



FOREWORD

Dear reader,

This past year a lot has happened around BDB and there are new stories we would like to share with you in the BDB publication of 2018. We'd like to inform you about the developments within BDB and the (Dutch) construction sector. And hopefully we can inspire you and give you some new ideas!

This edition is filled with success stories of some of our customers: such as a contractor, a municipality and an insurance company. You will read about their work in the construction sector and more important: the connection with BDB and our construction cost data.

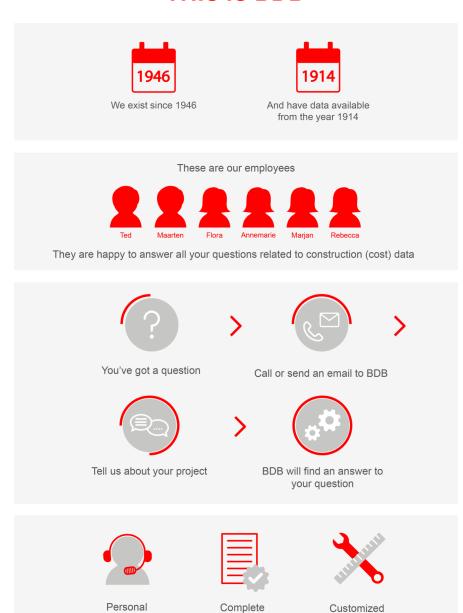
Besides these interesting cases, you will read our experiences as a specialist in construction cost data on the dynamic Dutch construction cycle and how you can anticipate to it. Moreover, we will introduce you to one of our team members and his role within BDB.

Last but not least: a few great developments have played part within BDB, and we proudly want to introduce you to it. Recently we have launched our new information system. In an article we put together all the new features and the benefits of the system.

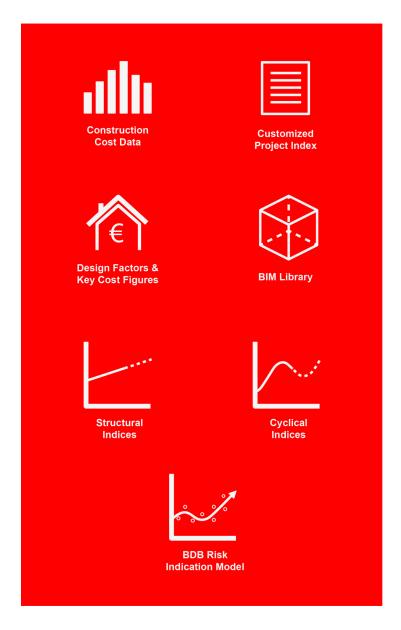
On behalf of the BDB team,

We hope you enjoy reading it!

THIS IS BDB



THE BDB PRODUCTS



CONSTRUCTION (COST) DATA

Extensive information that provides solutions to questions related to the finance of construction. We have data available for all processes, sectors, markets, tupes, phases, projects, abstraction levels, moments and data types.

CUSTOMIZED PROJECT INDEX

An indexation specifically customized to your project. This indexation is based on the dimensions and type of your project and its specific components.

DESIGN FACTORS AND KEY COST FIGURES

Generic objects and buildings that provide the ingredients required for substantiating business cases, analysis and investment decisions.

BIM LIBRARY

The BDB BIM library is an extensive library containing a wide range of data, on both abstract and detailled levels, relating to quality, time and money. This library is the fundament of the 5D BIM process.

STRUCTURAL IINDICES

These indices cover the autonomous price development of the production costs when the demand stays the same. In other words; this is the cost price development

CYCLICAL INDICES

These indices cover the general price development caused by a shift in the demand with a remaining supply. Therefore this cost development relates to the tendering market.

BDB RISK INDICATION MODEL

This model gives insight in the wage and price changes, in order to support the purchasing, tendering and negotiation processes, and to predict the financial risks of a project.



THE DISTINCTIVE POWER OF DATA IN THE CURRENT ECONOMY

In the Netherlands, the economy is constantly changing. Right now, it is moving up towards a peak in the economic climate. This is reflected into the market operations and developments. The growing demand in the market is causing a bigger need for capacity, but this demand can not always be fulfilled. In the construction sector, there is no balance between the available workplaces and the availability of people, partly because of the ageing of the population. More jobs than people are available, and so the capacity can no longer deliver the quality, resulting in a lot of pressure on the quality.

