Bastian Consulting is an independent consulting group providing engineering support for companies looking to improve their supply chains. Our team of consultants performs detailed research and data analysis before presenting strategic recommendations based on your business goals and requirements.

If you are considering enhancing or changing your operations – optimizing your supply chain network, improving your distribution center or manufacturing processes or implementing a new material handling system - hiring a Bastian consultant ensures you get the most effective solution with the highest return on investment.
PROJECT PLANNING

If you are starting a master planning project or are still in the research phase, our consultants help you:

1. **Define** business requirements including project objectives, key success factors, volumes and risks
2. **Measure** and understand current operations through data collection on operating methods, key performance indicators, staffing requirements and current supply chain network layout
3. **Analyze** this data to determine types, patterns, and seasonality of SKUs and orders to model profiles and develop system design parameters

SYSTEM DESIGN

Once project planning is complete, the next phase is system design and layout. During this phase, our consultants:

1. **Design** alternate system layouts based on parameters created in the planning phase
2. **Determine** a final layout and equipment selection based on qualitative and quantitative methods including: labor modeling, operational and systems definition, allotted budget and expected return on investment (ROI)
3. **Validate** the final system layout and equipment selection with computer simulation models to guarantee the system will not only work but meet all requirements and provide strong ROI

SUPPLIER SOURCING

With the design in place, a formal search for a system supplier can begin. Bastian Consulting can help:

1. **Identify suppliers** capable of providing system components based on the budget, timeframe and design parameters
2. **Formulate and manage RFPs** (request for proposals) to save you time and ensure you receive detailed, on-target proposals
3. **Choose suppliers** best suited for your project based on a thorough selection process

PROJECT IMPLEMENTATION

If desired, Bastian Consulting can help with all facets of your project implementation through our relationship with other Bastian Solutions companies. By leveraging these partnerships, we can support your project all the way through system start-up, providing a true “turnkey” solution. During project implementation, we can help with:

1. Project management
2. Writing and review of functional specification documents
3. Review of controls and software design
4. On-site supervision
5. Financial administration
6. Start-up support
**ENGINEERING STUDY**

Engineering Studies provide a customized roadmap for improving operations based on your business objectives and future goals. Data is gathered from your current operation, changes are forecasted based on new requirements and/or growth, and recommendations are provided to improve your distribution or manufacturing center. The result is an optimized facility design and a full analysis of the steps needed to improve your operation.

**Benefits**

- Creation of a manageable, phased action plan tailored to your business requirements & goals
- Selection of the proper solution based on data-driven analysis and business objectives
- Provides quantitative data to justify system changes and/or upgrades
- More accurately predicts required investment as well as payback period and ROI
- Guaranteed improvement in system and labor efficiency

**Deliverables**

- Data analysis summary
- Recommended solution(s)
- Description of operations
- Engineering drawings
- Budgetary costs
- Savings and ROI calculations

**THE ENGINEERING STUDY PROCESS**

1. **Define**

Working alongside you, Bastian Consulting defines the goals of the Engineering Study. The project objectives and key success factors are identified as well as potential project risks. Quantitative and qualitative tools are used to define the desired outcome of the study.

2. **Measure**

It is necessary to identify and measure key performance indicators early in the study. Production process capabilities, organizational and management goals, and risk assessments are all part of understanding the current operation. Bastian Consulting will conduct site visits to document material and information flow. We will also at this time begin to benchmark current operations against best practices from past experiences in related fields.

3. **Analyze**

Key to the success of the project is an understanding of the metrics that make up the operation. Bastian Consulting will collect data and develop data models based on order and inventory profiles, cycle times, customer order patterns, etc. Using the data models, design alternatives are developed, while considering how changes in operations and growth will affect the key metrics.
4. Design
Using the information gleaned from the previous steps, Bastian Consulting will use its engineering capabilities to develop design alternatives. We then optimize the best designs by interactively discussing the strengths and weaknesses of each design with you and compare particular design strengths to the study objectives set in the first phase. The best design is chosen, and we begin to plan for design validation.

5. Validate
The economic feasibility, including ROI, of the best alternatives is completed next. This includes quantifying both the estimated costs and benefits of the design. If the project seems viable, Bastian Consulting can also create a model of the selected design.

