The Importance of a Continuous Improvement Strategy

Most organisations understand the importance of Strategy and spend considerable time developing and refining their Business Strategy, however often what gets breezed over, or just buried within the Business Strategy, is the Continuous Improvement Strategy, resulting in improvement activities that lack alignment and holistic effectiveness.

Just thinking about strategy, Strategy is a term originally from the military and there are many examples of great military strategy that have won the battle.

For example, when Britain were faced with possible invasion by the Germans during world war 2 they needed a strategy to stop the invasion. There strategy had 3 key parts:

1. Develop the best bomber squadrons so they can bomb the airfields in France to make it difficult for the German Air Force to come;

2. Develop the best RADAR so when they do come, they know they are coming; and

3. Develop the best fighter squadrons so they can shoot the German Bombers out of the sky before they get to the coast line.

Behind these 3 key parts were very good tactics and action plans to allow the strategy to be successfully executed recognising that all 3 key parts are interlinked. For example, without RADAR their fighters could waste a lot of valuable fuel and range in finding the enemy. By bombing the airfields in France, the German bombers had to come from further a field and had less coverage by their fighters making it easier for the British fighters – the Spitfires.

Business is the same, we need the right parts to our Business Strategy and Continuous Improvement Strategy if we are to win the battle against our competitors.

So, what are the 3 key parts of a Continuous Improvement Strategy that we need to focus on to win?

We believe they are:

1. **Reactive Improvement** – when things go wrong, how quickly can we get back to Budget or Expectation and most importantly, stop it happening again.

2. **Pro-active Improvement** – how do we increase our capability from our current performance by reducing or eliminating losses and waste, whether it be through technology, projects & events or on-going improvement, so as to reduce our cost base, improve productivity and ensure a safe and risk free workplace.

3. **Stable Production Plan through Flow Logic** – how do we stop the hidden cost of fire-fighting throughout the supply chain every time the production plan changes while enhancing our customer service through shorter lead times and perfect delivery performance.

3 Key Parts to a Continuous Improvement Strategy
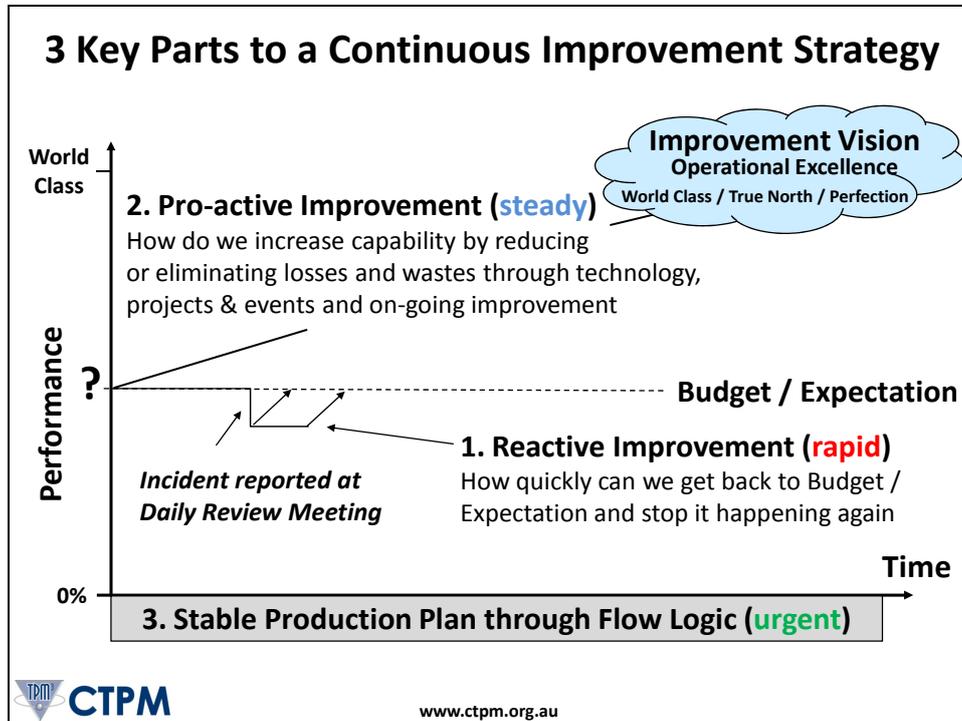
Like the Battle of Britain all 3 key parts are interlinked.