Contractors are confronted with the increased prices of wages and materials. Projects are financially pressured, because they were accepted in times of a low cyclical point. Organizations are not always prepared for these changes. Many businesses are managed based on the current situations and the economic climate. Right now, the economy is doing well: Organizations got more money available and a lot of new projects are being released. Tenders are being offered, but the orders of the executive parties are being filled or already filled.

The construction sector should be aware of the developments and changes coming their way and anticipate to it. The construction sector is quite traditional and this leads to many opportunities, mainly in digitalization, automatization and innovation. The importance of data in the sector is increasing. project. Better analysis can be made based on digitalization and data. The demand for data is increasing not only in the construction sector, but in the entire society. At BDB, we notice data is playing a more prominent role in health care, education and the government.

Data is offering a juridical base but can also be of use in making processes more efficient. Because of the

constant change of the economic climate, organizations want to have better insight in the current but also future developments. The increase in the prices leads to more questions and adjustments. If a tender offer is going to be made, you will want to know whether the time is beneficial, what strategy works best and how to stand prepared.

The need for information is increasing. BDB has the information available to solve complex questions of this kind: around the cyclical developments and how this relates to a project. Besides that, BDB can deliver customized data based on your company or situation. Nowadays we receive more questions on specific areas, certain activities or building materials. We can deliver the requested data. We advise you on how to apply certain numbers or figures, and how to implement them in your primary process. "The customized solution does determine the success of the data supply."

To summarize: We advise customers to innovate, to establish the most efficient process optimization and to anticipate towards the developments that come with the changing economic climate. This means opening up to outrageous innovations. BDB has undergone such transition itself. The process of obtaining data as well as the distribution of data is fully optimized. BDB is mainly focused on making sure the information coming from our enormous database is directly focused at and applicable for customers in Organizations want to be able to foresee the risks of a the primary process, so you can work even more cost efficient. Because raw data on its own, is not worth that much to you.

Ted Peek MSc MRICS (general manager BDB)



"We wanted one particular index, specifically for the contract and offer from the contractor. BDB is able to deliver this customized figure."

Martijn Gesink is head cost management at the department Metro and Tram for the **City of Amsterdam**. This means he leads and assists a team of cost experts. He also directs a number of contracts himself. "A good index regulation that matches with the project can take away part of the risks and uncertainty."

>> Read the full interview on page 13



"The biggest advantage from BDB for us: we can deliver a realistic price that is valid until one year later."

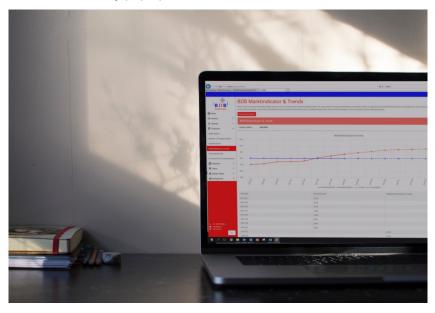
Antoine van Gelder is calculator at **KlokGroep**. He explains how the BDB numbers are applied in his daily activities and how the numbers deliver a value for the company. "Our cost prices are based on these numbers, therefore they need to be reliable."

>> Read the full interview on page 14

THE NEW BDB INFORMATION SYSTEM

Innovation plays a big part in our current society. The past two years BDB has been working on a number of special developments. Last year we introduced the new 'Index figure model' within My BDB. In June this year the new BDB information system went live! At BDB, the need of the customer comes first. We noticed our customers wanted broader, more accessible and immediately available numbers and figures. The new information system is an innovation that allows BDB to offer broader data, in a new, progressive way. We put together a list of the biggest changes in the new system and the benefits that come along with it:

- The interface of the system is completely renewed. The menu is structured in a logic and user-friendly way. Buttons are easy to recognize. These changes allow you to navigate fast and easy through the new system.
- The generic numbers can be read directly from the system, by using the interactive graphs and tables. With one simple mouse movement over the points in the graph, the indices will immediately pop up on the screen.



