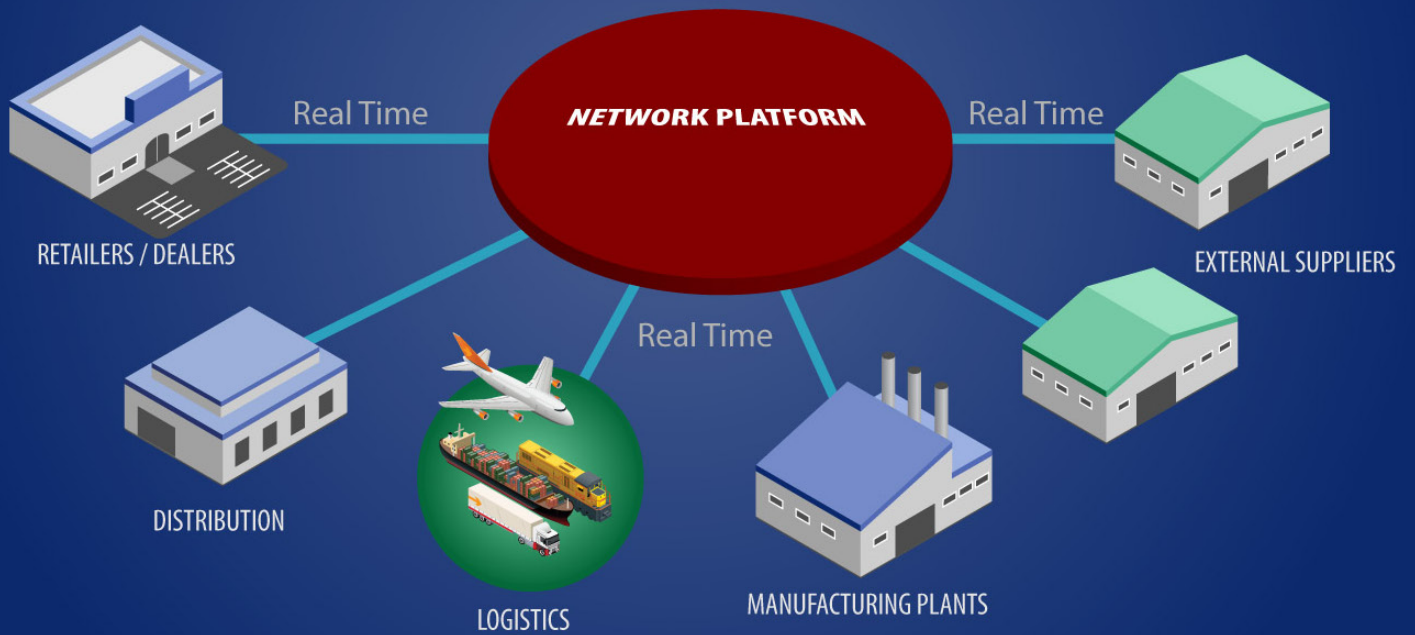


NETWORK MODEL integrated planning and execution with all parties on one platform.



Supply Chain's New World Order

How companies can leverage the cloud for predictive and actionable supply network operations, integrated financial measurement, and integrated business planning

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THE NEED FOR A HOLISTIC APPROACH

Enterprises face a conundrum in the optimization of their supply network performance. While many have driven significant improvements over the past few years through the application of advanced tools, processes, analytics, and measurement systems, how can they ensure that they are progressing from 'good' to 'great' in their market opportunities, their customer service levels, and their financial performance?

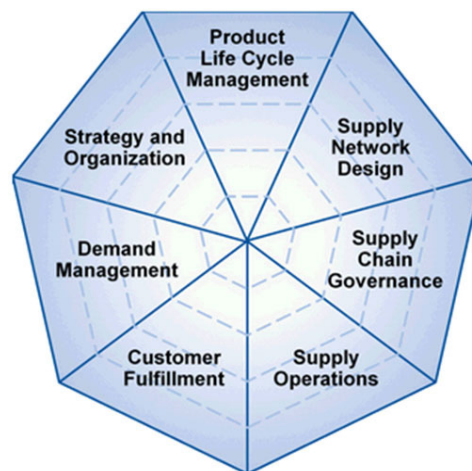
Many organizations have participated in worthwhile measurement initiatives such as SCOR or the Balanced Scorecard. Yet despite these advances it is still difficult to normalize and compare performance metrics given the geo-demographic, product, financial, political, and socio-economic differences they face in each increasingly competitive national, multi-national or global market.

As today's practitioners know, supply networks appear to be straightforward on the surface, using normalizations such as SCOR's Plan, Source, Make, Deliver and Return. But upon deeper examination many components require real time integration, coordination, and collaboration in order to deliver on a higher level of performance.

