

Fall 2008

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8 Upcoming Events

HeadRoom Amplifies Production and Net Profit

By Deborah Nash, MMEC

The sleeping giant has awakened!

Montana Manufacturing Center

HeadRoom Corporation in Bozeman measured an impressive 500 percent increase in net profit in the first six months of 2008 from efficiencies it has put into place, including Lean Manufacturing applications introduced by the Montana Manufacturing Extension Center.

A trailblazer in headphone amplifiers for 16 years, HeadRoom continued its sales growth in the first half of the year at about eight percent.

The entrepreneurial company's success is built on excelling in a niche market for people who love great sound quality and want it at home and on the go. Foundational to that is capturing the benefits of new technologies to advance its products and being so passionate in its customer relationships that its Web site is dedicated not only to sales but to "all things audio." The site includes selection guides, technical information, audio forums and other resources. For the interesting story about how HeadRoom got its start, visit its Web site http://www.headphone.com.

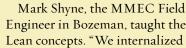
Today, HeadRoom has 20 full-time employees and does approximately \$4 million dollars worth of headphone-related business each year. Management is committed to providing its employees with a comfortable, secure workplace and empowering them to achieve in ways that benefit them and the company. Most recently it embraced Lean

Manufacturing to try to simplify what has become a very complex business.

University Technical Assistance Program

The Awakening

The recent increase in net profit is much broader than manufacturing efficiencies, said Tyll Hertsens, CEO and founder of the audiophile paradise. "Lots of it has to do with us waking up as a company."



them, and that makes us different than we were before," he said. "It has changed us philosophically as a company."

HeadRoom is currently working to integrate its business management and workflow using an ERP system along with the newly found Lean culture.

Hertsens noted that while you wouldn't think so, "simplifying is hard. MMEC helps to simplify by introducing new tools. Mark comes in and says here's what it is; here's where it fits; here's how to use it. He is just a great guy to work with."



Mario Maltese, Head Room's Manufacturing Manager, is using Lean in a big way. He was basically empowered to take the manufacturing all apart and rebuild it when he moved from production to management a couple of years ago. When the whole team took part in the Lean workshop early this year, "it became blatantly obvious what I needed to do," he said. Prior to that time he knew improvements were needed and had been

working to reduce a large accumulation of old raw materials. Lean gave him the knowledge to integrate changes and engage the staff.

Raw materials inventory has been reduced by more than \$100,000 and reorganized into labeled bins and easily accessed shelving located adjacent to work areas. This has made picking materials much more efficient. Kits then go to nearby shelving units dedicated to WIP (work in process). Simple kanban labels and a visual "fill a hole" approach has replaced arduous scheduling that used to gobble up much of the manufacturing manager's workday.



Mario Maltese demonstrates the reorganized kanbans, kits and "fill a hole" visual trigger.

Maltese said where he used to spend a good part of every day scheduling work, he hasn't had to in four months, with the exception of a few high-priority jobs. Using kanbans on WIP shelving, employees just "fill the holes" where kits have been

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Financial Crisis... You Are the Solution [Your Future Is at Stake]



The current economic "crisis" and shift in U. S. leadership leave business leaders uncertain about how to best position their companies. My advice? Let's do what we do best: Roll up our sleeves and get to work on improvements. More importantly, let's do things to position manufacturing for better times.

I find it interesting that little debate took place about investing hundreds of billions of dollars to "rescue" the financial industry...yet, as this is being written a huge debate continues about \$25 billion for the automotive manufacturing industry. More than any other sector, manufacturing is an

One way we...can help create a more stable and predictable future is to influence economic policy during its formative stage.

engine of economic growth: an additional \$1.37 of activity for every dollar in manufacturing goods, according to the National Association of Manufacturers (NAM).

In general, I don't agree with the philosophy of rescue plans, especially when they reward poor management, because they threaten our long-term national interests. And here's why.

