

## THE TIB – A FUTURE WITH ADDED VALUE

A Study on the Value and Benefits of the  
German National Library of Science and Technology

Carried out by







*“The public have a right to know that they are getting value for money – and therefore there are tough choices and hard decisions that have to be made. The something-for-nothing days are over in our public services and there can be no blank cheques.”*

**Gordon Brown**  
Former British Prime Minister

*“The TIB is a place that supports the competitive position, ongoing innovative strength and achievement potential of Germany.”*

From the 2006 tribute to the TIB as the  
“Selected Landmark in the Land of Ideas”



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# WELCOME



“LEAD CHANGED THE WORLD MORE THAN GOLD DID. AND THE LEAD IN THE TYPE CASE PRESS MORE THAN THAT IN THE MUSKET.”

With this pragmatic quote the Physicist, Writer and Philosopher, Georg Christoph Lichtenberg, put the first media revolution of the 15th century into words back in the 18<sup>th</sup> century. It came about as a result of the interlinking of historical coincidences, religious movements and technical inventions within the field of reproduction. The technical result that was derived therefrom was the printed book whose enormous appeal resulted in a cultural achievement the Reformation. The media revolution of our time is the digital media and the Internet. Thus, the dissemination of information by electronic means over the last ten years has again changed our world in a fundamental way.

We are experiencing a real flood of information whereby the major challenge is in the selection of both apt and quality assured information. The libraries or “information service providers,” such as the German National Library of Science and Technology (TIB) in Hannover, play a prominent role in this respect. TNS Infratest has documented the TIB with its publication entitled “Value and Benefits,” along the lines of the British Library who commissioned a similar study in 2003. Research and teaching in particular – in the universities and also in the private sector – need high quality information in both digital and analogue form – quickly, universally and

directly. They expect a service-oriented and user-friendly provision of printed information sources from their information service provider, such as books and journals, as well as the provision of digital full texts and also increasingly quality assured, bibliographical specialist databases and non-text materials, such as research data or audio visual media. The TIB is a leading protagonist in these areas, even often a pioneer of new trends and developments.

I am very pleased that this study of the TIB acknowledges such a high level of coverage of supply and demand in its provision to scientists in research and development departments.

The reliable provision of information for Mechanical Engineering, the Chemical and Pharmaceutical industry, Electrical Engineering, Information and Communications Technology, the Automotive industry and suppliers, Environmental Technology and Energy is essential for the future of research in Germany. The State of Lower Saxony is therefore proud to have this Leibniz Association institution of international standing, supported by both the Federal Government and the States in Lower Saxony. In 1692 its namesake Gottfried Wilhelm Leibniz described his vision of collaboration on research, transfer of knowledge and finally also the provision of information very aptly in a letter to the Chinese missionary in Peking and Engineer Claudio Filippo Grimaldi, with the words: “Let’s combine our talents and light the way for each other.” The study clearly shows that the TIB is committed to this aim.

A handwritten signature in blue ink that reads "Johanna Wanka".

Professor Johanna Wanka

Minister for Science and Culture of Lower Saxony

# FOREWORDS



As the German National Library for Technology, as well as Architecture, Chemistry, Information Technology, Mathematics and Physics, the TIB has successfully been facing up to its task as an important provider of literature and information for over five decades – and even at an internationally competitive level.

This is based on excellent and, to some extent, unique collections of essential and highly specific technically scientific specialist literature. For this reason, the TIB can present itself as one of the largest specialist libraries in the world and an effective full-text provider with an attractive collection of services. Beneficiaries of the TIB products and services are customers within research and development in both scientific and economic activities.

The TIB guarantees effective basic and peak provision with information and literature including an appropriate infrastructure across all media and, in doing so, generates the basis for successful innovations and growth and creates jobs. Having the lead in terms of knowledge gives rise to a competitive advantage that benefits Germany as a centre of scientific and research activity.

As an important part of the national research infrastructure and as a federal government and state-financed institution, the TIB asked the following questions: What does it give back to society and the State? Does the TIB actually generate added value, which is beneficial to the German economy? Is this value identifiable and quantifiable? Are the set paths strategically correct? What do our customers think about it?

The results on hand confirm the following: Yes, the investments in the TIB are justified – and not just that. The TIB is a vital element in the national framework for the provision of science. However what appears to be almost more important is the support, which the strategic direction of the library has experienced with the concentration on future core areas, such as the integration of multimedia materials or long term archiving.

One word to the participants on the study: The TIB customers have always been a part of the driving force, which has made the consistently positive development of the library over the last 50 years possible. We would like to express our particular thanks to you!

**Uwe Rosemann**  
Director of the German National  
Library of Science and Technology



The scientific libraries provide significant contributions to scientific and economic developments. However, they are rapidly being faced with challenges, which will call into question the fulfilment of their mandate of ensuring a comprehensive, high quality provision of information relating to science, the economy and business. These challenges can be described as an increasingly complex environment in terms of digitalisation, global networking of knowledge and the endangering of the traditional business model by search engines, such as Google. They will be aggravated by increasing prices for scientific journals and growing budget restrictions.

