TECHNO TRENDS
THE BIG IDEAS THAT ARE CHANGING EVERYTHING

7 FAILURES OF BUSINESS GROWTH (PART II)

BY DANIEL BURRUS, CEO OF BURRUS RESEARCH

Last month I covered two of the seven failures of business growth: #1 Failure to anticipate, and #2 Failure to communicate.

This month I would like to share some additional insights on the failures of business growth. When you know the failures to avoid and the strategies to combat them, you'll be well on your way to creating an organization that continues to grow despite outside conditions.

#3 FAILURE TO COLLABORATE

The majority of people tend to cooperate, which is very different from collaborating. Even though we often use the word "collaborate," we're really just cooperating, which is a lower level function. Cooperating means, "The pie is only so big, and to make sure we both get our fair share, I won't get in your way if you won't get in mine. Maybe we'll even work together...if we have to." Such an approach produces results but certainly not outstanding results, because it's based on a scarcity mentality. Collaboration, on the other hand, is based on abundance. It occurs when we put our heads together and ask ourselves, "How can we create a bigger pie for everyone?" *continued on page 2*

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7 FAILURES OF GROWTH *(continued from page 1)*

That's the secret to getting competitors to work with you and not against you. Remember that today's technologies allow us to collaborate in new and amazing ways. Make sure you're using them properly.

#4 FAILURE TO INNOVATE

When asked what their last big innovation was, most companies have to go back five or ten years to cite something meaningful. Why? Because the majority of companies innovate once, come up with a great product or service, form a company around it, and then they let it ride. They don't continue to innovate and create new products and services. Instead they spend a great deal of effort asking themselves how they can be more efficient…how they can do more with less…how they can reduce staff and overhead…how they can use technology better. Those are all good questions. However, you also want to ask yourself how you can use technology and your people to create new products and services that will increase the sales of your old products and services. The more time you devote to innovation, the more profitable and efficient you'll ultimately be.

#5 FAILURE TO PRE-SOLVE PROBLEMS

Some people say that a problem is an opportunity in disguise. Nonsense! A problem is a problem. A problem is only an opportunity before you have it. Realize that most of the problems our customers and our company experience are predictable. In today's world of rapid change, if you ask customers what they want and then give it to them, you're missing the real opportunity. Why? Because your competitors are asking the same question, getting the same answer, and providing the same solution. Instead, you need to think a level higher and ask yourself and your customers, "What problems are we about to have?" Then you can develop new solutions based on the answers you receive. At that point, you can base your product development on your customer's future problems and deliver the product or service right when the problem becomes a reality.

A WEAK ECONOMY DOES NOT HAVE TO LIMIT BUSINESS GROWTH

By implementing the strategies needed to overcome these business failures you can grow your business for years to come. Next month I will share the final two failures to avoid and the strategies to combat them.

TECHNOLOGY NEWS HIGHLIGHTS

MORE ACCURATE CANCER DIAGNOSIS

Cancer diagnosis is a complex process that often relies on visual analysis of tissue samples, and accuracy can be limited by the fact that normal and cancerous cells sometimes look very similar. But recently, a new method for diagnosing cancer was developed by researchers at MIT. Using an atomic force microscope, they discovered that the surface of living cancer cells is more than 70 percent softer than that of normal healthy cells. When minute amounts of pressure are applied with the nano-sized probe, differences in stiffness of the cell wall can be measured allowing clinicians to distinguish between cancerous and non-cancerous cells. The results of the tests were consistent across three types of tumors – lung, breast and pancreatic. In conjunction with other biomarkers, this nanomechanical approach could greatly reduce the margin of error in diagnosing many cancers that would have otherwise gone undetected.

For information: Subra Suresh, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139; phone: 617-253-3320; fax: 617-253-8549; email: ssuresh@mit.edu; Web site: www.mit.edu

CELL PHONES THAT DETECT RADIATION

Engineers at Purdue University have come up with a system to thwart nuclear terrorism using cell phones and other mobile electronic devices. By implanting tiny solid-state radiation detectors (which are already commercially available) into millions of cell phones, they would collectively become a sensitive network of detectors capable of sniffing out even light residues of radioactive material. Global positioning locators within the phones then transmit signals to a data center, which would, in turn, alert authorities The system was tested using a weak radiation source, which it was able to detect up to 15 feet away. Even if the radiation source is mobile, the software can pinpoint its location by tracking the relative signal strength as it gets closer or further away.

