BUSINESS CASE REPORT

The ROI Of Supply Chain Management

How To Calculate The Return On Your Supply Chain Management Investment

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Summary

Supply chain management (SCM) transformation efforts bring benefits like increased customer retention and greater cross-sell opportunity. But they also require investments in technology and services. SCM transformation leaders who want to accurately model the ROI of an SCM transformation must estimate the size of required investments and expected benefits as well as when those will occur. This report shows SCM transformation leaders how to build an ROI model that can power a business case, including where to look for benefits, how to quantify them, and how to estimate SCM transformation costs.

Make The Business Case For SCM By Calculating Return On Investment

Supply chain management leaders need to create business cases for their transformation initiatives. Industry expert Lora Cecere's supply chain blog laments poorly directed investment in supply chain management. To put SCM transformation efforts on an equal footing with other corporate initiatives, the SCM business case must include a return-on-investment model (see Figure 1). Armed with an ROI model, supply chain leaders can hone their executive pitch:

> "We intend to transform our supply chain to increase customer-generated revenue while reducing obsolescence, transportation, and inventory holding expense, which will bring $X of incremental benefit, at a cost of $Y, for an ROI of Z%. Our SCM transformation will provide a one-time cash flow benefit of $V millions by accelerating the inventory to cash cycle."

This report shows SCM transformation leaders how to build an ROI model that can power a business case, including where to look for benefits, how to quantify them, and how to estimate SCM transformation costs. The report builds on Forrester's Total Economic Impact™ (TEI) methodology. We also offer an interactive tool for calculating the ROI of your supply chain management transformation.

Figure 1

Key Elements Of The Business Technology Business Case

Section name	Description
Executive summary	**Standalone summary**
Problem description	**The "why" of the project**
Current practices	Describes current state
Best practices	Describes ideal state
Gap analysis	Determines the difference between the current and the ideal
Solution description	**The "what" of the project**
Solution overview	Describes conceptual solution to the problems
Resource requirement	Includes both project resources and those required to support resulting business changes
Potential other solutions and reasons for rejecting them	Adds credibility to the recommendation
Project timeline	Shows scope and scale of effort
Risk analysis	Describes areas of uncertainty
Key goals and metrics	Include success metrics, baselines, and projections
Financial analysis	Translates the project into business value

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SCM Benefits Include Revenue Uplift And Reduced Cost To Serve Customers

A business case should always start with benefits. In fact, the single greatest mistake that supply chain professionals can make when pitching their projects is to lead with a budget request. Fortunately, SCM transformation has many quantifiable benefits. For example, our analysis shows that both B2B and B2C enterprises can boost revenue and customer service by investing in SCM transformation to more closely synchronize inventory availability with local cross-channel demand. In addition, superior synchronization of supply and demand accelerates inventory turnover, generating one-time working capital savings that can fund the whole program. In earlier research, Forrester used public domain data to benchmark supply chain performance. The potential benefits from improved SCM differ by industry and even company. They include:

- **Increased revenue and margin across channels because of reduced stock-outs.** Shorter product lifecycles, more product variants, and more fragmented markets make it much harder to avoid stock-outs in B2C markets. Retailers alone forfeit as much as $1 trillion a year in lost sales due to stock-outs. Even in highly structured supply chains such as those in the automotive industry, disruptions such as COVID-19 can lead to parts shortages and millions of dollars of work in incomplete process. Stock-outs or supply interruptions impact sales, customer loyalty, online order fulfillment from the store, and shipping costs that eventually lead to margin erosion.

- **Increased revenue and margin because of shorter lead times.** Lead time and availability are significant elements of customer experience. Forrester's global study of 957 B2B buyers who made an important purchase in the last six months of 2020 showed that buyers most value suppliers that help them respond to rapidly changing market conditions. Customers (and regulators like the FDA) also care about continuity of supply. A Europe-headquartered global pharmaceutical company deployed an AI-powered supply chain management platform and reduced its annual supply chain costs by 10%. More importantly, it increased average pharmaceutical shelf life by more than 15%.

- **Accelerated inventory turnover.** CFOs love supply chain management investments that accelerate inventory turnover. The reason? Supply chain projects can turn inventory more quickly into cash, providing a one-time benefit that can fund the project, in addition to continued savings from funding more streamlined inventories. Home improvement tool manufacturer Positec worked with supply chain specialist Blue Yonder to boost forecast accuracy and reduced global inventory by 60% while improving on-time deliveries by 20%.

- **Reduced inventory carrying cost.** Carrying inventory costs an enterprise somewhere in the range of 12% to 20% of the inventory value annually. The precise cost depends on factors such as inventory valuation method and the enterprise's specific cost of capital. Unilever's supply chain transformation reduced working capital by 5.8% over 10 years while boosting customer service by 210 basis points.

- **Improved carbon footprint.** Placing inventory in the network efficiently ahead of anticipated demand and close to customers can reduce an enterprise's carbon footprint. Anglian Water implemented new procurement and supply chain applications to reduce embodied carbon by 54% from 2010 to 2015, against a 50%

target, and reduced operational carbon by 41%, against a 20% target.

