

Demand-Driven Value Networks: Beyond Lead Time and Cost Reduction to Integrated Management of Risk and Compliance

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Introduction

What is the value to becoming truly demand-driven? This paper will explore the Demand-Driven Value Network (DDVN) value statements which, while standard in nature, derive from piloting and implementing new processes, technologies, and change management. Lead time and cost reductions, as well as inventory savings, have led the business cases and yielded impressive improvements of 30% or more, even where companies have implemented ERP systems.

The most successful organizations are replacing their traditional sales and supply chain approach with a more robust DDVN approach (see *Figure 1.*)

Traditional Sales and Supply Chain Approach

- Organizations are segmented; “silos” exist within and across companies
- Short term planning is disconnected from execution
- Many parties are completely disparate from the supply chain eco-system

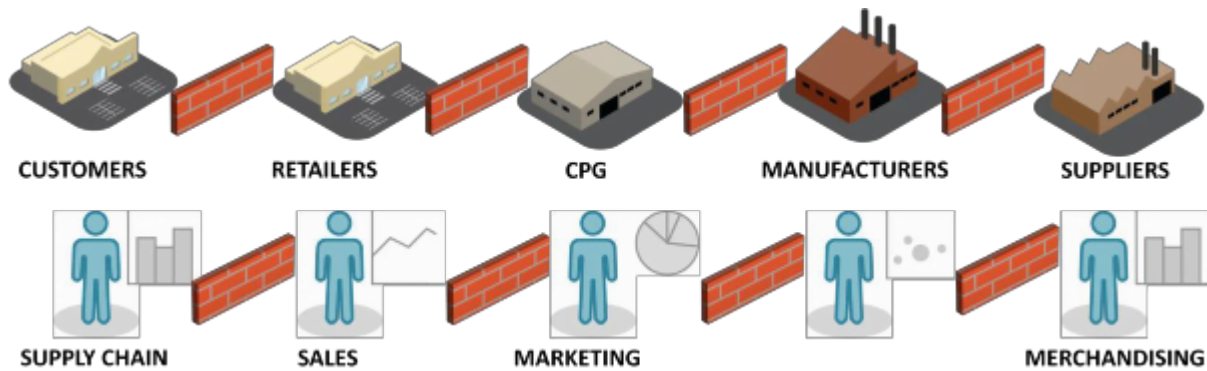


Figure 1. Traditional Approach vs DDVN

What has not been discussed, however, are the significant benefits in the areas of risk and compliance management, sustainability, and those that derive from Integrated Business Planning (IBP). This paper addresses these particular value statements.

Integrated Business Planning

Integrated Business Planning (IBP) is a relatively new term that applies to the goal of aligning a company's strategic plan, and operating plan, with its monthly Sales and Operations Planning (S&OP), as well as its operating plans for risk management, regulatory compliance, sustainability, and other important objectives. This is especially critical for today's organizations, since they require complex supply chains for global sourcing and distribution.

This alignment under IBP requires both visibility and agility. Visibility is necessary across the company's end-to-end value networks - i.e., into the plans and execution of supplier's suppliers, through the company, and on to customer's customers. What trading partners are doing to enable the company's supply chains, and how they are doing it, are critical components of business success.

Agility, then, is the capability to act quickly upon the information obtained through visibility. Supply chain disruptions, compliance issues, and/or sustainability impacts occur frequently in global operations. Not only do we want to prevent or mitigate these as much as possible, when they are unavoidable (such as a weather or labor-related disruption, or a supplier-driven issue), but we also want to know about it right away, and react quickly to recover from it.

A company with global operations has many trading partners - material and component suppliers, contract manufacturers, logistics service providers, freight forwarders, distributors, retailers, and order fulfillment providers can all be in the mix. The DDVN, when implemented effectively, enables the capture and tracking of near real-time data on demand performance, i.e., what is actually selling everywhere, any and all the time, where and when, and even to whom.

An effective IBP process is enabled, then, by the provision of near real-time demand data to all the trading partners (The Real-Time Value Network), with Cloud processing on a single platform.

