Research is prerequisite to Egyptian industries' progress

By Nader Riad

Egyptian industry is now facing more than ever many internal and external challenges and it has to overcome them in this battle, because there is no other alternative.

It goes like the famous Shakespearean phrase 'to be or not to be', whose meaning may also apply to industry but in another formula, 'to develop or not to develop'.

There is no doubt that there are Egyptian industries rivaling foreign counterparts. Although these industries are still modest, they constitute a bridgehead on which many promising industries will go across the world, thanks to their adoption of quality assurance, human resource and competitiveness principles, availability of stocks meeting the growing demand, after-sale service, client satisfaction follow-up under any circumstances, complaint management, ability to spend on research and development, and bringing the cutting-edge technologies.

Research and development are prerequisites for the progress of Egyptian industry. For its importance this issue raises traditional questions, an attempt to swim against the tide: Is development necessary for industry? Is it a step or progressive, non-stop series of procedures?

This takes us back to square one in the industrial engineering system – challenges of competitiveness faced by the product, the individual and the

institution. Industrial activity is based on three intertwined links – the life cycles of the product, individual and institution.

The successiveness of these links generates what is called virtuous circles; the opposite is vicious circles. This means that the challenge faced by the product is not separated from the challenge faced by the worker. The outcome is a challenge faced by the institution as a whole.

The examples are many. Each auto manufacturer launches a new product in each new cycle in order to keep demand on its products. In this process the manufacturer competes with itself to keep its production excellence. So the product life cycle should be successive to renew economic demand for the institution's products.

As for the individual life cycle, constant development during the individual's lifetime in the institution is a guarantee for the flow of positives inside the institution. The individual is the maker of success as well as failure. Investment in the humans secures success for the institution.

Regarding the institution life cycle, we are always asked in international forums: what is the research and development budget at your institution? The answer implies deduction of the institution's strategic behavior and way of heading for the future. In other words, the research and development budget is, in fact, a tool of change inside the industrial institution.

Undoubtedly, the availability of good innovative ideas and new applicable inventions within the industrial institution is strategic security for the institution to face fluctuations and challenges that may face it.

So, development is a constant operation adopted by strong companies, thus getting stronger, and abandoned by weak ones, thus getting weaker. Indeed, this confirms a fact in industry; rich institutions get richer and poor ones get poorer.

Three years ago on the sidelines of the World Economic Forum in Davos, Switzerland, news agencies reported news about a success story the protagonist of which was research and development. Procter & Gamble bought Gillette, the world Britain-based razor producer that is only rivaled by Wilkinson.

Thanks to research and development in Proctor & Gamble and Gillette, 80 percent of the market rivals got out of the competition because they were unable to keep pace of technology progress.

The two rivals remained sharing the market, each with its own efficiency, marketing ability and world market share. After Gillette launched a revolutionary concept in terms of design and innovation, superseding Proctor & Gamble, the result was that the latter bought the former for 54 billion Euros.

Asked by the German television about the reason for this huge deal, Proctor & Gamble chief said the new inventions of Gillette gave it the largest share over the coming period in the world unrivalled.

Development as a goal is the maker of success of the institution, while development as a necessary is escape from failure of the institution.

At the experimental research level, there is a question raising itself: Do we have research centers belonging to universities or others working in the field of evaluating products and comparing them to other rival counterparts technically to provide a low-cost method through reverse engineering on which the industrial renaissance of Japan, South Korea, India and others, is based?

Reverse engineering is an important tributary of low-cost industrial and technological development, according to the famous saying, 'we do not need to re-invent the wheel; just apply its uses'.

It is known that Japan depended in its industrial renaissance on the reverse engineering, just copying technically qualified products as a low-cost solution to transfer or even deduct technology. South Korea followed suit.

In this respect, the Metal Research Center and the Welding Division affiliated to it are a good example of the degree of technical services. The center provides the whole industrial sector with training, qualification, inspection and research services in the field of metals and welding for fees. Thus, it has made a considerable financial surplus covering these services.

The center uses these funds in preserving its technical expertise, in addition to constant development in laboratories and technical capabilities. This way, the center achieved success and world fame, thus gaining considerable material and technical assistance from scientific institutions from East and West.

That is why the Egyptian industry at present needs innovated, technical solutions to engineering products in order to keep pace with the speed of progress, especially as this saves the time needed for devising these solutions or transferring related technology.

With the growing fierce competition in the world markets and within the framework of international shifts and partnership agreements, capability of competitiveness is confined to those who are able to conduct research, improve quality and offer reasonable prices. Success maker has and will always been 'research and development'.

**** Translated from Arabic Original***
***Source:** Al Watani al Youm Newspaper 5/8/2008*