And although analyst reports try to categorize, rank, or slot solution capabilities, these measurement methods typically suffer from the subjectivity related to how the measurements were derived, interpreted, researched, and eventually applied to the ranked entities.

Key elements that must be brought together as part of this holistic approach are overall network assets, demand and supply information, market demographics, financial data, trading contracts, material sourcing, commodity pricing, and any relevant standards bodies, statutory, or regulatory requirements.

Gartner Research's "Seven Dimensions of Demand-Driven Value Network Excellence" offers a useful visual of such a holistic approach:



Integrating these elements into one seamless flow is many times looked upon as a technology problem, and while technology plays a key role in creating effective supply network operations, it is often the non-technology components such as organizational structure, performance measurement, and the resulting employee culture that truly separate great performance from marginal performance.

While technology plays a key role in creating effective supply network operations, it is often the non-technology components such as organizational structure, performance measurement, and the resulting employee culture that truly separate great performance from marginal performance.

Enterprises also need the ability to segment these networks when running their longer term IBP processes. Different strategies should be used for various geographies, channels, product types, manufacturing methods, product life cycle, tax scenarios, logistics options, customs implications etc. The goal is for the various dimensions of process, metrics and technology to operate with increasing levels of maturity until the enterprise can achieve full multi-party, multi-echelon collaboration across trading partners. This includes scenario based profitability planning and execution across multiple variables utilizing process automation and advanced analytics to drive desired outcomes.

The challenge is twofold. The organization must operate on these network elements in both the short term or real time execution environment, as well as the longer term integrated business planning environment. The need for a single version of the truth driven from a statistical sales forecast remains the same for both short term and long term optimization. A platform which enables this single version of the truth across both the real times execution environment and the longer term IBP environment is the key enabler.

GOOD TO GREAT

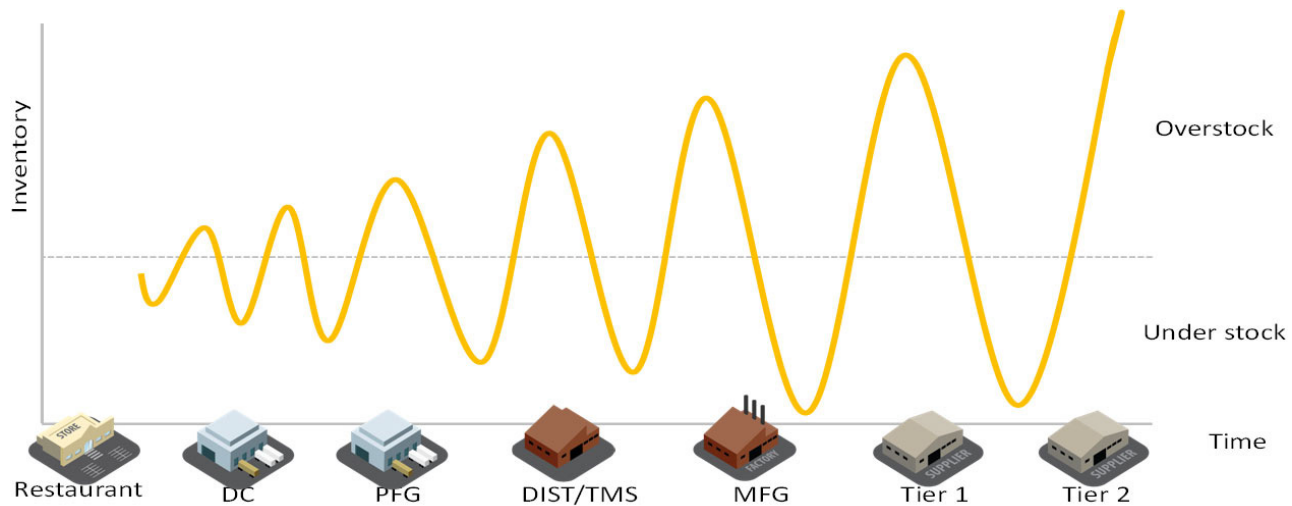
If we feel that today we have achieved a level of goodness across our supply network planning and operations, how do we target and mobilize toward greatness? The challenge for us in today's competitive environment is how to evolve from 'good' to 'great.'

We've gotten to 'good' by deploying the dominant technologies of today, but whose architectural design unfortunately perpetuates significant latency and inefficiency across the supply network. So while getting to 'great' involves a lot more than technology as we will discuss, we still need the underlying technology platform to evolve in order to support 'great'.

OVERCOMING STALE DATA

Our traditional technology limitations were rooted in the typical ERP environment where the business user receives information that has gone through and across multiple software modules and thus has been re-optimized or reconciled several times. Therefore the data appeared to be accurate for the silo it resided within, but due to the architectural constraints that data (which is then used to make critical business decisions) tends to be up to 3 weeks old when compared to the actual demand signal which triggered the data propagation across the supply network in the first place. While seemingly accurate within the silo because it has been crunched, massaged, and normalized, it is rarely accurate based on "today's" market demands. Thus our option was to use data to make decisions based on where our demand or supply needs were 3 weeks ago rather than today.