In addition to dirty bombs or nuclear weapons, the system could be used to detect radioactive material spills and evaluate the potential threat level.

For information: Andrew Longman, Purdue University, Department of Physics, 525 Northwestern Avenue, West Lafayette, IN 47907; phone: 765-494-2970; fax: 765-494-0706; email: alongman@purdue.edu; Web site: www.purdue.edu

OPTICAL CIRCUIT BOARDS

Optical networks are capable of transmitting data between devices at extremely high speeds, but the electrical wiring within the devices themselves limits the speeds at which signals can travel. For this reason, manufacturers have been working on developing a circuit board material that will enable optical coupling of electronic components and speed up internal data transmission rates. The latest development in optoelectronic circuit boards consists of two layers of electronic wiring with a 60-micron layer of transparent epoxy resin film in between. The epoxy acts as "optical wiring" to handle high speed data needs, and because it is so thin, signals can travel up to 100 cm (ten times the distance of previous prototypes) with very little distortion. The electronic layers support traditional components and the entire assembly may be attached to terminals like a conventional circuit board.

For information: Matsushita Electric Works, 1048, Kadoma, Osaka 571-8686, Japan; phone: +81-6-6908-1131; Web site: www.mew.co.jp/e/corp/

SEMI-TRANSPARENT TOUCH SCREEN

Touch screens are becoming more and more popular as interfaces for mobile devices. But it can be difficult to target accurately when your fingers block your view of the screen. A new technology call LucidTouch, which is currently in the prototype stage, allows users to activate a touch screen from the back. Using an effect called pseudo-transparency, it senses the position of the hands behind the device and overlays a semi-transparent image of them on the screen for better visibility and more precise operation. The technology also supports multi-finger input.

For information: Mitsubishi Electric Research Laboratories, 201 Broadway, Cambridge, MA 02139; phone: 617-621-7500; fax: 617-621-7550; Web site: www.merl.com

DIAMOND TRANSISTOR

Using a process called chemical vapor deposition (CVD) researchers have developed a diamond transistor that operates at a frequency of 120 GHz – higher than any such device in the world. The process basically consists of decomposing carbon-containing gas (such as methane or carbon dioxide) and depositing the carbon onto a substrate to form a layer of diamond. The material can be tailored for a variety of applications by varying the shape, size and thickness of the diamond. When operating at 2 GHz, the new transistor achieved an amplification ratio of 10,000:1, which exceeds the performance of gallium arsenide semiconductors by a factor of two. The developers anticipate commercializing the new product for use in vehicle-mounted radar systems in two to three years.

For information: John Cringle, Element Six Ltd., P. O. Box 6, Ballasalla, Isle of Man IM99 6AQ, British Isles; email: john.cringle@e6.com; Web site: www.e6cvd.com

ROBOT HELPS SHOPPERS

A new robot was recently deployed in a busy Osaka shopping center to help customers find their way around. Called Robovie, the crowd-monitoring humanoid is designed to recognize when people need assistance and provide simple directions. If they appear to be disoriented, it will ask, "Are you lost?" If they're simply browsing, it can escort them while making recommendations for nearby shops or restaurants. Robovie receives data from 16 on-board cameras, six laser finders, and nine RFID tag readers to identify ten patterns of behavior (like walking, running, wandering or waiting). It can observe up to 20 people at a time and classify their behavior with 90 percent accuracy. The robots will be available for lease as early as June.

