



# Alberta Guide to Productivity

Now is the best time to improve your productivity, helping your business to work smarter

**I**n a changing economy, Alberta companies have to be light on their feet, working smarter, leaner and – above all – more productively. That might mean implementing lean business philosophy, or it might mean addressing any of the five main zones of productivity improvement: product improvement, market extension, process

improvement, system solutions and renewal of the business model.

In these pages you'll find some great advice from other Alberta companies who've been there and done that. There are resources for the beginner and tips that you can take away and apply to your business today.

What are you waiting for? Roll up your sleeves and get started.

Learn to enhance your business's productivity. More than ever, you need the edge to last you through downtimes and see your business emerge stronger on the other side.

# Contents

- 4 Always a Good Time...**  
The cost of any product falls over time, which means it's never a bad time to seek productivity gains
- 7 Case Studies**  
Meet some great Alberta companies and learn from their journey to improved productivity
- 23 Get Fit, Go Lean**  
Become a company that's adaptive, waste-free and with an engaged, efficient workforce
- 28 Rate Your Productivity**  
Take this self-test and assess where your business is on the productivity continuum
- 32 A Formula That Pays**  
Embarking on a productivity improvement is not necessarily a big cash drain
- 34 By the Numbers**  
Productivity at a Glance

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## Government of Alberta ■

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# Always a Good Time...

Take steps today to ramp up productivity in your business so you can weather the recession and come out stronger

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**G**rowth in productivity is critical to remaining competitive,” says Ray Mills, CEO and – with his father – founder of Kudu Industries Inc., a manufacturer of progressive capacity oil pumps. “The cost of any product falls over time.” It’s a simple pressure that manufacturers everywhere face. One of the most important realizations Mills and his father came to was that complacency would be a death knell and that seeking productivity was a continuous process. At Kudu, he says, “processes are continuously improved, inch by inch, day by day, by removing waste.”

As the Mills can tell you, in business it’s always a good time to invest in productivity. Whether there’s a labour crunch or a recession, you’ll want to find out how to improve output relative to resource input. That could mean maintaining your current workforce and increasing output through lean business practices, technology adoption or workflow improvement. Or it could mean slightly less output for substantially less input. At its kernel, productivity measures how efficiently an economy or a business transforms its labour, capital and raw materials into goods and services.





Productivity improvement helps you meet challenges facing Alberta's economy, including a high dollar, increased material costs and a slump in business. In these pages you'll find a roadmap that will help you get started on the road to productivity.

There are five key avenues of productivity improvement available to you: product improvement, system solutions, process improvement, business model improvement and market extension. We'll take a look at some companies who've trod the road before and learn from their experience in these five key zones. And we'll look at how you measure productivity and how you can take steps now to earn gains in the short and medium term.

Whether it's through process improvements such as lean manufacturing, outsourcing or investment in automation, companies are looking to best practices to be more competitive. Don't be left behind.



## Don't Wait

While productivity, like Kudu's Ray Mills says, is a constant process, there are steps businesses can take to improve it today. There's always some low-hanging fruit that can be plucked with little grief or cost. Can you see some places in your business that would benefit from starting productivity improvements today?

**Benchmark.** Calculate your labour productivity to establish a benchmark. Divide revenue by the number of hours worked, which equals output per hour.

**Start learning.** Attend brown-bag lunches, trade shows and conferences. Take productivity courses online and read up.

**Ask for advice.** Consultants can help with production flow, plant layout and lean principles. Institutions such as SAIT and NAIT offer productivity courses.

**Keep it up.** Maintain your early gains and seek sustainability. Appoint staff productivity champions, and carve some time in their schedules to set the stage for success. Schedule regular meetings and consider investing in professional development to increase company literacy in productivity.



## Resource Room

If you are new to productivity, the first thing you want to do is start learning. Check out these resources:

### **Innovative Manufacturing Works:**

Learn more about manufacturing innovation in Alberta. IMW promotes innovative companies and best practices in manufacturing across the province with plant tours, productivity improvement seminars and information networks. Visit [www.manufacturinginnovation.ca](http://www.manufacturinginnovation.ca).

### **Construction Users Round Table:**

Measure productivity in the construction industry. Check out [www.curt.org/pdf/MeasuringProductivity.pdf](http://www.curt.org/pdf/MeasuringProductivity.pdf).

**NAIT Shell Manufacturing Centre:** With a mandate to help small-and medium-sized manufacturing enterprises in Alberta, the NAIT Shell Manufacturing centre offers a host of services. Navigate to Services, then Productivity Enhancement from [www.nait.ca/26738.htm](http://www.nait.ca/26738.htm).

### **Lean Enterprise Assessment Program:**

Get deeper into lean business practices with this program. LEAP is a model for expansion into other areas of organizational assessment. Visit [www.albertacanada.com/productivity/lean](http://www.albertacanada.com/productivity/lean) to learn more.

*Automation and the Welding Process*, by James M. Berge. As Berge says, your competition is global and you'd better develop strategies to cope with new forces affecting your business.

*A Guide to the Automation Body of Knowledge*, 2nd edition, by Vernon Trevathan. Billed as a technical summary of automation for those who need a comprehensive perspective in their job.

*Automation Unplugged*, by Jim Pinto.

"Industrial automation is not just one application," says Pinto. "The Problems are always challenging and the results are rewarding."

*The Goal: A Process of Ongoing Improvement* by Eliyahu M. Goldratt, Jeff Cox, and David Whitford

# Case Studies

**P**roductivity describes the output of goods and services as they relate to the resources used in production. Nationally, with a one per cent rise in productivity growth, real income takes 72 years to double. With a three per cent rise, it takes 24 years. Closer to home, productivity is about the future growth and well-being of your company. Beyond cost over sales, productivity accounts for input and output and their effect on your business.

For example, an increase in output value, adjusted for inflation, relative to the rise in the number of workers is a real cost reduction. But a cut in wages, without a change in the number of workers, does not represent a gain in productivity.

In a labour shortage or in a recession, productivity is your key to competitiveness in the marketplace.

Productivity gains can be realized in five key ways: product improvement, market extension, process improvement, system solutions and business model renewal. Each of the five companies profiled in the following pages is a real-world example of productivity improvement in Alberta today. Read about their experiences and find tips to apply to your own business in the short and medium term.



