

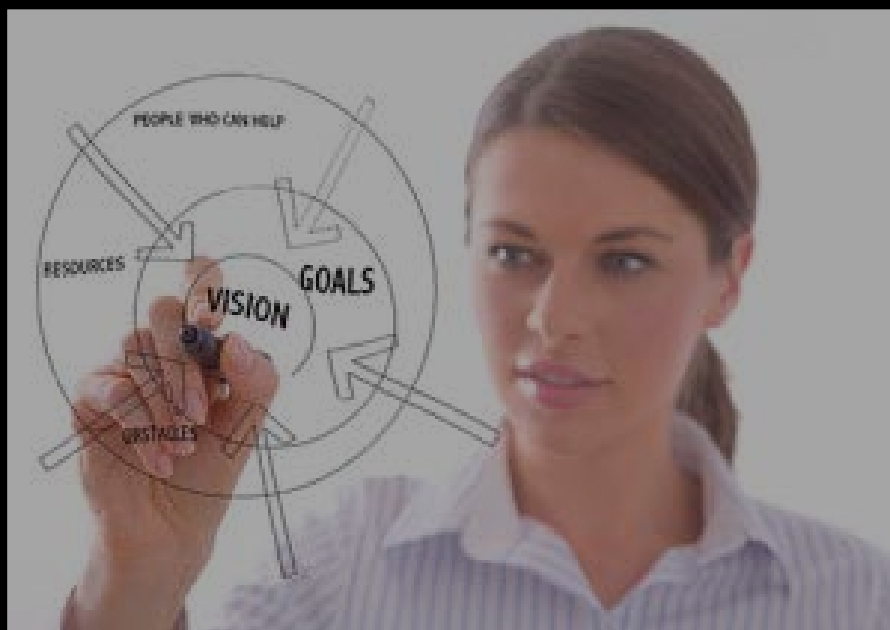
MICHIGAN

MANUFACTURING

TECHNOLOGY

CENTER

Know how you stack up against your competition. Use this information to help improve your quote win rates, demonstrate to your customers why you're better than the competition, or fulfill benchmarking requirements set forth by customers and quality management systems.



Transformation Planner

It can be difficult to identify where the biggest opportunities for improvement exist.

Michigan Manufacturing Technology Center's Transformation

Planner uses your company's financial and operating data to model the financial impact decision making will have on your PROFITABILITY.

Success doesn't just happen. It takes driven, dedicated, experienced, full-time professionals - like the kind at Michigan Manufacturing Technology Center (The Center), working together to keep Michigan manufacturing strong.

Since 1991, The Center has assisted Michigan's small and medium-sized businesses compete and grow. Through **personalized** services fitted to meet the needs of clients, we develop more effective business leaders, drive product and process innovation, promote company-wide operational excellence and foster creative strategies for business growth and greater profitability. Supported by the Michigan Economic Development Corporation as Michigan's National Institute of Standards and Technology Manufacturing Extension Partnership (MEP) affiliate, we bring well-tested services to our MEP clients.

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MEP | Affiliate PURE MICHIGAN™

Opportunity Assessment Benchmarks

Thank you for your interest in the Opportunity Assessment Benchmarks. The transformation drivers in this report have been identified as some of the more critical indicators of your company's performance.

