



# IST

Fallstudienreihe

Innovation, Servicedienstleistungen und  
Technologie

Case Studies on

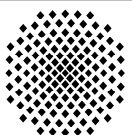
Innovation, Services and Technology

**IBM: The development from  
hardware producer to service  
company**

**Ute Reuter**

**IST** Volume 3, Issue 11 (2011)

**ISSN 1869-3105**



**Universität Stuttgart**

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Betriebswirtschaftliches Institut  
Abteilung I - Forschungs-, Entwicklungs- und Innovationsmanagement

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Innovationsmanagement

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Erscheinungsort

Stuttgart, Deutschland

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## **IBM: The development from hardware producer to service company**

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### **Table of Contents**

<b>1 Introduction .....</b>	<b>2</b>
<b>2 Case study .....</b>	<b>2</b>
<b>3 Assignment of Tasks .....</b>	<b>4</b>
3.1 Kondratieff cycles .....	4
3.2 The post-industrial society according to Daniel Bell .....	5
<b>4 Bibliography .....</b>	<b>5</b>
4.1 Literary sources .....	5
4.2 Further literature on the theoretical background of the case study .....	6
4.2.1 Literature references on the Kondratieff Theory .....	6
4.2.2 Literature references on the post-industrial society .....	6

## 1 Introduction

The information technology (IT) industry is one of the most important pillars of the global economy. The section that follows illustrates by means of a case study how IBM developed into a service company. For this purpose, the theory of Kondratieff cycles as well as the approach of the post-industrial society according to Daniel Bell are used.

## 2 Case study

With a production value of over 600 billion U.S. dollars in 1988 and double digit growth rates, the IT served as one of the main pillars of the global economy in the late 1980s of the 20th century. At the end of the 20th century, there was an enormous economic widespread impact and dynamism of IT. IT was considered the only technology that could have the potential for a long economic upswing.<sup>1</sup>

While in the 19th century natural products and industrial products were considered the pillars of the global economy, at the end of the 20<sup>th</sup> century it was the exchange of services, licences, patents, work methods, information and ideas. However, one has to take into consideration that the main advantage of IT innovations, namely the increasingly smoother distribution of accessible information, can be accessed optimally only on a global scale.<sup>2</sup>

An important source of disseminating information is the publication of information in scientific journals and papers. On average, about 6,000 scientific articles are published on a daily basis. This information flood cannot be tackled by a single individual. Many outstanding scientific results therefore remain unused because they are either not made accessible to the relevant expert audience or made so only in a rather insufficient way.<sup>3</sup> The productivity losses resulting from this are considerable.

However, it is not only the work area but also other areas of everyday life which have developed into significant IT markets. How people communicate and how

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<sup>1</sup> Cf. Nefiodow (1990), p. 36

<sup>2</sup> Cf. ibidem, p. 39

<sup>3</sup> Vgl. Nefiodow (1990), S. 52

they spend their leisure time is largely determined by information systems and information services.<sup>4</sup>

This development did not pass by IBM without leaving traces. In 1952 word processing was founded as a new line of business. At that time, the first products in this line of business were electronic typewriters.<sup>5</sup>

In 1962, IBM Germany had 9200 employees and in 1963, the first product group extension in the word processing business line followed: dictaphones of the 200 series were produced.<sup>6</sup> In 1964, the development of the mainframe family System/360 fundamentally revolutionized IT. Development expenses in the amount of 5 billion USD seemed very high and at that time were defined as “gamble”.<sup>7</sup>

In 1970, IBM Germany already had 22.459 employees. The year 1974 was characterized by the official opening of a new manufacturing plant in Berlin, in which typewriters, copy machines and dictaphones were produced, as well as by the opening of a goods distribution centre in Nieder-Roden with 450 jobs.<sup>8</sup>

In 1981, IBM Germany set up a new sales channel: a shop selling typewriters and accessories was opened in Düsseldorf. This type of distribution also performed well, so that until 1984 a total of seven stores opened and, in addition, 350 dealers were appointed as authorized IBM PC dealers. In 1986, Dr. Rohrer and Dr. Binnig were awarded the Nobel Prize for Physics for their work in the field of electron microscopy. At that time, both of them were employed at the IBM Research Laboratory in Rüschlikon near Zurich.<sup>9</sup>

From 1987 to 1990, the software and service centre of IBM Germany was created. And again, in 1987, two IBM employees rejoiced at the Nobel Prize for Physics: Prof. Müller and Dr. Bednorz were recognized for their discovery of superconductive material. In 1988, IBM launched its application system AS/400, a product line which enabled medium-sized companies in the fields of industry,

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<sup>4</sup> Cf. Nefiodow (1990), p. 60

