



EPICENTRAL

A Newsletter from Epicenter Development Group
highlighting ideas that improve organizations

Welcome to Epicenter Development Group's newsletter, EPICentral. The purpose of this newsletter is to highlight fundamental ideas that have helped organizations develop and maintain great manufacturing and service operations. We hope that you find our EPICentral newsletter helpful, and we would welcome your comments on its content.

Selling the Investment

As an industrial engineering practitioner, I have spent a good deal of my career justifying investments in everything from facility expansions and rearrangements to new equipment to the implementation of new labor practices and procedures. **The ability to thoroughly understand and quantify the impacts of a new investment is a key skill for any professional who wants to secure funds towards implementation of a goal.** This month's newsletter article reviews the typical criteria used to evaluate a solid cost/benefit analysis.

Last year I had the opportunity to help a client complete a cost/benefit analysis for a new investment that they were considering for 2017. The effort included a structured review of their expected project investments and benefits which included the following categories:

Investments:

- **Initial Capital Costs and Installation (Equipment/Support)** - What new equipment would need to be purchased and what will be the total cost associated with installation?
- **Plant Modifications Required** - Would it be necessary to modify the plant floors, walls, doors, and/or utilities (air, electric, water, gas) to accommodate the new equipment and/or layout?
- **Employee Training Required** - What training would be required to operate the new equipment / systems?
- **Lost Sales/Overtime Costs** - Would it be necessary to work overtime or outsource the work during the installation period of disruption? Could we potentially lose sales because of this disruption?
- **Maintenance/Technical Support** - Would there be increased on-going costs for maintaining/supporting the new equipment (over existing equipment).
- **Increased Space Requirements** - Would additional space be required for the future-state layout with the new equipment? What is the value of that space?
- **Increased Utility Costs** - Would there be increased on-going costs for plant utilities from the new equipment.

Benefits:

- **Reduced Labor (Direct and Indirect)** - Would the investment reduce (or increase) the time associated with operating the equipment, dealing with quality issues and scrap, completing changeovers, moving materials, walking, maintaining the equipment, etc.?
- **Reduced Scrap/Waste** - How much material savings would be seen through reduced scrap of material waste? How much production time savings would be seen from a reduction in rework?
- **Reduced Unplanned Downtime/Delays** - What is the value of an increase in capacity and productivity due to reduced unplanned downtime and typical delays?
- **Reduced Set-up/Changeover** - What is the value of a reduction in set-up/changeover time? Improved capacity? Ability to run smaller production batches? Reduced lead-time from order generation to shipment?
- **Reduced Outsourcing (cost of)** - Would the new investment reduce the need to outsource production during busy periods? Reduced product cost? Reduced handling costs?
- **Cost Avoidance of Other Items** - Would the new investment eliminate the need for other, future costs? What is the value associated with this?
- **Inventory Reduction (Cost of Inventory)** - Would the new investment reduce the need for some of the current inventory? If so, what is the value of reducing the inventory (less space required, reduced obsolescence, reduced handling costs, reduced holding costs, etc.)
- **Increased Sales (profit from)** - Would the new investment have an impact on future sales? If so, what is the value of the additional sales?
- **Improved Space Efficiency** - Does the new investment impact the space efficiency in the facility? If so, what is the value of the freed-up space?
- **Improved Safety/Ergonomics** - Would the new investment have a positive impact on safety and/or ergonomics? If so, what is the value of the savings (reduced insurance? reduced injuries? etc.)

At the end of the analysis, the client confided in me that they did not believe that we would be able to justify the investment (which we did). Although a number of areas of potential savings were not significant, the structured review of the potential investments and savings uncovered a number of benefits that were not previously considered. In addition, the exercise helped the team to fully understand all of the assumptions associated with the analysis.

Next Steps

If you would like more information on this topic or other similar types of tools, please contact Bill Proctor with your request at wproctor@epicentergroup.com or 216-702-0952. You can also find previous issues of EPICentral at [Newsletters](#).

Mr. Proctor also speaks on a variety of problem-solving and system design topics that can help companies significantly increase the success and profitability of their businesses. If you are interested in having Bill speak at one of your upcoming meetings/events or would like more information on any of the speaking topics, please visit [Speaker Services](#) or you can email sales@epicentergroup.com.

Epicenter Development Group is a unique consulting firm that seamlessly integrates the disciplines of Systems Engineering and Organizational Analysis & Development to create practical design solutions to your toughest challenges. It is on the cutting edge of problem-solving solutions and the creator of a unique process called GreenRoom Engineering. This process adds greater value and cost savings for clients as compared to traditional engineering methods.

William Proctor, Epicenter's founder and president, has provided services around the country to more than 100 companies consisting of a variety of organizations; and Epicenter continues to grow as a resource for firms of all sizes.

To learn more about Epicenter Development Group, visit our website:

www.epicentergroup.com

Epicenter News

Epicenter is excited to be working with CNH Industrial on a Simulation Modeling Project.



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