Business takes risks hoping for a return. Well run businesses manage the risks to avoid the failure of the company when things don't turn out as they hoped. It shouldn't come as a surprise that we see business failures from time to time. In fact, our bankruptcy system is designed to give a business protection and oversight for a period of time so it can restructure and recover when too many things go wrong. Rewarding poor management perpetuates it, to our detriment. Worse, providing an out for

poor decisions, – eliminating risk – at the expense of taxpayers, incents poor management practices and destroys free markets.

The economy will change in unpredictable ways in the short time between my writing and your reading this article. Perhaps things will be more clear, but as of now things seem out of control...chaotic. The causes and results of the economic situation will be discussed extensively. But the manufacturing business community needs to step out and lead the way to a more desirable and stable future.

If at all possible, use the downturn to improve your own internal processes, increase efficiency, and eliminate waste. Task key staff with projects that will position you to capture market share and to penetrate new markets when the economy picks up. In short, capture the opportunity that the current chaos offers to grow your future profits.

Creating a desirable future.

One of the ways we, as individuals and as a manufacturing community, can help create a more stable and predictable future is to influence economic policy during its formative stage. Demand accountability of our policy makers and leaders. There are literally dozens of ways you can participate in the policy discussion, and I encourage you take control of your future and become engaged. Consider joining one of a number of successful business support organizations including NAM, the U.S. Chamber of Commerce and the National Association of Independent Businesses. You can also give voice in Montana by joining the Montana Manufacturers Council within the Montana Chamber of Commerce. Become actively involved with them to be heard in Montana and in Washington D.C. on serious business policy issues. It takes citizen participation and commitment to empower such a council. The organizational infrastructure offered through

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HeadRoom (continued from cover)

completed and moved to the next stage. Simple kanbans in the form of sticky notes signal where materials are running low and need reordering.

Cells Speed Output

Several efficient manufacturing cells with point of use storage have been set up, most visibly the textiles department for sewing a variety of amp/player travel bags and accessories. It now takes

up half its former space and uses a "supermarket" of sub-assemblies stored in nearby tubs. Another cell has been organized for building the "bread and butter" products known as the Total AirHead and Total BitHead, which are miniaturized power amplifiers dedicated to headphones for portable players

portable players and computers respectively.

That room used to house three people and multiple processes including all thru-hole soldering and surface mount. It was extremely congested, Maltese said. Now it is organized as a product cell with point of use storage, comfortable space and the test equipment for the Air-Head and BitHead; one person handles the work in that space.

A small electronics build cell is adjacent to the WIP shelving where two people work on thru-hole soldering, surface mount finishing and final build. Maltese also proudly showed off the test room where bigger amps are tested and the electronics "burned in" to ensure stability and superb listening quality.

The room was previously piled high and somewhat impassible, he said. Now it's a serene, organized space to connect and monitor products before they are packaged and ready to sell; a further demonstration of Lean strides that have been achieved.

The new arrangements have been

easier on the employees. They can now pace themselves and don't have to seek him out for what to do next. The company's urethane molding technology lab to create and manufacture flexible rubber parts for bags and amplifier housings has also had some 5-S organization (sort, set in order, shine, standardize, sustain), and more Lean changes are ahead for that area, Maltese said.



Easy-to-reach point of use storage in the electronics build cell improves work environment.

Employee Viewpoint

"I'm one of the ones who took the class and have seen the light! It is a real eye opener," said Mike Olson, HeadRoom Service Manager. "The system almost runs itself."

He recalled a time when he would have to go to a separate storage room to get parts, searching and

pulling out various boxes looking for what he needed. Now, he said, "I'm able to do less to get the job done accurately and efficiently and can take on more tasks. I used to drown in work."

Because Head Room no longer orders parts in large quantities but at set trigger points, both Olson and Maltese admit some trepidation while they get comfortable with the change.

"But so far it's working," Maltese said.
"We never run out. We realize we can get by with much less inventory."

