



Find Your Productivity Blind Spot—And Fix It with the Application Optimization Process

SUMMARY:

Manufacturers often miss opportunities to optimize their metalworking operations because inertia, over-leveraging, and tunnel vision get in the way of cutting costs and boosting productivity. The Application Optimization Process, driven by MSC's knowledgeable and experienced team of metalworking specialists, is designed to overcome these blind spots and refine metalworking processes and applications.

“A bad craftsman blames his tools...”

Old Proverb

“...but a good craftsman never keeps a bad drill around.”

Larry Miller, MSC Metalworking Special Services Manager

The Faultless Application Error: 3 Factors

All manufacturers want to save costs and boost productivity. Those goals boil down to two things: increasing the capacity to make parts, and decreasing cycle time.

And so manufacturers upgrade equipment, add shifts, invest in training, reduce wait times, eliminate warehousing, etc. And yet **most manufacturers in metalworking overlook the biggest obstacle to increasing efficiency:** how tools are used for specific applications and materials.

The Faultless Application Error is simply the mistake of assuming that a current set of tools and how they are being used or applied is most optimal, or at least that a more optimal tool would not yield a significant return on investment. (No one wants to be the “bad craftsman who blames his tools.”) This causes manufacturers to look elsewhere for gains in efficiency, missing significant opportunities.

When the Faultless Application Error happens, manufacturers either miss opportunities to increase productivity and reduce costs, or else adopt inferior solutions that take a long time to get a positive return. Optimizing operations on the plant floor requires a different approach.

The blind spot is costing companies millions of dollars a year. We call this blind spot the *Faultless Application Error*.

There Are A Variety Of Factors That Typically Contribute To The Faultless Application Error

Inertia Change can be costly in the short run. Sometimes it seems easier to stay with an inferior tool or process than to incur the cost and trouble to make an improvement. But often this is an illusion: incremental savings compound over time, making even gradual improvement efforts worthwhile.

Over Leveraging A plant buys a tool for operation X. That tool is ideally suited to doing X quickly and well. At a later time, that same plant now wants to perform operation Y. Even though that tool is not ideally suited to doing Y, it's on hand and ready to go. So the company, instead of investing in the most efficient tool, uses the more available one. But over time, this increases cycle time and quality issues.

Tunnel Vision Vendors will talk about all of the great things about their tools, and even point to the “right” tool for the job. But they always see things from the perspective of their product line. Not only does this leave solutions from other vendors off the table, it means that solutions will always focus on the tool, not the process itself.

New Technology Suppliers are constantly issuing new and improved tool sets. Trying and testing the latest and greatest is a chore for all but the largest shops. Manufacturers can labor at great cost over a long period of time without knowing that a better solution for the job is out there.

The Application Optimization Process

The Application Optimization Process (App Op) is a set of procedures created by the MSC metalworking team to refine, and sometimes even reinvent, manufacturing processes. By its very design, it can prevent or overcome the Faultless Process Error and help manufacturers become more productive across practically any application involving almost every type of material.

The 3 Steps In The App Op Process

1. Understand Your Operations

Before making any recommendations, we get to know the operation. We work side-by-side with customers on the shop floor to understand their machining process at every step. We want to see and hear the machine and how it's running. And we collect data on everything, from materials and tools used to machine horsepower to speeds, feeds, and all other pertinent cutting data.

2. Recommend Improvements

Sometimes an operation needs a different tool. Sometimes speeds and feeds need to be adjusted, or a new geometry introduced. And sometimes there needs to be a whole new approach to a manufacturing problem. We never settle for "good enough" — we dig deep for the right answers and the right tools, often relying on the deep internal library of intelligence and experience of our team. We work with the confidence of knowing that someone, somewhere has the answer.

3. Document Test Results and Savings

We work with you to implement a refinement or fix to the metalworking process, no matter how tricky. At the end of the App Op process, customers receive documented test results that show estimated cost savings, tool life data and more.

MSC frequently works with customers to optimize a range of applications. Columbus McKinnon is one example. The company needed state-of-the-art machining processes for its Lodestar 2T hoist, which is used to lift stadium jumbotrons. Faced with capacity issues, the company turned to MSC's metalworking team to ensure the necessary parts remained in house and on U.S. soil.

The MSC team reviewed product drawings and part specifications, then leveraged its supplier base to provide a tooling package that was efficiency focused rather than brand specific. After in-depth testing, the company had a set of more than two dozen tools that allowed Columbus McKinnon to reduce cycle count and increase production by more than seven times — opening up enough capacity that the company was able to reshore parts being manufactured in China.

There are many other examples where, though the challenges varied, the process was the same: misapplied tools, wrong grade of carbide, need for different geometry, or sometimes even a new technology of which the customer wasn't even aware. In all these cases, MSC (1) took the time to understand the operations and the specific application, (2) recommended improvements, and (3) documented the results.

What Makes App Op So Successful?

The App Op process is not just a consultation to make manufacturing more efficient. Of course, partnership through consultation is a part of it — but there are several advantages built into the App Op process that make it unique.

Keys To Success

A “Tool-Neutral” Approach MSC is not tied to a specific brand for the products we supply. This means that MSC’s metalworking specialists can look across a broad array of tools and solutions to pick the right ones for a specific application. Or they might not even focus on the tool itself, but instead look at process, speeds, feeds or geometry.

Independent Data MSC keeps a large database of its own tool and application data, based on thousands of real-life applications in the field. This means that we do not have to rely on vendors’ data alone. Furthermore, we can make comparisons across vendor lines, which helps us to make the best tool neutral recommendations.

Cutting Edge Knowledge and Expertise The independent data that MSC has for optimizing metalworking applications is rivaled only by the in-house expertise of our metalworking specialists. Our expertise is unique in how many suppliers we supply, and how many manufacturers we use. And we make it a priority to keep up with the latest technology.

Documenting Results Documenting results is important for overcoming inertia: when one can see the gains and cost savings that come with optimization, it makes one more likely to optimize across all processes. Our App Op database has results from numerous “in the field” applications, and it grows with each customer.

As one MSC specialist puts it, “If there’s an application that produces chips or creates swarf, MSC can help maximize efficiencies.”

How Does MSC Maintain The Best Team For Application Optimization?

A Rigorous Screening Process We seek out the most knowledgeable people in the field.

Broad and Deep Experience Our experts have deep experience across industries and applications.

Constant Training Our metalworking team constantly receive highly technical, customized training on all the latest tools and techniques.

A Collaborative Approach We don’t keep our in-house expertise in silos. Our metalworking experts reach out to each other, share knowledge and collaborate.

Work with the MSC Metalworking Team to Make App Op Work for You.