SCM Transformation Needs Investments In Tech And Integration Services

Supply chain transformation leaders are struggling to adapt legacy monthly sales and operations planning processes to more volatile markets. To articulate their business case, they need to detail supporting investments. Their colleagues in sourcing and procurement have invested in supplier value management platforms and associated retraining to source from suppliers offering more value rather than merely lower unit cost. To our surprise, our supply chain management interviewees did not dwell on the costs of data cleansing or on investment in process change or retraining, but they identified the main costs of SCM transformation simply as:

- **SCM platform costs.** Vendors deploy AI-infused SCM solutions on cloud platforms. This simplifies timely transparency across multiple carriers and shippers. Such transparency streamlines costly safety stocks while maintaining a high level of customer service. Embedded AI delivers market-driven recommendations about which purchase orders, production work orders, and transportation orders to expedite and which to delay. We used 5% of enterprise revenues as an example of the likely cost of platform operations.
- **SCM configuration and integration costs.** SCM draws on data about inventory and outbound consignments from enterprise systems such as ERP or digital operations platforms and warehouse management systems. The cost to plan the SCM solution, configure the tools, and integrate with carriers, ERP systems, and other tools is substantial. On average, interviewees indicated amounts that approximated 200% of the first year's license cost.

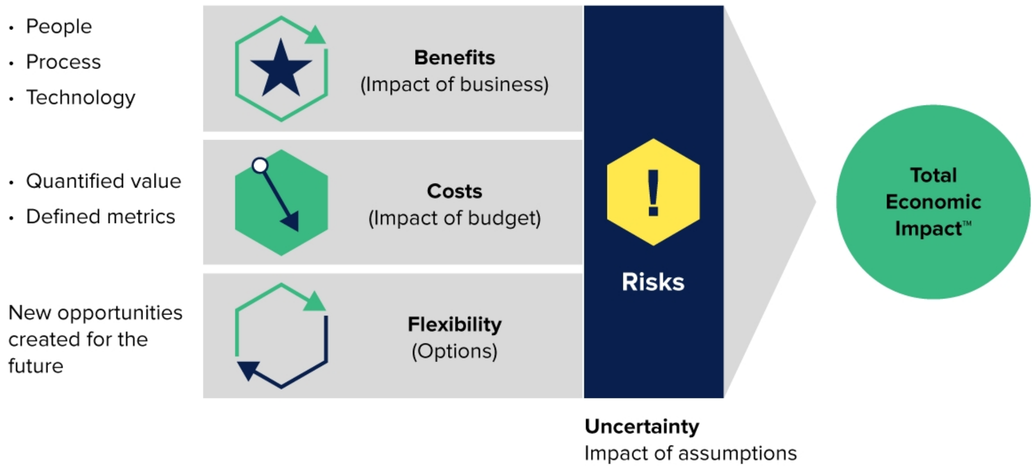
Example: A Guide To Building An ROI Model For Acme Inc.

To illustrate the process of creating an ROI model for SCM transformation, we built a business case for a fictional company, Acme Inc. You can customize the interactive model to your own circumstances. The fictional company is a composite of real TEI studies that Forrester has conducted in the past. It generates annual revenues of $10 billion from B2C and B2B customers (see Figure 2). It is struggling with the soaring cost of transportation to meet its customers' expectations of prompt order fulfilment. The CEO thought that improving SCM might help turn the situation around. He looked to his leadership team to explore the business case. They started by documenting Acme's current situation:

1. **B2C sales in physical stores.** Since Acme sells to customers in-store, the transformation team needed to establish a base level of sales.
2. **Growth rate in B2C sales.** One challenge for Acme will be to maintain a high level of availability as in-store sales grow.
3. **B2C sales online (e-commerce)**. Acme must transform its supply chain to anticipate and fulfil online as well as in-store sales.
4. **Growth rate in online sales.** Acme expects online sales to grow more rapidly than in-store sales.
5. **B2B sales.** Acme sells to businesses like distributors too.
6. **Growth rate in B2B sales.** Acme must transform its supply chain to anticipate growth in B2B sales.
7. **Operating profit margin.** Acme needs to estimate the operating profit impact of incremental sales that its supply chain transformation will facilitate.
8. **Average stock-out percentage in B2C physical stores.** The supply chain transformation will reduce stock-outs so the team needs a baseline data point to estimate potential improvement.
9. **Average inventory as a percentage of revenue.** Accelerated inventory turnover is a key benefit of SCM transformation, so the team needs to estimate the number of sales days of inventory on hand at the start of the transformation.
10. **Average percentage of inventory that becomes obsolete.** Accelerating inventory turnover reduces the incidence of obsolescence.
11. **Baseline warehousing costs as a percentage of e-commerce revenue.** Acme plans to accelerate inventory turnover and reduce the cost of warehousing.
12. **Percentage of warehousing cost paid to 3PLs.** Acme's transformed lean supply chain will reduce 3PL costs.

Figure 2

Forrester's Total Economic Impact™ Analysis



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