

CASE-IN-POINT: AVAYA'S SUPPLY CHAIN TRANSFORMATION - ENABLED BY A VISION FOR PEOPLE, PROCESS, AND TECHNOLOGY

→ **Bryan Ball**, Vice President and Group Director, Supply Chain and Operations Practices



This case study will explore Avaya's supply chain evolution that grew from the critical intersection of basic needs and a vision, into a complete transformation. We will examine the circumstances and challenges that Avaya faced at the start of their journey, the catalysts for transformational change, their approach and evolution, and the dramatic results that they were able to achieve.

At the Heart of the Matter

As practitioners in supply chain know, the job is never over. The ultimate challenge is, given that there is always the next thing to do, deciding how your time is spent on the value scale. Do you spend your time reacting to events that shape your day and your schedule? Are you able to behave more proactively, pulling together the story to make critical decisions, and sometimes getting there and sometimes not? Or are you at the top of the value pyramid, where you are able to monitor critical data and make decisions in a predictive manner that drive improvements in your key metrics and processes?

As Benji Green (Director Global Ops, Sales, Supply & Inventory Planning at Avaya) and Frank Carbone (Director Supply Chain Strategy) will tell you, Avaya's supply chain transformation spanned the entire gamut from low value activity at the start of their journey, to high value activity in their current state, with further refinement on the horizon.

At the core of their transformation was the perspective of the value pyramid that permeated their thinking.

Figure 1 portrays the Avaya perspective, which compares the value added activity of working in a *low value pyramid* to a *high value pyramid*. The low value pyramid depicts the position that many

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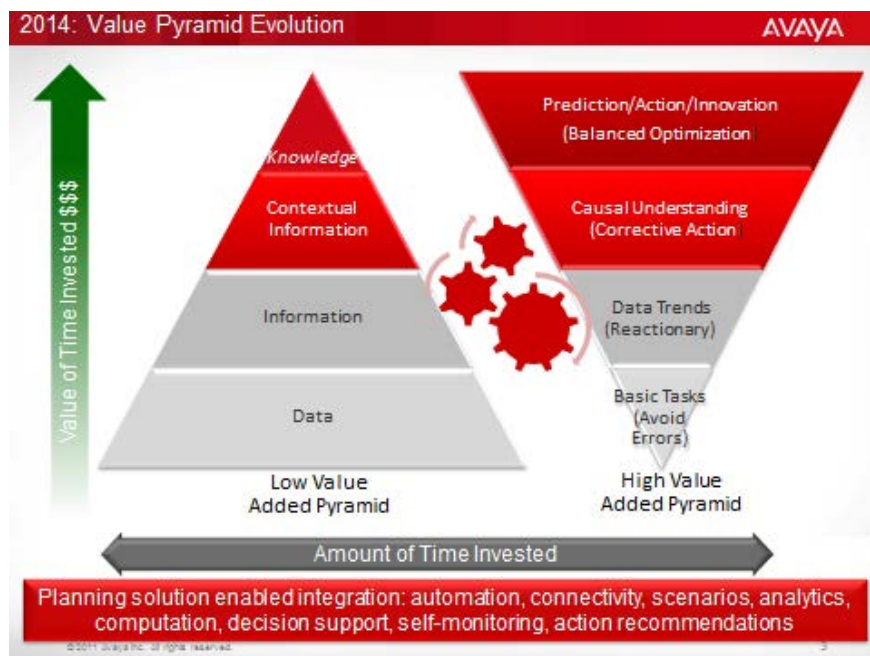
businesses find themselves in - trying to digest all of the data produced from their existing transaction and planning systems, and spending very little time analyzing meaningful and actionable information. It basically characterizes the situation of wasting precious time and resources translating and moving data, preventing those resources from making insightful analysis and driving meaningful change. The *high value pyramid*, on the other hand, inverts that paradigm; minimal time is spent on low value data tasks and maximum time is spent on high value prediction, analysis, and actions, by leveraging the right tools to manage and translate the data. It defines the form and speed of information that must be available from the system for the organization to operate at maximum speed and effectiveness. Essentially, the high value pyramid begins at the highest point that an organization can ever achieve within a low value pyramid.

Best-in-Class Definition

Aberdeen categorized participants as Best-in-Class, Industry Average, or Laggards. We also refer to a fourth category, All Others (Industry Average and Laggards combined):

- **Best-in-Class** - top 20%
- **Industry Average** - middle 50%
- **Laggards** - bottom 30%
- **All Others** - sum of the Industry Average and Laggards - 80%

Figure 1: Avaya's Value Pyramid



Source: Avaya, December 2014

As we will further discuss, behind Avaya's success was the vision of where they needed to be, as illustrated by the value pyramid, but this vision was also coupled with the technology and process changes that enabled the *high value pyramid* to become a reality.

