Technology Brief...

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Talend: Data Integrity is Imperative

"….While many data warehouses can offer "Brute Force" cleaning of data sets, it's imperative that organizations find a more elegant way to interact with their data and assign a quality or trust score to that data. Without such a strategy, it's unlikely that companies can truly trust the value of their operational data....."

Nearly all companies, especially those that have moved to a cloud-first mentality, have implemented some form of enterprise data warehouse that contains massive amounts of data. Indeed, the move to a digitally transformed world has created an overload of data for many companies. We estimate that 85%-95% of data that organizations accumulate goes unanalyzed, and therefore adds no value to the operations of the company. There are many reasons for this, such as insufficient resources in data analysis functions in both technology and people, lack of easily accessible expert systems and tools like AI/ML powered analytics, and basic lack of data quality. It is this last item that is often overlooked in organizational planning and operations, even as the first two may have visibility within planning and strategy processes.

Many enterprises import data into a central data warehouse from many diverse applications (e.g., web site inquiries, CRM applications, partner and/or acquired company data, public sources, etc.) as well as different operational areas within the organization. This internally and/or externally sourced data may or may not be in a consistent format, may have incomplete content, may include old/outdated information, and may or may not have duplicated records. Indeed, different databases within the organization may have similar or identical data about an entity but have it configured differently or have inconsistent labels. The greatest challenge that many organizations face before moving on to the analytical processing of the data is, how to verify that the data is accurate, complete and not duplicated. Without data integrity, any attempt at analysis will be problematic.

Companies need to look at the data in their data warehouses and provide a score for the accuracy of that data before it's sent to analysis or used for instance, in contacting users in marketing operations. Doing so not only eliminates making multiple redundant contacts, which users hate, but also streamlines operations and reduces costs. It's also a security issue as inaccurate data may lead to increased risk of disclosure (e.g., not identifying sensitive data like personal health data). But current "data lakes" generally don't offer the tools necessary to accomplish this.

As an example of "data scoring" tools, Talend, who provides tools for data translation and aggregation, provides a method of examining records in a disparate set of data sources, whether in the same data warehouse or not, and building a "quality score" on that data. Ratings enable processing tools to take in data, clean it of bad data sets while keeping the good data, and transpose the values to something meaningful and equivalent for all data components. The result is that this makes it simple for users who want to work with that data to understand the

level of quality of results it may produce.

Why is this important? If the organization and/or data analysts have confidence in the current state of data quality, it's far more likely to produce meaningful insights. A trust score is used to assign a quality number which an analyst or business user can easily understand. But it's also important that the tools indicate the reasons for the trust score, and offer suggestions of what can be done to improve it. The ultimate goal is to reach a reasonable confidence level. It may not be practical or efficient to go after the last 5%-10% which is very costly and hard to do. Indeed, how close to perfect to go depends on the use of the data. For instance, a marketing campaign is different than financial reporting/analysis and they have different trust score thresholds for the data they'll use.

Bottom Line: While many data warehouses can offer "Brute Force" cleaning of data sets, it's imperative that organizations find a more elegant way to interact with their data and assign a quality or trust score to that data. Without such a strategy, it's unlikely that companies can truly trust the value of their operational data. Further, a trust score allows enterprises to know what data is best for what levels of analysis and which should be overlooked, thus providing much better results. Improvement in data analysis can offer profound insights that can greatly improve business operations. Companies should be moving to a trust score methodology now.

Poly Moves to Keep Users Healthy, Goes Anti-microbial

Although many believe that the previously ubiquitous office phone is a relic as a result of so many users having a mobile device with them at all times, centralized software-defined phone systems that work over standard network infrastructure and add features like forwarding, logging, multi-user conferencing, branch connectivity, etc. are still heavily used in business, and in fact continue to thrive with a number of new entrants that are growing the market. And while some of the unified communications services are available on user smartphones as a software app, most of the market still uses specialized handsets. This is especially true in the DECT IP phone market, which provides phones that connect to the internal phone network wirelessly and can be carried around the physical premises. One of the market leaders in DECT IP phone space, Poly, wants to make the device which is often shared among multiple users, a little safer.

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Poly recently announced a partnership with Microban, the leading anti-microbial technology provider used to safely disinfect all sorts of places and products. Microban uses a silver-derived technology to keep microbes from reproducing, which essentially causes the colonies to die off, and hence from contaminating people who touch Microban-protected surfaces. To make their devices safer, Poly is incorporating a layer of Microban protection directly into its phones – the DECT-based Poly Rove 30 and 40. This is a big step in making enterprise–class communications devices much less prone to spreading infections within the shared workplace.