For example: *When Pro-active Improvement is successful, then the need for Reactive Improvement should significantly reduce, however if Reactive Improvement or Stability is poor, you may struggle to find time for Pro-active Improvement.*

Hence all 3 key parts need to work in concert.

Sadly, many organisations either don't have a well thought out Continuous Improvement Strategy or only focus on 1 or 2 parts mentioned, and even then not in a holistic way often resulting in their efforts not being fully rewarded or sustained.

1. Reactive Improvement
Assisting sites to enhance their Daily Management practices and processes

Reactive Improvement is about developing our capability of rapidly reacting to the root causes of events in the workplace that stop us from achieving our expected performance or the standards we have set for our operation.

In other words, when things go wrong, how quickly or rapidly can we get back to Budget or Expectation and most importantly, stop it from happening again anywhere across the organisation.

If Daily Management is poorly done, your people, especially your Frontline Leaders may struggle to find time for Pro-active Improvement, as everyone is too busy fire-fighting day to day problems that keep re-occurring.

So what does Reactive Improvement focus on?

There are 6 Key Elements of Reactive Improvement that need to work in concert for effective Daily Management:

1. **Appropriate Measures** with expected targets that are linked to the site's Key Success Factors for Operations to ensure Goal Alignment, and are relevant for the area being focused on;

2. **Right Structure** to support development of your people so they have ownership and accountability for the performance of their area of responsibility;

3. **Daily Review Meetings** to identify opportunities (problems / incidents) and monitor progress of their solution;

4. **Information Centres** that visually display daily and trending performance along with monitoring of actions to address issues / problems raised;

5. **Root Cause Analysis / Frontline Problem Solving** capability across the site; and

6. **Rapid Sharing of Learning** across shifts and across the site.

Thinking about your current daily management practices, where would you place them in relation to below:

Daily Review Meetings	
Held just to comply with policy and gather data to feed up the line	Focused on making sure your frontline leaders are getting the support they need to ensure the production plan is achieved each day to the required standard
Display of Current Performance and Issues	
People have to search through screens of information to get an understanding of the real situation	Information boards used to allow everyone to see at a glance where the problems are, and what is being done about them
Root Cause Analysis / Frontline Problem Solving	
Only support staff or leaders have Root Cause Analysis problem solving skills, with Root Cause Analysis initiated at Daily Review Meetings when deemed necessary, and often in an ad-hoc manner rarely done to any consistent standard	Developed the Root Cause Analysis problem solving skills of all your frontline people so that if there is an incident that triggers a root cause analysis, they commence the root cause analysis before the daily review meeting rather than wait for someone to tell them to do it

If your site is more to the left than the right of the table above, we would suggest you seriously consider applying Reactive Improvement so as to create Effective Daily Management to ensure you have the time for Pro-active Improvement so that opportunities for improvement are not being missed and your workforce is not spending most of their time fire-fighting problems that keep coming back.

2. Pro-active Improvement
Assisting sites to achieve their Improvement Vision

An Improvement Vision should spell out what you are trying to achieve in measurable terms and by when. For example, in 5 years time we will:

1. Achieve world class performance for all our key success factors for operations;

2. Have all our people engaged at least 10% of their normal work time in strategically driven on-going continuous improvement activities; and

3. Be externally verified for these achievements.

Once the Improvement Vision is established, we need to develop the right thinking, actions and solutions to achieve the Improvement Vision.

Pro-active Improvement can be divided into 3 key categories of solutions:

1. **Technology & Automation:** involving new equipment and new systems.

2. **Projects & Events:** involving capital projects, 6 sigma projects, and Kaizen Events.

3. **People Development through On-going Continuous Improvement:** involving focusing on developing all people, especially those at the frontline, to identify and address problems at the earliest possible time while creating a workplace that stops problems from occurring.

Most organisations focus on the more traditional first 2 categories, with the third category, involving the engagement of the entire workforce, often given little, if any focus.

However, we find it is the sites that are good at category 3 - **People Development through On-going Continuous Improvement** - that perform the best.

Most companies create or adopt a model for their Continuous Improvement journey. We have seen many examples, especially those framed around a 'House' or a 'Parthenon', however a common concern is that they tend to consist of a lot of standalone methods or tools, rather than explaining the new thinking required.

We have found the Development of Lean Thinking model recently developed by Modig and Ahlstrom in Sweden and published in their book 'This is Lean' to be very helpful in assisting people to better understand where all the parts of the Improvement Journey fit together.