During a consulting study, we gather data about the operation and flow of a system. Once enough information is gathered, we create data models like inventory profiles. Using this data, we develop design alternatives. After the best design is chosen, we validate it — which includes quantifying the estimated costs and ROI (see figures above).

ENGINEERING SURVEY
An Engineering Survey is a tested method of benchmarking your operation. During the Engineering Survey, our consultants perform a review of your operation and offer improvement concepts for consideration. The goal is to provide recommendations for immediate benefit while determining if more in-depth study is justified for other changes. Engineering Surveys are usually completed within 4 to 6 weeks, and clients are given a complete summary of findings and recommendations.
SUPPLY CHAIN NETWORK OPTIMIZATION

Companies face the challenge of achieving an efficient and flexible supply chain—a goal that can mean the difference between spending or saving millions of dollars. As companies change over time, their volume and shipping patterns can also change, but this is often not reflected in the supply chain network, which can remain static over years and even decades. A physical supply chain network, no longer optimized for current requirements, can raise total supply chain cost by as much as 15 percent.

Benefits

- Some of the benefits of optimizing your supply chain network include:
- Reducing overall supply chain costs
- Improving customer service
- Consolidating after mergers or acquisitions
- Performing contingency planning
- Performing what-if scenario analysis
- Optimizing production sourcing decisions

SLOTTING STUDY

Depending on the picking methodology, warehouse employees can spend upwards of 50 percent of their time walking to and from picking mediums. If time given to this non-value added process is minimized, there can be tremendous increases in rates and throughput. Slotting your warehouse ensures SKUs are in the best picking locations by determining size and velocity of SKUs, balancing the labor within picking zones, and placing SKUs in more ergonomic locations.

If your operation requires excessive amounts of labor, your SKU mix has recently changed, or picking cycle times are too high, then a slotting study is a great way to improve your facility layout and picking inefficiencies.

Benefits

- Increased picking efficiencies
- Labor reductions through increased productivity
- Lowered storage footprint
- Decreased operating costs
- Higher on-time and more accurate shipping
- Better customer service

Supply chain network designs, like those shown here, are mathematical models of a company’s supply chain. Network designs help a company determine optimal facility locations and flow of product within this structure.

Slotting studies help determine the best locations to store inventory in a warehouse or distribution center. This image shows the proposed optimal layout of product within a distribution center.
FACILITY LAYOUT & DESIGN

Sometimes clients know exactly what changes need to be made in their manufacturing or distribution facilities – they just need assistance in specifying equipment and drawing the solution. Armed with the latest CAD 3-D software, our consultants not only design efficient systems, but also understand the technical components going into them. This allows Bastian Consulting to produce an optimal material handling system layout for your business goals.

Benefits

- Increase order fulfillment volume
- Reduce operator travel time between machines or picking modules
- Optimize floor space usage to gain additional square footage

SIMULATION

Computer simulation analysis helps visualize changes in layout and process as well as answer what-if questions before implementing automation technology, information management systems, or procedural changes. Computer simulation models can be used to help evaluate potential new automation investments or even changes to current operations. Results of a computer simulation can help determine throughput rates, the number of employees needed to pick orders, design problems, and system bottlenecks.

Benefits

- Determine system capabilities
- Risk mitigation and cost avoidance
- Analyze expected throughput
- Identify process bottlenecks for continuous improvement
- Measure cycle time for specific activities
- Study the dynamic interactions within the facility
- Determine optimum staffing levels in each area
- Aid in choosing the right material handling system
- Validate existing or new material handling system designs
- Help with integration to existing systems
- Provide in-depth understanding of your system and business operations
- Experiment to see how changes to one area of your system affect other areas

As seen in the rendering above, we design the optimal material handling system layout for your business using the latest CAD 3-D software.
Our Global Offices

United States
Indianapolis, Indiana (Corporate HQ)
Bakersfield, California
Los Angeles, California
Atlanta, Georgia
Boca Raton, Florida

Greenfield, Indiana
Evansville, Indiana
Fort Wayne, Indiana
Chicago, Illinois
Lexington, Kentucky
Louisville, Kentucky
Baltimore, Maryland

Detroit, Michigan
Grand Rapids, Michigan
St. Louis, Missouri
Cincinnati, Ohio

Sydney, Australia
Sao Paulo, Brazil
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Riyadh, Saudi Arabia
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