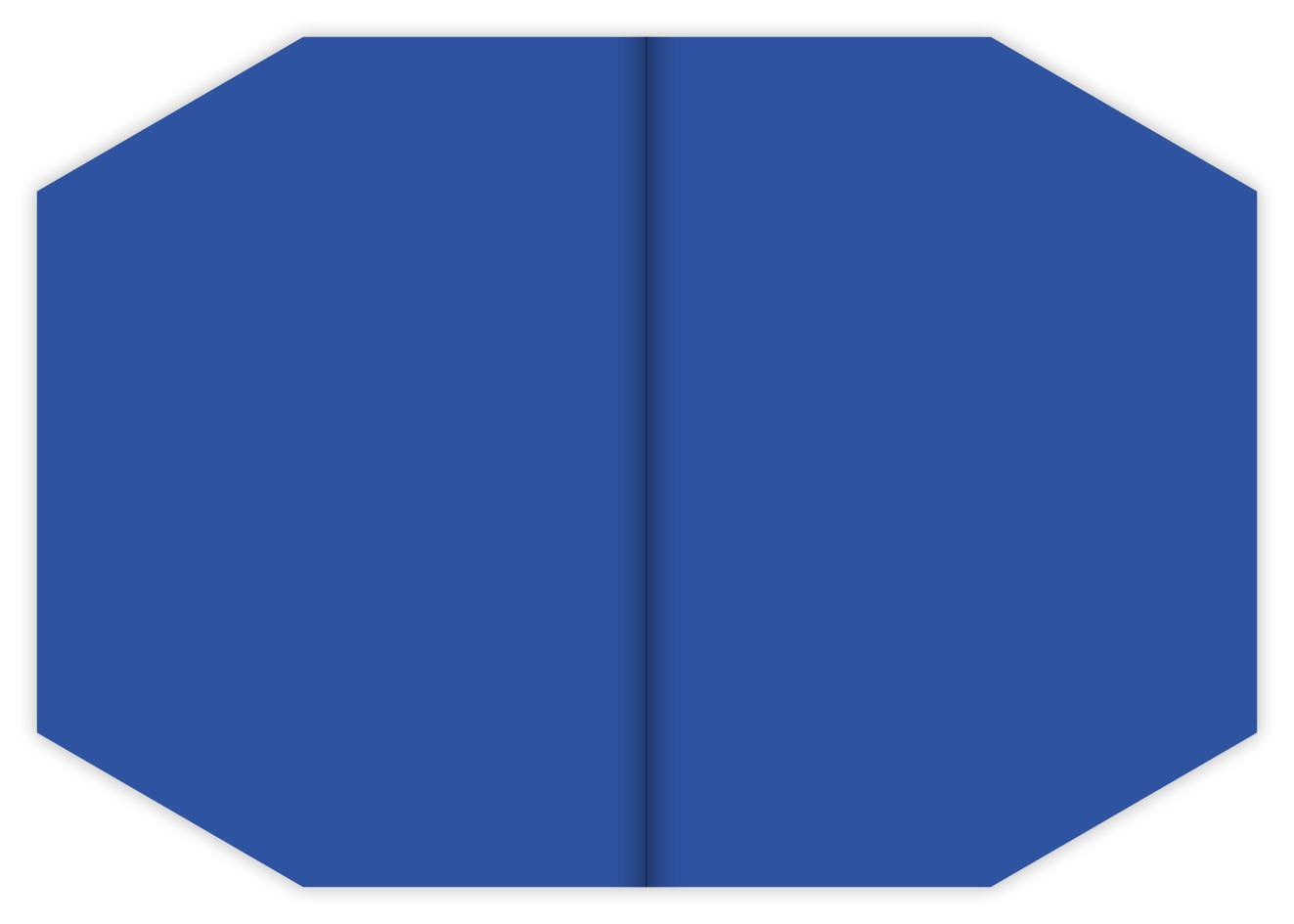
FUTURE ROLES FOR ARCHITECTS an academic design guide MARINA BOS-DE VOS | BENTE LIEFTINK & THE FUTURA TEAM 2018





CONTENT

What important future challenges do architects face?	p. 09
2 How can you negotiate your role in a project?	p. 21
3 What role identity do you want to take on in a project?	p. 31
4 How can you deal with the tension between creativity and commerce?	p. 41
6 How can you balance competing values?	p. 53
6 How can you balance professional and financial value within your firm?	p. 65
Now can you change your role as an architect?	p. 79
8 How can you institutionalize and consolidate change?	p. 93
Which specific challenges do future roles pose?	p. 105
no How can you design your future role as an architect?	p. 117
Summary	p. 125

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'Future Roles for Architects' describes the core insights from a research project into new role structures in the Dutch architectural sector, conducted as part of the futurA project on "future value chains of architectural services". For four years a joint team from Delft University of Technology and Radboud University in Nijmegen, working in close collaboration with BNA, the Royal Institute of Dutch Architects, studied the future of the professional roles performed by architectural firms within the broader construction process.