Standardizing Pays Off

Along the Lean path, Headroom has been standardizing product options as changing technologies have enabled the same high performance in smaller, less expensive models. The Desktop Amp line, for example, used to have 72 permutations, making it extremely difficult to keep any in stock. Now there are four selections.

Studying trends revealed the configurations customers like and order most. This enabled the elimination of some

raw materials inventory and the ability to stock more finished goods, which cut lead times from 2-3 weeks to 2-3 days if not instantaneous order fulfillment.

"It means customers don't have to think so hard about a myriad of options," Maltese said. With the same performance, fewer decisions, and quicker order fulfillment, customers are more willing to buy.

"Now we actually have Desktop Amps in stock, and they're selling like crazy. We never had that before," he said. "Always, in my four and one half years, we were trying to catch up [on the backlog of orders.]"

Other Impacts

The changes have been especially rewarding, Maltese said because the company can now handle new product releases more easily and add to the builds using reclaimed space. A few years previously, HeadRoom had thought it needed a new building.

Hertsens is very pleased with the new culture of Lean and obvious improvements to both productivity and bottom line. He noted that for manufacturers, especially in Montana, it is hard to find good advice but said MMEC offers that. "Now we have goals, well delineated goals. MMEC gives us a leg up as we begin to manage the business."

Like many entrepreneurial ventures that start with solving a problem, the excitement of the products and selling take precedence at first. Managing the "20 people that wear four hats each and juggle 16 things" comes later. "If you don't know it, how do you get the answers you need?" Hertsens asked. "MMEC woke us up to possibilities."

"Wise access to information and how to apply it is extraordinarily beneficial; invaluable," he said, adding that he has had a surprising amount of bad advice from other sources over the years. "MMEC is a touchstone to a growing understanding of how to do business. In this age of information, having government provide management infrastructure through information and the tools that give it meaning is more important than a tax break," he said.

4 Forward Focus

Have You Grown Profit Margin and Are You Having Fun?

Three simple but core questions set the tone that launched the sixth biennial Compete Smart Manufacturing Conference in Missoula in early October. Keynote Speaker Doug Hall asked 288 attendees at the opening luncheon,

"Have your profit margins grown in the last five to ten years?

If you lost your number one customer, would you survive?

And are you having fun (doing what you do)?"



Doug Hall

If the answer to any of those is no, companies need to take action today, he said.

Hall, is founder of Eureka! Ranch and considered the nation's number one growth expert by Inc. Magazine and other business publications. He delivered the keynote address at the conference co-hosted by the Montana Manufacturing Extension Center (MMEC) and NorthWestern Energy and supported the Montana

Chamber of Commerce, the Montana Department of Agriculture, First Interstate Bank, Montana Hydraulics, Sterling Savings Bank and other fine sponsors.

What separates winners from losers is having a system for innovation and growth, Hall said. Growing profit should not be random but achieved by using the scientific method set out by Dr. W. Edwards Deming in the continuous Plan-Do-Study-Act loop.

Using research data from Eureka! Ranch on company success factors and real examples, he explained what influences positive profit margin growth today and why it is important for companies to act.

Key Success Factor

A key success factor for growing new customers and markets is how well the marketing message conveys what's in it for the customer, why that customer should care and why he or she should believe it.

Again and again, Hall brought the message home that, "If you are not unique, you better be cheap." Companies with a pipeline of unique choices for growing profit do so at an average of 5.8 times faster than companies with few choices.

"Think smarter and more creatively about your production, current customers and current capabilities," he urged listeners. "Get back to the passion that started your business, your father's business, your grandfather's business."

New Commitment to Small Companies

Last year, Hall partnered with the NIST Manufacturing Extension Partnership (MEP) to help small to mid-size companies get back to that passion and take advantage of the systems being used successfully by large companies at Eureka! Ranch, where data on growth has been researched for more than 25 years.

"My personal mission is to take what has proven successful for large companies and transfer these methods to help America's smaller companies," Hall said of that partnership. Hall has been working closely with MMEC to ensured that the process, "Eureka! Winning Ways" fits Montana-size companies where nearly 80 percent have fewer than 20 employees.