It is even more important, especially in difficult economic times, to accurately determine the benefits of scientific libraries in financial terms. Up until recently, the added value of libraries, public organisations or state-run institutions could only be registered by qualitative research means. In a new type of project approach, the German National Library of Science and Technology decided to join up with TNS Infratest Business Intelligence to determine its benefits both for the individual but also for Germany as a centre of scientific activity. They also reverted to the “Contingent Valuation” method, which was developed by Nobel Prize winners, Kenneth Arrow and Robert Solow.

The quantitative measuring of contributions of scientific libraries to research, teaching, the economy and cultural development is a challenging multidimensional task. For example, we need to differentiate between the direct benefit that the library gives its customers and the indirect added values that benefit the whole population.

In autumn 2009, TNS Infratest Business Intelligence conducted an online survey of the TIB customers on behalf of the German National Library of Science and Technology. If the government support of the TIB suddenly disappeared, the German population would accrue losses in the region of at least 64 million euros. According to this, the indirect benefit that the TIB gives to science and the economy of our country could even be a considerable degree higher.

That is not just a finding that can be seen in the eyes of the TIB. In fact, the “Contingent Valuation” method has proved itself as a procedure that provides the management of government financed institutions with a tool so that they can quantify and substantiate their benefits on an empirically assured basis, which is justifiable to their governmental financing.

I am really pleased that the German National Library of Science and Technology has joined up with us in setting out as a forerunner with the introduction of an innovative procedure for German-speaking regions and would like to express my thanks for this constructive collaboration.

Dr Sabine Graumann

Director of TNS Infratest Business Intelligence



# MANAGEMENT SUMMARY

**What added value is generated from the German National Library of Science and Technology in financial terms? This was calculated according to the basic approach of the “Contingent Valuation” method, which was applied for the first time for scientific libraries in German-speaking regions. To this end, TNS Infratest Business Intelligence carried out an online survey of 663 TIB customers in autumn 2009.**

## **LARGE COVERAGE OF SUPPLY AND DEMAND.**

In particular, the TIB comprehensively covers the demand of information from scientists in research and development departments within core fields, such as Mechanical Engineering, the Chemical and Pharmaceutical industry, Electrical Engineering, Information and Communications Technology, the Automotive industry and suppliers, Environmental Technology and Energy, as well as the public institutions relating to them. 76 % of those questioned indicated that deliveries are quick and reliable, 74 % that the collection is current and comprehensive. These are the two most important reasons why scientists continue to use the TIB on a frequent basis.

**THE CUSTOMER STRUCTURE.** 44 % of the TIB customers come from the private sector, 29 % are attached to (non-)academic research and teaching, 14 % to other state institutions, such as libraries and administrations.

## **HEALTHY BALANCE OF EXISTING AND NEW CUSTOMERS.**

On average 68 % of customers have been using the TIB for four years and longer, 52 % already for seven years and longer. 30 % became customers in the last three years. 47 % have called upon the TIB at least once in the last month.

**BENEFITS OF THE TIB BEYOND ALL QUESTION.** If the public authorities were to stop financing the TIB, 87 % of those questioned would be affected (considerably) and feel restricted in continuing with their work.

**PRICE ELASTICITY IN THE EVENT OF AN INCREASE.** If the TIB were to increase its prices by 50 %, 45 % of those questioned would not change their pattern of use. 7 % would discontinue their usage and 49 % would reduce their usage.

**WILLINGNESS TO SELF FINANCE.** 19 % of the respondents can imagine supporting the TIB through a regular payment.

**COMPENSATION PAYMENTS FROM THE STATE.** If the public authorities were to stop financing the TIB, but the government were to provide compensation payments to customers, those questioned considered that the government would have to pay on average € 427 per month “to redress the losses that it had caused.”

**THE ADDED VALUE.** The TIB generates € 3.80 for every euro of public financing. Therefore, it generates 3.8 times more value to its customers than it actually costs. From € 23 million of funding, the TIB generates € 87 million for the German scientific society. By implication, this means that if there was to be no investment in the TIB, there would be annual losses of € 64 million.

**FUTURE EXPECTATIONS TOWARDS THE TIB.** 68 % of customers expect that the TIB will store more and more information on new carrier media and make multimedia ranges of products available. According to the respondents, the management of open access publications, the further development of retrieval and the access to research data are areas of the product range with a future, which the TIB should consequently turn towards.

**PRIORITISATION OF ITS FUNCTIONS CONFIRMED.** 82 % of the respondents emphasise the importance of completely encompassing all specialist areas for Germany as a centre of research activity moving into the future. 80 % stress the importance of the provision of guaranteed and long-lasting information for everyone.

## **THREE STRATEGIC BENCHMARKS FOR THE FUTURE:**

1. The TIB is essential and must continue to exist as a federal government and state-financed specialist library for technology and science, in order to maintain and promote Germany as a centre of scientific activity.
2. The focus that is already being pursued should be continued in the future, namely providing multimedia materials without the traditional library services being disregarded.
3. It is important to maintain the high level of customer focus and service quality.

