

# The Importance of Finding New Ways

*Innovation is important because old ways won't solve world's new problems*

BY JAMES PILDITCH\*

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One of the first things President Kennedy did when he took office was to direct the Department of Commerce to explore new ways of "speeding the development and spread of new technology." A commission was set up to look at the problems of innovation. The report subsequently published<sup>1</sup> made a number of points of special interest to us today.

1. Innovation creates jobs. Three industries alone, commercially nonexistent in 1945, were employing 900,000 people by 1965.

74 2. Innovation creates wealth. Those same three industries — television, jet travel and digital computers — contributed more than 5,400m to the gross national product in 1965.

3. There is a very significant relationship between innovation and economic growth.

4. Innovation has had a very significant effect on the United States international balance of payments. (At that time the United States received 10 times as much in technological payments from abroad as went out and had a balance of payments surplus from patent royalties and the like of £200m.)

The report said: "Companies that have committed themselves to innovation as a way of life have grown faster and more consistently than others". Over 20 years the average annual growth of gnp in the United States advanced at a rate of 2.5 percent. During the same time the average annual net sales growth of innovative companies studied was 17 percent. Their average yearly growth in jobs ranged from 7.5 percent to 18 percent.

Jobs, growth, security, balance of payments surplus — all are items we could do with now. To that list one must add a turbulence of change affecting industry in every dimension. Such change spells doom to anyone unable to find new ways of doing things, indeed, new things to do. Innovation "as a way of life" is imperative because old answers will not solve our new problems. The need for innovation has never been more urgent.

For a decade or more British industry has grown by acquisition and merger. Today the possibility of growth this way has all but evaporated. At the same time industry's preoccupation has been with rationalizing, cutting out

duplication, trying to give shape to the conglomeration of assorted companies that have been thrown together.

Much of the hoped-for synergy never arrived. And evidence suggests that you cannot build a forest simply by cutting down dead trees. So which way will even our most successful managers turn?

## Organic Growth

Growth from within, organic growth, is an inevitable if belated answer. This must mean having the will and power to innovate one's own products or services so as to relate oneself to the world in new ways.

Definitions are due. Innovation is the process by which an invention or idea is translated into the economy. According to the report cited, "innovation encompasses the totality of processes by which new ideas are conceived, nurtured, developed and finally introduced into the economy as new products or processes; or into an organization to change its internal and external relationships, or into a society to provide for its social needs and to adapt itself to the world or the world to itself".

Emphatically, the authors point out, innovation is not the same as research and development. This may well have been a source of misunderstanding in Britain. According to the Organization for Economic Cooperation and Development, this country spends much the same proportion of her gnp on nonmilitary or space research and development as the United States does. Yet we cannot be said to run a close race with respect to innovative success or economic growth.

## Innovative Process

In other words, investment in research and development does not lead automatically to economic success; research and development is part of the innovative process, not the whole. Perhaps there is a sad truth in the well-worn phrase that British industry invents things which others then make money on.

There is also plenty of experience to show that research departments in industry can expend a lot of energy diligently developing things that no one can profit by. The effort, in short, has not been directed sufficiently towards the marketplace.

It is easier to say that companies should innovate than

<sup>1</sup>*Technological innovation: its environment and management.* Published by U. S. Department of Commerce. Available from U. S. Government Printing Office, Washington DC, 20402.

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to say how to do it. Good systems for developing profitable new ventures do exist and can be described. And experience has certainly taught a number of fundamental ground rules without which innovation has not much chance of success.

Some of these rules emerged from an internal seminar held a fortnight ago in Birmingham by the Delta group of metal and engineering companies. The first is the essential need for serious commitment by top management. Particularly in these days of stringency and cutback and saving every penny, it is hard for any board to commit funds to anything new or risky. But if it is hard for them it is harder still for divisional company and line managers, who are directly responsible for profit now. So the enthusiasm and the means must come from the top.

### Source of Innovation

It probably follows that you cannot expect innovation to come from people with an in-tray full of today's problems. New ventures (which in early stages cost money and do not make it) will go to the bottom of the pile and stay there. Line managers should certainly be involved in innovation projects but the drive should come from people one step removed from the hurly-burly.

The next rule is that innovation must be geared to market need. This may not mean, indeed probably does not mean, the immediate market. The closer one is to one's market the less chance there is of being thrown by changes in demand. Equally, the more people's eyes are focused on their technical or manufacturing skills the more they will suffer when demand for those skills declines.

Good innovation work, too, is geared and assessed frequently in the light of the potential profit it will yield; if not misdirection and fruitless effort is almost inevitable. The ability to cut a project quickly is important.

The next rule is that innovation should be based on existing strengths, and these need not be technical ones. I would even say the opposite: too much emphasis on technical excellence has inhibited many companies from profitable innovation.

By this I do not minimize the need for a product to perform well. But I do mean we have to see what performance is required. We have to reassess the whole process of getting products successfully into society.

The other point to bear in mind is that innovation is essentially a creative as well as an analytical process. The important thing is to get the balance right, and, again, there are established ways of doing so. Whether brainstorming and other group activities for developing ideas are encouraged, or whether ideas come back from what Steinberk called "the lonely mind of a man", does not matter. The great thing is to search for new ideas, new ways of relating previous experience — then to check them.

The final rule is that innovation should be the constant, continuous concern of any organization. In good times we may appear to get along without it, but past negligence

will surely show when the climate changes. If I may quote Colin McIver, the eminent marketing consultant, "It's like growing asparagus. The right time to have started is five years ago."

## Perspectives on Development

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the division of labor concept practiced by the cooperative effort of the developed and developing country provides a basis for low-cost manufacture of a given product which in turn builds volume, which in turn further increases the cost savings generated by the division of labor concept. It should be noted that technology learned by the developed country over a period of, for example 25 years, may be learned by a developing country in a substantially shorter time because the developing country is starting with that which is known today — the device has been made, therefore it may be made. To protect markets and to bring about healthy economies in both transferor and transferee countries, application of the division of labor concept dampens the effect of the technology transfer/market loss phenomenon to the transferor. The transferee, in turn, develops a higher level of industrialization and he, in turn, may become a transferor of technology relative to his neighbor, a lesser developed country. This step-by-step-progression is economically sound for each of the countries in the developed, developing and under-developed country environment.

### VII. CONCLUSION

The developed country must be sensitive to developing countries which are the market places of the future for the developed country as it reaches its own market saturation point. The developed country must strike a balance between rapid transfer of technology and therefore loss of the developing country as a market place, and the normal growth within the developing country which will preempt the developed country from the ability to maintain the developing country as a market place through a cooperative effort. The developed country must develop a strategy which is economically sound for developing country customers.

The developed country must guide the developing country carefully, helping the developing country avoid mistakes and delays experienced by the developed country. The developed country must carefully plan and use the technique of licensing, joint ventures, merger and acquisition with long range consideration in mind.

The developed country should not be so shortsighted as to exploit the market places of the developing countries since this will lead to loss of the market more surely than in the licensing process.

On the other hand, the developing country must consider the advice of the developed country. The developing country must carefully apply the techniques of division of labor, the leap-frog theory, and the use of idle technology.

In short, a cooperative effort on each side will balance the forces of developed/developing countries and balance the technology transfer/market loss phenomenon, thereby achieving an economically sound environment.