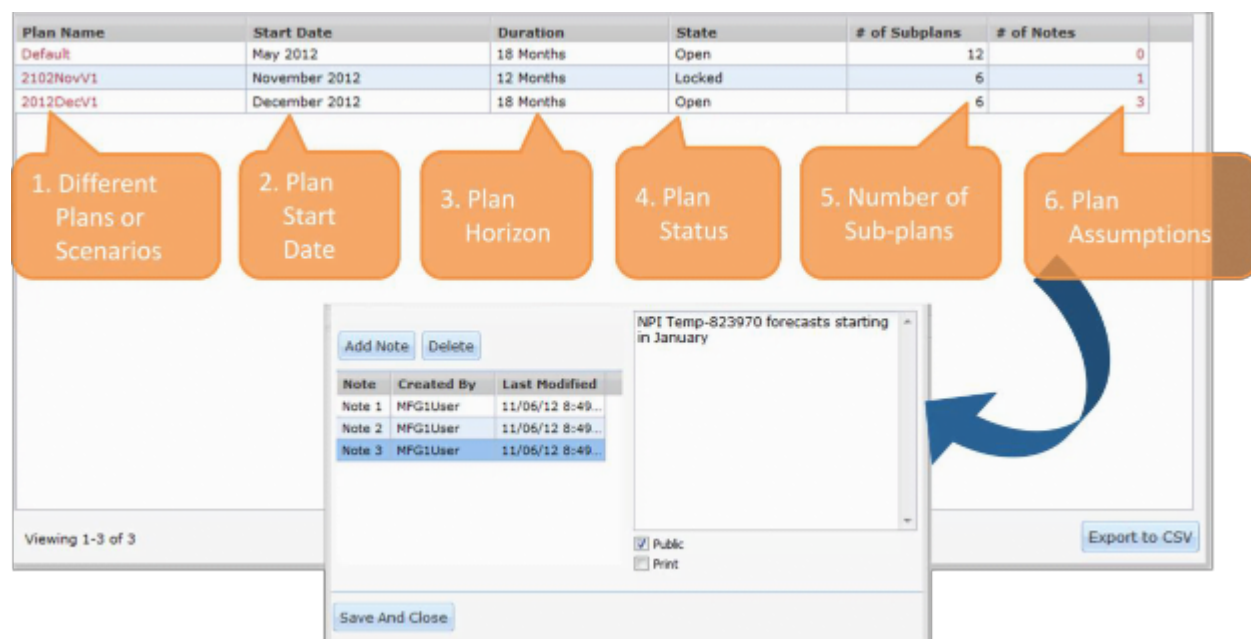


Figure 2. Example of Integrated Business Planning (IBP) Multi-Plan Analysis and Scenario

Regulatory Compliance

Serious events that have occurred recently in Asian-based sourcing have highlighted the need for companies to establish improved management of not only regulatory compliance for its supply base, but beyond that to smart management practices for product, safety, licensing, insurance, and other supplier relationship management (SRM) matters.

When casualties or questionable practices are discovered at offshore factories, not only are supply chains disrupted, but a company's reputation and brand image can be damaged. We have seen this negative impact with apparel, footwear, electronics, and other consumer products.

Basic to the design and implementation of sound management practices for regulatory management are information and documentation developed and made available, on permission, to the Value Network.

While sourcing decisions can be supported by real-time information on actual demand, the availability of information on what is being planned, and how that is being executed, by the Value Network, is critical.

It is true that not all incidents can be prevented with real-time information; however, there

are signals that can be identified that indicate risk is increasing, along with the improved ability to recover from the incident quickly.

The availability of important compliance documentation (the central compliance repository) is not only useful for legal protections, it is also critical for compliance management. Multiple corporate interests can review the same information for different reasons and take unified action earlier than post-crisis.

The company can make use of DDVN to configure what processes and documents are important and necessary for compliance, and the trading partners can view or download this anytime and anywhere.

DDVN enables a Compliance Information Service that is active, integrated, and early-warning, as well as crisis management supportive.



