

Transform Product Development into a Low Waste, High Value Process

Does your company need to prioritize new product development? Do ideas for new products get stalled during the long step between design and production? Could a streamlined product development process—one that reduces time-to-market and cuts costs—help elevate your company to the next growth level?

Lean Product Development (LPD) is a strategic part of the NIST Manufacturing Extension Partnership (MEP) Technology Acceleration program that focuses on clearer and more efficient concept development and commercial delivery. LPD methods and principles help small and mid-sized manufacturing companies reduce costs, improve resource utilization, and accelerate time-to-market for new products and services by eliminating the non-value-added tasks in their development stages.

Using a proven step-by-step methodology, LPD integrates powerful waste-eliminating tools into any product development process. This highly-individualized process focuses on:

- Creating cultural change while positioning your company to grow and increase profits by utilizing a more streamlined and effective product development process
- Helping you overcome time-to-market, portfolio management, design and development resource, and new product cost challenges
- Transforming the small and mid-size manufacturer's enterprise via the delivery and execution of LPD tools, methods, and strategies.

These methods can easily be scaled to your company's size and are recommended for manufacturers who are new to product development or trying to improve their current product development process.

Developing a new product is exciting and risky, but with LPD, you can learn to reduce the risk so you can enjoy the excitement — and the payoff.

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Lean Product Development (LPD) is a component of NIST MEP's Technology Acceleration strategy. Over the past few years, NIST MEP and the regional MEP Centers have been working with Technology Perspectives, a consulting, training, and publishing firm dedicated to the elimination of waste and the enhancement of profits in all aspects of product design and development, to develop and provide the LPD service to small and medium enterprise (SME) manufacturers. LPD projects have resulted in efficient and cost effective new product development efforts. To learn how LPD can help your company, contact your local MEP Center for additional information.

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LPD CASE STUDY: BUFFALO FILTER



"The product innovation methodology has enabled our company to become a true global player in our market. We have seamlessly focused and integrated all our efforts across the manufacturing, engineering, and operational facets of our business."

Chris Palmerton,
President and CEO, Buffalo Filter

Aligning company strategy with lean product development

Buffalo Filter manufactures filters and smoke evaluation systems that are used to clear hazardous smoke or aerosols created by lasers, electrosurgical tools, and ultrasonic devices commonly used during surgery. Since being acquired by Medtek Devices in 1995, the company has grown into an industry leader, employing approximately 50 people at its headquarters in Amherst, New York.

Situation:

Buffalo Filter's management knew that developing new products and pursuing new market opportunities were critical to securing the company's future. Many opportunities were on the horizon: the expanding use of lasers and electrosurgical tools during surgery created new opportunities to enhance existing products, and the trend toward less invasive surgery created a need for new products. Recognizing that these opportunities needed to be capitalized on quickly, Buffalo Filter challenged the engineering team to prioritize new product development. This new focus quickly became a strain, however, as other targets, projects, and deadlines were not being met. Buffalo Filter came to Insyte Consulting, a NIST MEP affiliate, to develop a tactical and strategic solution that would help accelerate product development and focus the company during this opportunity for growth.

LPD Solution:

Insyte conducted a Lean Product Development (LPD) project to help Buffalo Filter build a new cultural foundation that would streamline product development, improve productivity, and allow the company to grow. To lay the groundwork, the team developed a strategic plan focused on achieving longer term goals. They created a New Product Roadmap, which established a robust, methodical approach to build the company's technical leadership while also pursuing high probability trends in the market. The team then used Value Stream Mapping methodology to examine how workflow was impacting total costs and to create a detailed analysis of the company's product development activities. After establishing a baseline, they defined a streamlined process that eliminated many non-value activities, accommodated the need for occasional 'quick fix' projects, and differentiated major project parameters from minor ones. The new process for evaluating and prioritizing projects ensured that only the highest potential projects were allowed time from the company's limited resources. This comprehensive approach—aligning company strategy with a New Product Roadmap and process changes—allowed Buffalo Filter to accelerate the pace of product development while addressing the root causes of delays.

Results:

- * Initiated a process for evaluating and prioritizing new projects.
- * Achieved more than 99% on-time delivery with all shipments.
- * Increased revenues by 300% and new customers by 200%.
- * Developed 28 new products in 30 months.
- * Expanded engineering staff.

Increased revenue by 300%