FuturA was one of 23 projects funded by NWO, the Netherlands Organisation for Scientific Research, in 2013 as part of the CLICK.NL programme, to strengthen knowledge about and innovation in the creative sector. The objective of this particular project was to better understand changes to the architectural profession arising out of ongoing social trends and the recent financial crisis, as well as to expose opportunities for the future. I believe that we have accomplished that mission very well.

Our professional consortium made up of De Zwarte Hond, EGM Architects, IAA Architects, JHK Architecten, Rothuizen, Ballast Nedam, Havensteder and the Studio of the Chief Government Architect (Atelier Rijksbouwmeester) has been of inestimable value. Twice a year, they helped us to critically examine our findings in "living lab" sessions against their own experiences in leading their own firms and in cooperating with partners in the building sector.

The members of the consortium and various other industry players were also generous in allowed us to gather data in their organisations. In line with the vision behind CLICK.NL – collaboration between curious researchers and entrepreneurial creative professionals – we have really invested jointly in knowledge and innovation to build a strong economy and a sustainable society. For me personally, this has been a most pleasant and inspiring process. I am therefore convinced that we will continue to work together beyond the duration of this project to enhance the innovative capability of the Dutch creative industry.

The architect "as entrepreneur" has long been a largely neglected topic in research on the construction industry. Thankfully, entrepreneurship has now become an accepted concept within the architectural sector. The Royal Institute of Dutch Architects (BNA), for example, has developed many activities in this field. As a team, we are extremely proud of the enthusiasm with which our PhD students Marina Bos-de Vos and Bente Lieftink have foraged for scientific understanding amidst the forest of interesting practical examples and personal experiences in their respective areas of expertise. As a result of their efforts, we have not only been able to gather solid know-how about the creation and capture of professional, financial and use value, but also gained a good understanding of the various role structures within the construction supply chain, as well as the consolidation of changes to them.

This academic design guide for the architectural firm of the future is one of the products of our research. As well as providing theoretical insights into the architectural firm itself and into project collaboration in general, we present four practical role identities that architectural firms can take on within the construction process: "initiator", "specialist", "product developer" and "integrator". The board game with cards accompanying this publication can be used in a variety of ways to stimulate collective reflection about the direction you as a firm want to take with a particular project and about which revenue models and collaborative strategies are best suited to that trajectory.

For each role identity, we present the most crucial professional challenges and opportunities facing the architectural firm as part of the supply chain. This should enable you to design your own role within a given project. But with that our task is complete. From here, it is up to you as a reader of this book and a player of the game to translate the lessons you learn into financially and professionally sustainable roles as an architect of the future.

Enjoy this book, and enjoy your future role!

Leentje Volker

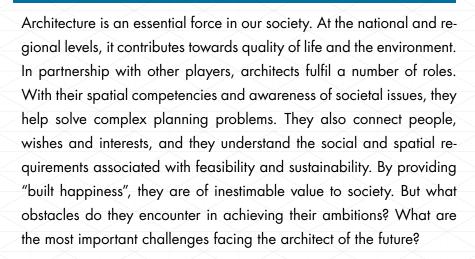
Project leader, futurA





WHAT IMPORTANT FUTURE

CHALLENGES DO ARCHITECTS FACE?



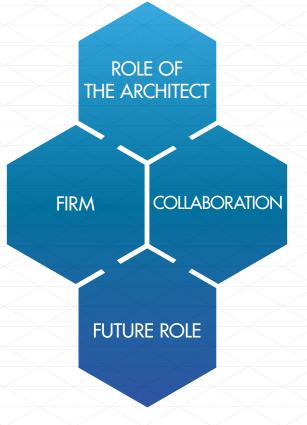
In recent years, the architectural profession has come under pressure. A multitude of changes have affected, and continue to affect, the domain of architects and the activities of the firms they work for. For example, the distribution of tasks and responsibilities between project partners is increasingly variable. New forms of co-operation are diversifying the role played by those involved, making negotiations about who does what more commonplace. As a consequence, architects increasingly have to fight for their place within projects, and what they do with it. At the same time, however, such changes also open up opportunities for architects to take on new tasks and to extend their responsibilities.

