

Ct scanner business by emi essay sample

[Literature](#), [Russian Literature](#)



This case discusses about the new product conceptualization and the evolution of the CT scanner business by EMI. It also discusses what happened after the market introduction of the commercial CT scanner by EMI Ltd. In a prototypical pattern of industry evolution this case represents an industry in its growth stage since the entry rate exceeds the exit rate.

Company Background and History

EMI was started as a Gramophone company in 1898 when it used to import gramophones from US. Soon after its merger with Columbia Gramophone Company, EMI quickly gained the reputation as an aggressive technology innovator. The company was in a strong financial position as it entered the 1970s because of its success in the music industry. However in 1971 EMI losses were a major hit to an otherwise profitable company. These losses were quite staggering in the North America, with profit down some 175% from the previous year.

Their music business, long a source of reliable profit over the years, took a massive hit in 1971, down 88% along with a total revenue drop of 48% after taxes. In order to continue its growth, EMI should make a play into emerging markets with its products, or move into a new market segment. These staggering losses led to a change in the top management at EMI as well as a shift in corporate strategy. The management recognizing the risk in the music business which accounted for two-thirds of EMI sales wanted to obtain a strategic balance by divesting some of its cash flow into numerous acquisitions and internal developments. This change in strategy helped EMI

to diversify in the fast growing medical electronics field with the innovation of the new product called CT scanner.

CT Scanner : The Concept

Godfrey Hounsfield, a research scientist in the EMI's Central Research Laboratories came up with the CT scanner concept. It was a technology that wasn't necessarily new, but often played more off older technologies with some refinement. The idea was to link the X-ray, data processing and cathode ray display tube technologies in a complex and precise manner. Since the technologies harnessed were quite well known and understood complemented by the well-established electronics capability of EMI made this new product introduction less risky in my opinion. The end goal was to create a device that was actually able to process data obtained from these different technologies and into a format readable to the technician.

Diagnostic Imaging industry

The new CT scanner product provided a superior buyer surplus based on the current technologies in the diagnostic imaging industry which are as listed below

a) X-ray was one of the widely used technologies during this time. It used rays generated by cathode ray tube to penetrate solid objects and create an image on film. The average X-ray system cost more than \$100000. This product cycle was already in the mature phase of industry evolution with top 5 companies accounting for 88% of market share.

b) Nuclear imaging was still in the early stages of development, and was used to complement or in some cases replace the existing X-ray system. Since the industry was in the growth phase lot of new companies entered the market thus increasing competition. The average nuclear camera and data processing system was sold for \$75000.

c) Ultrasound was a well-established technology where sonic waves which were used to create images. This technology was widely used in obstetrics and gynecology due to limitations of the technology. Its cost was half of nuclear imaging and 1/3 of X-ray machine.

The CT scanner was specifically designed to do head and brain imaging thus displacing existing equipment in only few cases. The current CT technology provided higher value compared to the existing complements which was necessary to justify its high cost.

Market Analysis & Risks

Though the CT scanner technology was superior to most of the existing technologies it was necessary for the EMI management to identify the market potential for this new product. The case states that the U. S medical market represented a major opportunity for this new product due to its size, sophistication, progressiveness and access to funds.

This represented a major challenge to the company because of its limited exposure within U. S medical community. Basically they were entering with little in terms of knowing anything substantial about the market. If they are going to make a play into the market, their company strategy should be to

get on board with some of the major medical associations that would use this device. By getting these associations buy in to the new technology would result in them pushing this technology into hospital thus increasing their market penetration.

The second challenge was the manufacture of CT scanner since most of its components were purchased from were purchased from subcontractors and then integrated into a functioning system which was different from EMI's experience. If the manufacturing process if not well coordinated would cause potential backlog problems which will hamper the production of CT scanners and time to market necessary to obtain a strong market position.

Finally the company was taking a big risk by investing 6 million pounds which was half of their funds available for capital investment in that year. All the potential challenges were mitigated by the fact that there was no other product like CT scanner in the market. Employing the right strategy will help EMI to gain from the first mover advantage in this market eventually establishing a strong market position in the rapidly growing medical imaging business. Weighing the pros and cons I think Powell had a solid proposal to introduce the new product. This was also in sync with the current company strategy and the product was finally launched in April 1972 with overwhelming response from medical and financial communities.

Strategy and Challenges in 1977

After the successful product launch EMI CT scanner division was faced with numerous new challenges. First, this fast growing field attracted a lot of new

entrants along with advances in technology. Thus the marketshare of EMI was shrinking as more and more competitors entered through 1973 - 1977 as shown in Exhibit 1. It is evident from the case that even though EMI had a first mover advantage it was unable to establish a strong foothold in this market. Part of the reason might be that EMI moved too slow to develop supporting capabilities.

Also EMI was not able to develop the necessary dynamic capability necessary to maintain the market potential. As a result, established companies such as GE and Siemens were able to enter the CT technology market along with lot of smaller companies. Also EMI's vision to use scanner as a means to become a major force in medical electronics further compounded this problem since they started pursuing other imaging technologies such a nuclear imaging and magnetic resonance imaging before creating an effective commercialization system for CT scanner.

Second the U. S market faced temporary decline due to CON (Certificate of Need) which was introduced to curtail the rapidly escalating cost of healthcare. This made justifying the purchase of a \$500000 CT scanner more difficult. Firms faced declining sales, as total capacity in the industry now vastly exceeded short-term demand. EMI needed to either increase its value or reduce its costs to obtain a competitive edge.

Finally the U. S hospital market is a key market and it was necessary for EMI to succeed there than elsewhere because of the scale and learning. Hence it was necessary for EMI to focus its initial product development on demands of the U. S rather than UK or other European countries because these markets

will be too small to support full development. EMI started by establishing a U.S. sales subsidiary which further expanded its service organization to maintain its leadership image.

At the same time EMI tried to compete with all the major and potential generations of CT systems introduced by its competitors. In doing so, EMI spread its resources too thinly and created a substantial confusion within its operation in the US and Britain. This resulted in increased interval between order and delivery time, which was hurting its reputation and increased the strain between the 2 business units. Each started blaming the other for the delays etc. Also the new Medical Review Group Committee (MGRC) established by Powell to establish and review strategic decisions was unable to bridge the gap between these business units.

Recommendation

These were some of the key issues, which Powell had to tackle moving into 1977. In order for EMI to continue its market dominance these are some of the things that I think Powell should do

a) Have the U.S. operation take the lead. This will help them better adhere to the changing medical imaging market in US which is necessary for long term survival of the company. He's got to get someone to head the US and UK groups who can align these units towards a common goal. Right now, the current committee (MGRC) is simply not doing any good. It will also force EMI to move away from its core practices which is necessary to respond quickly to changing market conditions.

b) Focus on getting the CT scanner commercialized before diversifying into other fields in the medical imaging industry. I think that it is too early to attempt to become a multiple subfield player, but be ready to expand once CT business is properly commercialized.

c) Reduce the delivery lag from the date promised. This is necessary to maintain the reputation of the company and will also reduce the opportunity for new companies to enter the market and take advantage of this delivery lags. It is necessary for EMI to maintain its market position to be successful in the long term.