

# EBITDA IMPROVEMENT X-RAY

THE SHORTCUT TO OPERATIONAL VALUE CREATION



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## **EBITDA Improvement X-Ray: The Shortcut to Operational Value Creation**

In recent years, pulling operational levers at portfolio companies has become a key task for many private equity firms. Prioritizing the right levers and executing a pinpointed and speedy but impactful program are the most typical challenges our clients face in this context.

To help address these challenges, Oliver Wyman has developed the “EBITDA Improvement X-Ray.” It is designed for private equity portfolio companies in the manufacturing sector and provides a fast and structured assessment of approximately 90 percent of total cost by leveraging Oliver Wyman’s global operations expertise.

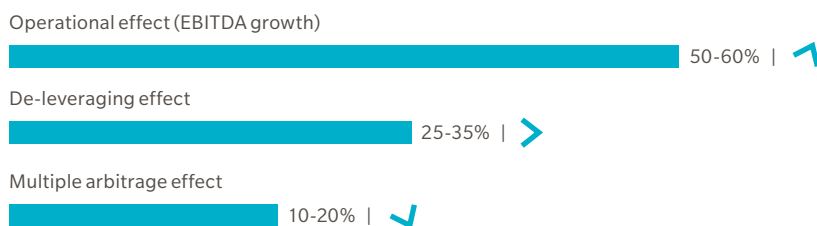
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# PRIVATE EQUITY MUST MASTER OPERATIONAL IMPROVEMENT

The private equity industry has seen a reshuffling of the importance of different value creation levers. With opportunities for financial engineering gains and de-leveraging being outweighed by an increase in equity valuations, the need for value creation through operational improvement has increased and will continue to do so. Contributing the lion's share to overall realized value, operational value growth usually stands out as the most effective means to accomplish target returns (Exhibit 1).

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## Exhibit 1: Sources of value creation in successful leveraged buyouts (LBO) and trends



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## TO REALIZE OPERATIONAL PERFORMANCE POTENTIAL, IT IS IMPORTANT TO BE FAST, FOR THREE REASONS:

1. Deal momentum and new ownership should be used as a catalyst for change in any new portfolio company.
2. Resources and experience in portfolio companies are often scarce, and employees must be able to maintain focus on the essentials of their daily work.
3. EBITDA gains from operational improvements should fully materialize during the holding period, especially when investment horizons are short.

Against this background, private equity funds, together with the management teams of their portfolio assets, should seek to quickly take control of operational value creation priorities in the early stages of the investment cycle. Private equity firms investing in manufacturing companies are furthermore advised to focus on the essential pool of costs instead of undergoing a lengthy “leaving no stone unturned” exercise. Usually, about 90 percent of total cost in manufacturing companies consist of material, production costs, and general and administrative (G&A) functions (Accounting and Controlling, Human Resources, Information Technology, Facility Management, Legal and Compliance, etc.). Accordingly, analyzing sourcing departments, production processes, and product and overhead structures can unveil significant profitability potential. The “EBITDA Improvement X-Ray” capability helps generate this insight quickly and systematically, ready for prioritization in an action plan.

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~90%

of cost in manufacturing companies can be addressed by a quick and systematic cost review.

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# THE EBITDA IMPROVEMENT X-RAY CAPABILITY

The “EBITDA Improvement X-Ray” encompasses three cornerstones to support private equity investors:

1. A systematic, tool-based approach, requiring only minimal time on-site and management involvement.
2. Leverage of Oliver Wyman’s global expertise in the manufacturing sector, including proprietary benchmark databases and a global network of specialized partners.
3. Execution in a very short time frame – usually just two to three weeks.

## EBITDA IMPROVEMENT X-RAY CAPABILITY: BUNDLED IN FOUR MODULES

### **SOURCING X-RAY:**

A maturity assessment of the portfolio company’s purchasing department and identification of achievable performance improvements in both direct and indirect material as well as services, based on a proven benchmark survey of purchasing best practices.

### **PLANT X-RAY:**

A proven plant-visit methodology for on-site analyses of manufacturing processes and plant design as well as quantitative analyses of plant performance.

### **PRODUCT COST X-RAY:**

A review of current practices to reduce product costs, spanning the entire product lifecycle, to determine where potential measures for additional cost reduction can be found, leveraging our industry experts with engineering and materials expertise.

### **OVERHEAD X-RAY:**

An analysis of performance and cost gaps based on an extensive, proprietary benchmarking database and definition of concrete improvement levers to close the gaps vis-à-vis industry best practices for the G&A functions under review.

Each of the modules follows a proven four-step approach. Thanks to a modular design, each EBITDA Improvement X-Ray module can be deployed independently of the others, depending on the value creation hypothesis to be tested for a specific portfolio asset.

