Journey with ONE Through Your Supply Network Digital Transformation

In your digitization journey, don't be bound by traditional enterprise-centric thinking. Innovating your existing enterprise-centric business operating environment to one targeting your future potential requires new strategies and network thinking. In this paper, One Network Enterprises explains how you can achieve a future based on disruptive network-based product and service models - that unlock enormous value for your business and every business partner.

By Joe Bellini, COO One Network Enterprises

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A WHITEBOARD, A MARKER, AND A STRATEGIC OBJECTIVE

Our journey to a fully digitized supply network may not start where you think. While the universe of automated workflows and autonomous agent-based predictive analytics awaits, our trek begins with a simple whiteboard and marker.

A workshop approach will enable us to express the future state business network across all digital marketing and sales channels, calculate the potential business value, model all cross-functional and multi-echelon network process flows, and identify the underlying data required to bring our digital model to life.

As part of this whiteboard-based innovation workshop, we will simultaneously produce a digital representation within our Real Time Value Network platform, powered by machine learning and intelligent agent technology. The components within this digital representation include virtualized supply chain business processes – both vertical and horizontal across the network, including customers, products, assets, capacity, transportation, logistics, geocodes, locations, attributes of all physical assets, and the logical relationships between physical assets. Looking deeper into the digital supply chain representation will include data that may be required before something like a purchase order is even issued - such as price negotiation, bills of lading, commercial invoices, packing lists, export entries, customs entries, vendor bookings, and more.

With One Network Enterprises as a trusted advisor and digital champion for our customers, new learnings will emerge. For example, in a recent workshop with a large Fortune 100 company, as we collaborated in front of the whiteboard on a digital representation of the future state process design, our customer suddenly came to the realization that a byproduct of their digital transformation journey would be a **multi-party master data management** platform providing a single version of the truth (SVOT) across their entire supply chain network! It was like Christmas came early in the room.

Another realization is that when the platform enables real time data availability across a complete business network of trading partners, the upside potential of providing **mathematical optimization across the entire network** suddenly becomes viable. This math optimization can include:

- Rule-based engines to make decisions around alternate sourcing or substitute parts
- Heuristics for supply/demand netting
- Algorithms for optimizing to objectives like revenue, cost, or profit
- Machine learning for use when extending the data model to include new vectors such as weather and traffic patterns, or automated root cause analysis
- Deep learning for true pattern recognition

This is quite exciting for us supply chain folks, especially when you consider that the analytics which are enabled through autonomous agents provide full decision-making visibility and value generation statistics to the supply network's control tower dashboard.

LOOKING BACK AT OUR STARTING POINT

Let's think about what happens at the workflow level when enterprise-centric rather than Network-centric technology is used to run the business. In this case, the planning-to-execution workflow (both within the enterprise and across the Network tiers) employs multiple disconnected algorithms and optimization engines. This requires armies of planners to cover all the touch points. These planners implement inventory buffers and capacity buffers to cushion and absorb the obvious conflicts that arise between trading partners. This is costly, and takes the form of high labor costs, inventory carrying costs, capacity costs, expedited freight, and product obsolescence/waste.

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WHAT IS THE ENTERPRISE SOCIAL GRAPH (ESG)?

An enterprise social graph is a representation of the extended social network of a business, encompassing relationships among its vendors, partners, customers, employees, and the public. In the supply chain context, it represents the multi-enterprise business network of suppliers, distributors, customers, contract manufacturers and logistics providers for a business.

Thus, value realization is trapped in your supply chain network due to sub-optimization inherent in enterprise-centric, siloed approaches. And even worse, the stale data that is being used for decision-making across trading partners is never addressed, given the technology being used isn't capable of leveraging real-time or multi-tier data anyway. The result is over-simplified, aggregate and gross average level decision making capabilities that generate today's poor performance - with increased inventory, capacity, transportation and logistics costs required to buffer for all variances, along with the resulting poor order fill rates and customer service levels.

A DUAL PLATFORM STRATEGY: ENABLING THE TRANSFORMATION

The way we unlock this enormous value and enable a cost effective, low maintenance digital environment is through a Dual Platform deployment. The Network Business Operating System (BOS) we will have defined at the process level in our whiteboard sessions is required to be competitive well into the future – To make it work, a new Network Platform is required to enable the new digital business operating system. This Network BOS will operate in the cloud, enabling all planning, operations, orders, and execution across all trading partners.