# 1. THE FUNCTIONS OF THE TIB IN A CHANGED ENVIRONMENT

With the increase in digital media and the paradigm shift towards lifelong learning and research processes, which at least in the scientific area moves increasingly towards virtual, data driven environments, there is increasing demand amongst customers, who will influence the long term provision of information in the future. Globalisation and the Internet are changing the functions of libraries to a large extent and, at the same time, offer opportunities and challenges – this particularly applies to the TIB.

Therefore, the role of the national specialist information institution is changing. On the one hand, it will embrace its classic library functions, such as collecting, licensing, indexing and archiving. On the other hand, it will also strengthen its role as a national and international networked infrastructure institution, which develops and offers field-specific services for the research and publication process. The focus on the needs of the customers will become increasingly important. A changed attitude towards communication and work in social, professional and company networks, as well as the need for a virtual working environment for the development of long term information services, require a considerable capacity for innovation.

The TIB has been an innovative, dynamic library for more than 50 years, always focusing on its customers. In its role as the German National Library for Technology, as well as Architecture, Chemistry, Information Technology,

Mathematics and Physics, its mission is as follows: provide good and effective literature and information and, in doing so, supply the basis for successful research and development.

Several thousand customers trust the TIB and up to 1,500 literature orders are processed each day – particularly via the TIB portal, GetInfo. These are delivered quickly and reliably directly to the work place and that is currently in 65 countries.

It is possible to do this with a collection of literature in both printed and electronic form, which has been compiled over decades and is globally unique. With approximately 7.8 million types of media, 16,000 journal subscriptions and over 15 million patent specifications, the TIB is the largest library for specialist areas.

To maintain this top position, it is essential that it not only collaborates on but also runs projects. The TIB is a partner in a large number of national and international networks, such as Goportis, DataCite and the WorldWide-Science-Alliance. Projects are focused on strategically important fields, such as research data, multimedia products, open access and long term archiving.

All current and future activities pursue one aim: the TIB should become the most successful national and international specialist library for technical and scientific literature and the provision of information.

The TIB is a member of the Leibniz Association.

## 2. AIMS OF THE STUDY

The TIB requires planning security in order to determine its medium and long term strategy. The future expectations of the customers towards the TIB, as well as the continuation of government funding play a vital role in this. The answers to the following questions are therefore of significant importance to the future of the TIB:

- How satisfied are customers at present with the products and services that the TIB offers?
- What are your future expectations towards the TIB?
- What value does the TIB generate for the sciences, economy and knowledge society within Germany?
- What value does the TIB generate for its customers?
- What should the TIB do to meet the future requirements of its customers?
- How should it achieve its strategy in the near future from a medium to long term point of view?

In autumn 2009 the TIB commissioned the market research institute TNS Infratest Business Intelligence to carry out a customer survey. Three major aims were identified for this survey:

1. It should determine the structure of the existing TIB customers, from which industry sectors they come and which services and service packages they use at present.
2. The added value that the TIB generates for the sciences, economy and knowledge society within Germany was to be quantified in financial terms.
3. It should work out the building blocks towards the strategy of the library from a medium to a long term point of view. Identifying new areas of activity for the TIB were associated with this.

The survey took place in November and the beginning of December 2009. The following results from the online survey are based on 663 completed questionnaires.

### METHODOLOGY

Universe: 663 completed questionnaires

Methodology: Online survey  
Average interview duration: 13 minutes

Selection procedure: Random sample

Time period: 11 November – 4 December 2009

Questionnaire: Scope: 45 questions  
Part 1: Identification of the TIB's key customer groups  
Part 2: Usage of the TIB services and service packages  
Part 3: Assessment of the value of the TIB  
Part 4: Starting points for its future strategy

Evaluation: Anonymous

# 3. THE TIB CUSTOMERS

## 3.1 STRUCTURE AND INDUSTRY SECTORS

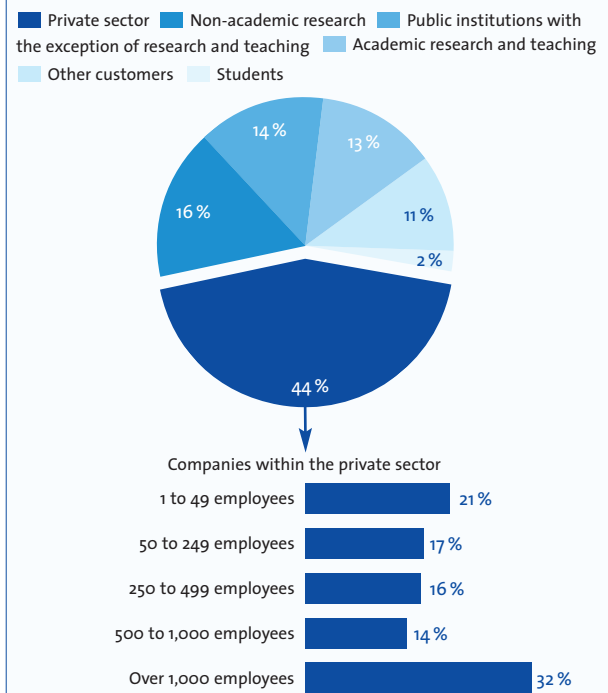
The 663 customer who took part in the survey present a representative cross section of all TIB customers.