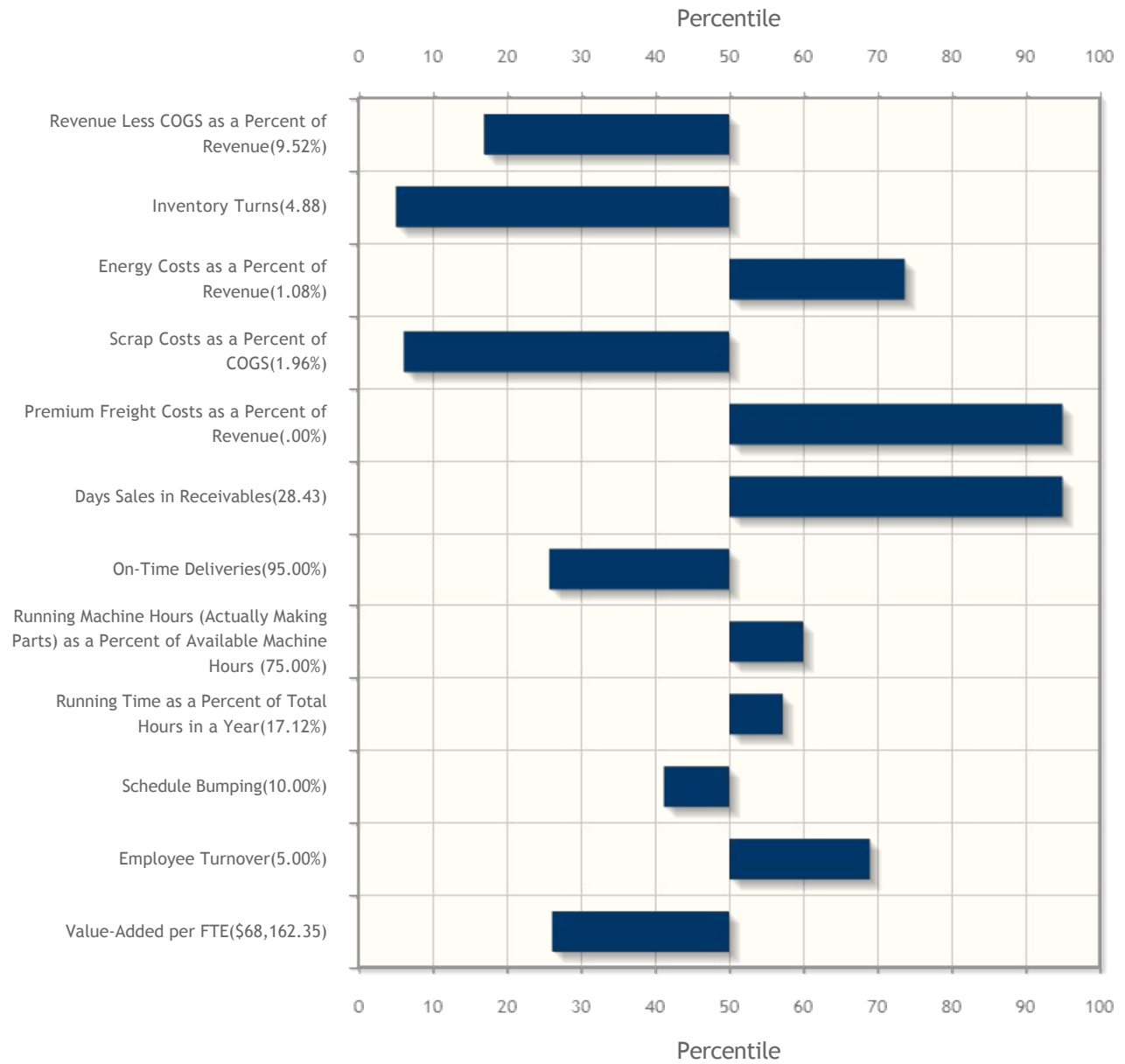
As you review your report, we commonly refer to the "Percentile." This is your relative position in the selected comparison group for each Transformation Driver. For example, if your percentile is 70, you perform better than 70% of the other companies in the comparison group. Conversely, you perform more poorly than 30% of the other companies in your comparison group.

Below each graph is a description of the transformation driver along with other information that we think can add insight into the value of the driver.

Transformation drivers on this report require the completion of the Opportunity Assessment Survey. If you haven't done so already, please complete the [Survey](#). Once completed, please return to view the results.

