



Industrial manufacturers as well as CPG companies place a high level of strategic emphasis on growing product revenue while emphasizing a decrease in both product cost and product development cost – all indicating that they are striving for profitable growth.

Leading innovative companies are using PLM-related solutions that integrate data from diverse sources and provide both centralized data repositories with change management, version and authorization controls, and applications that automate and manage processes that reach beyond engineering.

The solutions are ideal for ensuring communication, collaboration, and control across dispersed teams and can help capture knowledge and learning that enable process improvement.

At the same time, companies are facing substantial challenges in developing products to meet these goals in the complex, fast-changing, and often global marketplace where their products are rapidly commoditized; customers demand complex, high-quality products; and global competition exerts cost pressure. In this environment, product development and lifecycle processes frequently span multiple departments and information systems within an organization and often extend to external design, manufacturing, and supply partners – making it difficult to get visibility into what’s happening to ensure the efficiency and cost-effectiveness of processes. BI solutions offer the ability to gain control over complex, multi-departmental processes.

Traditional PLM solutions are limited in providing integration with BI, ERP, all other enterprise systems, and ultimately delivering strategic relevance to enterprise profit planning and decision support. PLM Product Profitability enables you to quickly spot a range of potential problems – from conceptual design to production, and arms your enterprise with the information to solve issues quickly. With a PLM Product Profitability dashboard, you can make business decisions that minimize delays and costs and maximize product quality and revenues – ultimately, helping to ensure product profitability.

Going beyond the competition, companies can use a PLM Product Profitability framework to evaluate market segments, which can be classified according to products, customers, orders or any combination of these, or strategic business units, such as sales organizations or business areas, with respect to your company's profit or contribution margin.

The aim of PLM Product Profitability is to provide your enterprise – from sales, marketing, product management and corporate planning departments with information to support profit planning and decision-making.

As an example, using ERP master data (customer, product, customer hierarchy) or derivation rules, the PLM Product Profitability solution can derive additional characteristics based on the ones entered manually or transferred from primary transactions. The

combination of characteristic values forms a multidimensional **profitability segment**, for which you can analyze profitability by comparing its costs and revenues.

Another potential use of PLM Product Profitability is to better estimate product costs. Research has shown that over one half of companies can't predict the cost of the products within 25% accuracy. By providing better visibility to cost information earlier in the process, companies may have the ability to better hit cost targets and enhance profitability. Reports such as costed BOMs could be generated based on current product structures from PLM and up-to-date costs from sourcing and ERP solutions, if that information is not readily available in the PLM system itself.

PLM Product Profitability solution from Innovator Solutions, LLC provides valuable capabilities to Aras Innovator customers. It enables them to quickly spot a range of potential problems and arms them with the information to solve them quickly and make business decisions that minimize delays and costs and maximize product quality and revenues – ultimately, helping to ensure product profitability.

The PLM Product Profitability solution integrates information from various PLM applications (including Aras Innovator), as well as ERP and other enterprise systems, and provides needed visibility into a range of activities throughout the product lifecycle. In addition, the solutions analytical tools allow users to leverage the vast store of product development data to derive business intelligence for use in making timely decisions that help companies' meet their goals. For example, users could spot bottlenecks in processes in real time, to troubleshoot and minimize delays – helping them make product launch dates and maximize windows of opportunity for product revenues.

Quote from Peter Schroer.

“Aras Innovator customers should consider extending their PLM implementation by adding this new reporting and analytics solutions. Companies looking for PLM solutions should consider including analytics and business intelligence capabilities in their PLM requirements. Companies with an existing PLM solution should investigate the use of business intelligence, and ask vendors about their strategy to provide an integrated BI solution.”

“If you are consistently more accurate, more timely, and more predictive than your competitors, you will dominate with improved products, channels, service, pricing, supply chain and workforce.”

The PLM Product Profitability solution accesses and collates data from Aras Innovator and other enterprise systems (ie PLM and ERP), legacy sources, and databases, and provides relevant information to a variety of business users (marketing/sales, operations, product development, planning, finance...) to analyze data in a digital dashboard. The solution enables near-real-time sharing of business intelligence (BI) and as a result, users can track, monitor, and better manage PLM processes and make more informed and timely decisions.

The PLM Product Profitability solution can be integrated directly into the Aras Innovator software. The configurable solution connects to Innovator through Innovator's native API, as opposed to connecting directly to the database or a data warehouse. It works within the Innovator business rules and security model to ensure access integrity and leverages the Innovator object model. In this way, existing security and data access controls do not need to be replicated, minimizing deployment time and effort.

Based on their levels of authorization, users can:

- Access Innovator PLM data – as well as data from ERP, legacy systems, data warehouses, and databases from a browser-based dashboard in real time or near real time. The data is integrated, providing a single version of the data and visibility into product development processes and status across distributed design environments.
- View and, on the fly, analyze the data, which can be presented in multiple hierarchies, by drilling up or down to get multiple views and levels of understanding of key performance indicators (KPIs) and other metrics. Users can view the data in cubes, reports, and graphs and can rotate, sort, and drag-drop data elements to view and dynamically analyze information from a chosen perspective or combine multiple KPIs for a better understanding.

With these tools, users can get business intelligence, including complex analysis based on information from different enterprise systems, on a wide variety of product lifecycle activities and needs. Potential uses include information gathering and reports on project status, specific process status metrics or KPIs, root cause analysis, detailed BOM parts lists, BOM comparison reports (e.g., comparing “as designed” and “as built” BOMs), and other product, process, and project related data.