Best-in-Class S&OP Maturity Matrix

The Best-in-Class are defined by their performance based on our S&OP and Integrated Business Planning Survey.

→ Customer service level

Best-in-Class	93.7%
All Others	85.3%

→ Cash-to-cash cycle

Best-in-Class	44 Days
All Others	65 Days

→ Average forecast accuracy at the product family level

Best-in-Class	81.5%
All Others	63.0%

→ Gross margin improvement

Best-in-Class	2.7%
All Others	1.3%

Avaya's Transformation

Avaya is a leading global provider of business collaboration and communication with over \$4B in annual revenues, and with product/solution offerings in: voice & telephony infrastructure, real-time video collaboration, contact center solutions, data networking, and implementation and integration services.

Their history provides a long legacy of "open-source" innovation from AT&T to Lucent to Avaya. They have had over 15 corporate acquisitions since 2001, notably Nortel Enterprise Solutions and Radvision, and strategic partnerships, Google, VMWare, and HP. It is shortly after the Nortel acquisition that our story begins. We start by reviewing the newly merged Avaya organization in early 2010 and then the impact that the acquisition had on results, which ensued not long afterward.

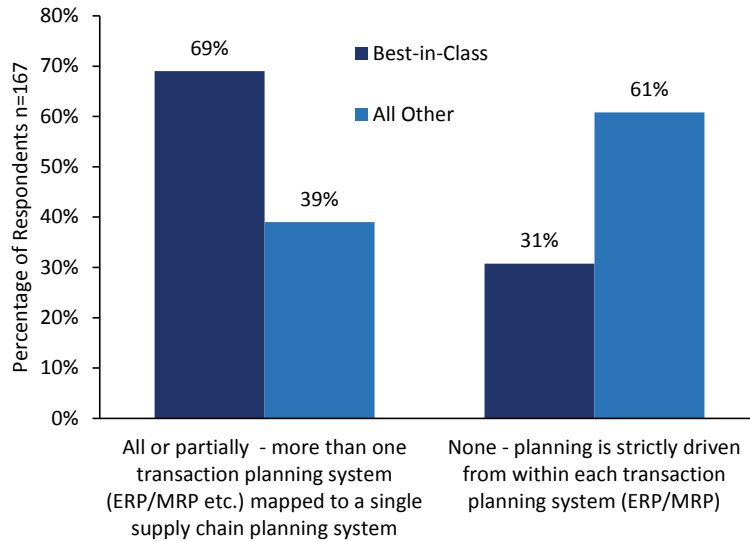
The Beginning: State of Affairs & Burning Issues

The initial, primary issue after the Nortel acquisition was the lack of visibility across multiple instances of the existing ERP system for the Nortel side of the business. Due to a lack of visibility and disparate processes, the organization found itself operating in the low value pyramid, gathering and sorting through "data," but not generating real intelligence and focused analysis. As Mr. Green described the situation, "we just could not get our arms around it."

As a point of contrast, the solution previously adopted by Avaya in 2008, prior to the Nortel acquisition, had helped them by starting to provide visibility and intelligence. It gave them a solution to basic component supply/demand visibility for their recently outsourced manufacturing costs initiative. Avaya needed this visibility and integration of the Nortel outsourced manufacturing, too.

As Figure 2 indicates, 69% of the Best-in-Class (see sidebar) map their ERP/MRP planning systems into a single supply chain planning system that provides them with an end-to-end holistic view of their supply chain. This is the issue that Avaya faced - multiple systems without one comprehensive view or process.

Figure 2: Best-in-Class Planning from a Single View



Source: Aberdeen Group, January 2015

69%
of Best-in-Class companies map their ERP/MRP planning systems into a single supply chain planning system.

As part of the blending process of the two cultures, the dilemma of which tool to use as the enabler was the next hurdle. Should they go with a new solution for all, or adopt the Avaya approach, which had shown some success? In the end, after some debate, the decision was made to go with the Avaya approach and adopt the solution that they already had in place, the Kinaxis RapidResponse solution, rather than forcing everyone to start over. Quoting Green, "Kinaxis has been a strong partner for Avaya and the RapidResponse tool was a key enabler in our transformation success." Some of the key factors in the decision were:

- ➔ Flexibility – user controlled versus solutions that were not configurable. They were able to create a new workbook in an hour with the established Avaya approach.
- ➔ Price – important, but not the sole criteria. Avaya was already invested, which made it an easier choice.
- ➔ Connectivity – across multiple boxes and speed of connectivity. This was a must have criteria to create visibility in order to get their arms around the business.

