THE ARCHITECTURAL SECTOR IN FULL SWING

FuturA white paper

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SUMMARY

This white paper is part of the FuturA research project regarding new business and organisational models for the architectural sector. It describes developments in the labour market, architecture market, construction chain and possible future scenarios for the developments of the architectural sector in the Netherlands. The architectural sector is in full swing. The levels of turnover and employment have recently increased. Architecture firms have the possibility to choose different roles and positions within projects and the construction chain. In order to keep up with recent developments in the market, such as new technology and the increased demand for circularity and sustainability, additional competences are needed from architecture firms. These required skills can be realised within the own firm, but can also be achieved through increased collaboration with other businesses. Informed choices are necessary and this paper as such can be used as a starting point.

INTRODUCTION

Added value of the architect

Architecture is a valuable social force. It contributes on a regional and national level to the quality of life and the environment. Architects do more than just design buildings. With their view and knowledge of spatial and social issues, architects contribute to solving complex spatial problems and add to happiness through the built environment. Architects connect people, wishes and interests, and are aware of the social and spatial demands regarding sustainability and feasibility. Therefore they are invaluable to society.

Entrepreneurship and innovation

The architectural practice is changing because of the dynamic context. In the world of design and construction, old certainties and business models have largely disappeared. There is a ‘new reality’. The revenue has been increasing over the past few years, but employment levels are still much lower than in 2008. This is a result of the economic crisis. In the next few years, the architectural sector will therefore focus on further strengthening the sector, and on increasing the positive impact of architecture in the world. In this transition, adaptation and enthusiasm in the sector are crucial. It seems as if possessing extra competences, an entrepreneurial spirit and being innovative are conditions that ensure employment in the future.

LABOUR MARKET

Number of firms

According to the research agency Panteia in the BNA Benchmark Annual Numbers 2015, it is estimated that the total sector consists of around 2.700 active architecture firms. The number of registered one-man businesses has doubled in the last few years and is still rising. However, a lot of these businesses are part of another firm, or are not active.
At the end of 2015, Statistics Netherlands (CBS) reported that there are 6.500 registered

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architecture firms. 5.290 of these firms consist of one person, and it is expected that around 1.100 of these are active.

Architects in Europe

The number of architects in Europe in 2016 is estimated to lie around 600.000, based on the sector study from the Architects' Council of Europe. This is an increase of 4% since 2014. Halve of the architects are younger than 50 years. The division of men and women is 62-32%. Around seventy-five percent of architects work fulltime. Although a healthy situation has not been reached yet, the indicators across Europe are positive. The building production in Europe, as well as the total value of the architectural sector, has risen by 12% since 2014. Architects themselves also see a bright future ahead: a majority expects an increase in workload or no change compared to the current situation.

Revenue development and employment opportunities

In 2008, the Dutch architectural sector boosted a revenue of over €1,6 billion. To compare, this was just €840 million in 2015. Between 2008 and 2015, an estimated 7000 people lost their jobs or started doing other types of work. Another part retired (early). Recent figures from the BNA Benchmark Annual Numbers 2015 and 2016 show that revenue and employment opportunities are on the rise again. In 2015, the total employment in the sector numbered 11.000 people, compared to over 22.000 in 2008. According to Statistic Netherlands (CBS), the yearly revenue in 2017 is estimated to reach €1 billion. An increase is also visible in the amount of employment opportunities.

Types of labour relations

Due to the recent experiences of the economic crisis, architecture firms are reluctant to enter into long term employment contracts. Alternatives are contracts for an indefinite period, assignment of projects to freelancers, internship agreements and the reduction of fulltime contracts to part-time work. Firms are still careful with regards to hiring new employees. In 2017, around 30% of architecture firms expects growth. However, 45% also states that they have a hard time finding skilled new employees (BNA Conjuctuurmeting, 2017).

Professional experience

Many firms provide positions for young talent that take part of the mandatory so-called professional experience programme (BEP). Every architecture student that graduates after 31 November 2014 has to go through this period, in order to qualify for a position in the Dutch Register of Architects. This applies to students of architecture, urbanism, garden- and landscape architecture and interior design. Almost three quarters of architecture firms have at least one position available. Larger firms offer three positions on average, while smaller firms offer 0,6 position on average (BNA Verdiepingsonderzoek voorjaar 2017).