- It was already possible to choose a reference project at the pages of the monthly figures and the forecast figures. This function is extended with the possibility to choose reference dates. Instead of going back 13 months, the numbers go all the way back to the year 2003. This opens up the opportunity to get more specific and broader data from the database.
- The monthly figures and forecast figures, as well as the market indicator and trends, are combined into one graph. This will give a better overview of the cost development and the trend development.
- At 'BDB projects' customers can find the results of (ad hoc)
 questions they have asked. The reports are connected to your
 own account and only visible for you.
- The section 'Design factors and Key cost figures' is expanded.
 Objects can be read more specifically. The form and amounts
 are easy to adjust, as well as the key cost figures. This gives
 opportunity to control the band widths of the data, making it
 possible to get more specific data from a project.
 - The system contains a company specific part, that allows you to build up your own project data base. It is possible to let BDB analyze your own projects and include these in this specific part of the database. You can benchmark on the most important design factors and key cost figures. Every month, the key cost figures are automatically indexed to the current price level. These project analysis are classified by default and only accessible through your own account. Therefore, the analysis are not provided to other parties.
- Next to the standard products, the system now offers the
 possibility to monitor international price developments and to
 benchmark international projects. BDB has historical
 international construction (cost) data. This data is not (yet)
 available within our subscriptions, but when you are interested
 please contact us.

The system is available via www.mijnbdb.nl, within the submenu in the red bar at 'My BDB'. To give you a tour through the new features of the system, we made an instruction video that can also be found within My BDB. Should you have any questions or comments, do not hesitate to contact us.



"The biggest value of BDB: the project has been verified by an independent party."

Robert Klein works at **OLCO**, a consultancy company specialised in real estate for social purposes. The city of Leiden hired him as project manager for a project of a combined pool and icerink complex called 'De Vliet'. He explains how he used the BDB products in this project. "To check the factuality of the price level, BDB did a good analysis on the investment cost budget and reviewed the cost level of the pool and ice-rink."

>> Read the full interview on page 15



"The indices give us more control over our wallet; We have better knowledge on the development of the construction prices."

Rob Bartels is product coordinator at **ZLM insurance**, a regional insurance company. Although construction cost data is primarily used in the construction sector, Bartels explains how this data can also be of value for the insurance branch. "We index the premium to make sure our customers do not risk being underinsured."

>> Read the full interview on page 16

INTRODUCTIONS...

Personal contact is one of the core values at BDB. That is why we want to introduce you to one of our employees:

Maarten in 'T Veld. Maarten has been working at BDB for the past four years. He plays a role in the intern guidance of the company, deals with background issues and consults specific projects.

1. What do you do at BDB?

At BDB I have two roles: I am a project manager and consultant. As a project manager I mostly focus on the background issues. This means I make sure that the intern business is running the way it should; products and projects are delivered according to the agreements, and when there are problems I will try and fix it. Most of the time, I am occupied with the daily operational activities of the team. An example of an background issue is the development of the new information system. In this process I monitor if everything is going according to the plan and agreements, and whether the requirements BDB has set are included in the system. Eventually we want to make sure the data system is a big value for our customers.

As a consultant I focus on the project specific questions. These are the projects that don't fit in with the generic solutions and therefore can not be solved with our general products.

2. How do you help customers?

As a consultant I advise costumers on how to use our indices and other products within their project. Usually, this starts on the phone; I try to get a clarification of the customer's question: the question behind the question. This will be of help in the further process. In some cases it is enough the give advice through the phone call. In other cases it is essential to have a meeting with the customer. A physical conversation clarifies the context and the question. This way a meeting can help in the further communication and offer a distinctive value.

3. What do you believe to be the biggest value from BDB for customers?

In the construction sector, I have noticed a lot is done based on a feeling. BDB makes sure this feeling can be measured. We are able to substantiate scenario's; such as business cases or updating estimates, but also the risks of construction projects. The BDB products allow companies to give their clients a reliable and independent substantiation on matters. It creates a transparency between clients and contractors.

4. How would you be able to help more (potential) customers?

To help integrate the BDB products in their primary process, in all phases of the design and building process. People should see the advantages of optimizing their working process or system, by using our products. When the implement them into their process, it can applied to every project. Companies can really benefit from this. To inform new and existing customers on how to integrate and apply the BDB products to their project or process to achieve the most benefit from it, is something I could help customers with.



"BDB is clear, independent and provides good insight. It is a reliable information source to include indexation into a budget or estimate."

Gerwin Matijssen is cost manager at **bbn**, a real estate adviser and construction consultancy company. He works on all activities concerning construction cost management and explains how he uses the indices. "The BDB products help me get a better idea of the indexation. If I were to make a cost estimate of a building today, what will the same building cost five years from now?"

>> Read the full interview on page 17

BDB has over 100 years of knowledge on construction (cost) data. With this knowledge we help our clients with their work an a daily base. Consultants, contractors, housing corporations, the government, bankers, insurance companies, and many more: Our data provides insight into the entire construction sector. Here are (random) some of our customers.