- 44 % of the TIB customers work in the private sector. A good third of these are employed in large companies with over a thousand employees. 30 % come from medium-sized companies with between 250 and 1,000 employees, 17 % from companies with between 50 to 249 employees and 21 % from very small and small companies with between 1 and 49 employees.
- 29 % of the TIB customers are involved in research and teaching. 16 % are involved in non-academic research, 13 % in academic research and teaching.
- 14 % of the respondents come from public institutions, such as from other libraries and from administration.
- 2 % of the customers questioned are students.

The TIB customers primarily come from the industry sectors that the library serves. They are primarily from Mechanical Engineering (28 %) and the Chemical / Pharmaceutical industry (22 %).

The information obtained from the TIB is required within the field of research and development in three out of four cases.

FIG. 1: STRUCTURE OF THE TIB CUSTOMERS

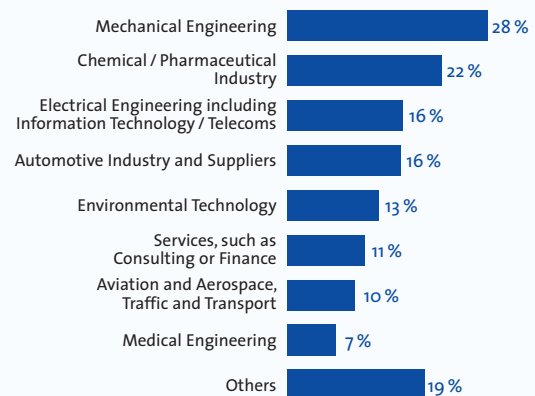


Question: For what function do you use the TIB? All respondents, n = 663

Question: Please indicate the size of your company in terms of the number of employees. Companies within the private sector, n = 293

Source: TNS Infratest Business Intelligence, 2010

FIG. 2: SPLIT BY INDUSTRY SECTOR



Question: Please indicate the main fields in which your company is active. Multiple answers possible; companies within the private sector, n = 293

Source: TNS Infratest Business Intelligence, 2010



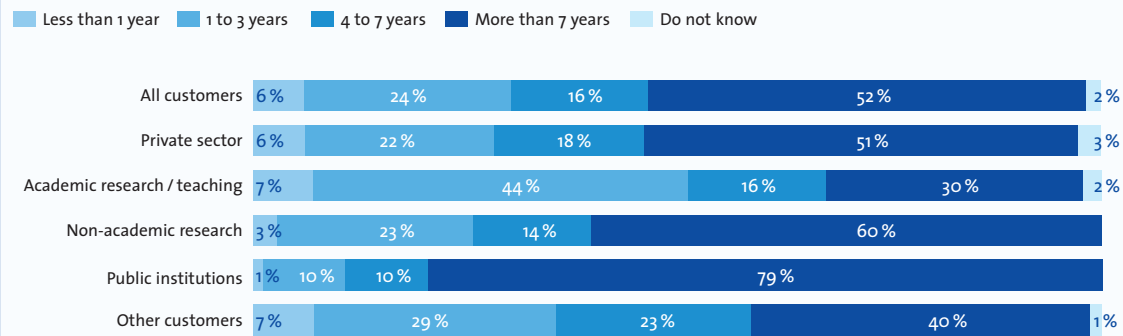
### 3.2 TYPOLOGY AND USAGE

68 % of the customers have used the TIB product range for four years or longer.

Other key results regarding customer typology and usage intensity:

- 52 % of the TIB is made up of existing customers who have used the range of products for seven years or longer. Customer loyalty can therefore be regarded as high.
- 79 % of the existing customers, who have used the TIB for seven years and longer, work in public institutions, such as other libraries and administrations. 60 % come from non-academic research. 51 % are private sector employees.
- 30 % of the respondents have called upon the TIB in the last three years and have been registered as new customers. 51 % of these are employed in academic research and teaching. 28 % in the private sector.
- 47 % of the respondents have called upon the TIB products within the last month.
- The usage frequency is highest amongst public institutions. 51 % have called upon the TIB in the last week, 82 % have used it within the last month.

FIG. 3: LENGTH OF USAGE



Question: For how long have you used the TIB up until now? All respondents, n = 663

Source: TNS Infratest Business Intelligence, 2010

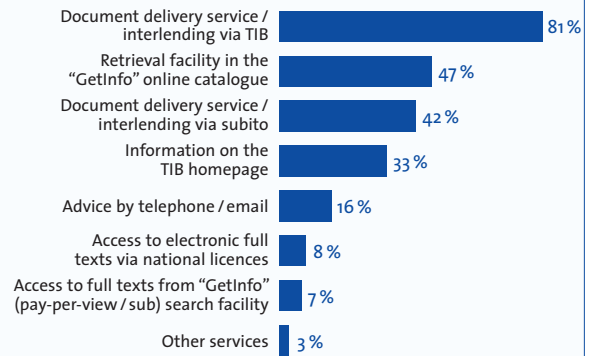
### 3.3 PRODUCTS AND SERVICES

The TIB customers believe that the library offers a high level of service. This could already be seen from the frequent and long term usage of the TIB by its many customers.