New Stimuli for New Ideas

Hall shared ideas with the Compete Smart audience on how to think more creatively. "Like minds make for like ideas," he said. Gain stimulus from diverse viewpoints; seek





Emcee Steve Holland unveiled the art promoting Compete Smart 2010 in Billings.



Exhibitors' display booths (above) and Montana Product Showcase items (below) enriched two days of conference interactions.



Compete Smart continued

perspective from the different personalities in your own company. Bounce ideas off people you meet. "You'd be surprised how far people will go to help you if you just ask!"

His research on company success shows that the number of practical ideas invented more than doubles with increasing and varied stimulus over low diversity in thinking. Technology scouting was recommended as one of the best resources for innovation inspiration.

View on Customer Input

Quoting Henry Ford about the Model T, "If I had asked people what they wanted, they'd have said faster horses," Hall emphasized that customers are not the driver for new growth. Business must lead customers to new uses for their goods or create complementary products. "Being proactive, not reactive is 10 times more predictive of success."

He also counseled that features are not benefits. As an example, he explained, don't tell people the faucet you make is from cast brass patterns with copper tubing... Tell that it "provides three times greater flow – 19 vs. 6 gallons per minute – installs in half the time..."

He urged people to strive for clarity. A confusing message about what's in it for the buyer "is not a strategy for success!"

Urgency to Act

Hall also expressed urgency for U.S. companies to take action now. China's 20-year plan is to focus on innovation as a



Nearly 300 conference goers were on hand for Doug Hall's keynote address.

core strength, he said, with their motivation easily demonstrated in a tiny hard drive display driver manufactured there. China now receives three percent of the profit from their effort while Japan, the inventor of the device, receives 83 percent of the profit. The math and path is clear.

Hall also told the audience that exporting should be considered as a viable, even lucrative, avenue for growth. The decline in the value of the U.S. dollar has created "a free cost reduction" today, he explained. Additionally, there are many more people in the developing nations, such as India's middle class of 340 million.

Hall wrapped up his presentation with several personal stories of survival from his passion for outdoor adventure; one a recollection of falling through the ice in the Arctic Ocean, being helped out, and skiing for an hour to retain body heat before reaching safety. He used this and other stories to demonstrate his conviction that companies must have the courage to take action and to underscore the alternate outcome in Deming's statement, "It is not necessary to change; survival is not mandatory."

Afraid you might fail? he asked. "Take comfort in the fact that taking action will result in less regret than if you were to take no action at all."



"Beer Game" breakout session teaches about supply chain whipsaw and distribution.

For more information about business growth, contact MMEC at 406-994-3812.

To view Hall's keynote address and other plenary presentations, go to http://www.mtmanufacturingcenter.com and click Conference News under Hot Topics.

Good Fortune Upwrapped

Good fortune abounded during the Compete Smart Manufacturing Conference as banquet attendees discovered prizes in many of the fortunes that wrapped Good Karmal treats from Bozeman.

Diners had been instructed to take a caramel from the Red Oxx.com travel basket at each table to discover either a traditional fortune or a prize to be awarded from items in the Montana Product Showcase. During the closing luncheon, the travel basket manufactured in Billings was awarded to the person at each table who had traveled furthest.

Engineers Without Borders (EWB) were lucky sub-recipi-

ents of one prize when Robert Marley, Dean of the College of Engineering at Montana State University, unwrapped a fortune that awarded him The PETT® dry toilet system. The PETT, manufactured and donated by Cleanwaste in Belgrade, is a sanitary method for transporting and disposing human waste using innovative, biodegradable technologies http://www.gocleanwaste.com. Dr. Marley, in turn, donated the system to the EWB program through which students work in a remote area of Kenya. They often face very primitive situations in their efforts to provide potable water and appropriate sanitary facilities for area schools.

