

BREAKTHROUGH

Lean Implementation & Training Resource Publication
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SYSTEM PRESSURE

By Michael Lewis

TURNING UP THE PRESSURE

Most of us have experienced that, before going on a trip, we can get the Inbox emptied, the Outbox filled and the post trip recovery plan implemented before the day ends. Why? Pressure. When the order is due yesterday, and somebody is screaming into our ear on the phone, we get the order shipped today. Why? Pressure. Pressure motivates people, to move, to act, to decide.

The immediate response to pressure, in many organizations, is to release it. They allow additional overtime, add a shift, hire additional manpower, purchase capital equipment, or over-spend budgeted amounts. When the pressure is released, everyone relaxes, "ah, we fixed it." Releasing the pressure just sets the cycle in motion again. Soon additional pressures will require more pressure reducing responses to lower the pressure again. A recurring reactive response to pressure is a symptom of a system that does not correct problems.

Stress and pressure are not new to business. An organization that learns how to use pressure as a competitive advantage can overcome seemingly insurmountable obstacles. Within the Lean toolkit are several pressure releasing and pressure causing tools. Let's look at a few pressure releasing tools first.

PRESSURE RELEASE

- **Organizational alignment** using a process called Hoshin Kanri (strategic improvement strategy) reduces the pressure of conflicting goals, unclear roles & responsibilities, and divided resources.
- **A problem-response plan** can relieve system pressure. When a problem occurs there needs to be a way to communicate the problem details and recommended countermeasures to a person or group that will have responsibility to fix the problem. As part of the problem response plan a problem-escalation procedure will allow increasing pressure to travel up the chain of command to a management level that can effectively release the pressure, preventing it from getting out into the system where it will disrupt other activities. A robust root cause identification and countermeasure implementation plan will also continually reduce system pressure.

CREATING PRESSURE

Next, as we consider pressure-causing tools, keep in mind that intentionally creating pressure is also a Lean tool. Actually, all Lean methodologies are designed to create pressure on one or more systems. This may sound strange, but by looking at a few Lean tools it will become clear how these tools act to create system pressure.

- **Visual management** is foundational to Lean. Visibility is pressure. Our performance changes when people are watching. Goals should be visual, and displayed in prominent locations. Targets should be reviewed frequently. Missed targets or goals should have countermeasures and responsibilities posted for review by management and operators.

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CREATING PRESSURE, cont'd

- **One piece flow** creates pressure. The loss of production due to line stops becomes evident very quickly. In the absence of one piece flow the takt time of a line or process creates the expectation for a specific demand rate to be achieved. Line stops and production shortages create pressure points to focus on for problem solving.
- The cash benefits of **low inventory** levels are well known, and so are the pressures to operate at lower inventory levels.
- **A future state Value Stream Map (VSM)** with an accompanying action plan and milestone completion dates creates pressure to meet those targets. A current state VSM does not create pressure.
- **Identifying non-value adding activity** within a system creates pressure in a Lean Culture to eliminate the waste or make it value adding.

The presence of pressure on a system can be used to make the system more pressure resistant and able to respond more quickly to pressure changes. A system designed for constant pressure, is a system that will focus people on solving the problems that cause the pressure changes. The key is constant pressure with mechanisms to release the pressure spikes so the whole system remains stable. A system that is allowed to avoid pressure changes is a weak vessel.

Are you at a boiling point? Do you know when to add pressure or release it in order to lead your operation effectively? Let LMSPI help keep you from blowing a gasket.

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We will continue next month with a new article that addresses "When Waste Reduction Isn't The Right Focus for Lean."