One of the developments that has had the most impact is the rise of the integrated contract. Clients want to be relieved of the burden of primary responsibility for a project, so they outsource everything to a single provider such as a contractor or a private consortium. It then shares out the work among a range of subcontractors. In principle, an integrated process of this kind encourages co-creation between participants and so improves the end result. For example, it can allow the architect to take into account specific construction-based limitations from an early stage of the design process. In practice, however, it is not always easy for the architect involved in an integrated project partnership to do much more than just design. More and more, the elaboration of their designs and co-ordination on the ground are being taken over by architectural drawing offices or contractors themselves. This can reduce the role played by the architect and make it harder for them to control the quality of the final product.

We are also seeing greater demand for the use of digital means of communication such as building information modelling (BIM). BIM can help to create more transparency within projects and support co-operation within the building industry. It also enables the work of different disciplines to be integrated effectively at an early stage, which has advantages as the project unfolds. For architectural firms, BIM provides opportunities to take on specific additional tasks. Indeed, those who adopt it extensively may be able to claim a co-ordinating role in the whole process. However, it impacts the way you work and requires additional skills, which will not appeal to every architect.

In short, a variety of societal and technological developments in recent years have brought changes to the role played by architectural firms, and that in turn has affected their tasks and the nature of project collaborations. These changes of role can be distilled into three basic challenges facing you as an architect, now or in the very near future, and which also form the basis for this book.

- How do you as an architect deal with your changing role in projects, in relation to your own professional identity?
- At the project level, how can you develop strategies for the successful capture of both professional and financial value?
- How do you institutionalize and consolidate changes to your role?



You as an architect may have only limited influence over trends in the construction industry and society in general, but it is certainly within your powers to determine how you play and fulfil your own role. You do have the opportunity to take charge of your own destiny, to play an active part in shaping your own role within a project and to use that position to decide how you achieve your own goals and those of the client and the end user. Designing your own role is as important as designing the built environment.

This academic design guide describes how developments in the world of construction affect the role structures in which architects operate. The guide addresses their own role identities, the tasks of the firms they work for, negotiating roles within projects and institutionalizing new roles in the professional domain. Each chapter provides suggestions to ensure that you as an architect stay in control of your work, and also presents specific challenges you might face in doing so.

The accompanying board game offers guidance in designing your strategy for a project – with regard to the tasks of your own firm and responsibilities in the collaboration with the other parties involved – in accordance with your particular role identity within it. The case studies in the book are included as inspiration for your future role.

DESIGN YOUR ROLE, DESIGN YOUR FUTURE!









The Nova Zembla Lofts project in Buiksloterham, Amsterdam, was developed on a collective private commissioning basis. Twenty combined residential and home-business lofts and two commercial units were delivered in shell form for completion as self-builds. Their differing sizes, high ceilings (340 cm) and flexibility of layout left plenty of scope for the final owners to finish the builds as they saw fit. Bets en Oudendorp Architecten acquired the site, began development of the complex and established a buyers' collective. As the project client, the collective then assumed full control over the appearance and layout of the complex. Having initiated the project, the architects went on to advise the collective and oversee the construction process from beginning to end.

PROFESSIONAL **EXPERTISE**

 Abilities as developer and project manager.

Hierarchy: co-operative | architect + process advisers.

Process supervisor is the principal partner.

Staff communication skills.

Establish co-operative as formal client.

 Provide advice on decision-making procedures within the co-operative.

Agree clear division of roles with process supervisor.

supervisor | contractor +

Deliver a product which meets market needs

Retain control of process and product.

Keep everything in own

Member financial contributions to the cooperative to cover initial

> NOVA ZEMBLA LOFTS

• Give residents the choice as to how they want to live.

More quality for the same price by taking on the role of developer.



Nova Zembla Lofts as

a concept: name ensures

familiarity among clients.





 Create a high-quality product (sustainability exceeding statutory requirements, ceilings higher than in a standard home, etc.).

> Design and aspects of project management: site acquisition; formation of resident group; legal establishment of buyers' collective; contractor selection; pricing.

Prevent premature resident withdrawal from the project through, for example, financial commitment in the form of a contribution.

Indication of number of project management hours in the stico.

Fixed fee for architectural work.

Make maximum use of buyers' collective know-how, as long as this does not undermine the architect's own tasks.