When we can go to our business users and tell them they will receive real-time supply network information as of the last ten minutes, then at that point we will have deployed a technology platform which enables the supply network to get to 'great'. Given that certain data will be available for synchronization at different times and frequencies under this



THE PROBLEM OF STALE DATA
 The longer it takes to propagate a supply or demand shift, the longer an organization is doing the wrong thing.

paradigm, the architecture has been designed to optimize segments of the supply network while maintaining overall network integrity.

Maintaining this overall network integrity, while optimizing supply network segments along with modeling large data sets and the associated measurements/analytics has changed the requirement for data representation. We no longer need to limit representative data in the supply chain based on traditional system or technology constraints. That is why One Network’s platform employs an Hadoop based architecture with a horizontal grid computing deployment.

Advanced business measurement relies heavily on data accessibility. Real time process automation and management capabilities have changed the game on the types and fidelity of available data. In traditional architectures, accessibility was somewhat synonymous with integration, universal object definitions, and longevity. One Network provides a real time business process management layer which in turn provides full control and interaction while executing a transaction – through state change, milestone, and tracking event linkages. This contextualized process level data is fully accessible based on policy and permission control either directly or through the data warehouse.

INTRODUCING THE ENTERPRISE SOCIAL GRAPH

No company has ‘truly’ modeled the full relationship set between how companies interact with other companies upstream and downstream in the supply chain. Some of the largest companies in the world struggle to maintain accurate master data about their suppliers. Even companies who have invested in building an accurate database of their direct suppliers know very little about the next tier of suppliers upstream in the supply chain.

As a result, when tragedy strikes like an earthquake affecting Japan or flooding rains overwhelming Bangkok, automakers and electronics manufacturers are unable to identify which of the suppliers upstream in their value chain may have been impacted.

Or a personal health situation arises like a batch of peanut butter becoming contaminated with salmonella or children’s toys being contaminated with lead paint, where the regulators have difficulty identifying the source of the problem several tiers upstream in the supply chain. The problem has been compounded in recent years as many of the world’s high tech, automotive, aerospace and consumer products leaders have outsourced design, assembly, logistics and sourcing activities to Tier 1 suppliers. It is increasingly common to find that the company whose

A social graph for the supply chain can visually depict all the linkages between buyers and suppliers throughout the world.

brand name is on a product never actually takes inventory of the item before it is sold to a customer. When supply disruptions occur the brand owner, having outsourced its bill of materials to a Tier 1 supplier, lacks visibility into which companies in its upstream supply chain might have been impacted.

A social graph for the supply chain can visually depict all the linkages between buyers and suppliers throughout the world. Thus when there is a massive recall required, as in the recent ignition switch problems at GM, identifying the supply network and drilling through based on also having full track-and-trace visibility to the items affected by the recall becomes a standard capability. The trouble is that historically companies have been reluctant to share information about their suppliers with their customers or the general public. And while we've been somewhat focused on direct network participants, indirect participants like banks that specialize in trade finance or insurers that specialize in trade credit can also be modeled as part of the supply network graph. Visibility across the network into the relationships between importers, exporters, buyers and sellers of goods is a key advantage when processing millions of letters of credit, foreign exchange transactions and insurance policies.

In addition, 3PL companies such as DHL, FedEx and UPS should have a vested interest in becoming a key capability within a supply network social graph. Given their extensive reach into multiple vertical industries, understanding the commercial relationships between buyers and sellers at multiple tiers of the supply chain should be central to their business strategies.

The core of One Network's platform architecture enables the real time network through a high performance Enterprise Social Graph or ESG. The supply network application of the ESG is somewhat similar to how Facebook models its social network or how LinkedIn models their economic graph.

The ESG models the full network as a 'web' of connections; from the OEMs that design and manufacture product, to the contract manufacturers who build to the OEM specs, to the suppliers who provide the components, to the direct or indirect materials procured for manufacturing or packaging, to the ingredients used to make the product, to the various logistics hubs to move finished product to market, and finally to the retail customer. This is in contrast to the one-off relational database integrations in a traditional ERP deployment.

INTEGRATING BIG DATA AND APPLICATION DEVELOPMENT INTO THE ENTERPRISE SOCIAL GRAPH

One Network's platform provides a flexible architecture that enables aggregation, storage, querying, processing, and analyzing of Big Data. The capability to provide the scalability across millions of nodes and edges for aggregating, storing and analyzing the data is substantial. The advanced data store is optimized for graph operations and uses a flexible and extensible data schema.