For information: Advanced Telecommunications Research, Intelligent Robotics and Communication Laboratories, 2-2-2 Hikaridai Keihanna, Science City, Kyoto 619-0288, Japan; Web site: www.irc.atr.jp/

ARTIFICIAL EYE

A new system currently under development is designed to restore vision in patients with certain types of retinal degeneration, such as that caused by diabetes. It consists of a camera mounted on a pair of sunglasses and attached to a computer. Images

are converted to digital signals and sent to an electrode array implanted in the eye. The electrodes then stimulate the optic nerve giving patients the ability to "see" again. An earlier version of the artificial vision system contained nine electrodes and confirmed that subjects could perceive light. The current prototype, to be implanted in a patient this year, will have forty-nine individual electrodes to substantially improve image quality. The next generation is expected to contain 100 electrodes; the goal is to make it possible for a patient to count the number of fingers being held in front of them at a distance of 30 cm before starting clinical trials, which may begin as early as 2010.

For information: Nidek Inc., 47651 Westinghouse Drive, Fremont, CA 94539; phone: 800-223-9044; fax: 510-226-5750; Web site: www.usa.nidek.com

DEEP TISSUE IMAGING

Scientists recently used genetic engineering techniques to create a fluorescent marker for studying tissues deep in the body. Derived from a red protein found in sea anemones, the new compound is not only brighter than current markers, but emits light in the far-red portion of the spectrum, so it travels more readily through tissue. Current markers have been limited to use on surface tissues or dissected samples. This newly engineered marker will enable researchers to track cell and molecular activity inside the body in real time.

For information: Dmitry Chudakov, Shemyakin-Ovchinnikov, Institute of Bioorganic Chemistry, Russian Academy of Sciences, Ul. Miklukho-Maklaya, 16/10, 117997 GSP, Moscow V-437, Russia; email: chudakov@mail.ru; Web site: http://www.ras.ru/index.aspx

BEYOND HIGH-DEF

A new display technology called high dynamic range (HDR) promises to take high definition television to the next level. The key is its ability to reveal vivid details, even in very bright or very dark areas of a picture, by producing much higher contrast. The displays incorporate an array of LED backlights, which can be controlled individually and projected through a standard LCD panel, front projection or rear projection television. The resulting picture provides ten times the brightness and 100 times the contrast of existing TV monitors.

For information: Dolby Laboratories, 100 Potrero Avenue, San Francisco, CA 94103; phone: 415-558-0200; fax: 415-863-1373; Web site: www.dolby.com/promo/hdr/

VIRTUAL TOURS

A technology is now available that uses panoramic photographs to create 3-dimensional virtual environments. Called EveryScape, its goal is to pick up where Google leaves off by providing photorealistic representations of streetscapes and building interiors anywhere in the world. Earlier versions already enable users to tour selected restaurants, high-end hotels, and travel destinations. The developers are also planning to add a shopping feature that would allow visitors to buy merchandise by simply clicking on a display item.

For information: EveryScape, 716 Main Street, 2nd Floor, Waltham, MA 04251; phone: 781-250-4800; Web site: www.everyscape.com

FUEL FROM BREAD SCRAPS

A system that recycles bread scraps to produce hydrogen is ready to begin field-testing in Japan. The 5-cubic-meter test unit will be installed in a bakery plant where it will process up to 200 kg of bread daily. It is estimated that each kilogram of bread will yield around 200 liters of hydrogen. The by-products can also be fermented to produce methane. Provided the test is successful, and it is determined that the system will be a viable source of hydrogen for the long term, the company plans to install a fuel cell at the site to generate a portion of the plant's electricity and heating needs.

For information: Sapporo Breweries Limited, Yebisu Garden Place, 20-1, Ebisu 4-chome, Shibuya-ku, Tokyo 150-8522, Japan; Web site: www.sapporobeer.jp/english

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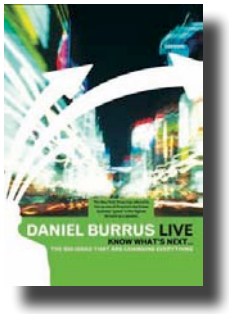

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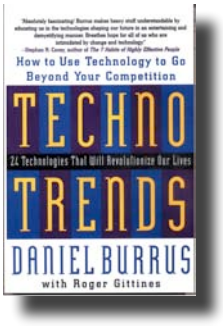

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