Regulations, technology and the market require new competences

The Sector plan architectural sector 2016 states that many architecture firms, not unlike many other organisations within the building industry, are working on a strategic reorientation based on the social design and building challenges of the future. Changing rules and regulations, technological advancements and the transition from a supply-driven to demand-driven market require new ways of working and new competences. Competences that appear to be very important are Building Information Modelling (BIM), quality assurances and the improvement of internal entrepreneurship.
Together with sustainability and technology, these areas seem essential to keeping jobs in the short term, and creating new job opportunities on the long term.

Professional development

Architecture firms are aware of the need to develop new competences. This appears from BNA Research of spring 2017, which shows that 70% of architecture firms believe that there is always something new to learn. Knowledge is acquired from projects, colleagues, project evaluations, training, courses, seminars and project visits. Several themes deserve special attention according to the firms: BIM (56%), 'BENG buildings', which are buildings that are nearly energy neutral (42%), modelling packages (40%), and personal effectiveness (29%).

ARCHITECTURE MARKET

Building production

The architectural sector is located in the front-end of the construction chain. Therefore it relies heavily on the overall building production. According to the Economic Institute for the Building Industry (2015), the total building production will show an average growth of around 4% between 2015 and 2019. The demand for architects is mainly related to housing and utility buildings, but also maintenance, repairs and transformation. The margins and turnover of architectural firms are currently still under pressure. Research from the BNA Benchmark Annual Numbers 2015 and BNA Business Survey of spring 2017 show that the expectations on the long term are moderately positive. In order to make the sector more resilient towards the future, more innovation and earning capacity at the front and back-end of the building process is required.

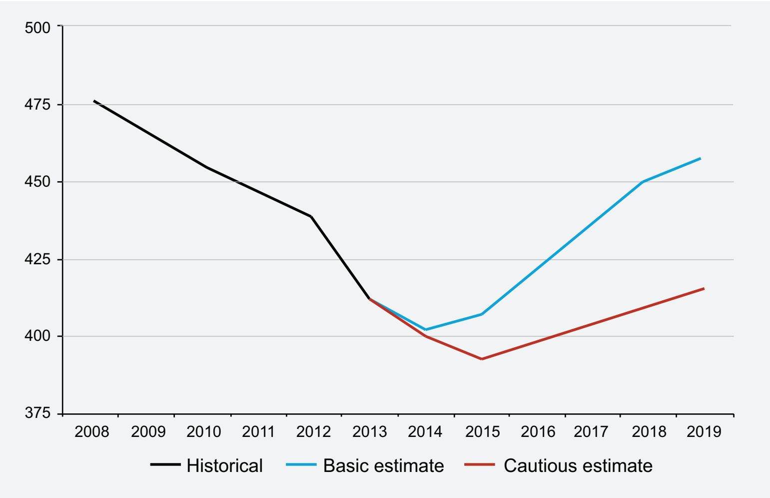

Figure 1. Development of employment in the building industry, according to the basic and cautious estimate, 2008 - 2019 (thousand working years). Source: Economic Institute for the Building Industry, 2015.

Growth of working stock

The BNA Economic status report spring 2017 shows that the 'working stock has increased from 4,5 months in 2016 to an average of 5 months at the start of 2017. Larger firms have an average stock of almost 9 months. For smaller firms, the average lies around 4,8 months. Due to this growth, the fee and number of employees have risen slightly. The main reason is the large demand for new, improved and sustainable dwellings. The sector is doing better. However, there are still large differences between bigger and smaller firms, and between regions and market segments. The nature of client demands is also changing. Sustainability, technology and innovations are demands that are put increasingly central by clients.

Expected growth 2017

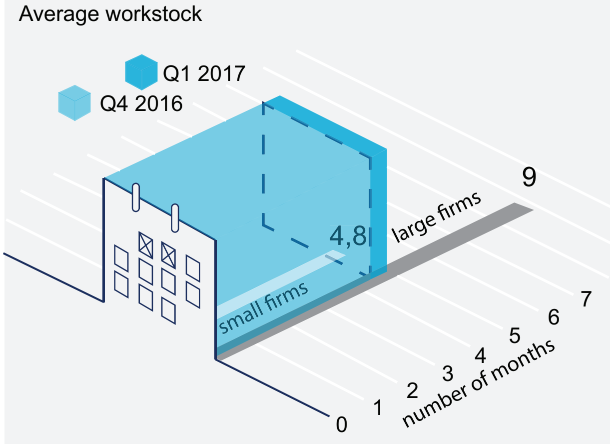

Figure 2. Average workstock for architecture firms.
Source: BNA Conjuctuurmeting voorjaar 2017.