Other key results regarding the quality of service:

- 76 % of those questioned indicate that deliveries are quick and reliable, 74 % that the collection is current and comprehensive. These are the two most important reasons why customers continue to use the TIB on a frequent basis.
- At 81 %, the delivery of documents and interlending is by far the most used service within the TIB. The retrieval facility in the “GetInfo” online catalogue follows this with 47 %. In addition, 7 % of the respondents pick up full texts after searching in “GetInfo.” The possibility of ordering via subito is called upon by 42 % of the customers.
- 33 % of the customers are guided by the TIB homepage and use the information that is presented there.
- 57 % of the respondents consider that the TIB’s service packages are user-friendly and that information can be found easily. 56 % appreciate the exclusive range of specialist information.
- 24 % indicate that they appreciate the professional support offered by the TIB employees. 16 % of the respondents make use of advice either by telephone or email.

FIG. 4: SERVICES USED



Question: Which of the following range of TIB products and services have you used in the last twelve months? Multiple answers possible. All respondents who have called on the TIB services within the last year, n = 663

Source: TNS Infratest Business Intelligence, 2010

FIG. 5: REASONS FOR USING THE TIB



Question: Why do you call upon the TIB? Multiple answers possible. All respondents, n = 663

Source: TNS Infratest Business Intelligence, 2010

“THE TIB IS UNCOMPLICATED AND HAS EVERYTHING. THE TIB HAS BEEN AN IMPORTANT SUPPLIER FOR OVER 30 YEARS AND AN IMPORTANT SOURCE OF INFORMATION.”

# 4. HOW CAN THE ADDED VALUE OF PUBLIC INSTITUTIONS BE QUANTIFIED?

## 4.1 A NEW PROCEDURE FOR LIBRARIES IN GERMAN-SPEAKING REGIONS

The “Contingent Valuation” procedure was applied to determine the added value generated by the TIB. This scientifically recognised “Stated-Preference” technique includes the construction of a “hypothetical market” in a questionnaire.

The “Contingent Valuation” methodology for the assessment of value was developed at the end of the 1940’s in the USA. It was fundamentally reviewed and further developed in 1993 by Nobel Prize winners Robert Solow and Kenneth Arrow<sup>1</sup>. The procedure was used in many areas, such as in cultural and educational policy, health care, tourism and in the environmental sector.

The British Library used the method for its own research in 2004<sup>2</sup>. Inspired from this study, the procedure will be used for the first time in Germany to assess the value of a library.

The participants will be asked several questions to achieve a financial appraisal of the value of the TIB. The direct questions incorporate the following:

- An estimation of how high the losses would be for the individuals if the library was no longer to exist and the maximum amount individuals would accept in the form of a compensation from the German State to gain access to the TIB (“Willingness to Accept”)
- An estimation of the willingness to pay and the value that individuals would pay to continue to gain access to the TIB’s services (“Willingness to Pay”)
- An indication of the changes in demand in response to a hypothetical price change (“Elasticity of Demand”)

These direct questions will be cross-validated in the questionnaire with other questions:

- Which costs do individuals incur for using the existing services of the TIB (“Investment in Access”)?
- Which additional costs would arise if the TIB were to be closed (“Cost of Alternatives”)?

Key results relating to this are presented below.

<sup>1</sup> Arrow, Solow, et al: Report of the NOAA Panel on Contingent Valuation, Federal Register, 58, Washington DC, 1993

<sup>2</sup> Pung, Caroline; Clarke, Ann; Patten, Laurie: Measuring the economic impact of the British Library. *New Review of Academic Librarianship*, Vol. 10, No.1, 2004, p. 79-102

## 4.2 HOW MUCH IS THE TIB WORTH TO ITS CUSTOMERS IN FINANCIAL TERMS?

The information from the participants is based on the question of how much time and money they would invest to make use of the TIB products, such as to research documents and to order (“Investment in Access”). The other questions were correlated based on the results and evaluations in terms of the time it took people to get to the TIB, the length of time spent there or the cost of travel.

*IF THE TIB NO LONGER EXISTED, 30% OF THE RESPONDENTS WOULD REGARD THEIR WORK AS BEING “SERIOUSLY AFFECTED.” 57% CONSIDERED THAT THEIR WORK WOULD BE “SOMEWHAT RESTRICTED.” 13% THINK THAT THEY WOULD “NOT BE AFFECTED” IN THEIR WORK.*

In terms of closing the TIB the respondents gave the following estimations (“Cost of Alternatives”):

- 54 % of all those questioned would have to use up to 25 % more working time and accept additional costs (without personnel expenditure). 16 % would have to use up to 50% more working time or even more.
- 6 % of the respondents expect at least a doubling in costs. 7 % estimate a cost increase of between 51 and 99 %. 16 % expect cost increases between 26 and 50 %.

