# International R&D Tax Incentives—Get Ready for the Global Innovation-Based Economy

By Charles Goulding



*Charles Goulding, J.D., CPA, M.B.A., is the Managing Director—Tax of Cooper Industries, Ltd.*

©2005 C. Goulding

## Innovation Drivers

For the first time in many years, no major national economy is experiencing a recession, resulting in one of the best overall global economic environments in recent history. Corporations are laden with cash, and mergers and acquisitions (M&A) activity is relatively slow. Commodity prices are at well publicized, all time highs supporting the funding of more efficient technology and substitute materials.

Numerous countries have focused national objectives designed to leverage their underlying attributes and position themselves for capturing the value-added profit available to them. Essentially, these countries establish global centers of excellence.

Global urbanization, traffic congestion, energy reduction and pollution are increasing problems demanding solutions everywhere. Innovative transportation logistics are providing consumers with the opportunity to obtain what they want of existing products, when they want it, from the world's market basket at reasonable prices.

Global security concerns are vividly presented in our nightly news and are driving new product ideas for biometrics and other security systems. In an article entitled *The Security-Industrial Complex*, author Mark P. Mills explains that "security is a very big and growing tech business." Mills predicts that "the enabling technologies for terror-sensing tools will rapidly migrate to applications in medicine, industry, transportation, telecom and even entertainment, driving a tech boom."[1]

## Government Provided Innovation Incentives

All of the above-described trends argue for a new innovation-based economy. National governments recognize these needs and now over 30 countries have followed the United States' 1981 lead in enacting research and development (R&D) tax incentives in the form of credits or enhanced deductions. For a comprehensive overview of all countries' R&D tax incentives, including national incentives and U.S. state incentives see the CCH publication RESEARCH AND DEVELOPMENT TAX INCENTIVES: FEDERAL, STATE AND FOREIGN by Michael D. Rashkin.[2]

## Rooted in Global Competition

Today's global R&D incentive regime is rooted in global competitiveness concerns. In 1981, the United States enacted a major R&D tax credit incentive to stimulate U.S. job creation in the face of then seemingly unstoppable Japanese advancement.

In 1983, Canada followed with its credit surpassing the U.S. credit, applicable to all current and capital eligible R&D costs. In 1994, NAFTA further focused the Canadian government's thinking with the reality that Mexico's advantage was low cost labor and Canada needed new thinking supporting innovation to establish its position in the North American economy.

The French R&D credit enacted in 1983, added a characteristically sophisticated French design flair. France offered an enticingly high 50-percent credit provided a taxpayer exceeded a two-year base. With this credit, timing is everything and the sophistication is the opportunity for a very large R&D credit correlated to the typical highs and lows of classic R&D product development cycles.

The United Kingdom enacted a new 125-percent R&D super deduction in 2002, which is essentially a 7.5-percent credit (25% additional deduction x 30% tax rate). This credit was enacted after long studies with the U.K. government openly acknowledged that it was very concerned about the continuing downward trend in innovation in the United Kingdom.

Mexico enacted a 30-percent R&D credit in 2001 after the dot.com implosion took the electronics/telecom-based *maquiladora* industry down with it. By the time the economy began to recover, Mexico confronted the Chinese economic juggernaut offering even a more competitive lower labor rate. China has recently enacted a 150-percent R&D super deduction in a quest to take its labor-based manufacturing economy up the next step in the value chain. Hungary has responded by really raising the innovation incentive challenge. In addition to low cost labor and a 16-percent corporate tax rate, Hungary offers a 200-percent R&D tax deduction plus, effective January 1, 2005, a 10-percent R&D/software development tax credit recognized ratably over four years.

## When Accountants Confront Innovation

One of the practical problems is that today's body of knowledge necessary to meet the minimum prerequisite to be a qualified accountant inhibits accounting professionals from developing a science-technical knowledge foundation. It's hard enough to meet the professional accounting prerequisite while attending undergraduate and graduate school, leaving little time for science and technology courses. Like any other knowledge-based discipline, their inadequacies can be overcome by self-education. Although there are numerous suitable publications, some of the more enlightening and readable sources are:

- WIRED
- FAST COMPANY
- MIT's TECHNOLOGY MAGAZINE
- THE ECONOMIST, with periodic technology reviews

For those who have a little deeper connection to technology, the monthly magazines SCIENCE and SCIENTIFIC AMERICAN are excellent resources.

Larry Sumners, the outspoken President of Harvard, has challenged a large portion of the Harvard community that traditionally focused on humanities and the classics, that one can't be considered educated in today's society unless he has familiarity with math, science and technology. Accounting and tax specialists face this same knowledge challenge.

## Understanding Global Centers of Excellence

It is extremely helpful for R&D tax incentive experts to understand global centers of excellence. There are myriads of underlying political, social and economic reasons why certain countries dominate certain industries and

develop a culture of innovation in a particular field. Typically, there are government policies and programs in those countries that support innovation in home advantaged industries. Exhibit A presents some of the recognized national centers of excellence.

For example, WIPRO and Infosys, the two Indian software giants, use India's tax holiday program to start new software centers. The continuing Boeing-Airbus trade dispute is centered on assertions of major government-provided economic incentive advantages. China's incentives for the semiconductor industry have also been well publicized.

Countries with particular industry leadership encourage their universities to supply talent that meets their needs, and company managers are often adjunct faculty at universities and colleges with a vocational focus. For example, the University of Arkansas is known for supply chain and distribution expertise in conjunction with Wal-Mart's prominence in that state.

