



When you are a leading designer and manufacturer of high performance marine and military equipment you need a culture of innovation at every level because that is where your success and sustainability will come from!

The history of innovation is long and deep at Teleflex Marine - which became SeaStar Solutions in 2013. In this issue, ATJ will share an indication of how British Columbia's largest machining facility builds their cultural support for Continuous Improvement and process innovation through the nurturing of employee learning and involvement. It was supported from the beginning by Teleflex's President, Harold Copping, now retired, and energized today by SeaStar's VP and GM Eric Fetchko

The concept was simple — provide after-hours hands-on opportunities to interested shop floor practitioners that includes the improvement of communication and presentation skills throughout the company. And to keep the early mission clearly identified — the name BOLTS was a natural selection with the letters standing for **Building Our Learning & Teaching Skills**. Their success soon generated interest in higher skills in teaming and problem-solving.



1999 — Consortium involvement

Teleflex became a founding member of the first CME LEAN Manufacturing

Consortium in Canada, which provided hands-on learning for the SeaStar staff through access to over a dozen like-minded companies within an hour's driving distance to exchange best practices and know-how.

2000 — TeamTime begins

In 2000 the workforce began TeamTime, to meet the thirst of those who had acquired the learning and skills BOLTS provided.

TeamTime is a question-based approach to learning the concepts of continuous improvement and LEAN. It draws on adult education's best practices to teach team work and problem-solving competencies in ways a team leader can facilitate. It was developed for Teleflex and CME by Tracy Defoe, a widely known workplace learning specialist who continues to deliver the TeamTime facilitator's training across Canada.

The photo above is from the TeamTime module, *What is a Storyboard?*

TeamTime continued to 2006 evolving with the needs of the workplace and the people, many of whom lead and even

developed training for Training Day. By this time LEAN Manufacturing (Toyota Production System) was becoming well known — Especially tools such as 5-S, Value Stream Mapping or Kaizen, which is a systematic form of accelerated process improvement.

2006 — Enter the employee-initiated Kaizen Club

The timing and culture were good when a shop floor employee asked if he could start a club for people who wanted to learn more, especially more about Continuous Improvement. There was immediate interest from his peers — and management gave it immediate support. The Kaizen Club charter cites it as a way to grow a grassroots culture of learning. The ideas came quickly — the club meets outside of work hours as a learning group where everyone is welcome. The club takes time to read or follow up the discovery of something unforeseen — there is plenty of time to investigate it and learn from it without a deadline. Wherever possible, members take leadership roles.

Management support from the beginning provided a champion, the services of the adult educator, encouragement, access to space, books and learning materials, project tools, etc. Participation was totally voluntary and to this day continues to focus on 'rubber-hits-the-road' fixing and learning — all outside of working hours on straight time pay. For just under a decade there has been a flow of Kaizen Club learners cycling in and out. At SeaStar Solutions a fairly constant number of about 20–30 employees are involved in the two Clubs. While the largest number are from the shop floor, anyone who wants to learn can join.

Over the years, with so many employees taking advantage of the experience — the entire plant knows, supports, and respects the Kaizen Club. **All in all, from ATJ's point of view this is a learning best practice — and second to none in growing an increasingly integrated the workforce.** It brings a new understanding of how to grow a **culture with learning and innovation at every level.**

Here is how it works

The Kaizen Club at SeaStar Solutions has two groups — one for the day shift, and one for the afternoon shift. Club membership has consistently been between 20–30 employees. Continuous Improvement Manager Mark Ellens and

adult educator Tracy Defoe, provide help and support to both Kaizen Clubs at SeaStar Solutions. They are facilitators in **every** sense of the word.

Kaizen Club meets every other Wednesday. For the Day shift, which ends at 3pm, Kaizen Clubbers continue to 5 pm. Afternoon shift members come in early for a 1 to 3 pm time slot before their shift begins. SeaStar pays straight time to club members for those hours.

Learning is the vision. Mark works with the Kaizen Club "because it's really fun, and it makes a difference", he chuckles. He brings his valuable engineering and product knowledge for the Club to draw upon. Tracy brings a passionate learning and team skills background and is probably best known across the country for her development of TeamTime, a program that develops effective learners and teams at all levels. "I try not to miss a single Kaizen Club meeting. Helping people grow their skills is the best," Tracy says.

"It is fun and rewarding to identify, understand, and solve real problems. Both the process and the results are deeply satisfying. It is a win-win for the company and the individual."