Benefits

- Improved system capability to connect multiple functional processes across all business segments
- Successfully connected supplier network in support of shipment creation, planning and visibility, dramatically reducing both cycle time and overhead
- Provided full item level shipment visibility across entire supplier and customer network
- Highly automated freight financials through EDI 210 and auto-invoice to support both

accounts payable and general ledger

- Provided systematic capability to support both static route process and dynamic route planning and execution
- Enabled meaningful network analytics and continuous improvement process through platform standardization

Figure 3. Example of Auto Parts Ecosystem with DDVN Enabled

Risk Management

Supply chain risk management has become increasingly important to all companies that source or distribute on an international basis. As supply chain managers work to optimize the Mega Processes of PLAN, BUY, MAKE, MOVE, DISTRIBUTE, and SELL – and in dealing with global sourcing, selling in new markets, demand volatility and supply challenges – we are finding that the risks inherent in international supply chains are increasing in frequency and severity each year.

Supply chain disruptions have become so important to global economies that the topic was recently addressed by the World Economic Forum (WEF), which has added supply chain risks to its annual *Global Risks Report*. The WEF recently concluded that “Risk management has to be embedded within an organization from top to bottom and has to include a consistent set of key performance indicators.”

Severe weather events – such as natural disasters caused by tsunamis, hurricanes and tornadoes – have disrupted enough supply chains to gain board-level and media attention worldwide. In addition to weather events, we experience labor actions, socio-political disturbances, and demand or supply shocks.

Moreover, there are risk disruptions associated with thefts, customs-law violations, technology breakdowns, materials shortages, communications delays, and logistics mishaps. In fact, there are some 12 categories of risks that have been identified as impacting supply chain flows.

Recent research has produced reports of corporate performance drops of anywhere from 3-7% alone from such events, with more impacts on selected industries depending on location. The tsunami in Japan in 2012, for example, caused a global auto parts shortage of up to 30% due to that region’s heavy automotive industry production.

While increased attention to risk management has yielded better mapping of supply chains,

and thus greater understanding of where risks could impact the company's supply chains, less attention has been placed on minimizing the "time to recovery (TTR)", or the "cost to recovery (CTR)".

Although the severity of an event is, of course, a major factor in determining the time required for supply chains to recover back to normal operation, it often takes months to recover after an announced supply chain disruption.

Most of the supply chain risk management attention has been placed on the logical goal of improving resilience, or the ability of supply chains to withstand disruptions or adapt to them quickly. Important public-private initiatives and programs have been launched to work toward harmonized standards, information sharing, trade resumption, and other worthy goals.

Individual companies, however, are normally not in the position to wait for strategic initiatives and policy changes to take effect. There are three major actions that each company should take to help mitigate risk:

- **Step 1** - Update your supply chain maps and risk points.
- **Step 2** - Develop scenarios, contingency plans, and recovery methods.
- **Step 3** - Build resiliency into your operations, and start now.

A true DDVN will ensure that these three key steps are handled effectively. Again, because the DDVN process and technology is continuously monitoring end-to-end supply chains, and thus visibility is real-time, we become aware of any impact almost immediately.

More importantly, alternative sources of supply can be identified, and almost automatically energized with any disruption, if so established by the process. This is where agility becomes evident - when the capability exists to engage alternatives, whether they are sources, routes, service providers, or other trading partners.

Real-time visibility enables near real-time adjustments. Supply chain managers, when provided information about risks occurring or about to occur, can order any appropriate adjustments. In special cases, the DDVN technology can automatically re-route goods, or resupply from alternative sources or providers. This, too, goes beyond traditional methods or technologies.

Sustainability

Along with compliance support, the DDVN will also enable improved environmental, social,

and governance activity for supply chains. The comprehensive repository feature will store and make available up-to-date information on environmental factors that impact carbon footprints, such as:

- Carbon footprint base-lining, tracking, and reduction with transportation management;
- Carbon footprint tracking of impacts of minimizing inventory levels and deployments;
- Bill-of-material carbon roll-ups; and
- Electrical grid monitoring.

In addition, we see paper eliminations and fax reductions of up to 95%. The use of technology and data centers is also reduced, impacting energy use.