"The difficult piece is changing your way of thinking to approach the problem from a different angle. Most people do not like change, even when that change adds tremendous value. Listen to what they (the One Network experts) say."

- a $30B+ Retailer

An important benefit here is that a Dual Platform strategy eliminates all the costly overhead and expense associated with enterprise-centric customizations and migration. What happens to the old legacy ERP instances and technology silos? These prior investments still have an important role to play. Even though the monolithic enterprise platforms that supported the obsolete BOS are no longer useful at the process level, they can serve to aggregate the financial performance of the enterprise, given that the finance modules are already configured for this purpose (and assuming they weren't corrupted by the attempts to extend the enterprise platform into the Network.)

Remember, the financially related inputs and outputs of these supply chain transactions can easily flow from the business network in the cloud to the legacy financial modules in the enterprise ERP system. Thus, the Dual Platform approach solves your 3 major problems:

- How to gain competitive advantage in today's marketplace
- How to eliminate the tremendous costs of maintaining and migrating the current ERP monoliths
- How to gain the flexibility required to take advantage of new market opportunities

Your digital transformation will provide a fully digitized partner ecosystem where autonomous agents help to optimize digital processes, including the ability to take action in a decentralized fashion, while maintaining centralized visibility and control. Finally, you have an environment where you can drive optimal efficiency and effectiveness by moving to a new technology-enabled organization structure. All those old discussions about core competency focus can finally be realized!

MATCHING YOUR BUSINESS NEEDS PRECISELY

Our digital representation is not constructed from scratch through a toolkit, like some RPA environments. The One Network platform contains a series of industry-based SaaS modules that can be configured to represent the future state. A rich set of industry best practices are available through a templatized module-based approach. Modeling and deploying innovative capabilities beyond the current configuration is also straightforward. The One Network SaaS modules sit on the platform which is designed as an application platform as a service (aPaaS). Thus, whether we extend a capability as part of the SaaS module or deploy a custom workflow for competitive differentiation through the SDK, the entire digital representation is maintained through the normal SaaS release cycle.

DIGITAL TRANSFORMATION: BUSINESS NETWORK TECHNOLOGY MAKE IT COST EFFECTIVE

Now it may seem unlikely for a journey that can generate this much value to actually be more affordable than what you are paying today. But for those who have looked at the tremendous migration costs they face with their legacy ERP systems over the next few years, this should come as no surprise. The good news here is that implementing a Network-based BOS can be done in a matter of months through a series of value-focused business releases, causing little disruption to the current business environment.

"One Network delivered capabilities in rapid sprints which were very effective. An agile sprint-based methodology delivered quick time-to-value which was self-funding for the next-sprint – making the project low risk."

– a $25B+ Manufacturer

Configurable roles and permissions within the Network give all elements - people, departments, locations, and trading partners – the ability to drive performance to higher levels. At the Network level, the Enterprise Social Graph (ESG), which represents the network of business partners, can unlock significant business potential. Underpinning the ESG is the network's multi-enterprise master data management (MDM) system, which acts as the common lexicon for the ESG and enables trading between every participant. As participants take advantage of more and more Network services, this becomes a force multiplier as the Network takes effect and business benefits accrue. The ESG and shared MDM also becoming the knitting for advanced collaboration among trading partners.

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DIGITAL TRANSFORMATION: JOURNEY'S END?

So where does this exciting journey through digital transformation take us? We will have enabled a completely unified network of planning, execution, and collaboration capabilities that work in a coordinated fashion to create real time visibility and improved decision making across each touch point in the supply network. This results in a more responsive, agile, and transparent supply network that can readily adapt to a host of industry business variables such as inventory shortages or overages, modifications to orders, demand variability, changing consumer tastes, and fluctuating availability of resources, such as capacity, transportation, and supply.

"Incredible technology leads to disruptive results! Their technology delivers on all of its promises. One Network's Real Time Value Network supersedes whatever else is out on the market. Others try to say they have the same capabilities. However, when put into action, others can not compete to create the disruptive results RTVN has delivered so quickly."