Metrics

Transformation Planner Metrics



Metric Description

| | |
|--|---|
| Revenue Less COGS as a Percent of Revenue | Sometimes called "Gross Margin," this metric captures what is left from revenue after subtracting manufacturing-related expense. It is the source of funds needed to cover Sales, General and Administration (SG&A) expenses, and for net profit. While higher Gross Margin is always preferable, locations with very little marketing and sales expense -- such as captive suppliers who sell to other branches of their own company-- might be fine with lower rankings on this metric. Companies with significant marketing and sales outlays, such as those making final products under their own brands, must score well on this metric or risk low profits. |
| Inventory Turns | Inventory Turns serves as a fundamental measure of lean performance, and ability to convert expense into billings. Companies with high Inventory Turns are able to generate saleable output with little carrying cost, yielding a cost advantage relative to others. A high Inventory Turns value also often signifies a nimble company -- one able to respond quickly to changes in demand. Low turns may result from excessive raw, finished, or in-process inventory stocks. You should examine your percentile position on each of these to determine the culprit(s). Low raw turns (i.e., high days) usually signal poor demand forecasting or suppliers that are unwilling to deliver small quantities frequently. Low finished goods turns (high days) often result from excessive stockpiling to insure the ability to fill rush orders; where possible, consider instead stocking standard intermediate products but doing final processing or packaging to order. Finally, high work-in-process (WIP) often reflects bottlenecks that result in long waits between processing or packaging steps. Poor routings, bad line balancing, and frequent but unanticipated equipment failures are common culprits. Many companies have attacked high WIP by changing shop layout to cells, and by making inventory costs visible by replacing warehousing with floor stock. |
| Energy Costs as a Percent of Revenue | Per unit energy costs vary significantly with geographic location. Looking at energy costs as a percentage of revenue provides a better indicator of how much energy expenditure goes into generating a dollar of revenue. A higher than average value in this metric would indicate an opportunity to reduce energy expenditures and improve competitiveness. |
| Scrap Costs as a Percent of COGS | Producing product that cannot be sold at full price is a direct deduction from the bottom line. Processing errors have many causes, including hard-to-make designs, incapable equipment or tools, poorly trained operators, inadequate in-process inspection, poor material choice, and weak or absent statistical studies of parts or machines. Root causes of high error rates need to be determined and systematically attacked. |
| Premium Freight Costs as a Percent of Revenue | When we ask this question, we're interested in only the premium freight that is not paid for by customers. High premium freight is an indicator that there are scheduling problems and expediting the shipping of materials or products is being used to compensate. Phrased another way, on-time delivery is being bought. High premium freight is often accompanied by high schedule bumping, low on-time delivery, high scrap or rework rates, or any number of other negative operating metrics. At a minimum, paying for premium freight that customers don't pay for reduces profitability. |
| Days Sales in Receivables | Days Sales in Receivables is calculated by taking your reported accounts receivable and dividing it by your average daily sales. The result of this calculation tells us how many days, on average, your customers' outstanding invoices are left unpaid. If this number is higher than the terms set on your invoices, cash is being tied up in excess of your terms of service and likely limiting cash available for other working capital or debt service needs. |
| On-Time Deliveries | Except when delays are clearly due to the actions of your customers, the surest way to lose orders is to under-perform your competitors in on-time delivery. Late deliveries may be due to many causes, including quoting unrealistic shipment dates, poor scheduling or excessive lot bumping, incapable equipment, or unreliable suppliers. The first step is usually to determine the root causes of recent late deliveries. Follow-on actions may include more realistic promised dates, producing in smaller lots but with faster setups, reduced bumping, and equipment capability studies. |
| Running Machine Hours (Actually Making Parts) as a Percent of Available Machine Hours | This metric focuses on how effectively you make use of the hours that you intend to be working with your machines -- specifically, those hours when you either have personnel attending a machine OR have scheduled it to run unattended. It compares the hours your equipment is actually making output, vs. non-productive time such as doing setups, maintenance, or when machines are idle while operators gather the material or supplies they need. |
| Running Time as a Percent of Total Hours in a Year | For most manufacturers, the overall cost structure for its investments in people, plant and equipment is relatively fixed. How well a manufacturer can utilize these fixed investments can have a much greater impact on profitability than product pricing. Running Time as a Percent of Total Hours in a Year (or how many hours of all available time (labor or machinery) in a year are you are actually producing product) is a purist's view of utilization. Lower utilization can be considered an opportunity to grow value-added revenue while adding very little incremental cost. |
| Schedule Bumping | Interrupting a scheduled job or lot to run a rush, or "hot," job often results in lost equipment run time, additional labor cost, and poor delivery performance. Not only can "bumping" the scheduled job result in at least one extra changeover; it also leads to more idle time and overtime pay for operators, and increased charges for premium freight. Companies that anticipate frequent bumping may build that into their schedules, so even when bumps do not occur, the material or supplies for the next job may not be available even though equipment is. You may need to consider, among other things, building a shop schedule with smaller lots, working to reduce the time required for each setup or changeover, or reserving some of your older equipment specifically for last-minute rush jobs. If your customers really value your quick attention to their rush orders, you may be able to charge a premium for fast turnaround to help offset the costs of bumping. |
| Employee Turnover | Something to be expected, employee turnover is unpleasant and costly. Direct costs of turnover is estimated to range from 16% to 20% of a person's annual salary due to losses occurring during training, recruiting, and lost work. Other impacts that aren't regularly thought of are the increase in scrap rates, overtime paid to remaining employees to pick up the additional hours, late deliveries, and a host of other undesirable operating side affects. |
| Value-Added per FTE | People are the most valuable resource in any manufacturer. With the current skilled workforce shortage, the ability to leverage human capital more effectively is critical to long-term success and indicative of flexible and scalable operations. Because different manufacturers require different levels of indirect support in their operations (i.e. engineering, procurement, etc.), measuring value-added per full-time equivalent is a better way to measure overall productivity of labor across a peer group. In a high-wage economy, the only way to stay globally competitive over the long term is to keep improving on this fundamental measure of labor productivity. |