The following question was also asked: "Imagine that the prices for the TIB service packages increase by 50 % on average. What would be the anticipated consequences of this "Price Elasticity" for the usage of the TIB by your organisation / you personally?"

- 45 % explained that they would not change their usage pattern.
- 23 % would reduce their usage by 1 to 25 %.
- 16 % would reduce their usage by between 26 and 50 %.
- 10 % would reduce their usage by more than 50 %.
- 7 % would no longer use the TIB.

If public funds were no longer available for the TIB, would those questioned be prepared to pay a specific amount themselves on top of the current expenditure to ensure that the TIB survives? The key results to this question on "Willingness to Pay" are as follows:

- 19 % of the respondents could imagine regular financing of the TIB by their institution. This applies to views from both the private sector as well as from academic research and teaching. 14 % of the non-academic institutions and 13 % of the public institutions are prepared to pay more.
- Exactly a quarter of those questioned are not prepared to pay more. The corresponding percentages are 28 % for private sector institutions, 27 % for public institutions and 22 % for academic research and teaching institutions.

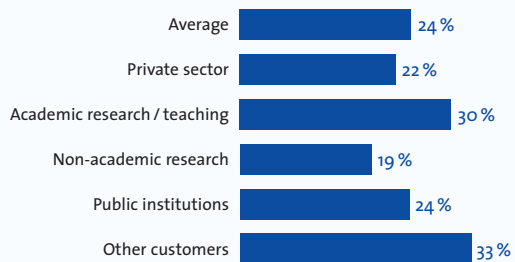
- 56 % of the respondents answered the question as "do not know" on the general willingness to pay. They were asked an additional question on whether they would be prepared to pay 10 % towards the survival of the TIB. As a result, a further 23 % explained that they could afford additional payments of this value. The customers who had answered this question with "no" or "do not know" (23 % and 54 %) were asked to give reasons behind their answer:

- 42 % indicated a lack of budget responsibility.
- 36 % thought that the TIB range of products should not be any more expensive.
- 32 % were adamant that the TIB should solely be financed from public money.
- 23 % indicated that they could not afford a monthly price increase of 10 %.
- For 12 % a price increase seemed to be unjustifiable.
- Those questioned were also asked to imagine a world where there are no budget restrictions. If this were the case, how much more would the customers be prepared to pay the TIB? Those questioned replied that they would be prepared to pay on average 24 % more if this were the case.

*"THE TIB IS AN ESSENTIAL (CULTURAL) ENTITY THAT SHOULD DEFINITELY BE KEPT, AS OPPOSED TO THE SHORT-LIVED COMMERCIALY FOCUSED SUPPLIERS. ACCESS TO INFORMATION IS PART OF THE BASIC PROVISION AND MUST BE (REMAIN) A TASK FOR THE STATE."*



FIG. 6: WILLINGNESS TO PAY MORE



Question: If you were free to make any decisions on budgets, what is the maximum percentage that you would be prepared to pay to ensure the survival of the TIB? All respondents who have estimated their monthly expenditure for the TIB, n = 579

Source: TNS Infratest Business Intelligence, 2010

The TIB customers were also asked why they would not be prepared to pay more. A quarter indicated here that the prices would be acceptable. Almost a quarter were not able to give any information due to a lack of budget responsibility (24 %) and 15 % indicated the need to make savings in their field.

In conclusion, the respondents were confronted with the hypothetical situation that the public authorities would stop financing the TIB, however, the government would be prepared to pay the existing TIB customers a monthly compensation (“Willingness to Accept”).

Those questioned would then call for on average € 427 per month in compensation for the closure of the TIB. In this process, the contributions would vary from € 174 for the private sector through to € 828 for customers from public institutions.



### 4.3 THE TIB – A BENEFIT FOR THE KNOWLEDGE SOCIETY

The results of the individual questions are weighted and aggregated to an index factor to present the added value of the TIB in one figure.

#### THREE STEPS TO QUANTIFYING THE ADDED VALUE OF INSTITUTIONS

##### 1. Aggregation of the individual results into a grand total

In the first step, the results presented in 4.2 will be allocated an individual euro value for each respondent. This value will be weighed according to the customer's usage intensity and the extent of the expected additional costs. The individual values of each respondent will subsequently be added together. This sum will result in an initial approximation of the added value.

##### 2. Review of the grand total

From the activity on this topic, it appears that a few of those questioned are increasingly willing to pay. The direct calculation in step 1 does not take this into account and as such, underestimates the actual willingness to pay. Therefore, a review of the value (via a regression model) is carried out to correct this and any other negative impacts. Consequently, a more realistic value can now be determined for the added value.