This allows private equity funds to launch a targeted assessment focused on the cost base of their manufacturing portfolio companies – either already at the “exclusive” confirmatory due diligence stage or during the first 100 days of ownership. Certainly, an X-Ray assessment also can be conducted later in the holding period, once strategic levers have been implemented, or even as part of exit preparation to underpin the equity story.

Based on the X-Ray scan, Oliver Wyman provides an “EBITDA X-Ray report” that outlines transparency on the status quo, improvement potential, and key levers. Furthermore, a first step toward consensus on the “road ahead” will be achieved in a summary workshop with the portfolio company’s management and the private equity firm.

## EBITDA IMPROVEMENT X-RAY FRAMEWORK: FOUR-STEP APPROACH

### 1 | DATA REQUEST

Swift collection of data, based on ready-to-use tools and questionnaires that are easy for management to handle



### 2 | DATA ANALYSIS

Creation of transparency on status quo performance  
Identification of gaps compared to proprietary benchmarks and best practices  
Derivation of hypotheses for improvement levers from multiple comparable cost reviews



### 3 | SITE VISIT

Validation of gaps and hypotheses  
Discussion of operational improvement levers  
1-2 interactive days (management workshops, site visits) are sufficient in most instances



### 4 | RECOMMENDATION

Improvement potential and potential improvement levers  
Delivery of “EBITDA X-Ray report” and interactive workshop to define the “road ahead”

# FOUR X-RAY MODULES

## SOURCING X-RAY MODULE

The Sourcing X-Ray module enables a deep understanding of a purchasing department's shortcomings and derives improvement measures that can then be prioritized into an actionable roadmap. As procurement of goods and services is usually the most critical cost driver for a company in the manufacturing sector, identifying performance improvement opportunities in procurement has the potential to significantly lift EBITDA while also strengthening the supply chain.

The Sourcing X-Ray builds on a well-tested purchasing best practice benchmarking (PBPB) survey database that investigates the maturity of purchasing departments. This database includes more than 200 benchmarked companies in the manufacturing sector. Moreover, Oliver Wyman has established the relationship between a procurement department's maturity and achievable performance improvements, including what necessary actions need to be taken to achieve such improvements. By using our cost benchmark database, the Sourcing X-Ray can help determine what cost levels should be for certain commodities, thereby setting clear firm-specific targets for cost improvement.

The often neglected yet very real cost block of indirect material is addressed as a separate category, supported by specific tools and a database. These tools cover a diverse range of indirect materials, factual spend levers, and Oliver Wyman's holistic methodology to address all available potential savings.

In addition to applying proprietary analysis tools, Oliver Wyman experts generate insights by conducting focused face-to-face interviews with key purchasing personnel and cross-functional interfaces (e.g., production or logistics managers). Based on all consolidated inputs, Oliver Wyman prioritizes the most pressing needs for action and evaluates the potential effects of improving the maturity of the purchasing department. All recommendations are discussed with management to explain the rationale and generate buy-in for the changes ahead. Finally, all levers are combined into an actionable roadmap to significantly improve EBITDA performance.

### EXEMPLARY X-RAY IMPROVEMENT LEVERS (HIGHEST LEVEL)

- Identify and implement "best fit" supplier base
- Increase analytical sourcing approach and professionalize negotiation process
- Consolidate and centralize indirect material sourcing
- Upgrade the sourcing organization (including processes and tools)

### RANGE OF SAVINGS (IN OLIVER WYMAN PROJECTS)

**5-18%**

of addressed spend

### TIME TO REALIZATION

**6-18**

months

# PLANT X-RAY MODULE

The Plant X-Ray module provides a fast and structured assessment of plant performance and cost improvement potential. The approach builds on a well-tested manufacturing excellence model that investigates manufacturing facilities along all dimensions (e.g., labor productivity, equipment productivity, flow-planning, quality performance). It includes a reference model as well as best practices from leading manufacturing companies. After only a two-day plant audit, the Plant X-Ray is able to determine a savings range and key areas for improvement, based on Oliver Wyman's understanding of the relationship between manufacturing maturity and performance improvement potential.

## FOR A PLANT X-RAY ASSESSMENT TO BE SUCCESSFULLY EXECUTED IN A SHORT TIME PERIOD, THREE PREMISES MUST BE FULFILLED:

1. The COO needs to complete a structured questionnaire, highlighting the manufacturing network structure and providing selected key figures per plant (e.g., cost structure, headcount, overall equipment effectiveness).
2. A sample of plants to audit has to be defined; it should be representative of the company's technology diversity and plant sizes (usually, a sample of about 25 percent of plants is considered representative).
3. Plant managers must be informed and asked to mobilize dedicated staff for the team during the audit.