The relevant take away for R&D tax incentive identification is that the leading centers of excellence are going to be leading innovators and their activities should be familiar and well within the comfort zone of the same country tax audit authorities.

## Local Government Initiatives

California is often referred to as a state with an economy at a size rivaling most major nations. California has its own state R&D tax credit at the 15-percent level for commercial R&D and 24 percent for basic R&D. The recently approved 10-year, $3 billion R&D funding for stem cell research has attracted world attention. Speculation is that Massachusetts, California's East Coast biotech competitor, isn't going to stand by without answering with its own initiatives. Pennsylvania has already earmarked $2 billion in tobacco settlement money to biotech. California continues to play a lead role in auto emission standards, which also drives innovation.

## The Need for New Industries

Some informed business leaders, like Larry Ellison of Oracle, feel the software industry is over resourced and the semiconductor industry has turned its focus to consumers now that industrial usage has peaked. Both the software and the semiconductor sectors are known for their historical commitment to large R&D budgets.

Many large industrial companies, like GE and United Technologies, are placing increased emphasis on R&D in what GE characterizes as a back to the laboratory strategy.

Some contemporary innovations are so pervasive that they are widely recognized as today's defining technologies. Examples include:

- Nanotechnology
- Robotics
- Fuel cells
- Gene cloning
- Stem cell research
- Light emitting diodes (LEDs)

The fast growing recognition of LEDs even resulted in a CFO magazine article dedicated to this topic, which evidences the relevance of major technological innovation to CFOs.[3]

*Exhibit A National Centers of Excellence*

- Australia—Mining technology & processes
- Brazil—Regional jets
- Canada—Point of sale software
- China—Televisions; semiconductor fabrication; furniture; textiles
- Denmark—Shipbuilding
- Finland—Telecommunications
- France—Commercial aircraft
- India—Software
- Italy—Design
- Germany—Machine tools; Printing technology
- Japan—Camera technology, robotics
- Mexico—Electrical assembly; automobile parts
- Netherlands—Transportation logistics
- South Korea—Shipbuilding
- Sweden—Telecommunications
- Taiwan—Semiconductor fabrication
- U.K.—Building security products
- U.S.—Aerospace; Internet equipment; Lasers; Oilfield technology; Software; Semiconductors; Pharmaceutical

***Note.*** This is not an exclusive list and many of the listed nations have demonstrated expertise in multiple additional areas.

## The New Global R&D Reality

Increasingly, large multinationals have multiple major R&D centers throughout the world. For example, since 2000, Samsung has opened or expanded design centers in San Francisco, London, Tokyo, Los Angeles, and this year in Shanghai.[4] In the multi-country R&D environment, major projects proceed uninterrupted, 24 hours a day, seamlessly transferred from shift to shift across time zones. Napster-like file swapping technology renders classic concepts of intangible transfers into non-country-specific world knowledge bases. After all, who really has ownership rights to new technology created by engineers and scientists located in, say France, China, the United States and Brazil, all of which simultaneously contributed to the same project while typically drawing on knowledge resources emanating from even more countries?

## Benefits of Global R&D Location Structure

There are numerous benefits from operating a global R&D structure, some of, which include (1) enhancement capability, (2) blending, and (3) local market knowledge.

### *Enhancement Capability*

Enhancement capability is where a lower labor cost R&D center adds important bells and whistles that would be cost prohibitive for the project originating in a high cost engineering center that may already be focused on an another alternative project.

### *Blending*

R&D blending is where a project is geographically allocated to the R&D center best situated from a cost and capability perspective to handle a project. This is a powerful economic resource that can actually enable a high cost R&D center to obtain more projects. This opportunity arises because the lower value added portions of a project are appropriately allocated to the lower cost R&D center enabling the R&D developer to provide a lower price for the total R&D project.

### *Local Market Knowledge*

Naturally, local area economies are going to be more informed about local market needs and characteristics. The classic example is developing appliances for the Asian market where smaller living quarters necessitate smaller appliances. Another relevant example is automobile beverage cup holders embraced by harried Americans willing to eat on the go, a concept other countries find quite astonishing.

## Conclusion

For tax professionals, working on R&D issues can be one of the most interesting and rewarding aspects of tax practice. Tax professionals can be of great assistance in supporting a culture of innovation, which is a critical function, at most companies. Those tax advisors that make the most effort to understand the technical trends and drivers impacting the industry they serve will reap the greatest reward.

ENDNOTES

1 Mark P. Mills, *The Security-Industrial Complex*, FORBES, Nov. 29, 2004, at 44.
2 Michael D. Rashkin, RESEARCH AND DEVELOPMENT TAX INCENTIVES: FEDERAL, STATE, AND FOREIGN (2003).
3 *Let There be Cheaper Light*, CFO, Nov. 2004, at 28.
4 *Redesigning Samsung*, BUSINESS WEEK, Dec. 2004, at 90.

This article is reprinted with the publisher's permission from the JOURNAL OF TAXATION OF GLOBAL TRANSACTIONS, a quarterly journal published by **CCH** INCORPORATED. Copying or distribution without the publisher's permission is prohibited. To subscribe to the JOURNAL OF TAXATION OF GLOBAL TRANSACTIONS or other **CCH** Journals please call 800-449-8114 or visit www.tax.cchgroup.com. All views expressed in the articles and columns are those of the author and not necessarily those of **CCH** INCORPORATED or any other person.