Development of Lean Thinking

Values	**Company Values**
Principles	Operator Reliability TPM · Lead Time Reduction & FLOW · Automated Quality & *Visual Mgmt* · Employee Engagement
Methods	5S ↔ SMED ↔ Pull ↔ Error Proof ↔ Std Work ↔ SPC ↔ RCA ↔
Tools	★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
Activities & Focus	Cross-functional Teams ↔ Area Based Teams ↔ Projects ↔ Events ↔ / Production ↔ Production Support ↔ Value Streams ↔ People Dev ↔

Adapted from: This is Lean: Niklas Modig and Par Ahlstrom – Sweden 2015

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They start with:

Company Values which define how an organisation should *behave*

then

Principles which define how an organisation should *think*

then

Methods which define what an organisation should *do*
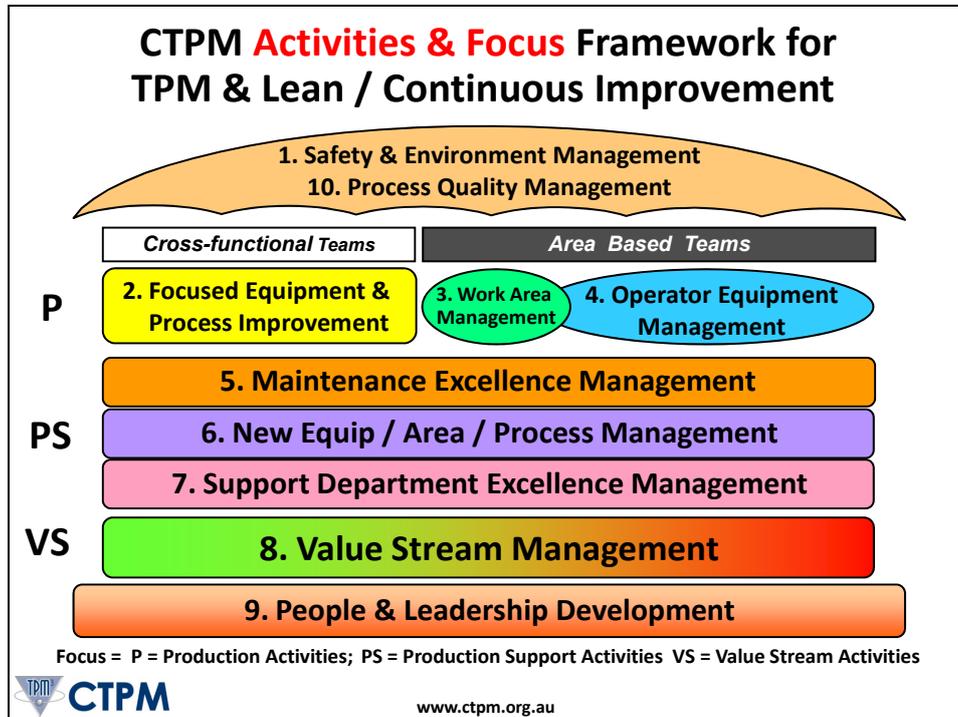
then

Tools which define what an organisation should *have*

and finally, and what we believe most importantly

Activities & Focus which define how methods are *realised*

At CTPM we have taken the **Activities & Focus** aspects and created a framework to allow the principles, methods and tools to be applied in a structured way.

CTPM Activities & Focus Framework for TPM & Lean / Continuous Improvement

1. Safety & Environment Management
10. Process Quality Management

Cross-functional Teams | *Area Based Teams*

P
2. Focused Equipment & Process Improvement
3. Work Area Management
4. Operator Equipment Management

5. Maintenance Excellence Management

PS
6. New Equip / Area / Process Management
7. Support Department Excellence Management

VS
8. Value Stream Management

9. People & Leadership Development

Focus = P = Production Activities; PS = Production Support Activities VS = Value Stream Activities

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Our framework has the 3 main focuses of Production Activities, Production Support Activities and Value Stream Activities.

Most sites following our framework start with initial pilot areas that have the biggest impact on site performance, then progressively cascade across the site at a rate that will allow them to achieve their Improvement Vision.

Sadly, many organisations don't have effective Pro-active Improvement capability. Too often we find only a few methods and tools being applied by a group of improvement specialists and little on-going involvement of the workforce. For example, sites will focus on an area and make some gains then move onto another area only to have the original area fall back to the old ways.