## Productivity Improvement Zones

**Product improvement** lets you become more competitive, creating new value for your customer.

**Market extension** adds new features or services for products to support customers. Adapt products and services for new markets.

**Process improvement** means streamlining your business to become efficient and productive. It makes workflow easier, faster and more accurate.

**System solutions** help you accomplish your goals of selling and servicing great products. Rethink current systems or find new ways to solve problems.

**Renew your business model** and think about how you do business to provide greater value for your customers.

# Process Improvement: All Weather Windows

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**Process improvement:** Streamline business processes, making them more productive, effective and efficient. Improving work processes makes throughput easier, faster, more accurate and reliable.

**W**hen All Weather Windows started operations in 1978, it had nine employees. Three decades later, there are approximately 1,000 employees and All Weather Windows is the country's largest privately owned window and door manufacturer.

But every business needs a tweak now and then. In November 2005, All Weather Windows' management team began to implement a lean manufacturing approach. "Our ownership group felt we needed a cultural change," says James Simon, the company's senior lean supervisor.

Improving processes at All Weather Windows was a big part of the new direction. The main principle of lean manufacturing is getting rid of waste and adding value for the customer, so management needed to consult with its most important asset – the staff. "We needed a process that would sustain the changes we were considering, to be able to produce more without adding additional resources and equipment," says Simon, noting that management also wanted employees to be intellectually stimulated. "A lot of the changes came from working with the employees on the shop floor."

Some of the changes implemented at All Weather Windows were simple. For instance, benches in the work area were tidied up and organized to the point where employees only had what was needed to perform day-to-day activities – "nothing more, nothing less," says Simon,



"so that you would alleviate the frustrations of looking for tools."

Another process change involved better recycling. "We're trying to create sustainable manufacturing so that our materials are not going to landfill," Simon explains. "What we're doing is we're capturing it and recycling it. We've been able to implement the Green Phase of our program, which is taking off extremely well. We're recycling 100 per cent of our PVC (polyvinyl chloride) regrind.

The results of All Weather Windows' process improvements have been significant. There has been a decrease in product defects and a corresponding 98 per cent quality rate with its manufactured items.

Achieve short-term gains with improved planning of work and manpower



### Details: All Weather Windows

**Employees:** approximately 1,000

**Sector:** Manufacturing and Sales

**Key Business Activity:** Manufacturing and selling windows and doors

**Contact:** 18550-118A Ave NW

Edmonton, AB T5S 2K7

780-451-0670

[www.allweatherwindows.com](http://www.allweatherwindows.com)

## Live it, Breathe it

The key to improving processes at a business is simple: commitment.

"There needs to be a 100 per cent commitment from the top," says All Weather Windows' lean supervisor James Simon. "That means that management is involved. They don't just take a book and say, 'You need to read this,' which happens so often."

Every morning at 7:30 a.m., the All Weather Windows management team gets together for a "gemba" walk, gemba being a Japanese term that means "the actual place" – in this case the shop floor. It's here that value is created. The group includes senior production supervisors, the purchasing manager, health and safety personnel, employees from

capacity planning and quality control and, quite regularly, company president Richard Scott. "We have that support from the very top," says Simon. "It's walking the walk and talking the talk every day, not rocket science. It's just working with people to make things happen."

Simon adds that given the volatile state of the economy, these practices make sense and are crucial to a business's survival. Believing the message is imperative.

"It's not just taking on the principles as a fad," he says. "It's living it, breathing it and making it a part of the business, a part of what you do every day to improve. If you're not doing that now, then chances are you're not going to be around to make those decisions in the future."