 Outsource tasks requiring independence, such as cost calculations and process supervision.



Prefinancing of own fee.

Risks of resident participation: individual input into functionality of the design.

Avoid risk of resident preferences undermining aesthetic quality by, for example, reaching compromises between aesthetics and functionality.



with fee only paid at a much later stage. Flexible number of project

management hours, adjusted in consultation with client; not all hours invoiced.

Prefinancing of own time,

8

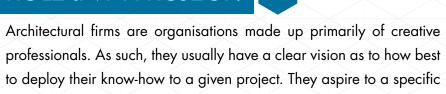
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HOW CAN YOU NEGOTIATE YOUR

ROLE IN A PROJECT?



set of tasks and responsibilities, with a view to serving the client, the end user and society in general to the best of their ability. In practice, however, this "ideal role" rarely coincides with the one they are asked to perform. For certain tasks, for example, the client will often already have other partners in mind or prefer to perform them in house. In

such circumstances, how do you as an architectural firm negotiate your role in a project?

Our research has revealed that, broadly speaking, there are three paths a firm can take to ensure that it is awarded its ideal role in a project.

REINSTATING

Architects that aim to reinstate their role try to revert back to their traditional project role, complete with all the associated tasks and responsibilities. Typically, those adopting this approach feel undervalued because they believe that their expertise is not fully appreciated. Their response is proactive: they attempt to expand their role and bring it back into line with the way they used to work in the past by showing the client that that is well within their capabilities. They present the positive results of earlier projects, for example, or provide free services to highlight the added value of their expertise.

BENDING

Architects that aim to bend roles recognise that their profession is undergoing change, so they fall into line with the role they are allocated within a project. They adopt a flexible attitude, considering case by case what tasks and responsibilities best fit the overall picture. In so doing, their principal concern is co-operation between all involved and so they deliberately focus upon those areas in which their specific expertise can be deployed to achieve a better overall result.

PIONEERING

Architects that aim to pioneer new roles are convinced that the usefulness of their expertise transcends their traditional professional domain. They proactively expand their role by developing new skills and forging new alliances. They consider it important that their profession move with the times, they are constantly challenging themselves to look critically at their own added value for the construction industry and they are open not only to taking on new tasks and responsibilities but also to discarding existing ones.

These three pathways show that different firms have different ideal roles, and each requires its own negotiating strategy in the context of a new project.





kraaijvanger • architects



David Hess of Kraaijvanger Architects developed De HUB in 2015 for a competition organised by Havensteder. In answer to the question "How will we live in the future?", he designed a unit with an integrated kitchen, toilet and bathroom. The competition proved the perfect opportunity to develop new know-how and stray off the beaten architectural path. A prototype of the concept was subsequently built, but it is now up to an interested supplier or entrepreneur to take on the further development of De HUB. Despite incorporating many practical features, this is not a design created from a commercial point of view.



PROFESSIONAL

- Human capital.
- Time and space to focus upon the competition.
- Sensitivity to client and competition target group needs.
- This was primarily a learning process, with trust and intuition being used to arrive at the prototype.
- Change-of-use permits for the building housing the prototype.
- The competition and delivery deadlines were fixed, but not contractually

● The HUB is a unique

product so there are

many risks, but on the

other hand this a small-

scale project in which

little can go wrong.

Simple way of creating housing



- The aim of the competition was to generate know-how; there was no commercial aspect to participation.
- The materials for the prototype were sponsored, so cost virtually nothing.

Architectural response to the question "How can a sound business case be made for an empty building or large-scale renovation?"

THE HUB

- Design of the unit
- Produce prototype as lead contractor, gather materials and apply for permits.
- Aesthetic and quality management, now and in the future development of De HUB.
- Preference for producing new designs rather than assuming entrepreneurial role in their further development.
- Outsourcing of tasks associated with rollout of De HUB (logistics, procurement,

- Investment of time.
- Role of lead contractor, including the legal risks of permit applications.
- Risk of damage to reputation (although in practice this project proved good for the reputation of Kraaijvanger Architects, with the concept picked up by social media and architecture websites all over the world).



- Investment in man-hours.
- Royalties, thus allowing retention of aesthetic and quality control even when the product itself is in the hands of a developer.



28

marketing).

BI2K2





WHAT ROLE IDENTITY DO YOU

WANT TO TAKE ON IN A PROJECT?

