**Network Curation**

*Augmented Intelligence for Federated Logistic Networks*

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**The origin:**

***Federated Networks in the Data Tsunami***

This article follows the evolution of supply chain technology starting 1992 when the concept of Federated Networks as a method to manage heterogeneous interoperability between distributed systems was first defined. This was followed in 1998 by the 3Vs [Visibility, Variability and Velocity] and in 2003 by [Resources in Motion] capturing the ascent of mobile technology in the supply chain.

In 2013 the Entrusts were introduced[[1]](#footnote-0) as the “the Next big thing in SaaS”. It defined a new way to deliver solutions in which a body standardizes processes and authenticates credentials to participants of federated networks. The Entrust launched multi-sided platforms, a new breed of business models.

A year later the classical marketing Ps, collided with the 3Vs of supply chain to produce the new 4Ps [Proliferation, Presence, Proximity and Personalization]1, customer service and supply chain in a single holistic model.

Today, this article defines Network Curation as the latest evolution of service delivery model within Federated Networks. Network curation goes beyond the Entrust and beyond the traditional SaaS platforms as it defines a new solution delivery model that leverages the value of data for the supply chain.

Today we are living in an era of content abundance and rapid proliferation. The amount of information grows exponential with the number of connected supply chain networks and data sources that support them. Supply chain participants such as manufacturers, distributors, retailers and their logistics service providers, all deploy and operate “intelligent machines”: robotized picking, packaging, and loading equipment with RF sensors and image readers, self-aware trucks, personnel with location and photo enabled smartphone applications, etc. Equally so, the surrounding infrastructure is also becoming “smart”: Local real-time information on traffic patterns, congestion alerts, weather forecast is highly accurate, border crossings, weigh scales toll roads, private yard sensors.

Supply chain participants produce a flow of information about dynamic rates, routes, tariffs, schedules, quotas, duties, product classifications, product catalogues, and conditions of materials, along with performance measurement information such as service and net promoter scores, fill rates, perfect order compliance, etc.

Today due to is through standardization of webservice APIs and interface libraries this data is now easily accessible. This requires a new holistic view on the supply chain information and its management.

**The next step:**

***Network Curation***

A step beyond the Entrust

The key technologies underpinning supply chain operations, such as wireless communications, location and sensor devices have become ubiquitous and cheap. Data standardization has advanced. Infrastructure and equipment is becoming “intelligent” and the proliferation of the microprocessors is exponentially increasing. We are at the tipping point at which the “always connected” supply chain operations has reached critical mass. Software platforms are now in a position to access and interpret massive amounts of real time supply chain execution data. We refer to that as *Network Curation*. Where the entrust standardized the transactions and operating procedures across a federation of networks, network curation goes a step beyond. It extends supply chain execution and optimization to include hereto untapped data sources from the environment in which the supply chain operations exist. The best performing supply chains of the future will be “context aware”. The abundance of data becoming available from a rapidly expanding variety of private and public sources through “click-and-connect” webservice interfaces. This requires a *Supply Chain Curator* who is continuously vetting, interpreting and assembling data. Thus creating meaningful information for supply chain operators distributed to the right place at exactly the right time.

**The outlook:**

***The Curated Supply Chain***

Supply chain curation is about *continuously* putting information into a defined relevant contextwhiletaking into account organization, commentary, source meaning and distribution. A curator provides a custom tailored and vetted selection of the best and most relevant resources on specific topics or themes. Curation involves the continuous collecting, filtering, sorting, arranging, interpreting, learning and finally, publishing of information. Publishing includes the feed-back loop of real time information creating the machine learning environment that will steer the supply chains of the future. Such automated feeds into the supply chain application platforms require precision resulting for curation. A supply chain curator defines and identifies relevant sources of information that relate to the business process designed by the Entrust. For example, a curator of available capacity on private fleets shares information with other shippers in the common trade lane. The curator offers significant value to anyone looking for supply chain specific content because finding that information (and making sense of it) requires more and more time, attention, knowledge and focus. In the world of hackers the supply chain curator will play a valuable role in the entrust, through authentication, certification, credentialing and even encryption to insuring positive risk free outcomes for the federated networks.

Supply chain network curators determine the relevance of content types in order to source the right members of the federation and their data. Working with the Entrust, acting as the custodian of a multi-party process, they will define and apply data standards, data sharing policies, credentialing members and authenticating services. Curators will collect, aggregate, analyze, contextualize, display, promote and distribute data through application services.