# Business Model: Kitchen Partners Limited

**Refresh your business model:  
Concentrate on providing greater  
value for your customers.**

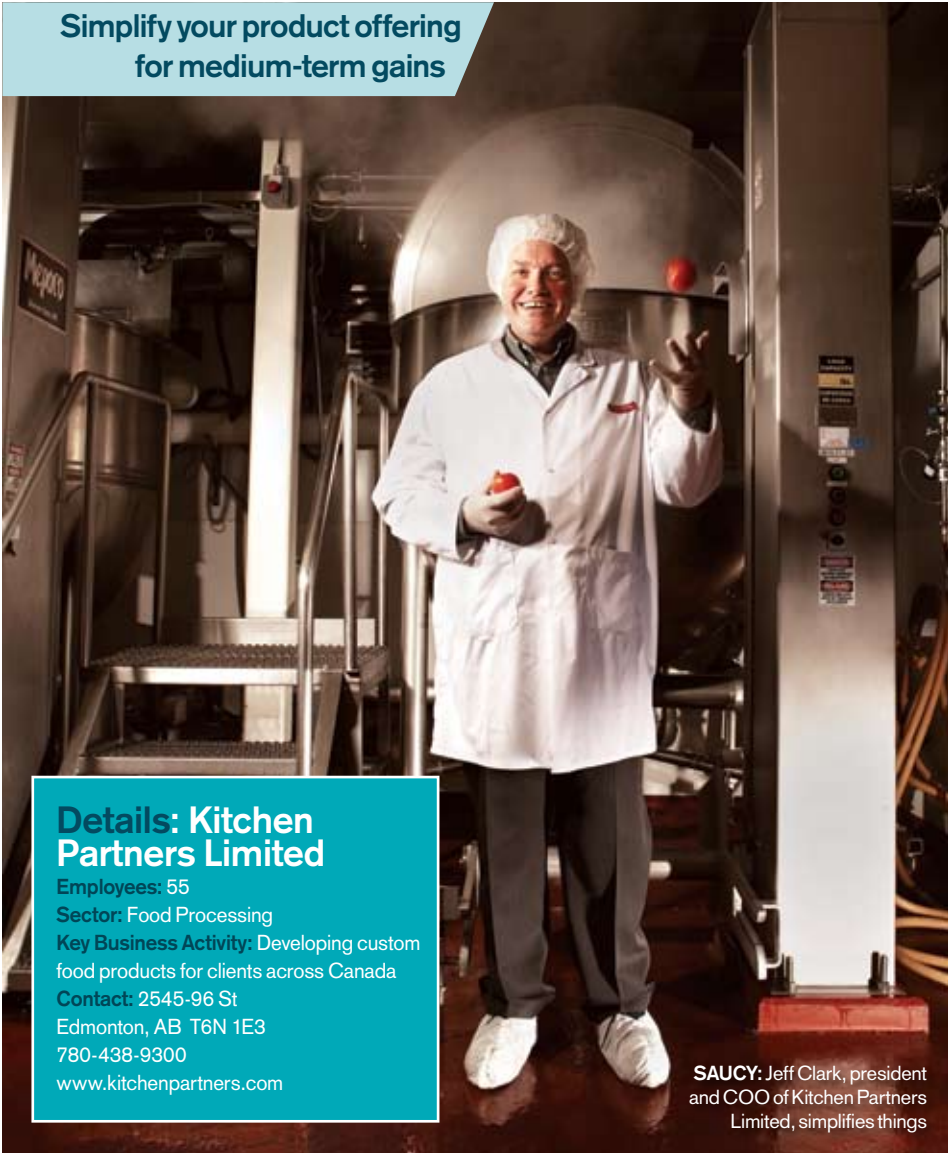


**J**eff Clark is an early riser. The president and COO of Edmonton-based custom food manufacturer Kitchen Partners Limited gets to work every day when most people are still in bed. “Our business is in full flight by 6 a.m.,” says Clark.

Clark says progress had already been made to improving productivity by the time he arrived four years ago, but a new business model was required. The company had no strategic plan and there were some gaps in management and employee capabilities.

It was also a two-fold operation that offered both food distribution and food processing services. “We made changes, and we made the decision to grow both sides of the business and determine later if we wanted to change the model again,” says Clark, who brought along experience gleaned at Maple Leaf Foods and Labatt. One of the primary moves was the name change in 2006. Founded as Floron Foods Services Inc. in 1984, the management team wanted a name that better represented company culture: Kitchen Partners. The “partners,” Clark says,

Simplify your product offering  
for medium-term gains



**Details: Kitchen Partners Limited**

Employees: 55

Sector: Food Processing

Key Business Activity: Developing custom food products for clients across Canada

Contact: 2545-96 St

Edmonton, AB T6N 1E3

780-438-9300

[www.kitchenpartners.com](http://www.kitchenpartners.com)

**SAUCY:** Jeff Clark, president and COO of Kitchen Partners Limited, simplifies things

## Case Studies

describes the relationship between the company and its clients (including major players such as Boston Pizza) and the relationship between ownership and employees.

Clark assembled a new management team that would collectively create the company's building blocks, focusing on appropriate staff and a viable strategic plan to move forward. Employees were engaged and constantly asked for input. With a strong team and direction in place, Kitchen Partners experienced tremendous growth in the first three years of the new model.

Last summer, they made another bold change – they eliminated the distribution arm of the business, a big risk given that it comprised the lion's share of Kitchen Partners' revenues. Distribution, Clark suggests, offers slim margins. Following this latest change to the business model, food processing has grown five-fold. (KPL makes custom stirred foods, assembled foods, starches and proteins for clients.) "We focused on creating value for customers because we are exclusively a custom processing facility," says Clark, emphasizing the company's commitment to using the best and freshest ingredients in their products. "We don't sell Kitchen Partner brands. We work for a number of food service operators across Canada. We like to call ourselves a solutions provider."

Clarks says there's greater clarity within the company. Previously it had two businesses with two models that required care and feeding. Now, with one focus, it can build the world-class capabilities necessary to compete. With growth running at about 25 to 30 per cent annually, the goal of becoming a \$50-million company is in sight.



### Building Blocks

"We sat down one day and said we're essentially building our company from scratch. We wanted to list the necessary things to make a company great. Any organization could look at this list and ask, 'How are we doing?' Test it one day, then go back and test it six weeks later, then a year later. It's about continuous improvement if you want to compete on a global stage," says Jeff Clark, president and COO, Kitchen Partners. Here's the list of questions business owners should ask themselves:

- 1) Do we have **the best people** to grow and sustain the company?
- 2) Do we have a plan to **address gaps and issues** that exist?
- 3) Are we **building a culture** that's meaningful and sustainable?
- 4) Do we regularly **thank, reward and support** our employees, partners and suppliers?
- 5) Do we **understand the critical processes** that support our company? Are they documented, reviewed and constantly updated to improve performance?

# Systems Solutions: Aecon Industrial

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## Systems solutions: Your company is its systems. Integrate your current systems or generate new ones to remove roadblocks, not work around them.

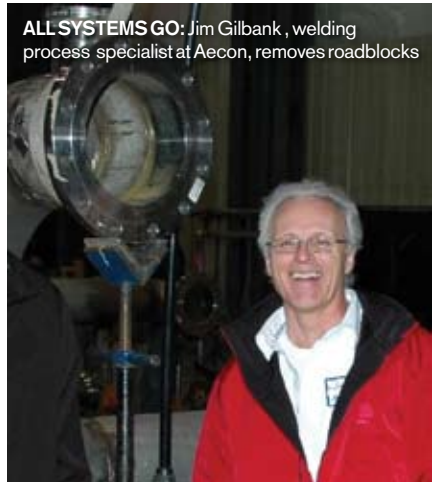
**T**he company motto for Aecon Industrial is “Building things that matter.” At the Sherwood Park-based welding arm of the Canadian construction and infrastructure development giant, how they build things also matters.

The business has received a big boost thanks to an IT solution. Aecon’s custom software ICoMS (Industrial Construction Management System) is a Microsoft-platform database that has dramatically changed the way the company does things. “We have to prioritize, to figure out what gets built first,” says Jim Gilbank, Aecon’s welding process specialist. “Without a database, we’d be totally lost.”

A finished weld is known as a module. A walk through the shop reveals pipes – the materials used to make a module – of all diameters and thicknesses imaginable.

Aecon might have multiple modules of various sizes to build at a given time, complicating the process significantly. “When that material is received, all that information goes through a warehouse software system and the inventory is logged in the database,” says Gilbank, adding that a co-ordinator oversees things.

The system also tells Aecon staff what they’re able to build on a given day. For example, if they require a number of spools to complete a module, but one flange is missing from inventory, the database tells them that it’s not a good project to start because it will sit unfinished until the flange arrives.



**ALL SYSTEMS GO:** Jim Gilbank, welding process specialist at Aecon, removes roadblocks

In-house database manager Vlad Vicentijevic is tasked with tweaking the database to improve its efficiency. “It’s really cool technology,” says Vicentijevic. “This system pretty much takes care of all of the processes that happen in this plant.” Vicentijevic developed a forecasting tool that goes into the database.