6 Forward Focus

Manufacturing News

Category Shop Certification Achieved

Anderson Steel Supply Inc., http://www.andersonsteel.com, Great Falls, was recently awarded Category Shop AISC certification and expects Clark County, Nevada certification very shortly. The structural steel fabricator and provider of building materials services for industrial, commercial and residential construction companies was founded in 1970. Anderson Steel is a woman owned small business with a sister facility in Billings.

Baby Rattle Gets Nod

Timberdoodle, Inc., http://www.timberdooledesigns.com, a Bozeman company, had its "Fresh Picked Flower Rattle" for babies featured in the CoolMomPicks "Safer Toy Guide 2008" and showcased with other green children's products in the Australian magazine LMNOP.

Native Seeds Company Acquired in Growth Strategy

Marwit Capital Partners II, a western U.S. private equity firm, has announced acquisition of **Bruce Seed Farm, Inc.** based in Townsend, Mont, from Arden Bruce, the company's longtime owner and President. Bruce Seed products are used in pasture, land reclamation, land preservation, rangeland management and erosion control applications. Read more at http://www.matr.net/article-31506.html

Labor Law Posters Reminder

Reminder from **Montana Department of Labor**: All labor law posters that are required to be posted at company worksites are available FREE. They can be obtained pre-printed at your local Job Service Workforce Center or downloaded by visiting the Montana Job Service poster page http://wsd.dli.mt.gov/service/posters.asp.

New ISO Standard Revision Released

The 2008 version of ISO 9001 standard was released in November to replace ANSI/ISO/ASQ 9001:2000. For more information on the new standard, visit http://www.asq.org/iso9001. Companies that are certified to the old version will have 24 months from the date of release to certify to the new revision. MMEC offers periodic three-day ISO internal auditor training workshops that can bring quality managers up to speed on the 2008 standards. Contact dnash@coe.montana.edu for notification on upcoming events.

Packing Plant Recognized

M3 Meats, Inc. of Sidney has been named the Montana Small Business Administration's (SBA) 2008 Minority Small Business of the Year. The two-year old firm is the only federally inspected meat slaughter and fabrication plant in eastern Montana.

More To Be Done

The 2008 update of the widely-cited manufacturing "cost study," published by the Manufacturing Institute of the **National Association of Manufacturers (NAM)** http://www.nam. org/coststudy includes the results of efforts to lower the aggregate cost burden faced by U.S. manufacturers over the past two years, according to Webb Brown, President of the Montana Chamber of Commerce. Manufacturers still face an excessive cost burden of 17.6 percent, creating a serious impediment to the their ability to compete globally. U.S. companies pay the second highest corporate tax rate in the world, an issue he said must be addressed to get our economy growing again.



Prospera Business Network Announces Business Excellence Awards

Prospera Business Network, http://www.ProsperaBusinessNetwork.org, recognized exceptional businesses and leaders in Gallatin and Park County during its Annual Dinner and Business Excellence Awards ceremony in November. Prospera is a non-profit, member supported economic development organization in southwestern Montana. The winners:

Zoot Enterprises was named the 2008 Business of the Year. The company is a leading provider of instant credit decisioning and loan origination solutions to financial institutions.

Cleanwaste (formerly Phillips Environmental Products) was honored with the 2008 Innovation Award for developing and manufacturing sanitary, portable methods for handling human and animal waste.

The 2008 Economic Leadership Award was presented to Steve Holland, Director of the Montana Manufacturing Extension Center. This award is given



MSU's Tom McCoy (I.) presents Economic Leadership Award to Steve Holland (r.)

to a government or non-profit leader for contributions to the state's economic development. MMEC provides technical, business management and engineering assistance and demonstrates significant impacts for small and mid-sized manufacturers around the state.

Lone Mountain Gymnastics & Swim School owners Jeff and Suzie Turczyn were named 2008 Entrepreneurs of the Year.

