



Financing

The big challenge facing many organizations today is not a shortage of ideas, but rather finding the capital to finance them. Many industries have dramatically scaled back their innovation budgets in response to the global economic crisis.

Yet, most senior executives would admit they fully recognize the innovation imperative. They know developing new products and services represents their firm's lifeblood — its only real hope for driving growth, valuation and strategic renewal. But with budget cuts, where exactly are the resources for innovation supposed to come from?

The good news: innovation can actually cost a lot less than most think. The implicit assumption that big breakthroughs require big budgets is kind of like the Gershwin lyrics articulate: "it ain't necessarily so."

In fact, the correlation between innovation resources and competitive outcomes is much weaker than most imagine. To the contrary, incredible innovation achievement does not

necessarily require a massive budget. Noted strategist Gary Hamel says companies can successfully innovate "on the cheap." In practice, there are several ways of multiplying available resources to deliver a whole lot more bang for each innovation buck.

Leveraging Limited Resources

When Steve Jobs and his Apple Inc. team created the original Macintosh computer in the early 1980s, International Business Machines Corp. was spending at least 100 times more on research and development than Apple.

Where Apple scored big was in combining existing but underutilized technologies — such as the mouse, the full-page monitor and the graphic user interface (which were invented by Xerox Corp. but not commercialized) — in a cleverly designed and consumer-friendly package.

Fast forward to 2001 when the same was essentially true for the iPod. Before iPod, there was flash memory, MP3 decoders, digital-to-analog converters, lithium batteries and basically everything else inside the device. None of iPod's essential



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components are unique and can almost be bought off the shelf. (The guts of iPod are even put together by a reference-design company, PortalPlayer Inc.) What made iPod a hit was the way Apple infused the device with its classic attributes — user-friendliness, cool design and iconic branding — and then linked it to the iTunes business model.

Similarly, before the iTunes Music Store came Napster. The idea of a digital download service for music wasn't new. What was new was the legality and the simplicity of Apple's iTunes model.

Indeed, consider Mac OS X. How is it possible that Apple makes arguably the world's most advanced personal computer operating system, despite having a tiny 5 percent share of the computer market and just a fraction of Microsoft's \$6 billion annual R&D budget?

It's due to the core software code behind Apple's operating system, UNIX, which came out of the public domain. Essentially, Apple layers its own proprietary "skin" over this core — the interface, the Finder and other

components that make the operating system so cool and easy to use.

If Apple had gone the route of developing Macintosh, iPod or MAC OS X completely on its own, entirely from scratch, the costs would have been astronomical. Instead, it chose to be innovative where it matters — in things that add unique Apple-type value — while sourcing the rest from outside its organization. This is a crucial key to leveraging limited resources in the pursuit of big, breakthrough innovations.

Many other organizations have also discovered the wisdom of this approach. Take Procter and Gamble Cos.' open innovation program — "Connect and Develop" — which is aimed at sourcing half the company's innovations from the outside.

Not only has the program produced a slew of successful new products that had their genesis with external innovators; it has simultaneously helped P&G slash its own R&D investments by around 20 percent, boosting productivity tremendously.

Another example of external inno-

vation is the popular computer game "Unreal Tournament." Its creators, Epic Games Inc. and Digital Extremes, have enrolled thousands of their customers in the firms' innovation efforts. They sponsor a \$1 million competition that rewards individuals from around the world who build eye-popping "mods" (modifications to existing

Business leaders who recognize that innovation is not a luxury reserved for good times, but rather the lifeblood for driving growth valuation and strategic renewal, will discover that incredible achievement does not necessarily require a massive budget.

games) — in the form of new weapons, characters and action settings — or create new games (conversions, or "cons") that utilize the Unreal Tournament "game engine."

When customers buy Unreal Tournament, they get a powerful suite of

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game-authoring tools — some of the same design tools used by Epic's internal game developers. This turning customers into co-developers serves to multiply Epic's own development efforts.

To put this in context, imagine if Detroit's Big Three automakers distributed powerful computer-aided design software with every car shipped — along with a digital rendering of every fender, piston, wheel and knob — and then invited car nuts everywhere to submit their "mods" and "cons."