The roles that architects fulfil within projects have become increasing diverse in recent years. Their traditional, clearly delineated set of tasks and responsibilities has made way for huge variety, its scope dictated in part by the particular wishes and requirements of the project and in part by the professional identity of the architectural firm itself. Based on our research we have identified four generic role identities. To make the right choices regarding your own activities and governance forms with partners, it is important to clarify which role best fits your situation and ambition. What role identity do you want to adopt for your part in a project?

Our use of four generic role identities is not intended to pigeonhole architects into types. For example, it is possible to assume one role identity in one project and a different one in the next. Moreover, each generic role identities encompass scope for a whole range of individual interpretations. The categorisation is meant only as an aid to help architects respond more specifically to the opportunities and challenges presented by projects.



INITIATOR

As an initiator, you are the one who creates and plans the project. You spot opportunities, you seize them with both hands and you persuade other interested parties to get behind the idea and support it. As the driving force behind the project, you feel personally responsible for it and accept co-ownership of the issue it seeks to address.



SPECIALIST

As a specialist, you provide a predefined package of activities and services. If offered a task not part of that package, you either refuse or delegate it. This is a deliberate choice. You excel in your area of specialisation, and position yourself accordingly (e.g. as a BIM specialist, a sustainability expert or a housing consultant).



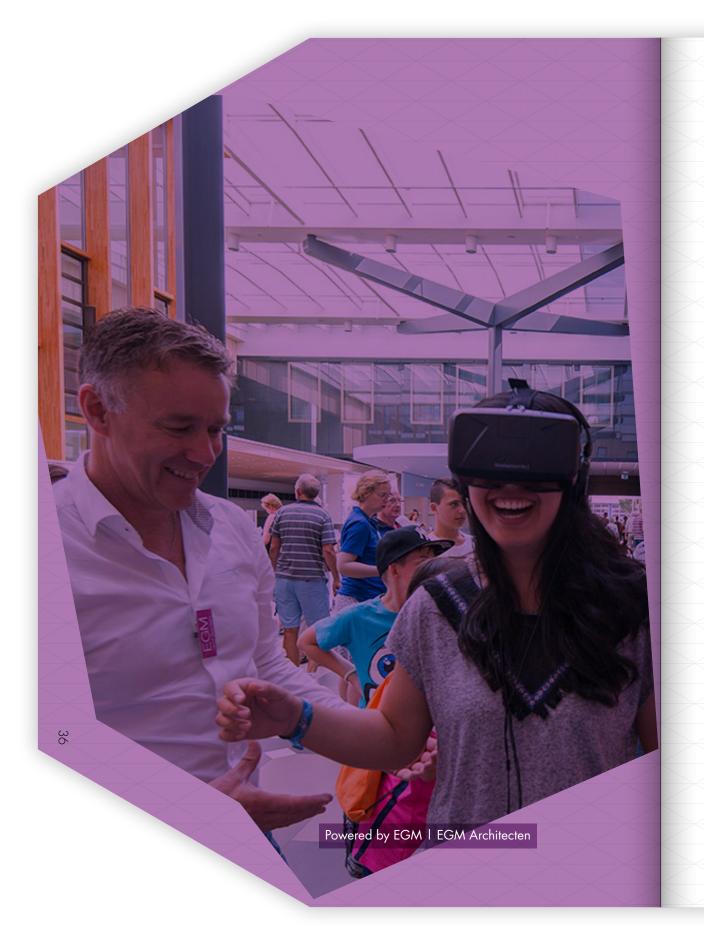
PRODUCT DEVELOPER

As a product developer, you deliver a complete product you have been involved with from start to finish. The value that this represents is clear, and with a bit of luck you also develop a business case around it. You form an effective co-creation team. And you also feel responsible for supplying solutions to individual and multiple end users.



INTEGRATOR

As an integrator, you are the project's linchpin. You bring together different disciplines and then make sure that all speak the same language. As an architect, you maintain your controlling and supervising role throughout the process. You feel responsible for the quality of the end product and its conformity with the specifications set.







Powered by EGM is one of the business units at EGM architects, dedicated to a constant quest to optimise working processes and make maximum use of the opportunities offered by building information modelling (BIM). The unit draws upon its BIM know-how to promote innovation, development and knowledge sharing. Clients are supported in all phases and layers of the building column, be they architects, builders, developers, housing corporations or property managers.

- ●EGM's reputation to attract commissions.
- Collaboration with schools and universities to attract good influx of trainees and new employees.

Revit Action Team for R&D to optimise BIM processes.

Architectural knowledge.

Internal training courses to PERTISE enhance BIM know-how.