→ Real-time adaptability – which created flexibility in the analysis to plan and foresee.

→ Configurable and user friendly – allowing for user design.

Avaya had the planning solution in place and saw the potential for further expansion and success. The technology decision was a key enabler for the transformation, but there were more pieces needed to complete the puzzle.

Journey and Transformation: The Intersection of Vision, Business Needs, and Technology

In addition to the technology decision, several key organizational changes provided a catalyst for the transformation. The Executive Vice President of Operations since 2008, Jim Chirico, previously with Seagate and IBM, began a broad leadership initiative. In Jan 2010, he hired Fred Hayes, previously at Dell and Autodesk, as the new leader of Avaya's supply chain to develop and implement their transformation. Together they hired domain experts for key positions including Logistics, Procurement, Planning, Maintenance, and Strategy. Their combined experience and successes gave them the perspective to see the full potential ahead. As described by Green, Hayes not only had a vision of what needed to happen, but he also knew what it would look like when successful.

A long term plan of action was created and was divided into phases. Not all phases of the transformation were 100% defined up front, but there was a definite sequence of the "things to fix" as part of the vision, which evolved as their expertise grew from phase to phase. Although the Avaya team had been through a Phase 1 already, there was a need to repeat that for the Nortel segment of the business in order to get the entire organization on the same page. Moving from the low value pyramid to the high value pyramid was at the core of their plan.

The Five Phases

Leadership was in firefighting mode at first, which was an intentional part of the transformation vision to drive a hands-on and high accountability leadership style. The situation was similar to the old

adage of *trying to change a tire on a car while it's going down the highway at 60 mph*, but that's really what had to happen. Getting the basic solution in place would at least put them in a position at the base of the high value pyramid from which they could advance. Their stated goal was to exceed customer and employee expectations.

Phase I: 2008 - Avaya-only implementation that focused on the basic areas of visibility, targeted to automate the low value pyramid process and to provide integration and information with which to run the business.

Phase II: 2011 - After the acquisition, Avaya repeated Phase I for the Nortel business segment. The approach was to leverage the existing planning solution to bridge all of the MRPs, merging in North America. Core functionality was understood at this point, but the model grew significantly, as well as the expectations to really concentrate on the high value pyramid. The implementation was done with the end vision in mind.

- ➔ Supply forecast - concentration on delivering finished goods per the plan
- ➔ Finished goods inventory modeling - this modeling and target setting, along with the existing forecast, established the baseline for replenishment
- ➔ Transportation planning - provided basic visibility over shipments and control over shipping costs; a beginning

Phase III: 2012 - After getting some basics in place to operate, the third phase was a matter of really getting their arms around the business, standardizing their processes, and eliminating much of the firefighting.

- ➔ S&OP I - creating the S&OP process was enabled by the overall end-to-end view of the supply chain by using their planning solution to span and model the entire business
- ➔ Flattened forecast - reduced SKUs by 30% by planning stockable part numbers instead of sellable part numbers

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The noise began to settle down after phase III, as Avaya turned their attention to more value added activities in the fourth phase.

- Workflow management- standardized the processes for forecasting and streamlined workflow to clarify roles and responsibilities
- MRP load validation - automated MRP forecast loading and validated the load accuracy
- POS visibility - (POS) visibility was created, which provided better and timelier information into the forecasting system
- Enabled VMI - improved their customer support and connectivity

In this phase, Avaya tackled the core mechanics of demand planning. They collapsed the "portfolio bill-of-material" (BOM) from sellable to stockable items. Forecast accuracy immediately jumped six points. They automated the planning interface and began standardizing their processes. At this point, they viewed their position as being at the second level and moving to the third level of their high value pyramid.

Phase IV: 2013 - The noise began to settle down after Phase III and Avaya turned their attention to more value added activities in the fourth phase. Their concentration shifted more to exception management and testing their plans and capabilities through "what if" scenarios.

- S&OP II - they pulled in comparison POS to improve their forecasting and began to incorporate lifecycle management for contracts and products as they phased out
- Flattened POS - they pulled in comparison POS to improve their forecasting
- Lifecycle management - this was a huge improvement for better control over large configured installs where a solution might be purchased and would be around for some time
- Sales funnel analytics - with few leading indicators available, a key change in their process to provide early order visibility was to incorporate their quoting tool information into their

planning system, which provided them with a much more realistic view of expected orders

- 'What If' models - began the proactive process of testing their plans and evaluating their constraints
- Expanded alerts and exception management
- Transition and planning dashboards

They also began to merge the product portfolios. Phase IV S&OP improvements enabled a 50% revenue transition while maintaining superior results.