Imagine further, that the best of these ideas were posted on the companies' Web sites to inspire yet more innovation among the world's aspiring car designers. Imagine, too, if General Motors Corp., Ford Motor Co. or Chrysler LLC. hosted online forums where people could chat about how to modify the cars to enhance their performance.

Not only could these cash-strapped auto companies get all of this new thinking for free; they might even be able to significantly reduce their engineering resources.

Just a dream? Many don't think so. The automobile industry might want to wake up to the fact that the single largest trade show in America today is the Secondary Equipment Manufacturer's Association. It's for firms that make automotive-specialty products like exhaust systems, turbochargers, roof racks, etc. Thus, auto manufacturers could multiply their resources by plugging into the huge cultural movement that is typified by MTV's hit show "Pimp My Ride."

Investing Incrementally

A second way to improve a firm's innovation efficiency is to make sure its experiments are initially based on small increments of capital rather than hefty, bet-the-farm investments. Consider "GameChanger," a program at Anglo-Dutch oil giant Royal Dutch/Shell Group.

The purpose of GameChanger is to solicit and fund breakthrough ideas from across Shell's global enterprise — and beyond. It is open to any-

body, anywhere in the company, as well as to people and organizations outside the corporate boundaries.

Ideas are submitted to a six-person peer-review panel that meets once a week and that is refreshed with new people every six months. The panel looks at every idea that comes in. When one looks promising, the innovator can receive initial funding of \$25,000 in less than a week. With the funds, the innovator sets out to design an experiment that will either validate or invalidate the idea's most critical hypotheses.

After 30 days, the innovator presents the results. At that time, the GameChanger panel may say, "Okay, how about another \$25,000 for the next 30 days?" Or, "This looks really promising, so we'll give you \$50,000 for 90 days." A subsequent proof-of-concept review determines a plan's potential for further funding. The average GameChanger grant is \$100,000; some projects have received as much as \$600,000.

The panel will also connect the innovator with a broad range of other company resources — experts to serve as technical advisers, mentors and coaches or other talented individuals and teams who can get involved in development. If a project gains serious momentum, they'll bring together business leaders from across Shell and give them the opportunity to adopt the new idea.

Thus far, the system has been a magnet for thousands of new ideas, hundreds of which have been funded. Many of these ideas are later moved into an operating unit or one of Shell's growth initiatives.

Still others are carried forward as R&D projects. In the last few years, some of Shell's largest growth initiatives had their origins in the GameChanger system, and a large percentage of the company's R&D budget goes to ventures that started in GameChanger.

If GameChanger were happening at Google Inc., many people would say, "Oh, that's Google. We couldn't do a thing like that here. We're too big, bureaucratic and cumbersome."

Well, organizations don't come a lot bigger, more bureaucratic and cumbersome than Shell. If this sort of innovation can be carried out there, it can be done in many other types of companies, too.

Investing Consistently Over Time

A third and closely related way to multiply a firm's available resources is to keep its innovation commitments consistent. Instead of going "full speed ahead in all directions," it's wise for the investments to compound — to be cumulative over time.

Again, consider Apple. The company has produced a steady flow of exciting innovations over the last decade — iMac, iPod and iPhone along with iTunes and retail stores — but a close look shows a coherent logic: they compound and reinforce each other.

Another example is Toyota Motor Sales' patient, multiyear program to develop eco-friendly vehicles, which is resulting in its hugely popular range of hybrids. It was managed as a stepwise migration path, with investments gradually increasing in stages as the company's learning and experience compounded and as competencies grew stronger.

The lesson here: it's fine to have revolutionary goals, but the best way to achieve them is usually by taking consistent, evolutionary steps — not by making big shifts in innovation priorities with start-again, stop-again investments.

By focusing on critical productivity drivers like those described — sourcing much of a firm's innovation externally, investing in innovation projects incrementally and keeping its commitments consistent over time — companies have the ability to significantly multiply their resources for financing innovation, even in the tight economy.

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