The tool checks whether or not they have the material for specific spools in the sequence and reveals if they are able to build a client’s order immediately with materials on hand.

“Before, it was a guessing game,” says Vicentijevic. “People would start to build things and then see that they were lacking parts. Now, one push of a button tells what’s buildable at that moment.”



Improve methods and procedures for short-term productivity gains

### Investing in a Database

ICoMS has been an instrumental tool in improving production at Aecon. The software means there's much better control over all of the processes at the shop. Gilbank believes that a database like the one Aecon uses can **take a good system and make it better** for any type of operation. Additional data can improve processes, as can the ability to immediately produce detailed operational reports that may previously have only been available on a weekly or monthly basis after intensive compilation.

ICoMS has **improved efficiency**, too.

Gilbank estimates that ICoMS has reduced the company's planning time by three times. "Definitely don't think that things are running smooth enough," advises Gilbank. "To me, that's a telltale sign of complacency. You'd be surprised how much benefit a database can provide."

There are different routes managers can take when investing in database software. For instance, they might consider hiring a consulting firm specializing in data processing. Another way is to get educated. "It might be worth your while to check out a community college to **learn more** on how to apply new software yourself," says Gilbank.

### Details: Aecon Industrial

Employees: 800

Sector: Fabrication, Construction and Infrastructure

Key Business Activity: Specializes in process piping for oil and gas industry

Contact: 53-251 Range Rd 232  
Sherwood Park, AB T8A 4V2  
780-449-5111

[www.aecon.com](http://www.aecon.com)

# Product Improvement: The Little Potato Company



**Product improvement: Don't be complacent. Find ways to better your product to allow you to be more competitive, creating new value and novel products.**



**W**hen Angela Santiago planted a one-acre crop of small potatoes in 1996, she couldn't have envisioned what her enterprise would become. The Little Potato Company is now a multimillion-dollar Alberta success story, ironic given that mini spuds have traditionally been considered sub-grade by many potato growers.

But the variety of products released by LPC caters to more discerning palates. The company is proud to spread the word. "We educate the

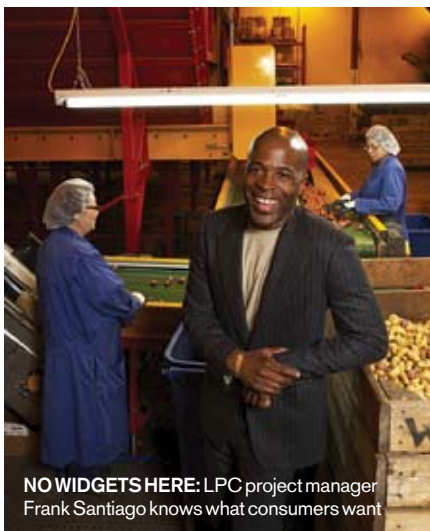
consumer on the health benefits of potatoes and how easy it is to prepare small potatoes," says Santiago. "All of the nutrition is in the skin. It's a healthy product but also convenient, which is what consumers look for." Quality is crucial to the success of LPC. It has to be—the distinctive brand costs about \$4 for a two-pound bag. "The need to have a really good-looking product in that bag is paramount," says Santiago.

LPC goes to great lengths to ensure the potatoes are top notch. It begins with growers, both

### Start working on long-term gains by improving basic process and R&D



**SPUDS FOR ALL:** LPC president Angela Santiago improves potatoes



**NO WIDGETS HERE:** LPC project manager Frank Santiago knows what consumers want

local and overseas. Over the years, LPC has sourced out farmers in Alberta, Saskatchewan and PEI, as well as parts of the United States, Europe and South America, where the soil is ideal for growing. The Canadian growing season consists of just four months and LPC's global growers allow the company to have a year-round brand presence for consumers. "And offering a 12-month supply evolved a better product," says Santiago.

LPC experiments with different varieties, often bestowing appealing names such as baby boomer, amandine, bushing bell and piccolo. It even features a party bag of several different types of potatoes as one of its product offerings.

Branding is part of LPC's success. Santiago says the company logo, designed locally almost a decade ago, has withstood the test of time. "Industry and retailers, whether in Canada or the U.S., are very aware of the company and what we do," says Santiago, proud that LPC also provides products for two private label retailers. "When you think small potatoes, the Little Potato Company comes to mind."

### Details: The Little Potato Company

**Employees:** 80

**Sector:** Agriculture

**Key Business Activity:** Growing and selling varieties of small potatoes

**Contact:** 11720-170 Street NW

Edmonton, AB T5S 1J7

780-414-6075

[www.littlepotatoes.com](http://www.littlepotatoes.com)



### Quality Control

Before the Little Potato Company's seven varieties hit the marketplace, a thorough quality control process has to be completed. In addition to maintaining its own strict food safety protocols, LPC is audited several times a year by its retailers. "That keeps us on our toes," says Santiago.

There are four major checkpoints in the quality control process at the LPC's 35,000-square-foot facility in Edmonton's west end:

**Receiving:** Checkers ensure they get precisely what they ordered

**Wash line:** Graders look over the potatoes again

**Packaging:** Quality control personnel look for overweight or underweight packages, and makes sure bags contain only potatoes

**Shipping:** Staff check bags once more as before they're loaded onto trucks

It's a lengthy process but the emphasis on quality control makes for a product that's as perfect as possible in an industry with inconsistent conditions. "It's produce," says Santiago. "It's not always the same. We don't make widgets. There are changes based on crops and weather. It's important to communicate, not only to the buyer but also to the quality control people at their end, so they understand what happens with the different variables."

Santiago says LPC has gained the trust of retailers. The growth in sales, she believes, is attributable to the consistency of product. "Every time a customer goes to the store they can say, 'OK, that looks the same as when I bought it last week and I won't be disappointed,'" Santiago explains. "Quality sets the bar."

# Market Extension: Almita Manufacturing Ltd.

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## Market extension: Adapt your product for use in a new market. Create new services or features to support existing customers.

**W**hen Ponoka-based screw pile specialist Almita Manufacturing Ltd. opened in 1992, its clients were mainly from the oil and gas sector. Things have changed. While many companies are losing momentum and feeling the effects of a spiralling economy, Almita is forcefully moving in the opposite direction.