**The method:**

***Four C’s of Supply Chain Curation***

The inherent condition of Supply Chain Curation is the real-time *continuous* activity. With so much information available and coming at us from many sources, we often do not know what is the right information, how would it apply or whether the information is still current. In today’s world, the skill of knowing where to source, how to interpret, when to share and how to learn from the content that we need to be effective is critical. Curation is not just about information, it is about continuous feeding, tuning and re-tuning of the network itself. Below we identify the four principal aspects that make up supply chain curation:

*“Curation is not just about information, it is about continuous feeding, tuning and re-tuning of the network itself”*

**Collection:**

Collectingthe information is the elementary task. Before anything else, the first job is defining data sources, data integration, extraction and ingestion, along with the systems operations maintaining continuity and data quality. Data standards are more available than ever before. Webservices based integration technology is part of every system and platform businesses serving enterprises have brought about a new generation of “API culture” and associated business agreements.

**Contextualizing:**

With the continuous data sourcing in place data putting the data to use requires applying context. Continuous context can be as simple as comparing schedules to actuals, routes, or predicting commentary about traffic patterns and weather. More complex is the creating of benchmarks through the cross-network assembly and distribution of performance indicators such as delivery accuracy and net promoter score, as well as the introduction of dynamic context whereby the outcome or condition of partner processes induces changes on the primary processes.

**Cognition:**

Although a good curator adds value to a network by reporting on facts and base judgment, the differentiator of advanced curation is be the ability to learn, identify and deal with exceptions. To weigh-in on anomalies and detect trends. The incremental value of a curator that effectively predicts and reports abnormalities is exponential. A thorough understanding of the "normal” and the “expected” is a mission critical competence for an effective curator. In the curated supply chain of the future, the self-learning algorithms are the key to identifying and propagating small anomalies that could result in big consequences. In addition to the basic information provision this ability to weigh-in on the value, relevance and ramification of exceptions will be the materially valuable performance of the curator. It is about identifying a discontinuity and exploiting it[[2]](#footnote-1).

**Collaboration:**

In many cases future complex pattern recognition “machines” in the curated supply work with data that is not part of the primary data but is sourced from related parties in the network federation, specialty providers or from the public internet. We are entering an era whereby business partners in the supply chain will be increasingly required to interconnect and share their data. Continuous collaborationis creating the tie that binds. Data sharing policies are the fundamental underpinning. The members of the federation need to overcome the inability to share data to obtain “new information” that is based on the composites of data from multiple parties and sources. The assembly, distribution and collaboration of information is about giving the best content to each federation member in a format that is instantly digestible and directly applicable.

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**The practice:**

***Network Curation at Work***

The supply chain will have to deal with a tsunami of content. There is nowhere to hide. Information continues to increase exponentially and so does the noise in the system. The good information must be filtered from the bad: Network Curation is becoming essential.

A network curator is not a single person. It is a concept to be implemented by next generation multi-sided platform businesses. They will build on the Entrust and evolve into curators that are hyper specialized in various aspects of supply chain operations. They will perfect the data acquisition, sharing, contextualization and distribution as their core business and will become valuable enterprises.

In closing I would like to give you two examples of specialized young companies, that are emerging network curators active in different parts of the supply chain.



***Continually******Curated Lane Pricing***

LoadDex[[3]](#footnote-2) is an intelligent pricing platform that drastically simplifies pricing and carrier selection across all modes. With a single search, users can compare thousands of rates across all modes to calculate the most optimal price. LoadDex achieves this by aggregating all market sources, historical rates, contact rates, and social data into one platform to help you win more loads, mitigate margin compression, and hit your revenue targets. Logistical Labs streamlines the tendering process by connecting shippers and transportations providers into an integrated ecosystem. This ecosystem allows companies to seamlessly share load information throughout the pre-shipment lifecycle for both spot shipments and formalized multi-lane loads.



***Linked-in Flows***

Local Line[[4]](#footnote-3) is an eCommerce and Logistics software platform for local food suppliers, farms, wholesalers and boutique producers who sell direct. The platform increases sales, manages online orders and organizes fulfillment. A logistics network of local farmers, Local Line aggregates distribution capacity among regional farmers. The result is an efficient sharing of their delivery resources, reducing cost and complexity when shipping their products to customers, who range from restaurants to large grocery chain stores. The system continually curates orders and computes co-loading opportunities linking into the flow from farm to table. The vision is to help farmers federate their hereto-separate individual distribution networks, helping to insulate them from the cost and complexity of distribution by providing access to the co-shipper community. By opting into to the logistics functions of the Local Line platform, both food suppliers and buyers, opt-in to a continually curated network. As the curator, Local Line credentials shippers and receivers on a daily basis and interprets their order patterns, thereby effectively creating the tie that binds the network together.

1. <https://www.3vspart2.com> [↑](#footnote-ref-0)
2. James Smith, CEO of Real Matters [↑](#footnote-ref-1)
3. [www.logisticallabs.com/products/loaddex/](http://www.logisticallabs.com/products/loaddex/) [↑](#footnote-ref-2)
4. [www.localline.ca](http://www.localline.ca) [↑](#footnote-ref-3)