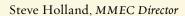
Financial Crisis (continued from page 2)

the Chamber leverages those efforts and offers stability and professional staff to get this much needed effort growing.

Recent Business Policy Issues in the News:

- Trade/export & trade adjustment
- Healthcare costs
- Transportation and infrastructure
- Workforce training/education
- Energy, environment & climate change
- Labor law/"card check"

Call to Action. Individually, you can contact your Senators and Congressman and your local State Senator and Representative. You can testify before state legislative committees, and, well, just educate yourself on the issues that can affect your livelihood. Get involved! You can no longer afford to leave it to others. You need to take control of your future... or others will control it for you.



Nopper, Marchi Join MMEC/UTAP Team



Leesa Nopper

Leesa Nopper who specializes in business development and helping companies grow sales and enter new markets, is rejoining the Montana Manufacturing Extension Center (MMEC) on a part-time basis. A Small Business Administration award will enable her to work with clients whose focus is value-added agricultural and alternative energy manufacturing. Her

experience includes working for national companies including Kraft General Foods and Hershey Chocolate USA and six years as the marketing manager for MMEC before founding Nicheworx, a business development company, in 2002. Nopper is a certified Eureka Winning Ways Coach of Doug Hall's nationally acclaimed Eureka! Ranch.

The University Technical Assistance Program (UTAP) at MMEC has hired a new marketing research assistant, Jake Marchi, who works from the Montana World Trade Center in Missoula while earning an advanced marketing degree in the University of Montana School of Business Administration.

Nopper and Marchi will be working closely together to bring marketing & business development services to Montana's manufacturers.

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*On January 1, outgoing board members will be replaced with newly elected members: Steve Chambers, Montana Specialty Mills; David King, the Camelina Company; Neil Sheldon, Poly Warehouse.

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MMEC Mission

To Help Manufacturers To Be More Successful

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We Can Help!



FREE 30-Minute Webinars Dec. 15-16-17 from your desktop. Tools you can apply now for customer pull, faster product-to-market & a system to fill the pipeline, 11:30 a.m. to noon each day. Easy to use and easy to remember: "Laws of Marketing Physics" to create more effective customer pull for both new and existing products; how to get product to market five times faster using four "Fail Fast, Fail Cheap, Get Smart" principles that real-world entrepreneurs use today; and why "Growth Is Not Random," about a proven method for growing profit reliably using a simple, direct and systematic approach called "Eureka! Winning Ways." Learn how MMEC is involved. A computer with Internet access is needed, and more than one person may attend at your call-in connection (requires speaker phone). For more information, contact Todd Daniels in Helena at 406-841-2745. Sign up for one, two, or all three sessions at the MMEC Web site: http://www.mtmanufacturingcenter.com/Services

MMEC LEAN Manufacturing Workshop & Simulation, January 13, 2009. Improve on-time delivery; reduce defects and WIP; gain participatory decision making, better use of floor space and much more in this powerful workshop. Practice what you learn in a live simulated factory; meet Buzz from Buzz Electronics. 8 a.m. to 5 p.m., MMEC conference room, 2310 University Way, Bozeman. \$195 per person. Register online at http://www.mtmanufacturingcenter.com or call 406-994-4507.

Ag Technology & Construction Expo Jan. 8-10, Billings MetraPark Expo Center. 7th annual northwest regional trade show for farm and ranch, construction services, technology & equipment, petroleum and transportation industries. http://www.agandconstructionexpo.com

MAGIE Jan 15-16-17, a regional farm and ranch trade show at the Great Falls Four Season Arena, Montana Expo Park. Featuring exhibitors from all over the Pacific Northwest, Montana, the Dakotas and Canada. Produced by KMON Radio.

Harvesting Clean Energy, Jan. 25-27, Billings. Bringing agriculture and clean energy production together to advance opportunities for rural economic development. Learn how you can tap into opportunities for energy efficiency and renewable energy. Meet various technical and financial resources and potential partners. Look for more detail at http://www.harvestcleanenergy.org/conference



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