Thank you for your cooperation!











































FULL INTERVIEWS





Interview with the city of Amsterdam: A customized index

Martijn Gesink is head cost management at the department Metro and Tram for the City of Amsterdam. This means he leads and assists a team of cost experts. He also directs a number of contracts himself. Examples are contracts for maintenance, such as the management and maintenance of stations and rails, but also train security.

Martiin Gesink plays part in the construction of the North/South line. This is a big and long-lasting project, concerning the development of a metro line in Amsterdam. This metro line connects the north of Amsterdam with the south. The length of the metro line is 9,7 kilometers, of which 7 kilometers go underground in tunnels and 3 kilometers are drilled. During the work several subsidences caused problems and at two of the stations, the project had to be put on hold. In 2009 the organization expanded the budget, and the work was continued with extra safety measures and a modified communication strategy. From this moment on Martijn was included in the project, with the role as cost manager. He holds an overview on the price levels of the contractors offers to see if they are reliable. Furthermore, he makes sure the risks in the project are being controlled.

The reason Martijn contacted BDB was because he needed a customized index for the completion of the North/South line. The North/South line is a big and complex project, that includes many different contracts for all the specializations that are part of the project. This caused discussions on how to index. An independent index was required. "We wanted one particular index, specifically for

"We wanted one particular index, specifically for the contract and offer from the contractor. BDB is able to deliver this customized figure."



The city of Amsterdam is a big organization with different departments. Metro and Tram is part of one of these four departments: Economic **X** Amsterdam Services Departments. Metro and Tram owns the rail infrastructure in Amsterdam and mainly focusses on the construction, management and maintenance of the metro and tram network in Amsterdam

the contract and offer from the contractor. BDB is able to deliver this customized figure. There are several indices in the market, but these are generic. BDB has a unique product in offering and delivering customized indices."

Based on the specific components in the contract. BDB created a project specific and detailed index for the North/South line project. This offers insight in the structural costs within the project and risks can be limited. The entire offer of the contractor is translated by BDB into one particular index. This index is created based on the wages, materials and equipment in this offer. The index figure is periodically indexed based on a set starting position. This is the tender date: September 2011. If the contractor is making changes in the offer. these changes will be based on the prices of that date, and raised with the BDB project index. "A project this big has many disagreements that have to come to agreements, but the index is never an issue. This way the BDB index created some peace."

"Every quarter of the year the figure is being indexed. This is happening separate from the city of Amsterdam and is independent and reliable. Because of the good experiences with BDB, I recently recommended their products in a different project. Currently a lot is happening at the market: capacity is scarce and the CLA wages in the construction sector are rising. People are talking about scarcity in the market. This brings along many risks. By using an index you can make sure you are prepared for all the changes that come along with these developments. A good index regulation that matches the project can take away part of the risks and insecurities. BDB can deliver these indices." •





Interview with KlokGroep: Making calculations based on reliable data

Antoine van Gelder works as a calculator for KlokGroep. His activities mainly consist of making budgets, bills of quantities and updating reference budgets. He also keeps track of the BDB monthly figures. These figures give insight in the structural cost development of the wages, material and equipment. The numbers are updated every month by BDB.

"Over the years, KlokGroep has evolved from a traditional developing constructor into a 'director' of large-scaled building projects. These projects we create together with our co-makers. This transformation resulted into new, different questions form our clients. An example: they asked us to monitor the currency depreciation. The BDB products serve as an instrument to consult our clients. We use them to give sustained insight in the expectation of the price increases. Our clients are content with the numbers BDB delivers and are able to apply them. It shapes a trustworthy bond between our clients and the company."

Antoine uses the BDB numbers mainly during the process of preparing estimates. The projects are diverse: from utility projects to housing projects, and new projects to renovation. "It often happens that we estimate the costs about a year and a half before the project is actually being built. When this happens, you want to have a good insight in the development of the prices. The trends gives us a prediction of the future course of the cyclical cost development. The percentage of the expected increase is part of the actual costs of our projects. Especially in the current economy, it can be hard to predict the developments. The BDB Trends gives us a better idea of what to expect."

"The biggest advantage from BDB for us: we can deliver a real price that is valid until one year later."