<sup>5</sup> Cf. IBM (2009e), for URL see bibliography

<sup>6</sup> Cf. IBM (2009a), for URL see bibliography

<sup>7</sup> Cf. Jetter/Satzger (2009), p. 47

<sup>8</sup> Cf. IBM (2009b), for URL see bibliography

<sup>9</sup> Cf. IBM (2009c), for URL see bibliography

trade, crafts and services to increase their competitiveness. Also in 1988, the first IBM customer service in Stuttgart and the portable IBM 4381 supply data processing centre had been employed directly for clients for the first time.<sup>10</sup> At the end of the 1980s, the IBM organization was structured around various IBM product lines which deprived the company of a comprehensive view of its customers' problems.<sup>11</sup>

In 1992, the IBM Consulting Group was founded.<sup>12</sup> In 1992, IBM urgently needed consulting since many of the companies that in 1957 still counted among the 500 most successful companies in the world (including IBM) disappeared in the next 50 years either through successful takeovers or by falling back into economic insignificance. In the early 1990s, IBM also almost became a victim of the rapid changes in the information and communication technology market.<sup>13</sup>

### **3 Assignment of Tasks**

Imagine that with your knowledge of the year 2011 on the development of IT, you would go back in time to the year 1992. Assume that in 1992 you will be employed as an assistant to the management board with the then newly established IBM Consulting Group. In this role, you receive the order to find out what the future-oriented technologies for the 21<sup>st</sup> century will be and how IBM can successfully manage the development of these technologies associated with it in society.

#### **3.1 Kondratieff cycles**

Analyze the emerging development in the field of future-oriented technologies in 1992 from an IBM perspective using your knowledge about the Kondratieff cycles theory. In doing so, please briefly focus on the characteristics of the

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<sup>10</sup> Cf. IBM (2009c), p. 4

<sup>11</sup> Cf. Jetter/Satzger (2009), p. 48

<sup>12</sup> Cf. IBM (2009d), p. 1

<sup>13</sup> Cf. Jetter/Satzger (2009), p. 43/44

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Kondratieff cycles in theory. Apply them to the aforementioned task and explain in detail.

Please analyze where the 5th Kondratieff cycle originated. Based on the case study, please explain which limits arise from Kondratieff's theory.

### **3.2 The post-industrial society according to Daniel Bell**

Briefly outline the five dimensions of the post-industrial society according to Daniel Bell and apply these theoretical approaches to the task you brought out in the case study in detail. Please also elaborate on the modification of the nature of work as a decisive factor in the change from the industrial to the post-industrial society, and discuss the importance of theoretical knowledge both in a model framework and for IBM, based on the information within the case study.

## **4 Bibliography**

### **4.1 Literary sources**

IBM (2009a): Geschichte der IBM in Deutschland. Die 60er Jahre. Downloaded from <http://www-05.ibm.com/de/ibm/unternehmen/geschichte/1960.html>. Accessed April 20<sup>th</sup>, 2009.

IBM (2009b): Geschichte der IBM in Deutschland. Die 70er Jahre. Downloaded from <http://www-05.ibm.com/de/ibm/unternehmen/geschichte/1970.html>, Accessed April 20<sup>th</sup>, 2009.

IBM (2009c): Geschichte der IBM in Deutschland. Die 80er Jahre. Downloaded from <http://www-05.ibm.com/de/ibm/unternehmen/geschichte/1980.html>, Accessed April 20<sup>th</sup>, 2009.

IBM (2009d): Geschichte der IBM in Deutschland. Die 90er Jahre. Downloaded from <http://www-05.ibm.com/de/ibm/unternehmen/geschichte/1990.html>, Accessed April 20<sup>th</sup>, 2009.

IBM (2009e): Geschichte der IBM in Deutschland. Die 50er Jahre. Downloaded from <http://www-05.ibm.com/de/ibm/unternehmen/geschichte/1950.html>, Accessed April 20<sup>th</sup>, 2009.

Jetter, Martin / Satzger, Gerhard (2009): Technologische Innovation und die Auswirkung auf Geschäftsmodell, Organisation und Unternehmenskultur. Die Transformation der IBM zum global integrierten, dienstleistungsorientierten Unternehmen. In: Wirtschaftsinformatik 1/2009, pp. 43-52.

Nefiodow, Leo A. (1990): Der fünfte Kondratieff. Strategien zum Strukturwandel in Wirtschaft und Gesellschaft. Betriebswirtschaftlicher Verlag Dr. Th. Gabler GmbH, Wiesbaden 1990, ISBN 3-409-13927-3.

## **4.2 Further literature on the theoretical background of the case study**

### **4.2.1 Literature references on the Kondratieff Theory**

Burr, Wolfgang / Stephan, Michael (2006): Dienstleistungsmanagement, Kohlhammer Verlag, Stuttgart 2006, pp. 38-40.

### **4.2.2 Literature references on the post-industrial society**

Burr, Wolfgang / Stephan, Michael (2006): Dienstleistungsmanagement, Kohlhammer Verlag, Stuttgart 2006, pp. 41-43.



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IST 11/2011	Reuter, Ute	IBM: The development from hardware producer to service company