Integration and extensibility for various types and formats of internal as well as external data sources is also provided as part of the platform. Further, the extracting and mapping

Either the existing or custom API's are used to take data directly from the customers' ERP or shop floor systems without having to spend months on data mapping and configuration.

functionality can handle both structured as well as unstructured information. The data aggregation monitors and regularly updates entities, properties and associations by requesting the newest representation from the respective data source, and re-aggregates if new data is available. The combination of various data analysis technologies makes it possible to constantly interconnect entities, enhance the data quality and transform any unstructured data into useful knowledge.

The platform also provides the ability to distribute and recommend information from the network graph to the right users based on a specific context. Moreover, it provides easy, comprehensive and consistent user access to the data in the knowledge graph via APIs, so it is possible to create applications and extensions based on this structured information. Users should be able to visualize, explore, and collaboratively edit the information in the supply network graph based on the tags the owners decide to attach to their assets. A graphical user dashboard enabling this level of interaction is also included.

Further, in order to populate the ESG, either the existing or custom API's are used to take data directly from the customers' ERP or shop floor systems without having to spend months on data mapping and configuration. With many of our supply network participants still communicating by email, we support various data schemes including the typical standards like EDI or EDIFACT. Each of these data connections is included as part of the definition of the network node when it is modeled as an extension on the supply network graph. This node can be modeled as a supply network hub or spoke,

with many of the larger spokes becoming hubs over time. The ESG is full function, allowing for discovery and alerts across the network assets based on permission structure. Network assets are tagged by owners in order to participate in this process.

The ESG has the potential to innovate significant functional capabilities over time. The graph provides information about related entities, and can therefore be used to locate potential demand, supply, network assets, products, processes, materials or locations. Further, the structured knowledge in the ESG can be utilized for advanced search capabilities such as natural language processing, and to provide semantic capabilities by understanding the contextual meaning of a search query.

Over 400,000 companies are testing various levels of enterprise knowledge sharing with Yammer. The next logical step will be for them to move into a well-structured, high value ESG environment like the ONE platform.

PROCESS AND MEASUREMENT WITH INTEGRATED BUSINESS PLANNING

Given that the technology platform limitation has now been resolved, we can move on to the harder problems related to process and measurement. Companies are entering a period of significant change where employees are going to be expected to learn something new almost every day with changes in markets, products, buying behavior, channel structure, transportation modes, trading partners, analytical tools, and process design.

Under our new paradigm, the technology platform and processes are real time responsive and the underlying enterprise social graph/supply network is representative of the actual trading environment, including the business rules, processes, policies and contracts in force between trading partners.

In addition, the way that employees and trading partners work in the network will change related to problem identification, problem diagnostics, and problem resolution. Advanced Integrated Business Planning (IBP) solution frameworks will provide the ability to interact with operating and execution environments on a continual basis.

In addition, M&A activity has increased significantly and the synergies used to justify these transactions require immediate absorption as a valued participant in the overall supply network.

Under the old technology paradigm, the systems and thus the processes were burdened with significant information latency at various nodes upstream in the supply chain. Thus there really weren't any measures put in place related to real time demand and supply responsiveness other than flexibility related to volumetric shifts. Given that information latency, there weren't any financial measures put in place that projected financial performance based on current process performance. It makes sense; why would anyone risk taking action on projected financial performance when the base operating data driving the projection is probably 3 weeks old?

However under our new paradigm, the technology platform and processes are real time responsive and the underlying enterprise social graph/supply network is representative of the actual trading environment, including the business rules, processes, policies and contracts in force between trading partners. For example through the transportation module, users can now access logistics visibility that shows all their company's inventory around the world which is in motion so

they can quickly see where shipments are and if they are late, drill down by carrier or customer to address problems as they arise.

Thus with the technology, metrics and process platform capabilities well in hand, we are now ready to deploy a measurement system which enables our ability to manage our supply network as it physically exists, in real time, based on a single version of the truth. Our ability to project future financial performance using real time operating data will give employees the confidence to make changes in both planning and operations, from the board room to the boiler room.

SIX SIGMA, LEAN, AND ROOT CAUSE ANALYSIS

The data driving our measurement system is being generated in real time by both our planning processes and the resulting operating transactions. The technology architecture is capable of allowing a planner to not only see the symptoms related to a supply network issue, but also to look deeper into the root cause of the problem. The analytical process robots running continuously in the supply network are designed to support both six sigma and lean strategies. These robots provide information to the planner's dashboard that allows them to interact with the system, solve any critical symptoms short term, and make permanent long term fixes to root causes.

Six Sigma owes its roots to the Statistical Process Control developments made by Dr. Walter Shewhart of Bell Laboratories in the 1920's and later expanded upon by Dr. W. Edwards Deming. The technique later evolved into the

Enterprise and departmental silos are reinforced by today's ERP systems given the fragmented environment present across most supply networks. Migrating this environment into one which will support change rather than resist change is much more cost effective than in the past given the highly secure cloud based system options available today.