KlokGroep is, together with Novaform, part of KlokHolding, a financially forceful and experienced family business. In 2017, KlokGroep made a revenue of €200 million. KlokGroep focusses, together with her co-makers, on the entire develop- and exploitation process in the construction sector: from the initiative phase till the property management. With almost 200 employees, KlokGroep is working daily on new development projects, maintenance projects, and the development of preservation concepts.

"When we look at the prices, it is clear that the developments are caused by the uprising market. As regard of the prices, we notice that people are taking opportunities to profit from it. For example, subcontractors no longer stick to their prices. By working closely together with our co-makers, luckily we are able to slightly control the rising of the prices."

"Another one of my activities is keeping track of the structural monthly figures for our project developers. I combine these numbers with the market indicator and trends, and put them together into an accessible graph, to send it to our developers. For them, it is essential to get a good overview of the market trends and the developments of the construction costs. The project developers base their cost prices on this data. Therefore, you want to be sure the information is reliable and up-to-date."

"The biggest advantage from BDB for us: we can deliver a realistic price that is valid until one year later. Especially because our cost prices are based on these numbers, we need good and reliable information. Furthermore, the BDB data system is a great tool to work with. During client meetings, we have immediate insight in the market developments and numbers through the online data system. And we are able to substantiate what is displayed." •





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Interview with OLCO: Validation through an independent party

Robert Klein works at OLCO, a consultancy company that is specialized in real estate, mainly for education and sports. As a project manager he deals with all kinds of questions, mainly related to indoor sports. The city of Leiden hired him as a project manager for a project of a combined pool and ice-rink complex called 'De Vliet'. Besides developing a new complex for the pool and ice-rink, renovating the outside pool as well as furnishing the common area are part of the project.

The sports policy 2013-2018 of the city of Leiden was the reason for this project. At that time, he budget for the renovation of the outdoor pool, as well as the new development for the indoor pool were set. In 2016 Robert was hired as the project manager. He continued and helped in further development of the project. Meanwhile, the project was extended with the development of a new ice-rink, to replace the existing rink. By combining the pool and ice-rink into one complex several synergy advantages can be accomplished, like the exchange of the energy.

The first plans for the project were made in 2013 and a lot has changed since then, mainly on the construction market. Robert Klein had already foreseen price developments as a risk of the uprising market. Based on data from an independent party, he wanted to get a better insight in how the market had changed since that time. And how the market would continue to develop until the tender, specifically for the segment of pools and ice-rinks. BDB was asked to create an independent benchmark for the construction, investment and operational costs for both the development and renovation of the pool and ice-rink complex. Besides that. Klein wanted to have a better insight in the price developments during the duration of the project.

"The biggest value of BDB: the project has been verified by an independent party."



OLCO is a consultant in the utilization, exploitation and development of real estate. We do not limit ourselves by fixed thinking patterns and restrictions. We challenge our clients to step out of their comfort zone and take a different view on their own wishes and questions.

"We created a list of requirements, to form a base for the investment cost budget. To check the factuality of the price level, BDB did a good analysis on this estimate and reviewed the cost level of the pool and ice-rink. They reviewed different sections in the budget, to check whether these weren't too high or too low. Besides that, they have given us a good perspective on how much influence the market changes have on the cost level of the pool and ice-rink. The results of the research BDB did, came to good use within the decision of the township council. BDB created a very accurate analysis and gave good advice, specifically focused on the pool and ice-rink. I was very content with the results. BDB is unique in offering such specific. customized solutions."

"The results of the research BDB did were of value by proving the board that although the budget determined in 2013 was good, adjustments were necessary as a results of the structural and conjunctural market operations. Earlier experience and knowledge within swimming pool projects, had already given me a suspicion the budget was not right anymore. Because of research BDB did, I was able to give concrete prove and substantiate this to the board. The biggest value of BDB: the project has been verified by an independent party, that does not have interest in playing a role in the further completion of the complex. OLCO is, by default, not going to apply for the tender and BDB is not related to any building activities."

"After this summer, the board is making a decision on the building credit of the development of the ice-rink. Next will be the start of the European tender of the development of the pool and ice-rink complex." •





Interview with ZLM Insurance: Using indices as an insurance company

Rob Bartels is product coordinator at ZLM insurance, a regional insurance company. Although construction cost data is primarily used in the construction sector, Rob explains how this data can also be of value in the insurance branch.