- a $30B+ Manufacturer

New levels of performance become achievable. For example, automated order processing can be deployed in conjunction with your available-to-promise (ATP) capability. Given there is now a SVOT in play, orders can be linked through ATP, and based on order attributes and rules, the Network can be used to fully automate the ordering process. A complete autonomous process now becomes possible, where no manual intervention is required between order intake and order confirmation. Of course, this requires continuously updated master data shared across the network, an essential element of a multi-enterprise business network (which should already be in place!).

A compelling value proposition. The associated value proposition is significant, delivering on lower production and operational costs, significantly improved lead times, and enhanced reporting and data analytics. What we will have designed as part of our digital transformation journey is a pervasive network integration strategy that eliminates enterprise-centric multi-suite applications. We will also have incorporated planning, analytical and reporting solutions into a single network-based platform that's accessible and shareable across the entire business network and corresponding enterprise social graph, governed by secure, role-based permissions.

Barriers and silos are eliminated. If we look deeper at the digital network value proposition, we clearly see the need to break down the cross-organization and cross company functional silos and collaboration barriers. The Network BOS achieves this. Considering the number of partners, suppliers, and production hubs or facilities across the Network in disparate parts of the world, this isn't as simple as applying a few AI/ML algorithms mixed in with some RPA, as some vendors would have you believe. We also need to meet growing customer expectations with ever increasing service expectations combined with SKU-level order expectations.

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Real-time, end-to-end transparency is achieved. Finally, whatever happened to being more accurate and precise? Because the enterprise-centric legacy systems were basically only capable of making gross level changes, given the staleness of the data, companies built entire ecosystems designed around significant forecast error. Our digital transformation will enable a future state of real-time, end-to-end transparency across the supply network, from visibility to enabling data. From contract-based KPI's (such as supplier performance and on time delivery) to telematic data, providing the exact position of trucks in the network, along with real/actual lead times and estimated time of delivery. This range of data provides a joint information basis for all levels of seniority and functions in the supply chain. This "supply network cloud" provides one version of the truth, where all stakeholders make decisions based on the same set of master data.

"Innovative analytical reports and interactive dashboards create added value that enables decision making by the supply chain business. The network works great, especially when dealing with all levels of the organization."

- a $10B+ Global Retailer

We would be remiss if we didn't mention IoT in a discussion around digital transformation. IoT is certainly a core component in the platform, providing material real time data which empowers better decision making across the network through more accurate, responsive, and accessible data and analytics.

DIGITAL TRANSFORMATION: TABLE STAKES OR A MARKET LEADING STRATEGY?

A few years ago, a digital transformation would have empowered a market leading strategy. Today it is quickly moving toward becoming the table stakes required to compete in today's marketplace. In fact, in many companies the C-suite has already been expanded to include the CSO, the Chief Supply Chain Officer, to not only address this issue, but to exploit the potential of new and disruptive business models enabled by digital transformation - to drive increasing market share and profitability.

With our new CSO in place, we now also have the leverage to look more strategically at master data management (MDM) as a core component of the overall digital transformation journey. Data quality and consistency are critical to supply network performance, as well as completing our digital transformation journey.

During this journey, every milestone brings performance benefits. Sales volumes are increasing, distribution networks are evolving, yet our supply network professionals will continue to juggle multiple competing priorities. The CSO will be focused on driving positive business outcomes resulting from this effective digital transformation. Can it still be a market leading strategy, even if it seems like everyone else is pursuing it too? Absolutely. As we've seen, each step in the journey can be value-generating and self-funding. However, to gain the greatest competitive advantage, it will be up to us to demonstrate the relationship between the enabling components of our digital transformation platform and our targeted business outcomes – to unlock the enormous value found at the intersection.

About the Author

Joe Bellini is Chief Operating Officer at One Network Enterprises. Joe's experience extends across some of today's leading technology companies, including General Electric, HP/EDS, Brooks Automation, IRI, R1 and Oracle. Joe was granted patents in Supply Chain Planning and is the co-author of the business strategy book, "The Real-Time Enterprise." Joe holds degrees in Mechanical Engineering, Applied Mathematics and Statistics, is an alumnus of Harvard Business School, and is certified in Artificial Intelligence and Machine Learning from the MIT Sloan School.