Mark Ellens, CI Manager

Supervisors and managers clearly recognize the value of the Club and now

check periodically to see if they could use the Club's help to solve a nagging and annoying operations problem. While these too can be fun — and offer a great live experience — the Club members, in consultation with Mark and Tracy, will decide if it can be managed.

There is rarely a shortage of project ideas. To get new projects, manufacturing supervisors regularly approach Mark with project ideas and often he will approach manufacturing cell leaders and ask the question **"If you had 8 hours without interruptions what improvement would you work on?"** Those lower priority projects are great for Kaizen Club, though over the years they have also helped on some big improvements too.

The key approach to problem solving at SeaStar

In LEAN companies, from the smallest to some of the huge steel companies we've seen, there is much value in having a common process for attacking problems no matter what the level in the company might be. In LEAN, it is PDCA, a cycle that consists of Plan → Do → Check/ Study → Act. When in place it provides a common process that everyone can relate to regardless of the complexity of the problem or the kind of tools used. Leading companies who see the value of accelerating their journey to World Class will adopt PDCA and apply it to everything they do (even at home). Cutting edge folks will make it, or a similar routine, into **their own problem-solving KATA.** This means the routine is practised until it is so familiar it becomes a habit that's automatically and instantaneously applied — thus freeing up more time to think about better and more innovative solutions.

Like leading companies, SeaStar has developed a similar process to suit their own culture and environment. Below is the Problem Solving Process they apply to just about everything which can be used at every workforce level.



The SeaStar problem-solving process

To reiterate, companies wanting to build-in continuous improvement and process innovation into every level in their organization, know the value to be gained from a common problem-solving discipline. That benefit, in addition to the communication teaming skills we see at SeaStar, becomes a potent problem-solving weapon. So to move a selected problem-solving process up to a more powerful one, just think of martial arts — or, of the training required to prepare for the Olympics. It is a matter of practicing the routine until it is instinctive. In fact, it becomes another KATA routine in your arsenal. The sheet beside the Problem Solving Process to the right is one of many worksheets they use to find their answers.

Problem Solving Process

- 1. Problem Definition - do with several people**
 - Agree on the "undesirable" outcome and potential consequences
 - Agree on the "desired" outcome – what is reasonable versus ideal?
 - Business Impact (high, med, low) vs Difficulty (easy, med, hard)
- 2. Identify Probable Causes**
 - Brainstorm & Rank with "5 Whys" and/or "Fishbone" – go get data
 - Review the data and vote the Top 3 most probable causes
 - Top 3 causes: Accused for all relevant data? Simple? Probable?
- 3. Find Root Causes**
 - Formal Data Collection: Talk to people from assembly, machining, material handling, engineering, quality, purchasing. Watch the process, inspect parts. Review metrics, run charts, standardized work, drawings, tolerance stack-ups, test data, warranty
 - Setup and Collect New Data: as needed
 - Analyze Data: assess data to prove or disprove probable causes
 - Verify: test potential root causes at nominal and limits
 - If you can't verify root causes, brainstorm a new list
- 4. Develop & Implement Solutions**
 - Determine scope: Repair vs Refinement vs Overhaul vs Redesign
 - Create a plan: plus identify potential issues and how to avoid them
 - Have you prevented: "The last time we solved this problem..."
- 5. Audit and Sustain**
 - Verify that the improvements are effective and sustained

Kaizen Club Activities



Their approach to across-the-workforce education and growth is exemplary.

SeaStar employees are clear on their positive feelings about the Kaizen Club. As one member put it: "The more you learn, the more you apply it, and the more you get involved. Solving problems strengthens all of our learning skills."

How does management see the Kaizen Club? SeaStar Solutions Vice President and General Manager, Eric Fetchko, expresses it this way:

"Continuous improvement is critical to ensuring our manufacturing stays in Canada. Intellectual property in engineering and on the shop floor prevents our products from becoming

commodities. The Kaizen Club is a paid venture outside of production time filled with people who want to have their ideas heard and implemented. The Club has helped by delivering real and substantial results. I completely support our Kaizen Club."
Eric Fetchko, Vice President, General Manager

As we move into the uncertain economy ahead, the companies who investigate, support and put in place both Continuous Improvement and Innovation thinking at every level will see solid value for their investment. Our thanks go to CME member SeaStar Solutions for sharing their best practices with the ATJ eNewsletter. 🙌

The Last Word

ATJ salutes SeaStar Solutions for sharing their approach to evolving a constantly learning and problem-solving integrated workforce. This is still a dream for so many companies across North America. What has been achieved moves SeaStar closer to accelerating both continuous improvement and process innovation even more in today's competitive world.