##### 3. Quantification of the added value in euros and as an index factor

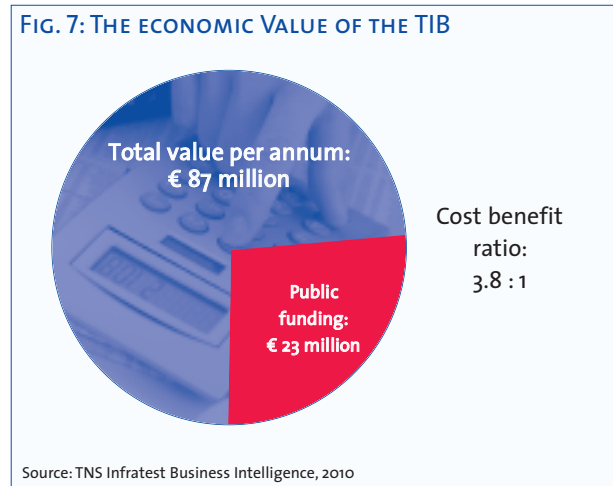
The added value calculated in steps 1 to 2 will be deducted from the net public funding amount. The remaining amount is the added value per annum calculated in euros that will be generated by the TIB. The index factor can subsequently be calculated from the remaining amount.

As a federal government and state-funded institution, the TIB receives around € 23 million per annum.

The results of the study show as follows:

- The library generates € 3.80 for the German economy from every single euro of public funding invested in the TIB.
- If the public funding of the TIB were to stop, Germany's scientific activity would accrue losses of at least € 64 million.
- The TIB customers confirm that the TIB is worth 3.8 times more value to them than the costs that it generates.

FIG. 7: THE ECONOMIC VALUE OF THE TIB



# 5. TIB PERSPECTIVES

## 5.1 THE SIGNIFICANCE OF THE TIB FOR GERMANY AS A CENTRE OF RESEARCH

The TIB is endorsed by its customers in its core functions.

For 82 % of those questioned, the complete coverage by the TIB of specialist areas within the technology and science sectors is an important function for Germany as a centre of research. This could become more important in the future in light of exponentially increasing knowledge and the penetration of new types of media.

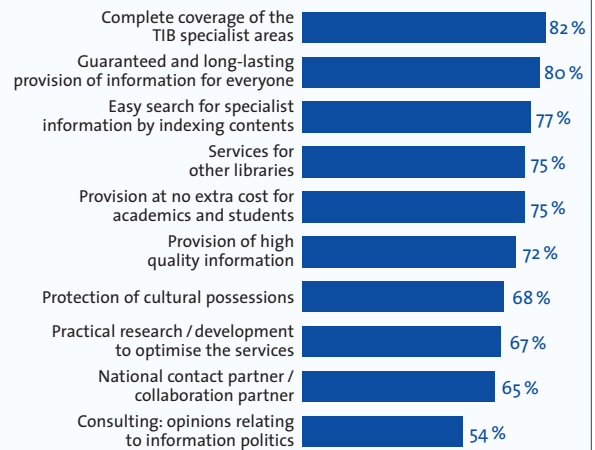
80 % of the respondents indicate “the guaranteed and long-lasting provision of information for everyone” as an important or very important task for the TIB.

77 % of the respondents emphasise the importance of “an easy search by indexed contents.” Taking over the “services for other libraries” is considered an important function by 75 % of the TIB customers and also the provision of information to academics and students at no extra cost. The “provision of high quality information” is important or very important to 72 % of TIB customers.

The further weighting of the tasks of the TIB can be taken from figure 8.

*“THE TIB COLLECTIONS ARE UNIQUE AND VALUABLE. IF THE TIB DID NOT EXIST (NO LONGER EXISTED) I WOULD NOT KNOW OF A REPLACEMENT FOR IT.”*

FIG. 8: THE SIGNIFICANCE OF THE TIB FOR GERMANY AS A CENTRE OF RESEARCH



Question: The TIB fulfils a multitude of functions. Please indicate for the following functions, how important these are for Germany as a centre of research in your opinion? All respondents, n = 663, only entries with “very important” and “important,” multiple answers possible

Source: TNS Infratest Business Intelligence, 2010

## 5.2 CUSTOMER EXPECTATIONS FOR FUTURE SERVICES

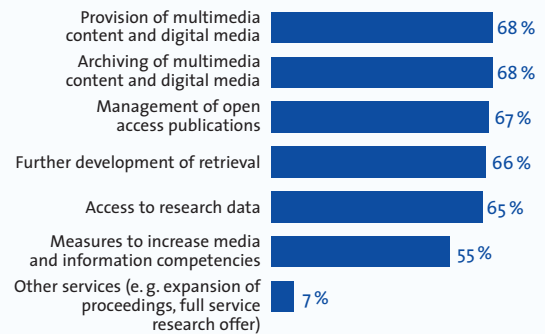
The TIB is the world's largest specialist library for technology and science. In a radically changing technological, scientific and political environment it is not just expected to fulfil its traditional function and to make its collections available in both printed and electronic form. It is also expected that it should develop new fields of activity.