Six Sigma business strategy driven through innovations by Motorola and General Electric. Basically it is a customer-focused, data-driven methodology that identifies root causes defects due to both specific and common cause process variation. The method utilizes the industry standard DMAIC structure--define, measure, analyze, improve and control—to innovate and generate solutions to specific and systemic problems that affect the end customer of the process. Dr. Deming was always a staunch advocate of fixing the process rather than blaming the employee for the outcomes of a poor process. It is process variation that is the true enemy of a 'great' process.

Lean, on the other hand, analyzes process flow and related outputs, including waste. Core events within a lean program are Kaizens, which are focused, high energy, cross functional design sessions whose goal is to create standardized solutions which can then be implemented in a step wise fashion. Lean is all about introducing Straight Through Processing coupled with flexibility where required across processes. Similar to Six Sigma, there is a clear focus on the customer, taking non-value added process steps out of the environment and automating process segments where possible.

Combining Six Sigma and Lean has proven effective, given the fact that Six Sigma improves quality through decreased defects while Lean increases process efficiency, velocity and flexibility. Plus both methods are squarely focused on improving outcomes for the customer. The term most commonly used today is "Lean Six Sigma".

Using the dashboard, the planner now has full visibility and control to all current and future issues and exceptions within the processes they have permission to access. Elimination of issues related to either symptoms or root causes can be evaluated through the advanced measurement system and action taken based on the desired set of results. Issues can be resolved in different ways depending on whether the strategy at that point in time is to improve service levels, reduce inventories, increase capacity utilization or some combination of those or other variables.

ACCOUNTABILITY AND MEASUREMENT

Assuming excellence in customer responsiveness is a given, in order to achieve excellence in operating performance all employees should have a solid education and understanding as to how their roles and responsibilities contribute to their supply network outcomes in addition to their budget or financial performance. And more importantly, accountability must become a key component to any organizational and measurement alignment.

The importance of offering process visibility, measurement, control and the related education and training to employees whose roles are critical and accountable to successfully executing 'great' demand or supply processes can't be underestimated. Coupled with an overall financial and process leadership curriculum offering education on financial forecasts, cost management, and operating measurements, as well as comprehensive measures such as 'cash conversion cycle' improvements, it will empower and enable the organization to become 'great.'



As mentioned above, technology isn't the total answer, but is critical to providing the infrastructure to enable these process improvements. Enterprise and departmental silos are reinforced by today's ERP systems given the fragmented environment present across most supply networks. Migrating this environment into one which will support change rather than resist change is much more cost effective than in the past given the highly secure cloud based system options available today.

And while education and awareness will generate empowerment, it is the accountability and measurement of individuals across the organization and across their network of trading partners that will drive the collaboration necessary to achieve higher levels of performance. Annual goals for departmental managers must be tied to the supply network's financial performance so that leaders are held accountable. Daily performance visibility and collaboration to discuss performance related to supply network outcomes and enterprise operating metrics must become part of the fabric and rhythm of running a successful operation. Most enterprises will find that rather than creating a burden on their 'silo' based metrics, improvement in cross functional integration across trading partners will contribute to improvements in customer satisfaction scores, operating indicators, and overall employee satisfaction. Strong culture flows from thoughtful organizational design and measurement.

Performance and operating measurement visibility enabled by a platform which allows employees to take action to resolve related issues provides the foundation for continual

employee participation and feedback. This capability will empower leadership, employees, and their trading partners to work toward achieving enterprise goals. Initial resistance to running a fully integrated environment is typical given the enormous time constraints in everyone's schedules and their inability to resolve the issues they encounter on a daily basis today.

However to a person as they begin to engage and realize the value produced by operating in a completely actionable environment, supported by automated problem resolution, and capable of collaborative problem resolution when required, they will not only accept but begin to promote this type of measurement and accountability environment. Their ability to visualize the associated metric performance with planning or operating decisions made on a daily basis, while being equipped with the tools to affect future performance around those metrics will give them the confidence to succeed.

The pain of operating in the traditional ERP environment with all the associated limitations that made their jobs so frustrating will fade into distant memory.

VISIBILITY AND MEASUREMENT

Visibility to the potential value locked in the current environment is a key driver in a supply network transformation and is being provided by One Network today through our cloud based network platform. Departmental workbenches which provide not only the departmental performance as we see with most systems, but also show

When considering organizational dynamics, we must include all the appropriate stakeholders in measurement discussions, not just the department leaders.

the effect of dependencies and actions taken in other departments or across customers or trading partners have been deployed by One Network in highly complex supply networks for more than 10 years.

At higher levels in the organization these workbench analytics can aggregate to show performance measurement based on annual goals, market outcomes, customer service levels, revenue performance, price performance, cost targets, etc., creating for the first time a set of measurements that are both operational and financial in nature, that aggregate from the boiler to the board room, and that can map into the chart of accounts as defined in the enterprise financial system.