Screw piles, used in drilling holes for deep foundation work, are effective and versatile. Almita now produces screw piles for a variety of other industries, including commercial construction and power transmission. “We’re in a unique situation,” says president Larry Kaumeyer. “The market for screw piles is opening up faster than the reduction in the general piling market.”

Kaumeyer says that the company’s three-pronged approach to being a productive business is translating into market extension opportunities.

The first approach centres on engineering. “Ours is an engineered product, so we have to convince engineers to use it,” says Kaumeyer. “That’s not easy because screw piles are relatively new. But our team of engineers specializes in screwpile design.” Custom products offer clients turnkey solutions.

To get the word out, Almita has worked closely with the Deep Foundations Institute (in the United States), a group whose engineers look at innovations in the foundation industry.

The second approach has been to streamline via lean principles, including an emphasis on



automation. “When you do that, you have to educate your people,” says Kaumeyer. “We’re doing quite a bit of training and looking at our end-to-end process, trying to be better at what we do.”

The final approach the company is taking to increase productivity is to concentrate on brand management, putting a lot of work into understanding customers’ needs and increasing visibility. For example, the company now has an online presence where potential clients can see that Almita offers turnkey solutions—they can make a custom screw pile, engineer it, fabricate it and then install it. “We take a lot of headaches away from our clients,” Kaumeyer says.

### Initiate improvements in plant, equipment and machinery for long-term productivity gains

A critical step came when the company restructured to split various markets into segments. Almita now has specialists who focus on each of their markets. "That's increased our ability to add value," says Kaumeyer. "You have to know what you're doing. A power transmission foundation is very different than a commercial building foundation. You have to understand how each will operate in order to pass the value on."

#### Details: Almita Manufacturing Ltd.

**Employees:** 70

**Sector:** Manufacturing and Sales

**Key Business Activity:** Designing, fabricating and installing screw piles

**Contact:** 4201-66 Street

Ponoka, AB T4J 1J8

1-800-363-4868

[www.almita.com](http://www.almita.com)

### New Markets

Until Almita tackled the problem, screw piles weren't an option for foundation work on larger buildings. "We've worked on trying to open up the commercial construction area," says Kaumeyer. "It's about convincing engineers that you can put a steel-structure building on screw piles if it's designed that way from an engineering perspective."

Almita is also working at **new opportunities** in the alternative energy market. Screw piles, for example, can be used in drilling the holes needed to erect a wind turbine. While the alternative energy market currently accounts for about five per cent of Almita's annual revenue, Kaumeyer expects that figure to **double or triple** in the next decade, potentially accounting for 40 per cent of the pie further down the road. "People are looking for

cost savings and alternative foundation products for their projects," says Kaumeyer.

But devolving new markets requires plenty of work. "You have to **understand your ability to compete in that market**," Kaumeyer says, "who you are competing against and what your value proposition is, relative to your ability to compete in that marketplace." Developing a new market means recognizing barriers to your own effectiveness.

It's also crucial to be aware of the economic conditions. "Can you build that market?" asks Kaumeyer. "What are the resources like? Can you get people? Can you train people so that they understand exactly what you need to deliver?" With a **keen focus** on answering these questions, Almita continues to show growth every year.

# Get Fit, Go Lean

Improvements to quality, cost and delivery time mean leaner operations and increased productivity



**C**orporate fitness means trimming the fat and becoming responsive and lean. In business, lean is about addressing labour, efficiency and productivity issues. Throwing labour at a processing problem is not effective. And, given the global recession, it's not an option. Lean business principles focus on reducing waste in such areas as maintaining, transporting and handling inventory, as well as saving time and processing steps on the shop floor. "Aspects of lean practices are obvious,"

says Anurag Pandey, senior director of Alberta Finance and Enterprise's Process Improvement Unit (PIU), "but the principles that underlie lean can run counter to accepted ways of manufacturing or service."

Principles include starting and finishing a product, rather than lining up half-made products and working on them in batches. Workers might move from station to station rather than moving products. The Ford Motor Company's mass production line was an early example of

# Go Lean

lean. Later, the Toyota Production System (TPS) became synonymous with lean.

Lean philosophy requires managers to develop a broader vision, to learn lean practices and support change. "It's a culture shift," Pandey says. "Managers can't do it without employee buy-in." Besides, some of the best ideas for lean come from the shop floor, where workers know exactly where corporate waste lies. They've often come up with unique workarounds. But lean business practice doesn't try to find the fastest way through the obstacle course – it tries to remove it.

"The goal is to look at end-to-end processes," says Pandey, "to see where the inefficiencies lie.

There are significant opportunities to improve simply by looking at waste." Much of a company's assets can be tied up in inventory and real estate. Lean processes can open up new space on a shop floor, allowing for increased production. It's eye-opening for managers.

The first steps to lean involve education. "It's not about buying faster equipment," says Pandey, though technology adoption can decrease waste and increase productivity in the long term. Managers need to audit the system, find the bottleneck and deal with it with three metrics in mind: quality, cost and delivery time. Improving these means increased productivity.

## Lean LEAPs

A manager hates to see skilled staff spending time waiting for the product to be delivered to their workstation, searching for tools or hauling stuff around the shop. Inefficient work processes cause bottlenecks that decrease productivity. The first step to improving a process is to assess it.

Alberta Finance and Enterprise's Process Improvement Unit (PIU) offers that step. It's called LEAP: Lean Enterprise Assessment Program. The program answers issues such as: increasing costs, inventories sitting idle, facility capacity and space issues, long lead times to fill customers' orders and supply chain challenges.

Lean assessments by LEAP team members include a plant walk-through and written assessment that can provide information on ways to increase operational efficiency.

LEAP experts, all of whom are industrial engineers, have conducted more than 250 lean assessments with Alberta firms. They can advise businesses about available resources, and talk about training opportunities as well as work directly with organizations during the implementation of the plan. And companies who've been there can offer further expertise. Members from some of these 250 firms have formed a network to continue their efforts at lean business practices in a peer-to-peer approach, sharing best practices.

To find out more about LEAP, call the Process Improvement Unit (PIU) 780-422-9312. (For toll-free access in Alberta, call 310-0000 first.) Email [anurag.pandey@gov.ab.ca](mailto:anurag.pandey@gov.ab.ca) or visit [www.albertacanada.com/productivity/lean/index.html](http://www.albertacanada.com/productivity/lean/index.html).