Sustainability has become a reporting topic for most corporations, and it has been proven that brands receive favorable treatment when this is improved. Use of the DDVN to advance such improvements goes way beyond financial measures and impacts consumer demand.

Note: *Figures 4-6* in the Appendix further illustrate key elements of DDVN.

Conclusion

Most of the impacts or enablers that DDVN provides beyond the standard performance measures have to do with speed of the four flows of supply chains: information, physical goods, cash, and work.

The earlier we learn of changes or problems in supply chains, the earlier we can adjust to it; the earlier we can learn of compliance issues the earlier we can address these with the supply base; and the earlier we learn of imminent disruptions in our supply chains, the earlier we can engage alternative sources, re-allocate, re-supply, re-deploy, or re-route goods.

The other chief value proposition is based on the unified, or integrated, source and use of common information made available to all trading partners in our supply chains. The single source, operating on a single platform, provides the right information, to the right people, at the right time, so that actions are taken for the benefit of all. DDVN makes this all possible, for the first time in history.

Contact Information

Tompkins International

Tompkins International transforms supply chains to help create value for all organizations. For more than 35 years, Tompkins has provided end-to-end solutions on a global scale, helping clients align business and supply chain strategies through operations planning, design and implementation. The company delivers leading-edge business and supply chain solutions by optimizing the Mega Processes of PLAN-BUY-MAKE-MOVE-STORE-SELL. Tompkins supports clients in achieving profitable growth in all areas of global supply chain and market growth strategy, organization, operations, process improvement, technology implementation, material handling integration, and benchmarking and best practices. Headquartered in Raleigh, NC, USA, Tompkins has offices throughout North America and in Europe and Asia. For more information, visit www.tompkinsinc.com.

Appendix

Further illustrations of key elements in a true DDVN.