RESPONSIBILITY, ACCOUNTABILITY, AUTHORITY, AND MEASURABILITY

When considering organizational dynamics, we must include all the appropriate stakeholders in measurement discussions, not just the department leaders. Across these stakeholders we will have a combination of those who have been assigned 'responsibility' for a process segment, those that have been assigned 'authority' for a process segment, those that have been assigned 'accountability' to a process segment and finally a set of measurements that hopefully bind them all together to drive the desired outcome. Many times those with operating 'authority' will choose to meet with the department director who has similar 'authority' when in fact a staff member who lives and breathes 'responsibility' and 'accountability' might have more influence in improving the performance.

Another technology capability that is essential as part of the platform shift is the ability to assign process level permissions to users. The organization cannot operate efficiently without a clear line of site related to authority, accountability, and responsibility. The permissions framework can reinforce this structure both at the process and measurement levels.

COLLABORATION AND MEASUREMENT

To leverage cross functional measurement improvements, perhaps pull together a chat session to discuss inventory positions and show the various departments the effects their decisions are having on quarterly cash flows and customer service levels, without becoming negative and turning the conversation adversarial based on the usual "lack of visibility" issues. Properly positioned operating information will be an eye-opener for both leaders and staff and will help them to better focus on the actions needed for improvement. If we look holistically from an overall supply network perspective, there are 5 high-level business functions per the SCOR model including Plan, Source, Make, Deliver and Return. This is where typical organizational design stops and departmentalization by area causes us to produce suboptimal results, which is typically reinforced by enterprise software designed at this feature/function level.

Under this paradigm we see this dysfunction play out where just within Sourcing we find there are many competing source optimization routines second guessing each other between manufacturing and supply, supply and raw material, manufacturing and logistics, manufacturing and co-manufacturing, supplier and co-manufacturing, supplier and logistics, etc.

Recent customer results include reductions of 40% in inventory requirements for cycle and safety stock when compared to traditional ERP batch type processing, 5% decreases in lost sales, 99% customer service levels at retail, 5% reductions in material costs, and 30% reductions in premium transportation costs.

As a result the 'accountability' at the customer service level is spread out across many nodes running local optimizations. Any hope of leveraging a learning organization will be constrained by these types of poorly designed organizational boundaries. A well designed permissions framework at the user level can cut through these limitations and focus on the target outcomes and associated measurements.

OUTCOMES

The journey from 'good' to 'great' is well underway across many global supply networks. While comprehensive benchmarks are still being normalized for comparative purposes, recent results that have been experienced by various One Network customers include reductions of 40% in inventory requirements for cycle and safety stock when compared to traditional ERP batch type processing, 5% decreases in lost sales, 99% customer service levels at retail, 5% reductions in material costs, and 30% reductions in premium transportation costs.

METHOD COMPARISONS: A SINGLE VERSION OF THE TRUTH

In order to operate a 'great' supply network, we must adhere to 2 immutable truths.....namely there is a single statistical sales forecast driving all related actions across the supply network, and this therefore drives a single version of the truth.

We don't view measurement as an overlay on the business or the process. Excellence in process execution is the driver and measurement is a capability that converts real time data at

the process level and aggregates measures at different levels based on which types of measures at which levels will help drive actions that result in improved outcomes.

Measurement can take on a number of different forms including numbers, indexes, percentages, ratings, ratios, and rankings. Numbers are the simplest to understand, but are only as good as the strategic objectives the numbers are measuring. An index, like CPI, has the advantage of combining lots of numbers, but it's hard to understand what is really happening. Percentages can be good when measuring blocks of time, but can be used incorrectly depending on segments and causals. Ratings are good when comparing qualitative information, but is subjective and can be manipulated based on derivation. Ratios are good for measuring critical relationships, but typically require addition analysis to understand the meaning and reach the correct conclusion. And finally rankings are a feel good measure for highly ranked companies, but don't provide any actionable insight for lower ranked companies.

SCOR

The SCOR model can be useful for measurement and benchmarking purposes. It is a normalization based on a well-defined taxonomy where major functional areas are disaggregated and attributes related to those functions are further broken down into strategic and operating metrics. It is a top down approach where at its lowest level an enterprise can try to map how they run the business to how the taxonomy is structured in order to try and derive some value out of the benchmarks.

In contrast the One Network architecture is a bottom up, process driven measurement environment with precise access to any issues that cause a measurement to indicate there is a problem.... on a real time basis.

However this method suffers from what most methods of this type suffer from which is they typically are able to tell the enterprise what they already know without giving them a set of tools to actually solve the problem.