## Lean Certification

The Society of Manufacturing Engineers, an international body to advance manufacturing knowledge, offers a three-tiered certification in lean practices. The first stage, bronze level, requires participants to pass a test, proving familiarization in a body of knowledge about lean. Later, they must submit a portfolio that demonstrates education requirements, participation in projects to which they've applied lean principles and tools and an assessment of the project's results. In 2008, 52 Albertans passed the lean bronze exam, which the Process Improvement Unit offered in partnership with NAIT, supporting the SME certification program. Visit [www.sme.org](http://www.sme.org) and navigate to Professional Development. Select [Lean Certification](#) to find out more.

### Lean Reading

**Lean Thinking**, by James Womack and Daniel T. Jones.

**The Machine that Changed the World**, by James Womack, Daniel T. Jones, and Daniel Roos.

[www.albertacanada.com/productivity](http://www.albertacanada.com/productivity)

Read some lean success stories and learn about the Lean Enterprise Assessment Program (LEAP).

## Top Five Lean Principles

- 1. Specify value for the customer.** Lean expert James Womack says that value is "meaningful when expressed in terms of a specific product... which meets the customer's needs at a specific price at a specific time."
- 2. Identify the value stream.** This is the set of actions performed to bring raw material to a delivered product. At no point should anything happen to the product that doesn't add value.
- 3. Encourage flow.** A product ought to flow continuously through value-added steps. Production is based on delivering a single product to the customer, rather than compartmentalizing by task and batch.
- 4. Introduce pull.** Production shifts to an on-demand basis. That is, production is governed by customer demand, rather than forecasting.
- 5. Aim for perfection.** Continue to reduce steps, time, information and space needed to complete a product suited to the customer's needs.

Adapted from *Lean Thinking*, by James Womack and Daniel T. Jones.

# Reading the Signs

Take the productivity path if your business is suffering these common challenges

**J**eanette Guertin, president of Supreme International, knows about productivity, the importance of its gains and the challenges of its implementation. Supreme designs, tests and manufactures a device called the vertical feed processor for agricultural customers around the world.

“There’s more competition now. To stay in the forefront, you have to do it better and more efficiently,” Guertin says. “We focus on quality. The way the economy is going, whatever money anybody spends, they are going to think very carefully on it.” Supreme has been in business in its current iteration since 1992, and for decades before that. In her years in business, Guertin has seen and addressed many obstacles to productivity.

**No review process.** You can’t improve productivity drivers or results until you benchmark and regularly measure. Poor assessment of cause and effect creates a dearth of knowledge.

**The fix:** “We do it (assessment) daily. We focus on improvements. We actually just had a big find that probably saved us about eight man hours. It was one of those things that you look at every day and don’t see it. We try to have a process where different people are standing back and observing. There are easy finds and some that aren’t so obvious.”

**Inefficient processes.** Poor productivity can be the result of redundant prac-

**BEING SUPREME:** Jeanette Guertin, president Supreme International, adds value for customers



tice. Maybe you have no integrated approach or suffer endemic redundancy.

**The fix:** “Our approach has always been to look for opportunities. For example, trying to see where we can be more efficient in the production process with the jiggling and the tooling we do.”

**Customer service tanks.** Remember why you’re in business. Poor use of time means managing the shop floor, rather than adding value for the customer.

**The fix:** “It’s people paying attention and these days, that’s where we’re going to make our

gains, being more efficient on the production side and then passing that on to the customer.”

**Don't know the customers.** Maybe your company doesn't focus on extending or better servicing its existing customer base. Maybe you find you're providing loads of service to marginal customer accounts.

**The fix:** “We've been manufacturing our product since the early 1990s. Now, there's an opportunity for replacement parts. It was an add-on to our existing business that we had to be better at. As business grows, it leads to other areas. It's a whole other dimension to be able to now build replacement parts for the product.”

**Productivity bottlenecks.** You don't know the bottlenecks until you look at the system, end-to-end. Do your employees spend time developing local fixes to system-wide problems?

**The fix:** “We've spent a lot of time on the actual flow of the products through the factory, making sure that we eliminate as many extra steps as possible.”

**Little professional development.** A hiring freeze means no new staff (or their ideas) are coming in. Staff seem to work in silos, not learning from outside or each other.

**The fix:** “We make sure we continue to do what we are doing and work together to make it one step better. In one particular case, there were a number of staff involved [in looking at a problem]. We thought, ‘Oh my goodness. Why didn't we see that before?’”

**Don't understand innovation output.** It's time to start looking and measuring. Maybe your business lacks processes to measure innovation, seize and manage new ideas and apply new learning.

**The fix:** “As you grow, you're always busy worrying about getting the product out and you sometimes neglect other areas that are very important, your technical side, your design side, your bill of materials, your administration. Those are things we need to be more efficient at, not only on the floor but also on the day-to-day administration side of manufacturing.”



# Rate Your Productivity

Use this self-assessment tool to rate your current level of productivity in a variety of categories and determine which areas to target for improvement. For each item, rank your company between 1 and 10, then add up your score for each category as well as your overall total.

## LEADERSHIP

**Planning and Targets:** Is your focus on sales only (give yourself a low score) or are key performance indicators and targets updated and communicated frequently (high score)?

1 2 3 4 5 6 7 8 9 10

**Champions:** Do champions exist in name only or do they have the authority to deliver and implement the teams' lean initiatives?

1 2 3 4 5 6 7 8 9 10

**Style:** Is the leadership style autocratic with minimal team participation or is collaborative input expected?

1 2 3 4 5 6 7 8 9 10

**Management:** Do managers encourage individual and team participation in generating continuous improvement ideas and actions?

1 2 3 4 5 6 7 8 9 10

**Continuous Improvement:** Are changes and improvements made on a reactive, as-needed basis or are they pursued relentlessly across the entire organization?

1 2 3 4 5 6 7 8 9 10

Leadership Total: \_\_\_/50

## INNOVATION

**Commitment:** Does your organization lack a formal or informal commitment to innovation (give yourself a low score) or is it a key element of your strategy (high score)?

1 2 3 4 5 6 7 8 9 10

**Information:** Is information hoarded to protect confidentiality or is all relevant information available to internal and external innovation team members?

