the past. For example, in the case of delivery-related issues, a user can see -- provided the company measures this data and/or SAP has a log of related information in the InfoNet network already -- the relative effectiveness (and impact on specific metrics) of such resolutions as changing carriers, pursuing alternative suppliers or expediting orders. Users can drill down to understand how often different strategies are used (on a percentage basis) in addition to their percentage effectiveness.

Aside from understanding the impact of past strategies on actual performance in mitigation situations, one of the most unique aspects of Supplier InfoNet is the sub-tier explorer capability embedded as a core component of the network value proposition. For example, SAP walked us through a demonstration showing how users can use the explorer capability to see their top 15 suppliers and then expand the view (with one click) to see those suppliers' suppliers -- provided the information is mapped and available in the aggregate file information.

While a mouse-over movement over a company's own (tier one) supplier's icons would immediately show specific company names and associated events (e.g., performance degradation, debarment) by default, users cannot see tier two or lower name information if the source of that information is another OEM in the network. In part, the model mirrors the LinkedIn approach to security, as users can't see all the profile details of suppliers not in their specific network. In the multi-tier hierarchy, users can keep drilling down and selecting suppliers to identify potential lower tier supply chain hiccups and can then communicate with lower tier suppliers once given permission by their direct suppliers which they can freely communicate with in the InfoNet system.



The above image shows a network view where the tier-2 suppliers are visible but in an anonymous fashion. Once the tier-1 supplier PAC Wireless provides access to a user of G2 Manufacturing, they can then see more information on their tier-2 suppliers as shown below.



With InfoNet, a user must request access to information from those who may (or may not) be the actual source of that information, but are the intermediary for the actual trading relationship. For example, a user might request debarment access for an anonymous supplier it sees two levels down in its supply chain. That request would go to their tier one supplier, the lower-tier supplier's customer, who can login and grant that access (e.g., company name, in this case) directly in the system. SAP told Spend Matters that enabling this direct communication and permission request is critical, as it does not want to be the content middleman. Rather, SAP is just providing access to the information and the routing for a user to request information from the appropriate party to the relationship and event they are monitoring.

## Examining SAP Supplier InfoNet (Part 5)

In addition to the display of all relevant numerical and quantitative information about supplier risk and operational performance, Supplier InfoNet enables users to create their own data/audit trails around suppliers by posting or appending comments to records. Users can decide whether or not a comment they submit will be available only to them or also to their broader organization. Spend Matters finds this unstructured information quite valuable and hopes that SAP looks for a way to enable the confidential sharing of qualitative information and comments (based on opt-in permissions at the user and comment level) across the network in the future.

From an architecture perspective, SAP is using a standard SQL database as the back-end database for InfoNet in version one, but the next version plans to use SAP's in-memory database HANA. As we mentioned previously in our write-up, Supplier InfoNet is using its own spend and supplier based classification system to tag, categorize and map data. Spend Matters suspects that SAP will eventually standardize on one platform in this area across all of its solutions (currently, their Spend Performance Management solution relies on a different classification engine).

From a pricing standpoint, Supplier InfoNet is designed for affordability across a wide set of company users and spend. SAP shared that annual subscription pricing will be based on company size, number of employees, etc. ETL and manual matching (classification/enrichment) are grouped as separate cost line items, above and beyond standard fees. It's important to note that in its pricing strategy, SAP did not want to make the tool spend-based or user-based. The idea is to enable as many companies and users within an organization to use a tool that monitors and covers their entire (direct materials) supply base.

In summary, Spend Matters believes that SAP Supplier InfoNet is something truly unique and valuable in the marketplace today. As procurement experts, social networking geeks and analytical data junkies, it is hard for us to contain our enthusiasm for the InfoNet concept and execution. Perhaps most important of all, now that we have entered the "InfoNet" networked age, supplier management will never be the same again.

It is our strong recommendation that companies within SAP's target markets for this solution should seek out SAP directly for information rather than waiting for a sales call. Anyone tasked with monitoring supplier risk, supplier performance and related information could very well find Supplier InfoNet an invaluable supplement or even replacement for existing solutions they may have deployed already, or may be considering for the future.

In the future, Spend Matters believes that Supplier InfoNet will be a logical extension to other SAP solutions e.g., Spend Performance Management or, potentially, may even subsume other modules and suites available from SAP today. However, there is no doubt that the concept of networked intelligence in the context of supplier performance, supply risk information and even spending data on an aggregate level provides a step-change level of value from sourcing and managing this information from just internal systems. Because of this, Spend Matters believes that SAP Supplier InfoNet will change not only how companies think about these areas, but will also change the broader marketplace as competitive software vendors and content providers scramble to react to this offering, taking advantage of truly networked intelligence paradigms.

As a final thought, Supplier InfoNet is proof that the combination of a small and nimble product management and development organization (<20 people) is capable of changing an entire market in a matter of quarters, not decades, with a radical new solution. Anyone who thinks that the old software rules apply today from a time-to-innovation standpoint in the B2B applications and content environment are going to be in for a rude awakening as other breakthrough products like InfoNet hit the market without battalion size development organizations behind them.

Further information on this topic and others can be found at the website: [www.spendmatters.com](http://www.spendmatters.com). Reproduction of this publication in any form without prior written approval is forbidden. The information in this report has been obtained from sources believed to be reliable. Spend Matters, LLC disclaims all warranties as to the accuracy, completeness, or adequacy of such information and shall have no liability for errors, omissions, or inadequacies in the information contained herein or for interpretations thereof. The reader assumes sole responsibility for the selection of these materials to achieve its intended result. The opinions express herein are subject to change without notice. To purchase reprints of this document, please email [info@spendmatters.com](mailto:info@spendmatters.com).