New national and international markets

The BNA Economic status report spring 2017 shows that the working stock is dependent on the market segment and the region in which firms are active. The cause of the positive expectancy of growth is mainly due to the high demand for dwellings. Projects with a mix of functions and healthcare projects are also on the rise. For 2018, it is expected that the demand mainly comes from private individuals, businesses, project developers and contractors. Projects mainly concern new builds, transformation, redevelopment and making existing buildings more sustainable. A small but increasing number of firms is active outside of the Netherlands. These firms mainly work in Germany and Belgium. Larger firms also extend their business to Asia. Businesses and project developers are specifically mentioned as growth potential in 2017 (BNA, Verdiepingsonderzoek voorjaar 2017).

Architect selections

Besides personal invitations for projects, firms are increasingly participating in official selections. The reason for this is the growing economy. Old annoyances regarding this phenomenon, such as the limited chance of being selected, the high costs and the high demands, still exist. However, firms notice a small improvement in these areas. Selections through tenders or competitions are mainly done when it concerns large projects. Larger firms, with over 20 fulltime employees, are the ones who usually participate in these type of selections. Smaller firms, with less than 5 fulltime employees, and the category of firms with 5-20 fulltime employees, participate only occasionally. Smaller projects are usually awarded directly of after a request for a quotation (BNA Verdiepingsonderzoek voorjaar 2017).

CURRENT ISSUES

Growth expectation in the construction chain

Research from the Economic Institute for the Building Industry shows that most firms expect that the growth will continue in the coming period. In order to keep up with the growth, firms are searching for qualified personnel. This is apparent from the spectacular increase of 30% in vacancies in the construction chain, compared to the end of 2016 (EIB, 2017). Finding a sufficient amount of personnel to keep up with the growth is therefore the main challenge.

Supply conditions

The New Regulations (DNR) and the Consumer Regulations (CR) are the general regulations which are used most often by architecture firms. The DNR is the standard for projects in the business market, while the CR is used in the consumer market. Architects indicate that they regularly encounter problems due to divergent supply conditions from large clients. Nonetheless, a number of agencies do see some improvement here. This is due to the improving market, which allows for room for negotiation (BNA Verdiepingsonderzoek voorjaar 2017).

The national construction agenda

The construction chain has the ambition to work together on societal challenges. With this ambition in mind, the Dutch Construction Agenda (Bouwagenda) has been set up. Businesses, knowledge institutions and the government work together on matters that concern current and future generations: future-proof infrastructure, making dwellings more sustainable, offices and business units, and the integration of ICT- and data application in construction. The Dutch Construction Agenda focuses on eleven challenges, and has six horizontal overarching themes, such as circularity, digitalisation and computerisation, design quality, human capital, rules and measures that support change, and working together based on trust.

BIM

The Building Information Model (BIM) has become part of most architectural firms. Research from the BNA In depth research spring 2017 shows that the larger the firm size, the more they work with BIM. Only the smallest architecture firms do not make use of BIM. The largest firms share data through BIM in 50% of their projects. A few years ago, BIM was only used by large agencies, but now also smaller firms are working with BIM.

Innovation

Four out of ten architecture firms say they work actively on innovations of products, services and processes. On average, they spent around 10% of their revenues on innovation. More specifically, around 13% of the total revenue is spent on innovation in small firms, while larger firms spent around 5%. Almost 60% of innovations through architecture firms are related to product innovations, while around 30% is spent on process innovations. The obstacle that limits innovation that is mentioned most in 2017 is the rigidity in the application of legislation. A lack of cooperation in the chain comes as a close second.
The way the government organises tenders also plays a role in the limitation of innovation (BNA Verdiepingsonderzoek voorjaar 2017).