This results in opportunities being missed, and a workforce that has improvement turned on and off rather than being an on-going part of their normal work.

3. Stable Production Plan through Flow Logic
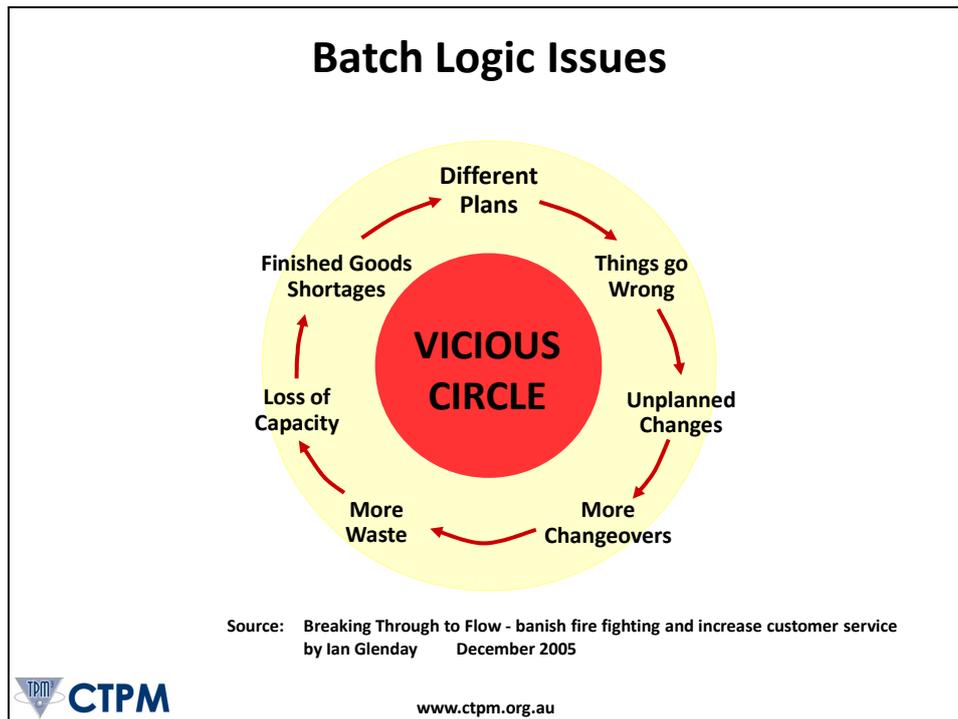*Underpin and enhance both Reactive Improvement and Pro-active Improvement*

Every time the weekly, or more importantly, the daily production plan changes, wasteful and expensive disruption occurs which then limits people's time for Continuous Improvement activities.

Some sites become very good at adjusting to the changing demands on production, and develop very good 'fire-fighting' skills to address shortages or changes to schedules. It becomes the normal way of doing things rather than seen as a problem or deviation that needs to be flagged, so that a root cause analysis can be conducted to stop it from happening again.
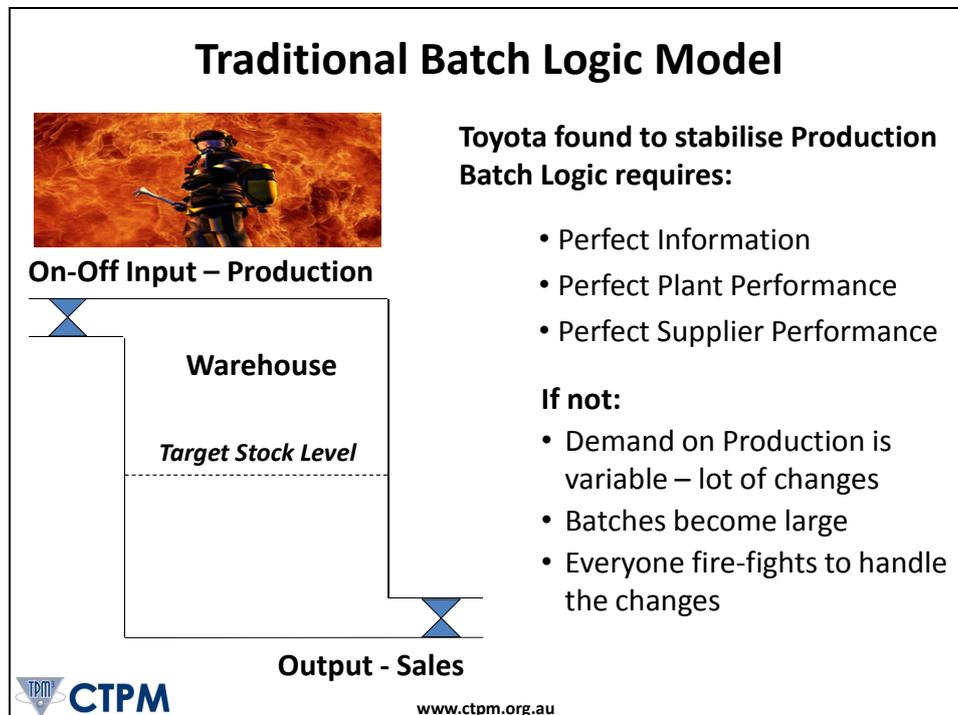
So why does this occur?