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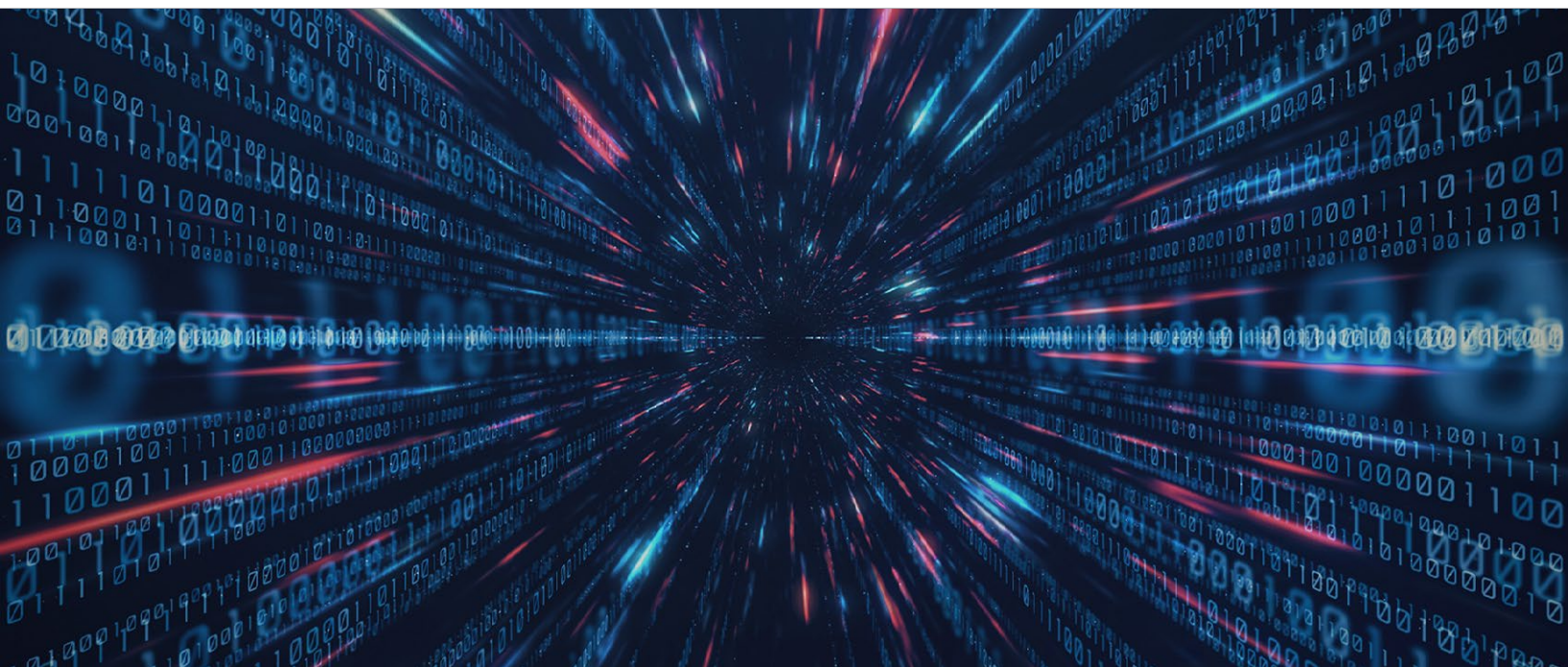
ABOUT ONE NETWORK

One Network is the intelligent business platform for autonomous supply chain management. Powered by NEO, One Network's machine learning and intelligent agent technology, this multi-party digital platform delivers rapid results at a fraction of the cost of legacy solutions. The platform includes modular, adaptable industry solutions for multi-party business that help companies lower costs, improve service levels and run more efficiently, with less waste. This SaaS and aPaaS platform enables leading global organizations to achieve dramatic supply chain network benefits and efficiencies across their ecosystem of business partners. One Network offers developer tools that allow organizations to design, build and run multi-party applications. Leading global organizations have joined One Network, helping to transform industries like Retail, Food Service, Consumer Goods, Automotive, Healthcare, Public Sector, Defense and Logistics. To date, more than 75,000 companies have joined One Network's Real Time Value Network™ (RTVN™). Headquartered in Dallas, One Network also has offices in Japan, Europe, and India. For more information, please visit www.onenetwork.com.

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