1 2 3 4 5 6 7 8 9 10

**Collaboration:** Is innovation directed, conducted and evaluated from the top-down or do customers, suppliers and cross-functional teams work together to find innovative solutions?

1 2 3 4 5 6 7 8 9 10

**Opportunity:** Do individuals have to "make time" or stay late or does the company dedicate time and help in implementing innovation and improvement ideas?

1 2 3 4 5 6 7 8 9 10

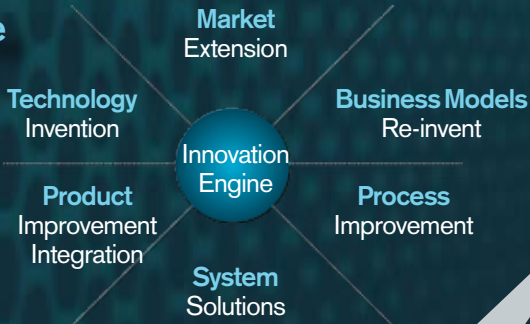
**Process:** Does innovation "just happen" or is there a clearly defined innovation process that includes responsibility and accountability?

1 2 3 4 5 6 7 8 9 10

Innovation Total: \_\_\_/50

## The Innovation Engine

Innovation is a critical component of productivity improvement. But innovation is more than fancy new technology. In fact, 80% of innovation stems from ideas, methods, products and processes, so it's not necessarily expensive to pursue



### PEOPLE

**Empowerment:** Are orders given by supervisors who make all decisions (give yourself a low score) or are associates empowered to make appropriate decisions concerning their work (high score)?

1 2 3 4 5 6 7 8 9 10

**Information Sharing:** Are associates told only what they need to know or do they have access to all of the information necessary to excel at their tasks?

1 2 3 4 5 6 7 8 9 10

**Training:** Is there little to no investment in training or does the organization see training as a positive ROI?

1 2 3 4 5 6 7 8 9 10

**Teams:** Do employees work as individuals on tasks assigned or are self-directed teams commonplace?

1 2 3 4 5 6 7 8 9 10

**Idea Contributions:** Are ideas generated by the supervisor alone or are ideas for improvement solicited and encouraged from everyone in the organization.

1 2 3 4 5 6 7 8 9 10

**People Total:** \_\_\_/50

### LEAN TOOLS

**Takt Time\*:** Is the company lacking a pace of production or office processes (give yourself a low score) or is takt time known by associates and adjusted with variability in product mix and seasonality (high score)?

1 2 3 4 5 6 7 8 9 10

**Error-Proofing:** Is error-proofing fully implemented on all processes?

1 2 3 4 5 6 7 8 9 10

**Pull Systems:** Are work orders driven by batch production to match forecasts or do processes respond immediately to customer demand?

1 2 3 4 5 6 7 8 9 10

**Kanban\*\*:** Is full Kanban implemented in the value stream?

1 2 3 4 5 6 7 8 9 10

**Total Productive Maintenance:** Does maintenance occur only when breakdowns occur or is there a complete preventative maintenance program?

1 2 3 4 5 6 7 8 9 10

**Lean Tools Total:** \_\_\_/50

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# Rate Your Productivity

## VISUAL WORKPLACE

**Performance Charts:** Is key performance data available only to a select few (give yourself a low score) or is there a clear visual display of plant performance and team performance at work cells or meeting areas (high score)?

1 2 3 4 5 6 7 8 9 10

**Work Instructions:** Are work instructions lacking or are they posted as resource and training information at the appropriate work station?

1 2 3 4 5 6 7 8 9 10

**Visual Charts:** Do operators and office personnel use factory and office charts to manage their daily work?

1 2 3 4 5 6 7 8 9 10

**Location Designation:** Does everything have a designated, identified and labelled location, with charts and floor maps indicating those locations?

1 2 3 4 5 6 7 8 9 10

**Visuals Updating:** Do operators and office personnel update charts and visual information displays seldom or continuously?

1 2 3 4 5 6 7 8 9 10

**Visual Workplace Total:** \_\_\_\_/50

## WORKFLOW

**Continuous Flow:** Are operations disjointed with machines in villages and large batch processing or is there a high degree of continuous flow?

1 2 3 4 5 6 7 8 9 10

**Work Scheduling:** Is work “pushed” from one area to the next, whether that area is ready for it or not or are work processes linked, with nothing produced upstream until there is demand from downstream.

1 2 3 4 5 6 7 8 9 10

**Production Cells:** Are cellular operations present that optimize productivity throughout the enterprise?

1 2 3 4 5 6 7 8 9 10

**Production Organization:** Are machines and processes organized in random villages or organized by value streams?

1 2 3 4 5 6 7 8 9 10

**Change-over:** Is change-over lengthy with no organized process or under continuous improvement with progress charted?

1 2 3 4 5 6 7 8 9 10

**Bottlenecks:** Are process bottlenecks used to schedule work throughout the process using drum and rope techniques?

1 2 3 4 5 6 7 8 9 10

**Work Flow Total:** \_\_\_\_/60

## Activities and tools:

Visit [www.albertacanada.com/productivity](http://www.albertacanada.com/productivity) today for more in-depth self-assessment. Other tool and activities online include:

- Lean training tools and assessments
- Productivity capability and capacity benchmarking tools
- Sectoral Benchmarking Studies
- Construction: productivity in large projects
- Automation assessments
- Management boot camps

### WORKPLACE ORGANIZATION

**Safety:** Is your workplace unsafe, with policies loosely enforced (give yourself a low score) or very safe with rigid adherence to policies and full compliance to local ordinances (high score)?

1 2 3 4 5 6 7 8 9 10

**Sorting:** Are random items stored in work areas or only the necessary tools, equipment and resources, with no other materials allowed to accumulate?

1 2 3 4 5 6 7 8 9 10

**Orderliness:** Is there little to no organization or is everything identified and in its place?

1 2 3 4 5 6 7 8 9 10

**Cleanliness:** Are floors and equipment dirty and dust accumulated on surfaces or is your office and/or factory immaculate, with clean surfaces and floors?

1 2 3 4 5 6 7 8 9 10

**Standardization:** Is there clear evidence of standards of procedures, shadow boards, and common flow?

1 2 3 4 5 6 7 8 9 10

**Workplace Organization Total:** \_\_\_/50

**TOTAL SCORE:** \_\_\_/360

### IF YOU SCORED:

**36-108:** Your workplace has lots of room for improvement when it comes to productivity. Target categories with the lowest scores to start implementing changes.