Traditional Production Planning & Scheduling is based on Batch Logic and Economic Order Quantity. For example, all MRPII (Materials Resource Planning) and ERP (Enterprise Resource Planning) scheduling systems use Batch Logic and Economic Order Quantities to generate production plans or schedules.

Batch Logic uses target stock figures to calculate what is required to be produced or delivered. If the underlying data has changed since the last plan was calculated, then one gets a different result and a different plan.

Batch Logic Issues

Different Plans

Finished Goods Shortages

Things go Wrong

VICIOUS CIRCLE

Loss of Capacity

Unplanned Changes

More Waste

More Changeovers

Source: **Breaking Through to Flow - banish fire fighting and increase customer service by Ian Glenday   December 2005**

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Toyota found that Batch Logic required perfect information, perfect plant performance, and perfect supplier performance otherwise they were forever adjusting their production plans and schedules.

Traditional Batch Logic Model

On-Off Input – Production

Warehouse

Target Stock Level

Output - Sales

Toyota found to stabilise Production Batch Logic requires:

- Perfect Information
- Perfect Plant Performance
- Perfect Supplier Performance

If not:
- Demand on Production is variable – lot of changes
- Batches become large
- Everyone fire-fights to handle the changes

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Moving from Batch Logic thinking to Flow Logic means rather than focusing on *improving* how production scheduling is currently done, Flow Logic *changes* the way it is done.

Flow is the foundation of the Toyota Production System, as it was the only way Toyota could stop the '**fire-fighting**' in their plants and supply chains to allow more time to be devoted to on-going Continuous Improvement.

Flow Logic is different from traditional Batch Logic so it requires a change of thinking regarding the Production Planning process. As such this is best done by a Cross-functional Team to ensure buy-in of the key players.

Flow Logic is typically a 5 stage process with stage 1 aiming to achieve a Stable Production Plan for about 50% of the volume of production recognising, according to the Glenday Sieve, about 6% of your SKUs will typically make up 50% of the volume.
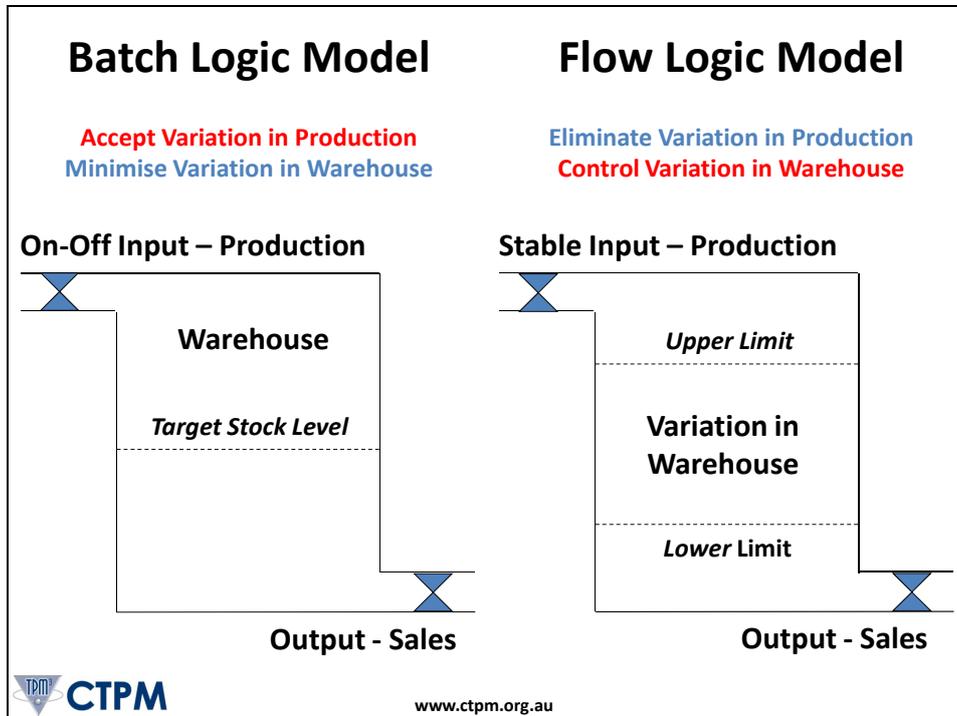
This approach is about taking the variation in demand out of the production area and moving it into the warehouse recognising in most cases the 6% SKUs typically have the lowest % variation in demand.

