



Overview:

When the manufacturing lead-time is equal to the shipping lead-time your customer requires – theoretically, **0 warehouse inventory is required**. Thus, your ability to meet this shipping interval is a critical Lean metric and begins EPE discussions.

So what prevents this from occurring? OEE calculations help us understand what the major obstacles are, but change over typically is a big culprit. What is a good change over time? The answer is quite simple: **one that is so short that it's insignificant**. Short change overs are essential in a Lean process.

The analysis:

“A problem that is well described – is a problem half-solved.”

Not many practitioners would argue with this statement, but unfortunately, most don't realize missed opportunities because 'traditional' approaches to measuring changeovers is poor – extremely poor – in quantifying task durations.

In our years of experience doing SMED Kaizen events the *analysis* portion typically takes 3 – 4 times the length of the change over. That is, if the equipment change over is 1.5 hours in duration then generally the analysis portion requires 4.5 – 6 hours of time. The analysis generally involves typing in a lot of time observations into Excel (e.g. – time study), graphing the work elements and then finally change begins. With that much effort & work – could the analysis be flawed?

Isn't there a better approach to SMED Kaizen?

Who Should Attend
<ul style="list-style-type: none"> • Supervisors • Lean Practitioners • Six Sigma Belts • Continuous Improvement (CI) Practitioners

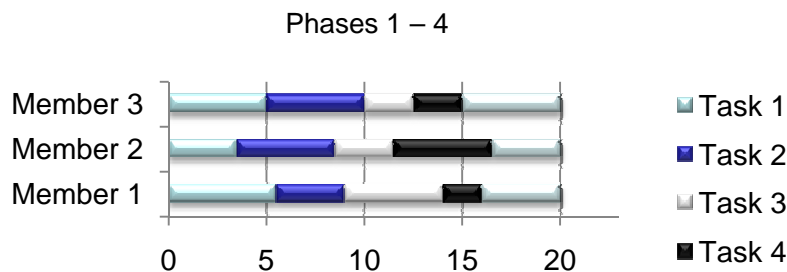
<p><u>Location / Duration:</u></p> <p>On site at your location – 10 days</p> <p><u>Other Specifics:</u></p> <p>Team size 12 – 16 participants</p>



We use Morae software. Morae allows the overall analysis to be done in 3 – 4 less time; when you have a team of Kaizen members ‘on the clock’ this time savings is important. More accurate than manual methods? Are you kidding?



Morae allows us to tap the intellect of the team by breaking the group into several small groups and having teams analyze the video placing both tasks & markers. Want more information? Contact us for a webinar demo!



Data!

1. Quantify waste & action items
2. Overall team tasks (phases)
3. Work content for each team member

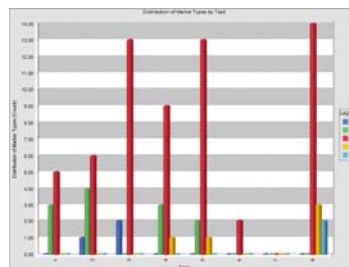
- Data quantified & graphed within Morae

Waste Categories:

By now you’ve likely heard of the 8 wastes: Question: who cares what the category is? Isn’t a better question – what are we going to do about it?

In our analysis we *quantify* the total time for wastes that we observe, but instead of coding the waste category, we record what the associated action should be to resolve it. Some standard categories we use are:

- I-information handling
- M - materials
- P – people (teamwork opportunities)
- Q - equipment
- T – tools



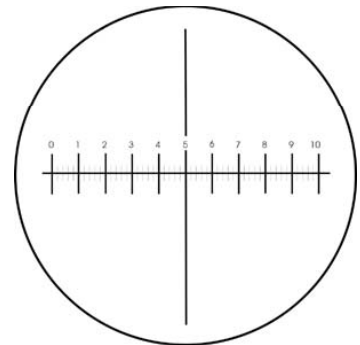
What do we do?
This chart tells us what action items to attack.

A Kaizen Story “Silver Bullets” (4th Quarter, 2005. Tullamore, Ireland)

Our team was immersed in the SMED data analysis and were growing frustrated as we looked at the improvement prospects. “Base hits – base hits, it’s all about base hits,” I said. “Don’t worry about looking for silver bullets – let’s just make a lot of steady improvements and the results will take care of themselves.”

Aidan had made a lot of trips to the lab during the change over and as we begin to ask why, it was learned that he was making measurements between each of his adjustments. Jeremy quipped, “have you tried using a calibrated eye piece for that inspection?” After some team discussion we determined that we should give it a try.

As an expert change agent I asked, “OK, where can we quickly get and trial an eye piece?” Jeremy pulled an eye piece from his briefcase and said, “how about this one?” Being both excited, but also confused, I asked “Jeremy, why do you have an eyepiece in your (travel) briefcase?” “I thought we might need it on this Kaizen event” he replied.



Again, being seasoned in continuous change, I quickly replied “Jeremy, what else do you have in your briefcase?”

