



**FACULTY OF AGRICULTURAL SCIENCES & ALLIED INDUSTRIES**

## Sources of Innovative Opportunities

### Source: The Unexpected

No other area offers richer opportunities for successful innovation than the unexpected success. In no other area are innovative opportunities less risky and their pursuit less arduous. Yet the expected success is almost totally neglected; worse, managements tend actively to reject it.

### The Unexpected failure

Failures, unlike successes, cannot be rejected and rarely go unnoticed. But they are seldom seen as symptoms of opportunity. A good many failures are, of course, nothing but mistakes, the results of greed, stupidity, thoughtless bandwagon-climbing, or incompetence whether in design or execution. Yet if something fails despite being carefully planned, carefully designed, and conscientiously executed, that failure often bespeaks underlying change and, with it, opportunity.

The assumptions on which a product or service, its design or its marketing strategy, were based may no longer fit reality. Perhaps customers have changed their values and perceptions; while they still buy the same “thing,” they are actually purchasing a very different “value.” Or perhaps what has always been one market or one end use is splitting itself into two or more, each demanding something quite different. Any change like this is an opportunity for innovation.

### The unexpected outside event

Unexpected successes and unexpected failure have so far been discusses as occurring within a business or an industry. But outside events, that is, events that rare not recorded in the information and the figures by which a management steers its institution, are just as important. Indeed, they often are more important. Here are some examples showing typical unexpected outside events and their exploitation as major opportunities for successful innovation.

## Source: Incongruities

An incongruity is a discrepancy, a dissonance, between what is and what “ought” to be, or between what is and what everybody assumes it to be. We may not understand the reason for it; indeed, we often cannot figure it out. Still, an incongruity is a symptom of an opportunity to innovate. It bespeaks an underlying “fault,” to use the geologist’s term. Such a fault is an invitation to innovate. It creates an instability in which quite minor efforts can move large masses and bring about a restructuring of the economic or social configuration. Incongruities do not, however, usually manifest themselves in the figures or reports executives receive and pay attention to. They are qualitative rather than quantitative.

Like the unexpected event, whether success or failure, incongruity is a symptom of change, either change that has already occurred or change that can be made to happen. Like the changes that underlie the unexpected event, the changes that underlie incongruity are changes within an industry, a market, a process. The incongruity is thus clearly visible to the people within or close to the industry, market, or process; it is directly in front of their eyes. Yet it is often overlooked by the insiders, who tend to take it for granted – “This is the way it’s always been”, they say, even though “always” may be a very recent development.

There are several kinds of incongruity:

-An incongruity between the economic realities of an industry (or of a public-service area);

-An incongruity between the reality of an industry (or of a public service area) and the assumptions about it;

-An incongruity between the efforts of an industry (or a public service area) and the values and expectations of its customers;

-An internal incongruity within the rhythm or the logic of a process.

## Source: Process need

“Opportunity is the source of innovation” has been the leitmotif of the preceding

chapters. But an old proverb says, "Necessity is the mother of invention". This chapter looks at need as a source of innovation, and indeed as a major innovative opportunity. The need we shall discuss as a source of innovative opportunity is a very specific one: I call it "process need". It is not vague or general but quite concrete. Like the unexpected, or the incongruities, it exists within the process of a business, an industry, or a service. Some innovations based on process need exploit incongruities, others demographics. Indeed, process need, unlike the other sources of innovation, does not start out with an event in the environment, whether internal or external. It starts out with the job to be done. It is task-focused rather than situation-focused. It perfects a process that already exists, replaces a link that is weak, redesigns an existing old process around newly available knowledge. Sometimes it makes possible a process by supplying the "missing link".

In innovations that are based on process need, everybody in the organization always knows that the need exists. Yet usually no one does anything about it. However, when the innovation appears, it is immediately accepted as "obvious" and soon becomes "standard".

There are, however, some important caveats

1. The need must be understood. It is not enough for it to be "felt" Otherwise one cannot define the specification for the solution.
2. We may even understand a process and still not have the knowledge to do the job.
3. The solution must fit the way people do the work and want to do it. Amateur photographers had no psychological investment in the complicated technology of the early photographic process.