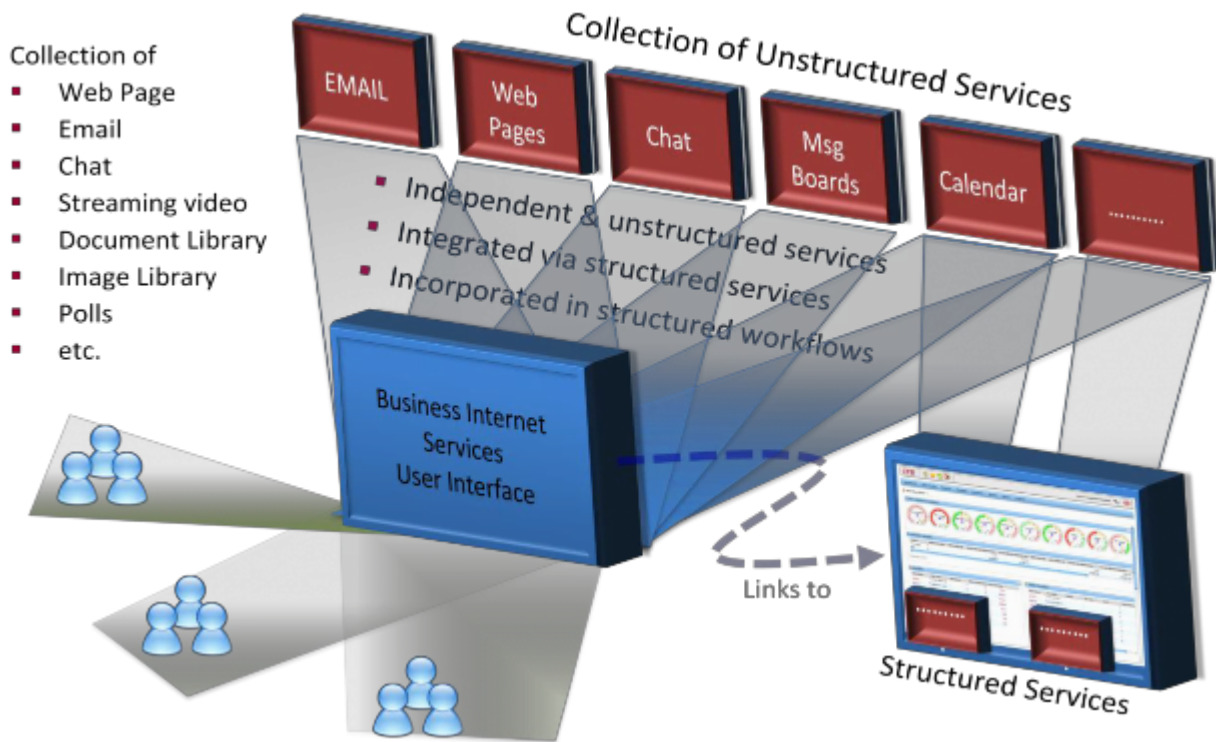


Figure 4. Business Internet Services

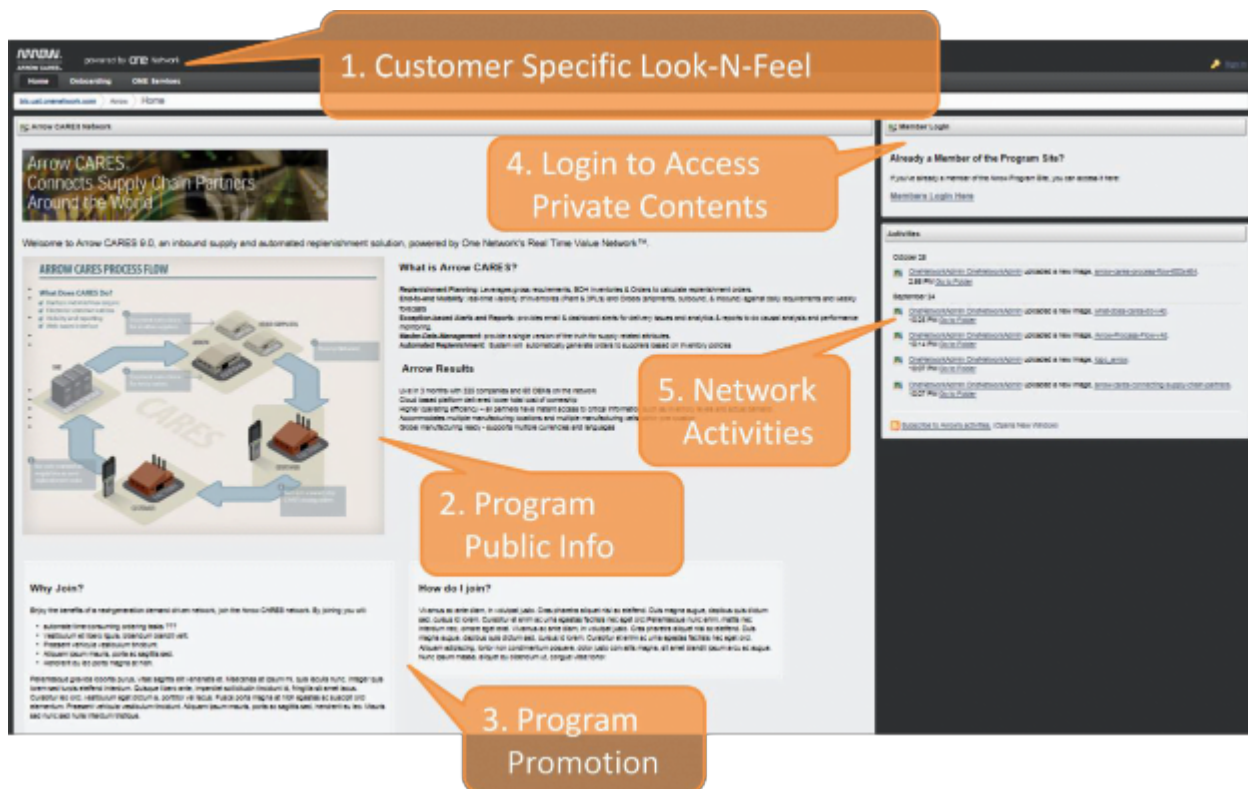


Figure 5. Secure Web Sites for the Community