3D printing and performance-oriented design

The most important technology trends for the coming five years according to architecture firms are BIM, 3D printing and performance-oriented design. Most agencies see these trends as promising for the sector. Other technology trends that are mentioned are domotics, parametric design, augmented reality, the Internet of Things, artificial intelligence, robotisation and big data. The trend that is the least seen as an opportunity is mass customisation.

Sustainability

The ambition to realise sustainable building has grown considerably over the last few years. While at first architects believed that this was the choice of clients, now they feel that this is also their own responsibility. Firms are increasingly taking more responsibility for designing sustainable and energy neutral buildings. The percentage of firms who are aware of the criteria which need to be met in 2020 regarding BENG-buildings (almost energy neutral building) has grown to around 60%. This is evident from the BNA In depth research spring 2017.

Quality assurance

Up till now, technical testing of building plans and the supervision of construction was carried out by the municipality. For low-risk construction, the intention is to let recognized quality assurance officers take over that role. This is described in the Quality Assurance Act, which (with some political changes) will be introduced in 2019 at the earliest. The BNA In depth research spring 2017 show that in line with this shift, larger architecture firms have indicated that they would like to act as quality managers. This service will also be offered to fellow firms. Smaller architecture firms indicate that they prefer to work with preferential quality managers.

FUTURE DEVELOPMENTS

Other tasks

The services of firms are related to social developments and therefore have a dynamic character. The market requires well thought out, sustainable and affordable interventions that have to be financed through new constructions. Investment-oriented thinking must make way for thinking about the lifespan. New technologies, materials and media are increasingly being used to achieve the desired goals. There is an opportunity for architecture firms to respond to new issues and challenges by using the distinctive, imaginative and connecting power of the architect for smart, new and good spatial solutions and constructions, that will stimulate clients, developers and users to change their behaviour with regards to buildings.

Changing roles

Dutch architects regularly develop new services, such as developer, facilitator and strategic advisor. They also have distinctive expertise nationally and internationally, in affordable housing, complex projects, urban plans and spatial plans including water. Due to the changing demand of clients and the increased complexity of projects, working together is a must. Today's design teams are multidisciplinary. Besides architects, teams also consists of other designers and building advisors, costs experts and installation consultants. Besides this, artists, sociologists and economists take part in design teams as well.
The architect often acts as the generalist between specialists within the design process.

BNA future scenarios

In order to have enough time to reflect on the role of the architect in 2030, the BNA has developed future scenarios for its members. These were jointly developed with architects and external experts to function as a tool for architecture firms to make strategic choices. The goal of the scenarios is to create a future-oriented dialogue and cooperation between agencies within and outside of the building sector. With the scenarios, the BNA wants to take the sector along in the steps needed for innovation, and implementation of the Dutch Construction Agenda.

Strategic choices

Architecture firms can increase their impact by for instance learning more about the entrepreneurial side of designing and construction, risk management and increasing their own revenue streams. Besides this, being able to communicate the value of architects in a convincing way is important. In the BNA Future Scenarios (2017), titled ‘Architect 2030: Act Now’, technological innovation is a common thread. The scenarios offer four perspectives: ArchiPreneur, ArchiBot, ArchiNet and TechArchitect. Architects can make different strategic choices that fit the identity and ambition of the firm.

CONCLUSION

The demand in various market segments from clients in The Netherlands and abroad is changing, and the complexity of projects has increased. Collaboration within the chain has become a necessity. In order to continue creating value for clients, end-users and society, architects have to choose their role and position consciously. In addition, some firms will need to shift their boundaries regarding their role and the services that they provide. In order to strengthen the architectural sector, architects have to ensure that they learn new skills such as designing energy neutral buildings, circular buildings and offering coordinating services. Being able to argue the added values and performance of the architects’ design and processes, and the impact of technological developments on organisation and revenue models of architectural firms, are therefore important topics for further research and discussion.

About futurA

The research of futurA (future value chains of architectural services) analyses existing and develops new revenue- and organisational models for the architectural sector. The 4-year long project from Delft University of Technology, Radboud University of Nijmegen and the BNA, is one of the 23 projects of the top sector creative industry from the NWO, the Dutch Organisation for Scientific Research. The aim of the project is to understand the changing work field for architects, as a result of societal shifts and the financial crisis, in order to reveal opportunities for the future.

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