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LEAN THOUGHTS

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Process Problem Solving

Recently we participated in a conference where we were able to make an aquaintence with Gary Hopkins. Gary works with "Slip Stream Software". It is always a challenge to balance the desire to share information without making it sound like a sales pitch … with that in mind Gary has submitted the following article. I also suggest that if you are in a process oriented environment you may want to contact Gary for more information about his software capability. You can do Lean … but you also need to incorporate formal problem solving to truly leverage Enterprise Excellence.

Using root cause analysis in your process improvement program

Many of today's manufacturers who have a complex production process (power, chemicals, pulp and paper, semi-conductors, bio/pharma, metals and mining) are under even more pressure to find their productions problems as quickly as possible. For these types of manufacturers an hour of down time can run from $20,000.00 to well over $100,000.00 per hour! If you are a typical plant you may have from 4 to 10 hours of downtime a month. Even at 4 hours a month x $20,000.00 this equals to $960,000 a year in lost profit.

More and more of these manufacturers are turning to root cause analysis to get to the heart of their problems. Most of the tools used by manufacturers today (whether manual or fully automated) assume you have a direct one to one ratio of problem to solution. If you are a chemical plant as an example, one instrument in your process can be impacted by up to 25 other variables (think of power, other instruments, changes in your recipe etc.). You are now looking for over 390,000 permutations to one problem!

Most customers today are using the process of looking at plant information and thus their process as serial. If X happens and alarm A occurred right before X, then the problem is Y. But what these customers fail to take into account, is that there are processes that can impact you both up and down stream to your problem. If you fail to see that a process or instrument caused a problem up or down stream then you have not really fixed the problem.

A software approach to root cause analysis can tell you instantly what process variables are truly related to each other. This eliminates the need for you the user to hunt and guess on what is truly driving your production. This same software based approach allows you the manufacturer to see and understand and thus fix what is truly causing your production bottlenecks. By using a software approach to solving these problems your plant will save time (how many times have you met in committees for hours to try and solve a process production problem and still had quality or production issues,) and money (every hour of down time you can prevent goes to your monthly bottom line, every hour you are not meeting as a committee you can be doing other productive things in your plant). Manufacturers who are using a software approach to root cause analytics save on average 4 to 8 hours of production time each and every month!

Customers can start the process of using root cause analysis by doing some very simple things.

-Map your complete process, understand what really drives and impacts it. A typical manufacturer today only knows 50 to 60% of the complete variables that make or break their production process.

LEAN CONSORTIUM MEMBERS:

- ACE Bakery
- Alumicor
- CGL
- CTS Canada
- EATON Cutler Hammer
- KRAFT
- LA-Z-BOY- Residential
- MESSIER-DOWTY
- MORRISON LAMOTHE
- ORENDA
- NESTLE WATERS CANADA

Where "Lean Thoughts" Become Reality

-There are both manual and fully automated ways to track this process, make use of them

-If you have a plant historian in place start to do your analysis on the data you have already collected. If you do not have an historian give serious consideration to installing one.

By understanding what truly drives your production you will gain more domain knowledge. More domain knowledge will ensure you know your process inside and out. And by using root cause analytics as part of your improvement program you will be able to continue to make marked improvement to your bottom line.

To see how a customer used a software based root cause analysis package to discover problems that occurred upstream please read the attached customer case study.

Gary Hopkins
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Global IQ Quiz

Below are some questions that appeared in the global IQ quiz that appeared in Richard McCormack's newsletter, **Manufacturing & Technology News**.

Q: Which country is the world's largest producer of small commercial jets of up to 120 seats?
1. France
2. India
3. Russia
4. Brazil
5. Korea

Brazil's Embraer jets have revolutionized the small aircraft business with products so successful that they have a $15-billion order backlog to prove it. The company's success is not just based on low-cost labor: Embraer has proved ingenious at design, responsive to customers and formidable at competing in international markets. Its most daring initiative was the ERJ145 family of jets, which turned conventional design on its head, by making the top of the plane wider than the bottom — increasing passenger room and comfort. (Answer: 4)

Contact me if you need coaching or facilitation help in the areas such as but not limited to; 5S, Value Stream Mapping, Set-up Reduction, Problem Solving or Policy Deployment and Consortium Development

KUNST
Art Of Solutions

Q: Chinese baby goods maker Goodbaby innovates at the rate of one new product development every ____ hours.
1. 12
2. 24
3. 36
4. 48

Since its founding in 1990, Goodbaby has put a premium on innovation and rapid-fire inventing. The company got its start when the founder had so many competing bids to buy his new stroller design that he decided to start a company and build it himself. Since then, the company has grabbed 80 percent of the Chinese stroller market, as well as a 25 percent share of the U.S. market. Goodbaby spends 4 percent of revenue every year on R&D — well above average for the toy industry. It operates R&D centers in China, Germany, France, the UK, the U.S. and Japan. An estimated 400 million households worldwide use its products. (Answer: 1)

Q: An upstart appliance manufacturer in Asia has designed a clothes washer for the Chinese market that also does what?
1. Removes wrinkles
2. Steams rice
3. Dry cleans silk
4. Washes vegetables
5. Heats the kitchen

Repairmen for China-based appliance maker Haier were getting numerous calls to unclog the drain pipes on customers' clothes washer. They found that customers were using the machines to wash sweet potatoes. So Haier, knowing the importance of listening to its customers, customized its washers for that market by adding a "vegetable wash" cycle. (Answer: 4)

Q: Choose the correct order below of the total hours worked per year by white-collar workers in the following countries — from highest to lowest:
1. Poland, United States, Germany
2. United States, Poland, Germany
3. Poland, Germany, United States
4. Germany, Poland, United States

Poles work an average of 1,984 hours per year, compared to 1,777 for Americans and 1,362 for Germans. This fierce work ethic is visible across most fast-growing economies from emerging Europe to emerging Asia. For example, in China, many workers see part-time opportunities — like working as street vendors in the evenings and on days off — not just as a way to add to their incomes, but as a way of gaining valuable business experience should they want to start a company of their own. (Answer: 1)

Q: A typical, 100-person U.S.-based startup will burn through approximately $20 million in its first year. How much does a similar Chinese startup spend?
1. $31 million
2. $20 million
3. $10 million
4. $2.5 million

(Answer: 4)

2008 Consortium Event Schedule

T Tour W Workshop C Conference

January	February	March	April	May	June
T Wednesday 16 Eaton Electrical, contact Joe Fisher, JoeRFisher@eaton.com	T Wednesday 13, ACE Bakery, contact Cindy Grolleman, cgrolleman@acebakery.com	T Wednesday 19, Nestle Waters, contact Mariela Castano mcastano@perriergroup.com	C Consortium Shareshowcase Saturday 05 Eaton Milton. Contact Cindy Grolleman cgrolleman@acebakery.com or Joe Fisher JoeRFisher@eaton.com	T Wednesday 14, Alumicor, contact Barry Wood barry@Alumicor.com	T Wednesday 18, Morrison LaMothe, contact Tony Vita tvita@morrisonlamthe.com

July	August	September	October	November	December
		T Wednesday 24, Kraft Foods, contact Hanif Jivraj hjivraj@Kraft.com	T Wednesday 16, CTS Corp., contact Navneet Mann, navneet.mann@ac.ctscorp.com	T Wednesday 12, Messier-Dowty, contact Mike Smith Mike.Smith@Messier-dowty.on.ca	T Wednesday 10, Orenda, contact Brenda McIntosh brendamcintosh@orenda.com