Oliver Wyman experts generate insights by conducting shop floor observations and one-on-one interviews with key plant managers. To generate deep insights, Oliver Wyman leverages specialist resources (such as the Harbour team for automotive clients, the leading authority for plant labor productivity benchmarking). The proprietary Plant X-Ray maturity assessment tool is a strong tool for ensuring manager buy-in. It favors clear self-understanding of the gap to excellence in plant performance and helps define the improvement roadmap. Based on the insights received, Oliver Wyman prioritizes key areas for action and evaluates the potential effects of maturity improvement. In a final workshop with management at the group level, recommendations are discussed to ensure commitment to the changes ahead.

### EXEMPLARY X-RAY IMPROVEMENT LEVERS (HIGHEST LEVEL)

- Reduce re-work, walking and transportation times, work in progress, storage space, etc.
- Simplify assembly processes, transport boxes, material flow
- Implement quality metrics in shift handover meetings

### RANGE OF SAVINGS (IN OLIVER WYMAN PROJECTS)

**12 - 20%**  
of total plant manufacturing cost

### TIME TO REALIZATION

**6 - 24**  
months

# PRODUCT COST X-RAY MODULE

The Product Cost X-Ray module is designed to provide manufacturing companies with a quick yet in-depth understanding of their current approach to product cost reduction. It highlights shortcomings of the current approach, identifies potential improvement areas, and defines levers for significantly reducing or eliminating product cost.

The Product Cost X-Ray module examines current practices, compares them to best practices, and provides a comprehensive set of levers for improvement. These levers can lead to quick cost reductions but need to be anchored in the relevant organizations and processes to ensure sustainable impact. Key to success in identifying product cost reduction potential is deep insight into and consideration of all costs attributed to a product along its entire life cycle, not only a focus on direct material cost. Oliver Wyman experience shows that average companies only address 42 percent of total product cost, realizing only 1.3 percent reduction p.a. of the total cost base, whereas best-in-class companies reduce total cost by up to 6 percent p.a. by addressing 81 percent of product cost. Consequently, all relevant functions contributing to product cost improvements (e.g., Product Design, Product Development, Engineering, Purchasing, Supply & Logistics, Manufacturing, Quality, and Sales) need to be involved in an X-Ray analysis. Core to any Product Cost X-Ray analysis is one guiding question: Are all currently available levers being investigated to identify appropriate measures for product cost reduction?

## TO ANSWER THIS QUESTION AND COVER ALL PRODUCT COST DIMENSIONS IN A SHORT TIME FRAME, THE PRODUCT COST X-RAY MODULE COMBINES THREE ELEMENTS:

1. A proprietary, proven toolbox, including questionnaires, benchmark databases, and best practice examples.
2. A scalable, customizable, and comprehensive framework that ensures cross-functional, goal-oriented, and manageable analyses of product cost reduction.
3. A network of industry experts providing engineering and material expertise.

By addressing key management questions on product cost, the Product Cost X-Ray can provide insights on how to overcome typical client hurdles, thus ensuring that the identified measures will materialize and generate savings in terms of product cost reduction, which can be as high as 25 percent per lever.

### EXEMPLARY X-RAY IMPROVEMENT LEVERS (HIGHEST LEVEL)

- Technical levers (e.g., optimization of specifications, usage of alternative/recycled raw material, elimination of variants)
- Develop cost reduction measures with suppliers (e.g., target costing)
- Optimize logistics processes (e.g., by elimination of re-packaging)

### RANGE OF SAVINGS (IN OLIVER WYMAN PROJECTS)

**10 - 25%**  
of addressed product cost

### TIME TO REALIZATION

**2 - 3**  
years



## OVERHEAD X-RAY MODULE

The Overhead X-Ray module is designed to generate a fast, robust understanding of efficiency potential in G&A functions. To this end, it combines general and industry-specific cost and performance benchmarks with a standardized maturity assessment of G&A functions.

### TWO PRINCIPLES SHOULD BE FOLLOWED TO ACHIEVE A QUICK AND SUCCESSFUL REVIEW OF OVERHEAD COST:

1. Use the appropriate level of detail to stay focused on the most essential topics.
2. Ensure a consistent baseline for the G&A organization (and thus comparability with internal and external benchmarks).

By leveraging Oliver Wyman's standardized taxonomy of G&A functions, a large set of industry-specific G&A benchmarking data, and a network of senior experts, the Overhead X-Ray is able to quickly generate a view on headcount- and discretionary spend-related items, with little involvement needed on the part of the portfolio company. A questionnaire-based self-assessment and additional focused interviews with companies' senior executives pragmatically lead to an evaluation of the maturity of G&A functions under review compared to industry best practices. They also enable conclusions with regard to efficiency opportunities in processes, organizational structure, and system support.

On this basis, combined with the expertise of Oliver Wyman's experts, the Overhead X-Ray provides private equity firms' assets with immediate results on improvement potential as well as specific improvement levers. In a final workshop, improvement potential and levers are discussed with the management team to ensure a joint understanding of the action plan required to realize value creation potential.

