

ment, i.e. a total of 20 minutes. By this time, however, our client would quite understandably have become very impatient and a temperamental person would call this incompetence. Our only excuse would be to say that this was due solely to our modern punch card procedures." At Süddeutsche Bank, there were fears of a certain degree of inflexibility in operations, as the entire organization would become dependent on the punch card machines.

Through visits to Dutch, French, Swiss and German banks that had already gathered extensive experience, the effects of the new technology in day-to-day business were examined in detail. At Crédit Lyonnais in Paris, the conversion to punch cards was portrayed as comparable to the transition from petroleum lamps to electric lights. One of the major advantages was considered to be that it was easier to handle peak workloads without special added effort. In contrast, it was striking that one important question could not be answered: whether or not costs had been reduced as a result of the punch card system. In this regard, it was only noted that they considered it to be impossible to handle this amount of work without the punch card machines. This view was shared by an industry journal published in 1954 in Germany: "Whoever currently uses punch cards has saved neither staff nor costs. However, he can be sure that he has contributed to fostering technological progress and thus probably to serving rationalization in the future."

In September 1955, the Wuppertal branch of the Rheinisch-Westfälische Bank began using the punch card technology after the step-by-step procedures had been thoroughly considered. At the time, no one spoke of "pilot branches", but it was clear that these test operations were to have a model character for the entire group of Deutsche Bank institutions. In Germany at that time, punch card machines were primarily offered by three companies: the American companies IBM and Remington Rand as well as the French Compagnie des Machines Bull. The machines used in Wuppertal came from the French company, which had begun to assemble "statistics machines" in 1931 based on the patents of a Norwegian, Fredrik Bull. The company was taken over by General Electric in 1964 and since then has had a very eventful corporate history.

The conversion to punch cards began with

the current accounts, considered to be the least complicated. Loose account sheets replaced the previous account cards. This took place in only six weeks. Further areas steadily followed: foreign currency accounts, bank and branch accounts, internal accounts up to general ledger accounting as well as a major portion of transfer payments including standing orders. Within the Association of German Banks (Bundesverband deutscher Banken), even the idea of introducing punch card cheques was mooted at this time, but soon recognized as impractical and rejected. After one year, operations had developed to a point that securities account administration could be started. This conversion was more difficult, but also more worthwhile, seeing as the large number of manual steps in custody business for one and the same transaction took up a great deal of time.



The punch card department in Wuppertal in 1958

In order to address the expected unrest among the staff, the introduction of the new technology was discussed extensively with the employees involved. "Despite all of the preliminary discussions and explanations, a few of the incorrigible later called the employees in the punch card department 'robots' and similar names and looked down upon them. But, happily, this changed over time, and we can now say with satisfaction that operating staff have become used to the new procedures," Richard Ahlborn, Head of the Organizational Department in Düsseldorf, said in a speech in 1956.

Connected to the punch card machine was a small electronic calculator that could only, however, handle additions and subtractions. Its total capacity was 240,000 additions per hour. A novelty of the machinery installed in Wuppertal was that a punch tape was used for account reconciliation purposes. "The punch tape procedures we selected turned

out to particularly useful because they make us less dependent on the key-punch operators, who are in high demand. Good key-punch operators are hard to find at the present time, and companies recruit them away from one another,” the bank noted.



Employees working at Bull card sorters

Newly coined words like “key punching” spread throughout the bank, while the job of “key-punch operators” – most of whom were women – signalled a change in technical processes and work atmosphere. Generally, many regarded this automation as the “second industrial revolution”. Thus, in 1958, *Die Welt* newspaper saw evidence of “a revolution behind bank counters. Tabulators and electronic adding machines, punch card machines and sorters are today [...] found where bank employees, pen and pencil in hand, used to stand at desks engaged in the painstaking task of keeping client accounts up to date.” To quote again from Ahlborn’s speech: “It is absolutely essential that employees in the punch card department are given the impression that they are valuable bank employees. We are therefore keen to counter the frequently voiced opinion that professional bank employees are being degraded to bank workers. [...]. However, we must be clear about the fact that no machine today is capable of independent reasoning – nor will be in future. Only the complex and detailed workings of the human mind that feeds the machine the results of carefully analyzed human thought processes allows it

to execute its programme systematically – albeit with unimaginable speed. Thankfully, this cannot be done without human beings! [...] Even in a punch card department, all business activity is solely centered on people!”



Key-punch operators entering data

When it was time to gain further experience at another branch, Stuttgart branch was chosen despite lingering scepticism there. And, indeed, the results were mixed. At a neighbouring bank that had converted its current accounts, it emerged that no savings had been gained: personnel costs saved after a considerable period were offset by higher material expenses and higher depreciation on the machine park. In custody business, however, significant cost savings had apparently been achieved. When the issue was discussed by the members of the Board of Managing Directors of all Deutsche Bank successor institutions in April 1956, the recommended course of action was to introduce the punch card system at one or two branches, starting with custody business, to gain experience and promote the development of the technology. An initial period of three years in which there would be substantial costs but no initial savings had to be expected. On the other hand, the potential of electronic data processing was certainly not to be ignored. Hermann J. Abs was given a demonstration of an IBM computer during a visit to the USA in early 1957. The German visitors were impressed by the fact that the First National City Bank of New York was able to present its annual accounts for 1956 on January 4, 1957 and hold its Annual Shareholders Meeting on January 8. Stuttgart was thus the second branch to become involved in the conversion to punch cards on a large scale. In this instance, however, IBM rather than Bull machines were used. Delivery periods for IBM punch

card machines, which ranged between 12 and 18 months in 1958, show how tight the market was at the time. After due preparations, the conversion of custody accounting began in March 1957, starting with security deposits for securities with semi-annual interest payments at the unusual dates May/November and June/December. After this method proved successful, the major interest dates were then handled without difficulty. At the end of 1957, custody account statements were sent to customers together with the quarterly accounts for the first time.

One effect of automation was a centralization of business. After the conversion only securities advisory remained with the subordinate units. All technical functions – with the exception of custody account charges – were handled by the main branch. An interim stocktaking after one-and-a-half years revealed appreciable cost savings. The punch card had other crucial advantages, even if these could not easily be expressed in numbers: for example, the fact that there were no more customer complaints of

outstanding custody account statements in February or even March. The experience of other banks was confirmed: peak business periods, such as client notifications of capital increases could be handled without the use of overtime. The sceptics were convinced.

The technology in Wuppertal and Stuttgart had little to do with electronic data processing in today's sense. That was not until an IBM 1401 was installed in Hamburg in 1962. A statement appeared in the staff magazine that – in more modern wording – has accompanied many organizational changes since then: "On the business side our employees are relieved of routine tasks, allowing them to focus even more on essential banking activities. They can therefore devote more time to acquiring and serving customers."

1805, two-hundred years ago, silk weaver and inventor Joseph Marie Jacquard of Lyon first used punched cards to automatically control looms. Today, the punch card technology is history, while the magnetic tape that replaced it in data processing too has become obsolete.

Lost and found

The virtue of austerity

"After random checks we have come to the conclusion that action is often taken without careful reflection and that in many cases where a short letter would suffice to resolve the matter, telephone calls are made or telexes sent. In this, we cannot help but

notice that the art of saving, once regarded as a virtue in banking, is becoming more and more of a lost art."

(Circular of June 23, 1958 from Head Office /Organizational Department to the departmental heads of Head Office on savings of telex and telephone charges)