Phase V: 2014 - As the fifth phase began, the firefighting was virtually gone and the proactive culture took hold. The ability to get ahead of problems and avoid issues, rather than react, created a significant energy across the organization. Opportunities to do more presented themselves and employees felt empowered. Analysis became very prescriptive. As procurement became more involved with cost reductions, they were able to roll up costs by part, which highlighted further opportunities. Behavior and focus began to change based on the value of savings of the opportunity. Rather than just managing the situation, the culture completely shifted to a "what can we do next" mentality.

- Product costs reductions analysis & projections
- Transportation planning II
- Distributor predictive model
- Extended dashboards

The organization moved to the top level of their higher value pyramid, where possibilities and opportunities seemed to explode according to Green. Continuous improvement is now part of the culture and efforts are concentrated on high value activities.

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Success

"Success breeds success," according to Green, as Avaya found that the more they improved, the more opportunities surfaced. The transformation is evident in their metrics; provided by Avaya below. Table 1 reflects not just internal business metrics, but also external KPIs such as *Net Promoter Score*.

Table 1: Avaya Transformation Metrics

Transformational Metrics	Start of 2011	End of 2014	% Improvement
Gross Inventory Reduction	\$286M	\$116M	60%
Improved Inventory Turns	5.8 turns	9.2 turns	59%
Cash-to-Cash Cycle	44 days	26 days	41%
Average Past Due Shipment	\$42M	\$10M	76%
Net Promoter Score Improvement	26	50	92%
Reduced EBITDA Risk	\$16M	\$1.5M	91%
Supply Chain Annual Expense	\$255M	\$177M	31%
GAAP Gross Margin	43.5%	57.1%	31%

Source: Avaya & Aberdeen Group, December 2014

The percentages of improvement in the Avaya metrics speak for themselves. They are, across the board, transformative levels of improvement and not just incremental. Table 2 further highlights improvements by providing Avaya's published goals and how they performed against them; data provided by Avaya. They met or exceeded all of them.

Table 2: Performance Against Stated Goals

Transformational Metrics	Goal	Actual
Year-over-Year Product Cost Reduction	\$51.6M (7.7%)	\$56.0M (8.4%)
Increase On-Time Ship Levels Provisioning/ Maintenance While Improving Inventory	92%/98%	94%/98%
Improve Supplier Quality & Service Provisioning/Maintenance	0.14%/0.60%	0.08%/0.28%
Top Performer Attrition Targets	< 5%	2.6%

Source: Avaya & Aberdeen Group, December 2014

As impressive as their measured performance for service, inventory, and cost are, they also exceeded their goal of employee turnover,

which speaks to **one of the most heavily touted outcomes of the entire transformation by one of their supply chain leaders, Benji Green-employee empowerment and engagement.**

Referring to the value pyramid, Green was passionate about the level of engagement and employee satisfaction that came out of the transformation. Once people could see their efforts paying off in performance benefits, combined with the quality of information that they had at their fingertips that continued to improve, they began to realize what more they were capable of doing. The culture became energized and empowered to keep pushing for the "next thing" to solve. Their problem solving moved to the level of identifying targets and applying a "what if" mentality to see what could be done. Freight modeling is a good example of where they began to question the modes (ocean, rail, truck, air) and benefits of each, while considering the business impact. This led them to shift from improving what they were currently doing, to questioning the "what" and "why" behind their existing actions and redefining what they *should be* doing.

Key Takeaways

Avaya's supply chain transformation was a huge success as a result of the leadership and the vision that encompassed all areas of the business relative to people, process, and technology.

- ➔ People - The move from the low value pyramid to the high value pyramid was definitely enabled by the technology, but it took the vision and leadership of the team to leverage their capabilities to the fullest extent.
- ➔ Process - Even though Avaya had acquired their software solution in 2008, they initially utilized it more for the lower value pyramid types of incremental improvements. The vision of how best to leverage the solution to span all ERP instances and to view the supply chain in one end-to-end model, is what dramatically changed their process from reactive to proactive.
- ➔ Technology - Having the right technology to provide a holistic end-to-end view was essential to Avaya's success. Without the

solution as the enabler, it would have been very difficult to move to the high value pyramid.

- ➔ Leadership and Vision - As Director of Global Ops, Benji Green, articulated, having a vision and the experience to know what it should look like when you get there was a tremendous catalyst and driver behind the supply chain transformation. Their EVP Jim Chirico and Supply Chain VP Fred Hayes established that vision and provided the spark to move forward, and it is a credit to the entire Avaya management team and their employees for embracing and supporting that leadership. **As Mr. Green proudly points out, and their turnover metrics support, "moving to the high value added pyramid has helped make Avaya a great place to work."**

Congratulations Avaya on a job well done and for providing a formula for success that other supply chain organizations can follow!

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