## **Source: Industry and Market Structures**

Industry and market structures sometimes last for many, many years and seem completely stable. The world aluminum industry, for instance, after one century is still led by the Pittsburgh-based Aluminium Company of America which held the original patents, and by its Canadian offspring, Alcan of Montreal. There has only been one major new comer in the world's cigarette industry since the 1920s, the South African Rembrandt group. And in an entire century only two newcomers have emerged as leading electrical apparatus manufactures in the world. Philips in Holland and Hitachi in Japan. Similarly no major new retail chain emerged in the United States for forty years, between the early twenties when Sears. Roebuck began to move from mail order into retail stores, and the mid-sixties when an old dime-store chain, Kresge, launched the K-Mart discount stores. Indeed, industry and market structures appear so solid that the

people in an industry are likely to consider them foreordained, part of the order of nature, and certain to endure forever.

Actually, market and industry structures are quite brittle. One small scratch and they disintegrate, often fast. When this happens, every member of the industry has to act. To continue to do business as before is almost a guarantee of disaster and might well condemn a company to extinction. At the very least the company will lose its leadership position; and once lost, such leadership is almost never regained. But a change in market or industry structure is also a major opportunity for innovation. In industry structure, a change requires entrepreneurship from every member of the industry. It requires that each one ask anew; "What is our business?" And each of the members will have to give a different, but above all a new, answer to that question.

## **Source: Demographics**

The unexpected; incongruities; changes in market and industry structure; and process needs – the sources of innovative opportunity discussed so far in Chapter 3 through 6 – manifest themselves within a business an industry, or a market. They may actually be symptoms of changes outside, in the economy, in society, and in knowledge. But they show up internally.

- Demographics
- Changes in perception, meaning and mood
- New knowledge

The remaining sources of innovative opportunity are external. They are changes in the social, philosophical, political, and intellectual environment. Of all external changes, demographics – defined as changes in population, its size, age structure, composition, employment, educational status, and income – are the clearest. They are unambiguous. They have the most predictable consequences.

Demographics have major impact on what will be bought, by whom, and in what quantities. American teenagers, for instance, buy a good many pairs of cheap shoes a year; they buy for fashion, not durability, and their purses are limited. The same people, ten years later, will buy very few pairs of shoes a year – a sixth as many as they bought when they were seventeen – but they will buy them for comfort and durability first and for fashion second. People in their sixties and seventies in the developed countries-that is, people in their early retirement years form the prime travel and vacation market. Ten years later the same people are customers for retirement communities, nursing homes, and extended (and expensive) medical care. Two-earner families have more money than they have time, and spend accordingly. People who have acquired extensive schooling in their younger years, especially professional or technical schooling, will, ten to twenty years later, become customers for advanced professional training.

## **Source: Changes in perception**

In mathematics there is no difference between “The glass is half full” and “The glass is half empty”. But the meaning of these two statements is totally different, and so are their consequences. If general perception changes from seeing the glass as “half full” to seeing it as “half empty”, there are major innovative opportunities.

## **Source: New Knowledge**

Knowledge-based innovation is the “super-star” of entrepreneurship. It gets the publicity. It gets the money. It is what people normally mean when they talk of innovation. Of course, not all knowledge-based innovations are important. Some are truly trivial. But amongst the history – making innovations, knowledge-based innovations rank high. The knowledge, however, is not necessarily scientific or technical. Social innovations based on knowledge can have equal or even greater impact. Knowledge-based innovation differs from all other innovations in its basic characteristics: time span, casualty rate, predictability, and in the challenges it poses to the entrepreneur. And like most “super-starts”, knowledge-based innovation is temperamental, capricious, and hard to manage.

## **The characteristics of knowledge-based innovation**

Knowledge-based innovation has the longest lead time of all innovations. There is, first, a long time span between the emergence of new knowledge and its becoming applicable to technology. And then there is another long period before the new technology turns into products, processes, or services in the marketplace.