By having a fixed schedule for say the first 2 days of each week, you not only have stability to allow regular Continuous Improvement activities, but you also gain by the Economies of Repetition.
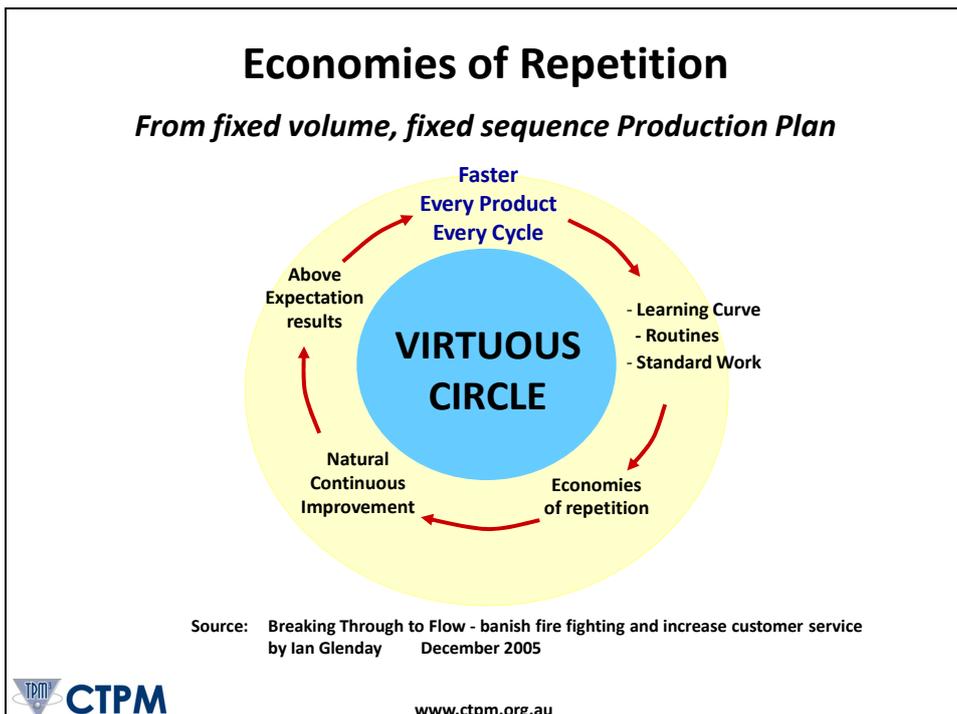
Sadly, many organisations don't have a Stable Production Plan often resulting in people being distracted by unexpected changes then not being available for their regular Continuous Improvement team activities causing disruption and delays to their team's improvement goals.

Call to Action

The Site Management Team should reflect on this article, then if they haven't already created their Continuous Improvement Strategy and Improvement Vision, do so, then map out an appropriate Improvement Plan identifying what needs to be done regarding Reactive Improvement, Pro-active Improvement and Stabilising the Production Plan through Flow Logic.

Thought should also be given to how the plan will be monitored eg 1 hour weekly meetings and reflected upon eg 3-4 monthly review and planning sessions.

If a Continuous Improvement Strategy is important to your business and you need help or would like more information about CTPM's approach, please contact Ross Kennedy on +61 2 4226 6184; or email: ross.kennedy@ctpm.org.au; or visit CTPM's web page at: www.ctpm.org.au