For example, this involves the provision of appropriate infrastructures no longer just for textual materials but also for multimedia materials, such as research data, films, images, sounds and 3D animations. The access to all collections, irrespective of shape, place and time, must be guaranteed in the long term. The integration of open access publications should also be promoted.

These new strategic fields of expertise have already been the focus of the TIB for a while and in the future, together with national and international partners, associations and networks, it will continue this focus in a more targeted manner.

The results of this study illustrate that the existing customers support the strategy of the TIB and its intended path.

FIG. 9: SUPPORT OF NEW BUSINESS AREAS



Question: How important do you consider it for the TIB to provide the following additional ranges of products and services? All respondents, n = 663, only entries with "very important" and "important," multiple answers possible

Source: TNS Infratest Business Intelligence, 2010

# 6. THE TIB – A FUTURE WITH ADDED VALUE

The results of the current study lead to the following conclusions:

## THE TIB IS ESSENTIAL FOR GERMANY AS A CENTRE OF RESEARCH, SCIENTIFIC AND ECONOMIC ACTIVITY.

- The public investments pay off: for every euro of public funding that the TIB receives annually, it generates € 3.80. If the public funding of the TIB was to stop, the German national economy would accrue losses of at least € 64 million. The library pays huge dividends to Germany, and represents value for money for the German taxpayer.

*“THE ACCESS TO INFORMATION IS PART OF THE BASIC PROVISION AND MUST BE AND REMAIN THE TASK OF THE STATE. THE TIB SHOULD EXIST AS AN EXCLUSIVELY FEDERAL GOVERNMENT FINANCED LIBRARY TO BE ABLE TO RETAIN AND PROMOTE GERMANY AS A CENTRE OF SCIENTIFIC AND ECONOMIC ACTIVITY.”*

## THE CUSTOMERS CONFIRM AND SUPPORT THE CONCENTRATION ON NEW TYPES OF PRODUCT RANGES.

- The customers have confirmed that the functions of the TIB should concentrate specifically in future on the expansion of new services, for example, research data and multimedia products, such as audiovisual media. The TIB should support research with innovative services and integrated processes. To this end, a digital infrastructure should be built up and expanded.
- It should also not be forgotten that the traditional library services are still a major asset for the TIB: Completeness of its collection, indexing, retrieval and archiving remain at the top of the agenda. The aim of the TIB should still be to network its customers quickly and in a targeted manner with the information that they require. To this end, both printed and digital media need to be archived.
- National and international collaborations will also strengthen the TIB’s extensive range in the future and increase the acceptance of the library amongst its customers.

*“DIGITAL COLLECTIONS AND INFRASTRUCTURES SHOULD BE FURTHER EXPANDED WITHOUT NEGLECTING THE TRADITIONAL TIB RANGE OF SERVICES.”*

## THE HIGH LEVEL OF CUSTOMER FOCUS AND QUALITY OF SERVICE SHOULD BE MAINTAINED AND EXPANDED.

- The customers expect the quick and reliable provision of full text. A current and comprehensive collection is important to them. Furthermore, it is also good to appreciate the exclusivity of the collection. The customers appreciate the high quality service and advice given by its employees.

*“THE HIGH QUALITY OF SERVICE AND ADVICE SHOULD AT LEAST BE MAINTAINED IF NOT EXPANDED.”*

## OUTLOOK

The TNS Infratest study was supported by a series of interviews with decision makers and multipliers from the narrower TIB environment. These discussion partners from science funding and policy, specialist scientific societies, publishers, media, university libraries, etc. were each asked lots of questions about the significance and the future of the TIB. The discussions were led by Dr Willi Bredemeier from the Institute for Information Economics and the Editor of Password. The results of these intensive interviews, which included international discussion partners, will be published in a separate study. It can already be determined that the evaluation of the discussions back up the results of the TNS Infratest study to a great extent and consider that the strategic direction of the TIB is correct and important.

**The TIB customers were given a lot of scope in this study to express themselves through open questions. Good use was made of this. The many suggestions, both of a positive and critical nature, will be adopted by the TIB to improve its range of services and service levels.**

TNS belongs to the Kantar Group, in which WPP (London) has focused its market research activities. WPP is one of the largest research, insight and consultancy networks. TNS Infratest is the German member company of TNS and thereby part of one of the largest market research organisations in the world.

The results of this study are based on an online survey. TNS Infratest is the market leader in online market research and has extensive experience with national and international online surveys. The technical platform that it uses meets the highest demands in terms of quality. To date, over six million online surveys have been successfully carried out.

TNS Infratest Business Intelligence has long-term professional expertise in the consulting of information institutions and has already carried out a large number of projects in this area. As a result, the Department has gained particular expertise in consulting on the customised design of information services and the creation of information products.

The “Contingent Valuation” calculations were carried out by “Models and Methods.” This Division is the hub for mathematical and statistical data analyses and consulting within TNS Infratest. TNS Infratest recognised the advantages of a centralised methodological department at an early stage.

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# IMPRINT

## **Publisher**

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