This information can help them make timely and effective decisions to ensure products are delivered on time and on budgets and attain the desired quality levels. The analytics can also be applied to post-sales and service operations, for example, to spot trends in part and asset performance in order to reduce warranty costs or improve predictive maintenance, and KPIs can be used to gauge adherence to service level agreements (SLAs).

[Company Name]
Product Profitability Analysis
[Date]

Dark gray cells will be calculated for you. You do not need to enter anything into them.

[Product Name]					
Inventory Movement					
	Q1	Q2	Q3	Q4	Annual
Number of units in inventory—Beginning of period	1,200	1,100	1,300	1,600	1,200
Production	700	800	800	600	2,900
Units sold	800	600	500	750	2,650
Number of units in inventory—End of period	1,100	1,300	1,600	1,450	1,450
Profitability Analysis					
	Q1	Q2	Q3	Q4	
Product revenue	\$400,000	\$425,000	\$285,000	\$395,000	\$1,505,000
Cost of Goods Sold					
	Q1	Q2	Q3	Q4	Annual
Material costs	\$90,000	\$80,000	\$80,000	\$75,000	\$325,000
Labor costs	120,000	120,000	115,000	110,000	465,000
Logistics costs	45,000	40,000	35,000	45,000	165,000
Other direct costs	0	0	0	0	0
Total cost of goods sold	\$255,000	\$240,000	\$230,000	\$230,000	\$955,000
Gross margin	\$145,000	\$185,000	\$55,000	\$165,000	\$550,000
Margin contribution percentage	36.3%	43.5%	19.3%	41.8%	36.5%
Indirect Product Costs					
	Q1	Q2	Q3	Q4	Annual
Product marketing	\$60,000	\$60,000	\$60,000	\$60,000	\$240,000
Other indirect product costs	25,000	25,000	25,000	30,000	105,000
Total other product costs	\$85,000	\$85,000	\$85,000	\$90,000	\$345,000
Quarterly product profit (loss)	\$60,000	\$100,000	(\$30,000)	\$75,000	\$205,000
Summary Metrics					
	Q1	Q2	Q3	Q4	Annual
Average sales price per unit sold	\$500.00	\$708.33	\$570.00	\$526.67	\$567.92
Material cost per unit produced	\$128.57	\$100.00	\$100.00	\$125.00	\$112.07
Labor cost per unit produced	\$171.43	\$150.00	\$143.75	\$183.33	\$160.34

This template helps finance, product management, and operations teams assess the overall profitability of specific products quarterly and annually. By conducting a product profitability analysis, your company can understand the direct and indirect costs associated with developing and offering a specific product and assess a product's contribution to the bottom line.

<Company Name>
Competitive Market Benchmark Analysis for Manufacturing
 <Date>

Gray cells are calculated for you. You do not need to enter anything in them.

Revenue	<Company>	<Competitor 1>	<Competitor 2>	<Competitor 3>	<Other>	Market Total
Annual revenue	\$45,000,000	\$65,000,000	\$52,500,000	\$48,900,000	\$70,000,000	\$281,400,000
Market share	15.99%	23.10%	18.66%	17.38%	24.88%	

Market Ratio Comparisons	<Company>	<Competitor 1>	<Competitor 2>	<Competitor 3>	Average
Operating ratio	0.24	0.19	0.23	0.27	0.23
Variance from average	0.01	(0.06)	(0.00)	0.04	
Inventory turnover	4.55	6.32	5.88	4.75	5.38
Variance from average	(0.83)	0.96	0.61	(0.63)	
Number of days of sales outstanding	58.00	65.00	72.00	46.00	60.25
Variance from average	(2.29)	4.75	11.75	(14.25)	
Gross margin ratio	0.32	0.25	0.29	0.38	0.31
Variance from average	0.01	(0.06)	(0.02)	0.07	
Return on assets	0.16	0.20	0.18	0.13	0.17
Variance from average	(0.01)	0.03	0.01	(0.04)	
Debt-to-equity ratio	0.26	0.78	0.27	0.32	0.41
Variance from average	0.15	(0.37)	0.14	0.09	
Earnings per share	\$1.20	\$1.43	N/A (Private)	0.25	1.25
Variance from average	(0.05)	\$0.18		(\$1.00)	

Employee Statistics	<Company>	<Competitor 1>	<Competitor 2>	<Competitor 3>	Average
Average number of employees	225	305	280	240	268
Annual revenue per employee	\$200,000	\$200,000	\$187,500	\$203,750	\$197,813
Market variance	\$2,188	\$2,188	(\$10,313)	\$5,938	
Annual compensation per employee	\$80,000	\$95,000	\$90,000	\$80,000	\$83,750
Market variance	(\$3,750)	\$1,250	\$6,250	(\$3,750)	

Operations	<Company>	<Competitor 1>	<Competitor 2>	<Competitor 3>	Average
Annual maintenance, repair, and overhaul expense	\$36,000	\$38,500	\$42,000	Unknown	\$38,833
Market variance	(\$2,833)	(\$333)	\$3,167		

This template helps manufacturing executives and managers compare a company's key financial and operating metrics against competitors and the market.

- Other Sample Reports for dashboard include:
- Costed BOM Report and Analysis (BOM Comparison)
 - Concept Design
 - Detailed Design
 - Production Planning and Sourcing
 - Manufacturing

Sales order data linked directly with multiple sources of cost data, such as raw-material purchases, manufacturing and logistics, sales, marketing, technology, and research and development (R&D).