Harmonic Machine is a family run, 15 employee CNC machine shop located in Chilliwack, BC.

"We started running into problems with scheduling our equipment and employees. Work in Progress and Inventory seems to be higher than it needs to be, but it appears to be the only way to buffer the variations in our trade. In addition, we do not have good control over job costs, or even which jobs are profitable, and which are not. As we have only a rough idea of our future work load, we are unable to accurately estimate when we can complete potential jobs for customers." Says Nathan Neels, Purchasing & Programming Manager.

"We end up putting in lots of overtime in order to complete jobs on time." says Neels, "Our current lead times are acceptable in the industry, but there is so much room for improvement. Currently customer promise dates have a 3 – 4 week lead time. Yet if there was no other work in the shop, it would only take 1 – 2 days to finish. Our problem is bottlenecks and our solution is better management of shop constraints. So we decided to entertain various ERP alternatives that might solve our issues.

We reviewed a long list of systems including M1, E2, JobBoss, Syspro, Epicor, Global Shop, and Netsuite, but they all appeared the same."

"Then in January of 2015, I was introduced to Andy Pratico from his blogs on 'How to Select ERP'. His advice posts were objective and informative, so I sent him an email. When he told me about VISUAL ERP and how it utilized the Theory of Constraints (TOC), I became very intrigued."

"VISUAL ERP quickly distanced itself from the other options out there by demonstrating a remarkably unique scheduling capability with Easy Lean. It is based much more in the manufacturing side of things rather than being an 'accounting' based software."

With Andy Pratico's recommendation, Nathan visited a VISUAL customer in Abbotsford, BC but left the visit disheartened. They worked with another Infor Partner (not Synergy), and were not utilizing VISUAL scheduling like they could. In fact they were scheduling the shop outside of VISUAL in Excel spread sheets. However after speaking to some VISUAL Easy Lean customers that Synergy was instrumental in implementing, Nathan’s interest peaked.
"For one, we expect to be able to schedule our shop accurately and efficiently, reducing overtime as well as freeing up capacity. We also expect to free up cash by reducing WIP and Inventory. We should start being able to see which jobs are profitable, and address the ones that are not. We will be able to give immediate responses to queries about lead time and firm completion dates on current jobs, even as soon as creating the original estimates."

Then why isn’t VISUAL Easy Lean adopted by more manufacturers?

Because Easy Lean can be Counter-Intuitive to long established cost accounting text books.

**Easy Lean’s biggest challenge**—and one deeply engrained for decades in Management’s DNA—is traditional cost accounting, (all machine and labor resources should be utilized to the maximum). Easy Lean counter-intuitively paces a plant to a key bottleneck, even if that means under-utilizing non-bottlenecks.

Easy Lean determines and monitors the bottleneck; sets and manages the buffers; releasing work towards a smooth flow maximizing plant throughput; and then analyzes resources for continuous improvement. For example, occasionally equipment will stand idle with Easy Lean, and only with strict restraint will management maintain the positive transformation.

When planning productivity improvements, Manufacturers need to assess their operations for waste reduction and balancing increased customer value. Another challenge is to address how to buffer operations against the unexpected and therefore keeping level production.

However software alone cannot convert a traditional mindset to an Easy Lean improvement transformation. Easy Lean is more about business practices than about software. What has to change is the company culture. Therefore new measures and disciplines need to be implemented and accepted; the software only reinforces these new procedures and measurements.

Outside expertise like that provided by Synergy often helps with both the mindset change and the more technical aspects of TOC. Being a ‘smaller’ company, Harmonic Machine negotiated a cooperative implementation strategy with Synergy that will keep the implementation costs affordable. "I had been struggling with the problem of how to implement the ideas found in the Theory of Constraints (TOC) into real life work. With VISUAL I believe I have found a way to do so."

**VISUAL Easy Lean** will provide Harmonic the tools to apply TOC and Throughput accounting principles. Nathan is finally making his TOC dream a reality by adopting VISUAL Easy Lean and the potential of a 50% reduction in their 3 - 4 week planned lead time is becoming closer to a reality.