An example of a SCOR measure is as follows:

RL.1.1 Perfect Order Fulfillment

- The percentage of orders delivered on-time, in full. Components of perfect include all items and quantities on-time, using the customer's definition of on-time, complete documentation and in the right condition
- $[\text{Total Perfect Orders}] / [\text{Total Number of Orders}]$
- RL.2.1 % Orders Delivered in Full; RL.2.4 % Perfect Condition; RL.3.19 % Orders Received Defect Free; RL.3.24 % Orders Received Damage Free.
- An order is perfect only if all L2/L3 metrics are perfect; An order must be: on-time AND in-full AND right condition AND right documentation

In contrast the One Network architecture is a bottom up, process driven measurement environment with precise access to any issues that cause a measurement to indicate there is a problem....on a real time basis. If an enterprise likes and is using any of the SCOR taxonomy, the data can easily be calculated using the associated equations and displayed on the One Network dashboard while maintaining the drill down capability to actually identify and resolve any root cause issues.

BALANCED SCORECARD

The Balanced Scorecard is interesting in that its definition actually reflects the traditional ERP limitations we discussed previously. In their taxonomy the measurements are actually broken out as either outcomes or drivers where the outcomes are lagging measures and the drivers are leading measures. Examples of lagging measures are revenue growth percentage, return on capital, customer satisfaction ratings, and product contribution margins. Examples of drivers include revenue mix, price variance, training hours, and customer face time.

A strong suite for this method is the usage of a Strategic Map. Objectives are mapped into measurements in finance, customer, processes, and learning.

All the so called 'lagging' measures can actually be calculated in real time using the One Network platform and projected forward in time based on planned operations as defined by the Integrated Business Plan.

Thus in our new paradigm there isn't a division of lagging measures and drivers. Lag is virtually eliminated unless required for comparative purposes and the financial measures can now become drivers.

A typical executive level measurement bundle related to customer performance includes quality, service, pricing, lead time, brand, and NPS. A typical executive level measurement bundle related to financial performance includes ROI, EVA, revenue, earnings, capital, and cash flow.

FINANCIAL RATIOS

Financial ratios are useful but require interpretation in order to reach the correct conclusions based on the measure. The major categories typically used in today's markets include Liquidity, Coverage, Leverage, Operating, and Expense to Sales ratios.

INTEGRATED BUSINESS PLANNING AND NEXT-GENERATION S&OP

The question is which measures are the best KPI's/decision drivers to be used at different levels within the organization structure?

One Network's Executive Level Dashboard will typically focus on measures related to both customers as well as enterprise financial performance. In keeping with good measurement practice, it is good to limit the number of KPI drivers to 6. A typical executive level measurement bundle related to customer performance that we have implemented in the past includes quality, service, pricing, lead time, brand, and NPS. A typical executive level measurement bundle related to financial performance that we have implemented includes ROI, EVA, revenue, earnings, capital, and cash flow.

The added advantage of One Network's architecture is not only providing drill down and issue resolution connected to these drivers, but also the elimination of any latency in the calculation of these measures related to real time supply network performance. Plus the financial measure can be calculated at the operating level and translated into any financial view, include the chart of account structure.

The Departmental Level Dashboard will be more tightly connected to actual process level performance. A typical departmental bundle related to process performance includes sales volume, material costs, labor costs, transportation costs, storage costs, and overhead costs.

Deploying this type of advanced IBP and Sales and Operations Planning (S&OP) has been difficult for most companies due to false starts given that many companies market this capability but lack the platform that can enable this level of consensus based collaborative forecasting and planning. Analysts give credit to technology providers who unfortunately can only really solve a small piece of the problem. This has shaken the confidence of many companies who now believe this all sounds "too good to be true".

However as we have detailed above, One Network has now successfully deployed this type of advanced cloud based platform in the retail, consumer goods, and automotive sectors. Even Pharmaceuticals which has been slow to adopt these types of advanced platforms due to its skepticism of cloud based solutions and the security related to shared data is beginning to move forward.

As pioneers of platform as a service (PaaS) and cloud infrastructure, we at One Network have made significant progress in data encryption, permission-based access, and data level security causing supply chain leaders to re-evaluate the deployment of a cloud-based planning layer over their core ERP. The One Network cloud-based planning layer enables the sharing of S&OP data across key stakeholders: contract manufacturers, branded and generic

ENABLING NEXT-GENERATION S&OP



business units, distributors and retailers. This planning layer enables collaborative and iterative simulation planning that takes into consideration pertinent factors such as current demand, projected sales scenarios and supply constraints like lead time and capacity.

Once consensus has been achieved on the forecast and the upstream planning of materials and capacity have been agreed to by all concerned stakeholders (for example, the brand owner and its contract manufacturers), the plan can then be adopted by the respective ERP systems to generate lower-level planning like MPS or MRP. In more advanced implementations the ONE Platform will be deployed at the execution layer as well, eliminating the need to integrate across multiple ERP silos.