**109-216:** You have implemented a number of measures to improve productivity but still have room to maximize efficiency in a number of areas.

**217-360:** You're well on your way to having a productive workplace.

Visit [www.productivityalberta.ca](http://www.productivityalberta.ca) for a more detailed version of this productivity self-assessment tool.

*\*Takt Time: The desired time between units of production output, synchronized to customer demand.*

*\*\*Kanban: An inventory control system for tracking the flow of in-process materials through the various operations of a just-in-time production process*

# A Formula That Pays

Take steps today to ramp up productivity in your business so you can weather the recession and come out stronger

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**J**im Rakievich, CEO and president of McCoy Corporation, credits his company's investment in productivity for keeping it competitive. Based in Edmonton, 85 per cent of McCoy's revenue is generated from manufacturing and shipping specialized products to oil and gas clients. McCoy used to operate according to what Rakievich calls "the North American style of manufacturing."

"We'd calculate the cost of materials and labour," he says, "and put in a profit margin above that, then convince a customer to buy it. But if someone new comes to town or a foreign company shows up with cheaper labour, you're left trying to make a profit on a non-competitive cost base."

In the midst of growing success, McCoy embarked on an overhaul of its plant in 2004. Rakievich had been to visit a busy plant in Washington and was stunned by how spotless and quiet it was. He learned it had undergone productivity improvements and set out to find out more.

At McCoy, Rakievich targeted the manufacture of power tongs, drilling equipment used on rigs worldwide, for productivity improvement. "We looked at manufacturing, what the guys were doing on the floor," Rakievich says. He found he could eliminate steps by purchasing new equipment: water jets.

"Then we watched the technician—assembly took a long time. We said, 'What if we went the



**WEATHER THE STORM:** Jim Rakievich, CEO and president McCoy Corporation, cut assembly time by two-thirds

Ikea way?' We got our engineers to design in little tabs, so everything snaps together. When the tong's finished, you wouldn't notice the difference. Assembly takes a third of the time," says Rakievich.

Rakievich credits productivity investment for McCoy's success. "In one of our plants, we have the exact same square footage we had eight years ago, but we've doubled revenue. We employ a few more people – but not double. "With the current economic climate, if it weren't for productivity innovation," he says, "our business would be in jeopardy."

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## TO CALCULATE LABOUR PRODUCTIVITY:

$$\frac{\text{revenue}}{\text{hours worked}} = \text{output per hour}$$

This is a key measure of productivity growth



## Get Started With Limited Funds

### Step 1: Do a quick calculation

You can do this whether you have five or 5,000 employees. Say your revenue-per-employee calculation is \$200,000 a year. If you've got five employees, your revenue is \$1 million, but what if, with your existing plant and workforce, your revenue was \$1.4 million? "What does your bottom line look like then?" asks Rakievich.

### Step 2: Educate yourself on productivity

"Buy a book called *The Goal* and read it," says Rakievich. "Get your accountant and plant manager to read it. You can't change anything in a business unless leadership is prepared to change."

### Step 3: Assess your operations

Do some simple exercises, such as a spaghetti diagram, of one of your processes. Take a measuring tape to the shop floor and

track a part through the plant. Document its path on a floor plan. "How much of that movement is because your plant layout is wrong? It's humbling, and the cost to you is the time you take to carry out the assessment."

### Step 4: Make the call

After you've educated yourself and done some initial assessment, visit a company that has implemented productivity measures. "Most people will be happy to show you," says Rakievich.

### Step 5: Pick the low-hanging fruit

Simple changes can be undertaken before you get deep into productivity improvements. "There are all kinds of things you could apply now that would cost you five cents," Rakievich says. "It's just reading to educate yourself, doing a few quick calculations, then rolling up your sleeves."

# Canadian Productivity, By the Numbers

**T**he *Proudfoot Global Productivity Report* is published by Proudfoot Consulting, designer of workplace productivity programs. The report measures global productivity for the business community. In 2008, the company consulted 1,275 managers in 12 countries and eight sectors. The results found that Canada is not a leader in productiv-

ity. Jon Wylie, Proudfoot's managing director in Canada, says the poor productivity indicators are a result of low levels of relevant staff training, slow speed of decision-making and problems with internal communications. On a more positive note, the Proudfoot report says that the stage is set to allow Canadian companies to seize new opportunities for productivity gains.



**HALF:** The number of Canadian companies versus international who are experiencing significant productivity gains



As well, Canadian managers say they could increase productivity by **13%** over the next two years, but expect to achieve gains of only **8%** – leaving **42%** of potential productivity gains on the table



**8:** The average number of training days per year Canadian workers receive. This is **25%** below global norms and **11th** out of **12** markets surveyed



**55:** The percentage of managers in Canada who say training needs within their company are formally and regularly assessed



**HIGH-LOW:** High staff turnover and low workplace morale pose productivity problems, according to Canadian managers



**SECOND LAST:** The rank Canada holds in the study for ease with which information flows within companies



**63:** The percentage of Canadian managers who report that decisions are made quickly in their companies



**Only 7!** Just seven percent of Canadian managers say that a lack of desire in their general workforce to adopt change programs is a barrier to productivity, meaning that a readiness for improved productivity is clear and present

**93:** The percentage of Canadian managers who say employees are ready to embrace change programs to improve productivity

Read the report: [www.proudfootconsulting.com/productivity](http://www.proudfootconsulting.com/productivity)

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## Government of Alberta ■

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# About Productivity in Alberta

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**It's our vision to make sure that Alberta** becomes known as the most innovative and productive region in the world. Considering that Alberta possesses a diversified, strong, and resilient economy it's a reachable goal.

But we're only as productive as our constituent parts. Productivity and innovation improvements by individual Alberta companies will help mitigate the effects of the current downturn and position the province – and those companies – to leap from the gates once the turnaround starts.

Happily for Alberta companies, improving your productivity and innovation is not necessarily expensive, time-consuming or overly difficult. But it takes a commitment to working towards and maintaining the improvements over time.

The Government of Alberta is at work with industry to improve productivity and innovation in the province. We're working together to ask the right questions and find the right solutions at the right time.

**Find out how your business can benefit.**

## Government of Alberta ■

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