"As a product coordinator, I analyze our products: the insurance policies. These analyzes are based on the premium and claims. I evaluate whether or not we should raise or lower the premium. Besides that, I am involved in the introduction of new products to the market. As a product coordinator, I also analyze our policy, by reviewing the law changes and restrictions. Based on the customer experiences and their suggestions, I examine if we can improve the products. This I do for every separate product, but also for the whole product range together. Giving value to our customers is considered an important part of ZLM. We review the premiums and products, to see what we can do to make them even more appealing for our customers."

"Recently I worked on an analysis of the part of our insurances that are prolonged per may first. These also include our home insurance, that covers damage on a house caused by fire, storm or a hailstorm. Based on the results of the analysis we check to see if we can update or change the premium. The BDB index will give us an indication of the development of the construction costs of a house. We index the premium to prevent our customers from the risk of being underinsured."

"The indices give us more control over our wallet: We have better knowledge on the development of the construction prices."



ZLM Insurance is a regional insurance company for the region Zeeland and Noord-Brabant. Customers can take out insurances for their homes, transport and travelling.

"The index can cause a raise of the premium, or lower the premium. When the construction and material costs rise, the premium will also rise. And the other way around: the lower the costs, the lower the premium. This way, the index is also used to keep the value determination of a home on the right level."

"A few years back, we chose to work with BDB. At the time, we had the feeling the numbers we were using, were not corresponding with the actual market. We chose BDB because their numbers are based on reliable and proper data. Their data gives a good impression on the activities in the housing market. Some insurance companies index based on the numbers of CBS (Statistics Netherlands). The BDB numbers we receive are specially constructed for our company. The indice figure and forecast figures give us more control over our wallet; we have better knowledge of the development of the construction prices."

"Internally, it is a fixed fact that we base our information on the BDB indice. If the increase or decrease of the premium is extreme, this will lead to questions from our customers. Based on the background information I receive from BDB, I can substantiate these changes. We want to give a good and clear explanation to our customers. Therefore it is important we are able to tell them how we determine our premiums. BDB supports this as an external, independent party." •





Interview with bbn: A critical view on current developments

Gerwin Matijssen is construction cost manager at bbn. He has about 18 years of experience in cost management. His main activities consist of managing construction cost projects, advising all parties involved in a (construction) project, negotiating with different parties like contractors and suppliers, and providing insight in the costs of a project.

Construction can be a broad concept: BBN works on diverse projects, but mainly focusses on commercial estate, healthcare and education. Recently, Gerwin was involved in a project concerning the renovation and new development of a city hall. First, he did a feasibility study to give better insight in the possibilities and costs. The project is not being built until 2022. However, there are already a lot of decisions that have to be made and the board and council need to be informed about the costs. "The BDB products help me to get a better idea of the indexation. If I were to make a cost estimate of a building today, what will the same building cost five years from now? The current economy puts a lot of pressure on all parties. Estimating on a feeling is not going to lead to the best results. If the timeline of a project is longer, like the city hall project, more information to substantiate is needed."

"The BDB index I mainly use for estimates and budgets show, based on the reference project, the structural price development of the production costs." To get better insight in the market operations related to it, Gerwin uses the market indicator and trends. "In times of crisis, the increase of prices were not as much of an issue. The increases were barely billed. With all the current developments and matters going on in the market, we have to be critical. Companies need to have a level of certainty.

"BDB is clear, independent and provides good insight. It is a reliable information source to include indexation into a budget or estimate."



bbn is a real estate adviser and construction consultant. Their services consist of real estate advice, construction project management, cost control and property management. bbn is active in several branches: health care, governments, education but also culture and business.

BDB offers a good starting point: it will provide a useful and reliable base to include price increases into your cost estimate. In the construction sector, BDB is a well-known company. BDB is ubiquitously respected and a prominent and independent institute."

"On a daily basis, I notice the effects of the cyclical developments in the market. BBN is doing many tendering offers. That way we notice enormous price increases. The delivery time for certain materials is increasing, resulting in higher prices. The prices of the activities of completion are also rising. Although I have not seen it happening yet, I predict the costs will mount into extremes and projects will have to be put on hold."

"Of course, BDB is not the only player on the market offering indices. But the way they provide their products, in different purchase options, is very convenient. I also make good use out of the index figure model." This model is an useful tool to easily measure numbers and figures, based on the reference projects and reference dates. The results are directly available in an Excel file. Depending on the subscription, the structural and cyclical numbers are calculated based on the inserted information. "The results are shaped into a neat lay-out, that is easy to include into a report or presentation for a client. BDB is clear, independent and provides good insight. It is a reliable information source to include indexation into a budget or estimate." •

