

Using ROI to Prove the Benefit of Your Optimal System Design

Securing the go ahead for a system upgrade can be difficult in a competitive work environment, where every cost must be accounted for and validated. Getting your project noticed and approved when it's lost among a sea of competing projects—each one making a claim on finite resources—can seem an impossible task.

One beneficial metric to use to demonstrate a system design or upgrade's worth is return on investment (ROI). Return on investment analysis is critical in gaining upper management support for projects that require significant investment. In this article, we will look at what ROI is, how it's calculated, and most importantly, how it can be used to prove the worth of an optimal system design or upgrade.

are a number of factors that must be considered for an ROI calculation. First is the necessary hardware required for the new design. This could be anything from a capital investment such as a machine or a new tool necessary for a system design, but it can also be a cost associated with operating a machine such as licensing software, maintenance or service agreements associated with the system. System or manufacturing downtime associated with the project for its implementation and completion should also be factored into the total costs.

Factors that can help justify a system design improvement include demonstrating the greater availability of reliable equipment, increased production levels, lower maintenance costs, and improved safety levels. Newer technology tends to be more efficient and requires less oversight than older machinery. By factoring these benefits into your ROI calculations, you should be able to demonstrate an improvement in costs and output, and lower liability exposure through equipment upgrades.

An optimal system design usually has associated features beyond simply achieving specified requirements. Optimal designs tend to have self-monitoring capabilities, allowing for more efficient communication between devices, and the ability to provide data relating to the efficiency of the machine itself. All the data that comes back from an optimal system can be used to help justify an ROI case for investment in current and future technological development.

Ensure You Have Everything You Need to Optimize ROI

There are a variety of methods that can be applied to optimize both the cost and profit portions of the

The Importance of Demonstrating ROI

Demonstrating a positive ROI for upcoming and future design improvements or projects is an excellent way to demonstrate to upper management the basic value of the plan. In organizations where there's a lot of competition for resources, ROI is a simple measurement that's often used to provide a basic ranking between competing suggestions. The projects with the best ROIs tend to be prioritized and forwarded for further review.

System Design Factors Used in ROI Calculations

Accurate ROI data requires a firm understanding of initial investment costs. With system design, there



ROI equation. For example, building strong supplier partnerships can allow your organization to lock in negotiated price structures that increase ROI by lowering initial investment costs.

Case Study

A company in the transportation sector is looking to invest in a system that automates the production of coated rebar.

Prior to the development of a more optimized system, the company was using a largely manual process to coat and bend their product. Through partnering with Valin, they were able to understand the value of automating their system using a variety of different motion control methods. The automated solution involved using various drives to move the rebar down the line and then adapting their machine configuration to automate the entire process end to end.

Valin calculated the savings of this design based on total through-put with an automated process compared to the through-put using the company's original manual process. Using this data, they were able to demonstrate the expected profitability gains

that would be derived from the optimal automated system.

Finding the Right Partner

If your company could benefit from an optimized system design, take the time to consider what your expected ROI should look like. Come to an understanding among all the key stakeholders on expected implementation costs as well as expected profitability. Ensure that everyone involved understands and agrees on what your upfront fixed costs will be, as well as the variable costs expected throughout the lifetime of the system design.

Understanding the total value of the system in terms of safety, efficiency, and performance is essential if you are going to arrive at an accurate assessment on the expected ROI.

If you have difficulty calculating these figures, then look to resources like Valin to help you support your ROI calculations. Working out how to optimize your ROI is not always straightforward, but with the right team backing you up, it's a worthwhile and rewarding process to work through.

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