#### EXEMPLARY X-RAY IMPROVEMENT LEVERS (HIGHEST LEVEL)

- Eliminate unnecessary tasks with high level of effort
- Reduce complexity, streamline and automate tasks
- Adjust service levels to optimize workload
- Leverage synergies through shared services/bundling of services

#### RANGE OF SAVINGS (IN OLIVER WYMAN PROJECTS)

**5 - 15%**

of total G&A cost

#### TIME TO REALIZATION

**1 - 3**

years

# X-RAY CASE STUDY AND EXAMPLES

**Client:** One of the largest North American manufacturers of industrial steel and plastic containers, with an annual spend of approximately 700 million euros.

**Situation:** After being purchased by a private equity investor and the subsequent acquisition of a leading plastic container manufacturer, the client sought to improve EBITDA margins by realizing cost savings in sourcing, product cost, and manufacturing. Oliver Wyman was asked to do an initial quick review of the client’s current situation based on the EBITDA Improvement X-Ray approach.

**Impact:** By using three of the four X-Ray modules, i.e., Sourcing, Product Cost, and Plant X-Ray, the X-Ray project unveiled a set of 63 cost reduction opportunities. For instance, the Product Cost X-Ray highlighted, among others, the need for cross-functional collaboration and simplification of the product design. Furthermore, by considering the impact of levers identified in one X-Ray module on the others – for example, the effect of product design optimization on raw material sourcing – the cost savings potential identified with the X-Ray assessment was maximized, providing a total annual savings opportunity of 40 million to 80 million euros.

**Implementation:** Given the in-depth understanding gained in the X-Ray review through, for example, analysis of spend cube data, plant visits, and management interviews as well as the expertise of our expert network, ideas on cost reduction opportunities were grouped into three implementation modules, spanning 27 concrete workstreams. This enabled our client to seamlessly transition into an implementation project. With the support of Oliver Wyman, it has already achieved approximately 20 million euros in EBITDA improvement within only five months, with an additional 40 million euros in sustained EBITDA improvement visible and lined up to follow in the next two years.

SOURCING X-RAY	PLANT X-RAY	PRODUCT COST X-RAY	OVERHEAD X-RAY
<b>Client</b>			
Steel manufacturer	Paper/packaging company	Plant engineering company	Manufacturer of electronic systems for naval and maritime applications
<b>Situation</b>			
The client sought to reduce indirect material cost to improve overall profitability (140 million euros facility management spend)	The client was facing competitive pressure from eastern competitors with lower cost	The client planned to address the evolving mid-price/-performance segment and required assistance in identifying product cost reduction potential	The client went through a structural crisis and urgently required a sustainable EBITDA increase
<b>Impact</b>			
Overall poor purchasing maturity in facility management identified (e.g., limited consolidation of suppliers across sites)	Savings of up to 5 million euros per site identified (ca. 15% of cost base)	Savings potential of ca. 20% of addressed cost identified:	Significant annual improvement potential of ca. 7% of costs and ca. 14% of FTE in scope identified
Key improvement levers defined	9 focus areas for improvement defined (e.g., process optimization, production planning)	<ul style="list-style-type: none"> <li>• 10% within current production system</li> <li>• 10% through adaptation of production system to mid-range requirements</li> </ul>	Based on the X-Ray maturity assessment, concrete levers and future service levels defined
Short-term savings potential of ca. 10% identified	Transformation roadmap developed		

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## **The Revealing Power of the EBITDA Improvement X-Ray**

To ensure target returns, private equity funds and the management of portfolio companies need to quickly put themselves in the driver's seat and identify improvement levers in the early stages of the investment cycle. Key to success is a quick and focused review of essential cost pools to ensure that deal momentum is used as a catalyst for change and to identify and pull the most powerful levers for improvement.

Oliver Wyman's EBITDA Improvement X-Ray capability provides private equity firms with exactly the ingredients required to do this for manufacturing companies: a systematic, tool-based approach that leverages limited management time, combined with a methodology that provides substantial insights in only two to three weeks. When cost review projects are addressed in the "X-Ray way," they provide private equity firms and portfolio companies with fast and tangible insights on improvement potential.

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## ABOUT OLIVER WYMAN

Oliver Wyman is a global leader in management consulting. With offices in 50+ cities across 26 countries, Oliver Wyman combines deep industry knowledge with specialized expertise in strategy, operations, risk management, and organization transformation. The firm's 3,700 professionals help clients optimize their business, improve their operations and risk profile, and accelerate their organizational performance to seize the most attractive opportunities. Oliver Wyman is a wholly owned subsidiary of Marsh & McLennan Companies [NYSE: MMC].

For more information, visit [www.oliverwyman.com](http://www.oliverwyman.com). Follow Oliver Wyman on Twitter @OliverWyman.

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