While some users may "wipe down" their devices after use, this is a cumbersome and unreliable practice. The Poly-Microban approach is superior as the anti-microbial capability is permanently embedded into the plastic polymer of each device when it's molded. This makes it permanent over the life of the device as the protection never wears out as long as the plastic is physically intact. Further,

Microban, working with the plastic molding producers, assures the level of quality of their antimicrobial technology by assessing each batch of devices produced. This insures the level of protection for each device that the Microban label has come to represent.

However, this is not a perfect solution to prevent all infections, as the Microban technology is not anti-viral and will have no real affect on helping to stop the spread of viral disease like Covid, the common flu, colds, etc. Despite this limitation, this is a major step forward for those organizations (e.g., healthcare, retail) where devices are used by many people during the day, and are rarely if ever disinfected. Providing antimicrobial protection is a major step forward in stopping the spread of diseases.

Bottom Line: We expect to see the same antimicrobial technology make its way into many other Poly products over the next 1-2 years. As premium priced products that focus on professional level user collaboration and productivity, this capability adds a major ingredient to keeping users healthier long term. It's likely that other companies will follow Poly and add antimicrobial technology to their devices. But for now, Poly has clearly taken a leadership position in trying to keep its users healthier.

UL Evolves to Manage Supply Chain Integrity

One of the major challenges nearly all companies that build products face, and not only the ones that serve consumer markets, is the need to make sure of the safety and integrity of their supply chain so that their final product is not compromised. Indeed, the amount and availability of counterfeit parts has grown dramatically over the past few years. With the increased complexity of nearly all products which often contain technology-based systems, and are often procured from a variety of different vendors, the need for testing and certification of product safety is a massive challenge.

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Famous for its UL Labs labels that promote safety on a variety of consumer and business goods, often centered on electrical testing but not exclusively so, UL has garnered a reputation for making sure products are safe and therefore consumers have confidence in the UL endorsement. UL has been around since 1894 and has 22B products globally that have a UL label attached. What often goes unseen is UL's work to remove counterfeit goods from the market, and in 2015 alone, UL participated in more than 500 seizures of counterfeit goods worth millions of dollars.

UL is now looking beyond its traditional end user labeling as it moves to a more behind the scenes certification scenario. It wants to expand its certification capabilities to ensure that product designs are safe and that the entire product supply chain is uncompromised. It has established a "Cyber Trust" program that can certify products and processes from multiple levels of suppliers from intermediate to finished goods. To achieve this, the program requires that a supplier answer a series of questions with supporting evidence that UL evaluates. UL then issues a Supplier Trust Level rating for that supplier that can then indicate to its customers the trustworthiness of its products.

UL provides five increasingly stringent levels of ratings, which include: Nascent at the lowest level, Challenger, Contender, Strong Performer and Leader at the highest level. Each level has increasingly more rigorous criteria for the supplier to meet, and the level may change over time based on how well each supplier operates and

validates their processes.

To obtain a rating, UL performs an assessment, typically taking 1-4 weeks, and then does a yearly update assessment to confirm or upgrade/downgrade the rating. The assessment includes 158 security controls under 10 trust categories and built around many industry standards, which then result in one of the five ratings. As it considers itself a trusted third party, UL hopes to do this testing and provide ratings for a wide array of companies that can then use the ratings to increase their market standing as component and system suppliers. This is a process that requires a significant amount of resources to accomplish at both the supplier and especially at UL. As a result, there will likely be some limit as to how many assessments UL can do and further, how many companies will want to go through the fairly complex process. It's also likely that the complexity of the process may dissuade smaller suppliers from participating.

Bottom Line: This is a strong step by UL to bring more cyber security into the supply chain in a world where increasing component complexity, lack of transparency and growth of counterfeit components is highly problematic. We expect companies to increasingly demand some sort of certification from their supply chain, and many large manufacturers have already started down this path by building out their own testing and certification rating system. Having a centralized rating bureau like UL can speed up this process, leverage the rating process for multiple companies rather than undertaking individually unique systems, and if the rating quality is proven, add significant value across the entire product lifecycle. This will ultimately produce better products while also speeding design processes and reducing cost for consumers.

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Research, Analysis, Strategy, Insight

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