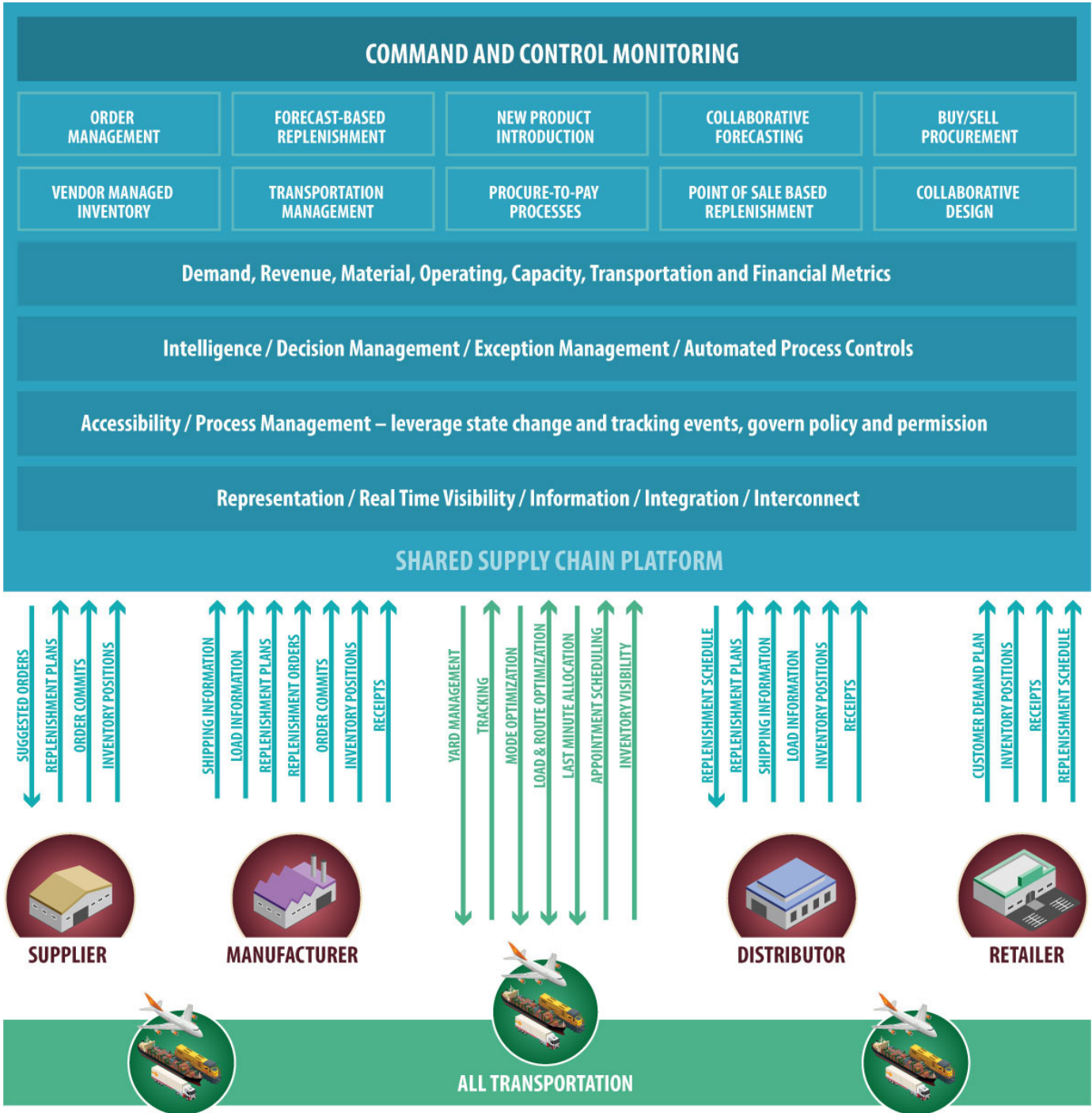
The core of this platform shift resides in the data model itself. The platform contains a deep and rich data model which will represent data globally across all underlying systems, empowering both the advanced S&OP functions as well as supporting data and decision integration back into the ERP environment. This allows the supply network to be easily

rolled out to multiple sites within the enterprise and also adopted by new suppliers and customers.

Manufacturers now realize that integrating upwards of 100 contract manufacturers in different regions into their core ERP would take several years. Cloud based network offerings like One Network provide instant connectivity and the ability to maintain a complex and scalable network, regardless of the number of interfaces involved.

IN CONCLUSION

At One Network we have combined the best of all measurement methods with an advanced IBP capability which will provide significant competitive advantage at the enterprise level. The innovation is using KPI's as drivers rather than just indicators of past performance, interpreting financial ratios in real time and simulating a series of scenarios to improve their future outcomes. The capabilities are driven through a dashboard supported by the platform described above which was seamlessly architected so that any IBP level scenario planning could drop right into transactional execution.



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