Revit Certified Professionals.



- One BIM co-ordinator per participating team, one BIM manager with overall responsibility for the model.
- Win clients' (mainly architectural forms) confidence that BIM services can achieve the required levels of quality.
- Client order confirmation.

- Business Unit must provide flywheel effect: acquire specialist assignments in the longer
- Ensuring that Powered by EGM can continue to lead, among other things, by increasing BIM knowledge in the organization
- Get in touch with fellow architects

- Project elaboration by erioleci eluborarion by certified BIM specialists.
- Offer elaboration capacity to other architectural firms.
- Depending upon client demand, market BIM modules separately.



● Traditional revenue model based upon hourly rates or fixed fees.

BIM protocol as an aspect of expectation management (sample drawings, itemisation, level of detail per item).

- Unit intended to have a "flywheel" effect,
- attracting specialist commissions in the • Ensure that Powered by EGM remains at the cutting edge by, for example, increasing BIM know-how within the organisation.
 - Make contact with other architectural firms.

Participate in high-profile projects with a

shorter completion time than most of those

Unit established as an idea to keep

everyone in work during the crisis.

undertaken by EGM architects.

- Strong commitment to BIM visualisation: virtual and augmented reality.
- Due to project fragmentation, it is possible that too much information is added to the BIM model about a phase you are no longer involved in.
- Do not accept liability for consequential losses que to
- There is always a chance that projects will be delayed.
- Accept risk due to cost miscalculations.
 - 2/12/19



Do not accept projects of a less complex nature.



errors in the BIM models



Staffing, IT (licences and hardware) and training costs.





HOW CAN YOU DEAL WITH THE TENSION BETWEEN CREATIVITY AND COMMERCE?

For an architect adopting a particular role identity in a project, good interaction between everyone involved is essential in order to successfully create and capture value. True co-creation only becomes possible when you are all in alignment and speak the same language. In practice, though, we still regularly see that project teams or architects and clients talk cross purposes and do not understand each other. The question is, how can you as an architect deal with the tension between creating value for your own firm at the same time as doing the same for the client and other stakeholders?

To discuss value effectively within the context of a project, it is important that you as an architect know where your own added value lies and what services you can provide, taking into account your organisation's particular qualities and financial constraints. Creative professionals like architects often find it challenging to strike the right balance between commercial ends and creative ones. As a rule, it is not in their nature to reflect with any regularity upon the mercantile aspects of their profession, never mind to critically examine the relationship between their own products, the creative process and a revenue model in the context of a particular project.

As construction projects are increasingly being decomposed in smaller, far more rigidly delineated parts, it becomes more and more important for architectural firms to design a properly considered business model for each project. This helps to ensure that value is not only created but also successfully appropriated. As well as strengthening the commercial aspects of the project, a good business model provides a sound basis for the financial and professional sustainability of the architectural firm itself.

The board game accompanying this book has been developed to help you make commercially sound choices in respect of projects. It is based upon academic literature on business models, including Osterwalder and Pigneur's "Business Model Canvas", research into project collaborations and interviews conducted with architects and clients specifically for the futurA project. The essence of this board game is interaction between three different types of value: use value, professional value and financial value. Within a project, greater awareness of this interaction helps you as both an architect and an entrepreneur to provide your services in a professional, economically sound manner.

THE CORE ELEMENTS OF A BUSINESS MODEL ARE:

SERVICE OFFERING

The value the or architectural firm offers the client indirectly the end user.

VALUE CREATION

How the architectural firm and the other parties involved collectively create value for the end user, society in general and other stakeholders, and how the architect creates value for their own organisation.

VALUE CAPTURE

How the architectural firm successfully claims value for themselves.

USE VALUE 1

The value created for and eventually appropriated by the paying customer and other users.



Example

An architectural firm is involved in the construction of a village library. The use value of such a building takes many forms. Thanks to the architect's design, for instance, villagers are able to navigate the building easily and so make use of whichever rooms are relevant for their visit. The local authority also benefits, because the design helps the building fulfil a social function in a deprived community.



PROFESSIONAL VALUE (2)

The non-monetary value accrued by the architect for their own organisation, such as prestige and a reputation for quality, or innovative knowledge to help the firm develop. Also positive user feedback can contribute to architects taking pleasure in their work.



Example

The village library had to be designed on a very tight budget. The firm still decided to take on the project, however, because of its social relevance, because it gave staff a chance to gain specific expertise in designing libraries and because it enhanced the organisation's reputation in the domain of public amenities.

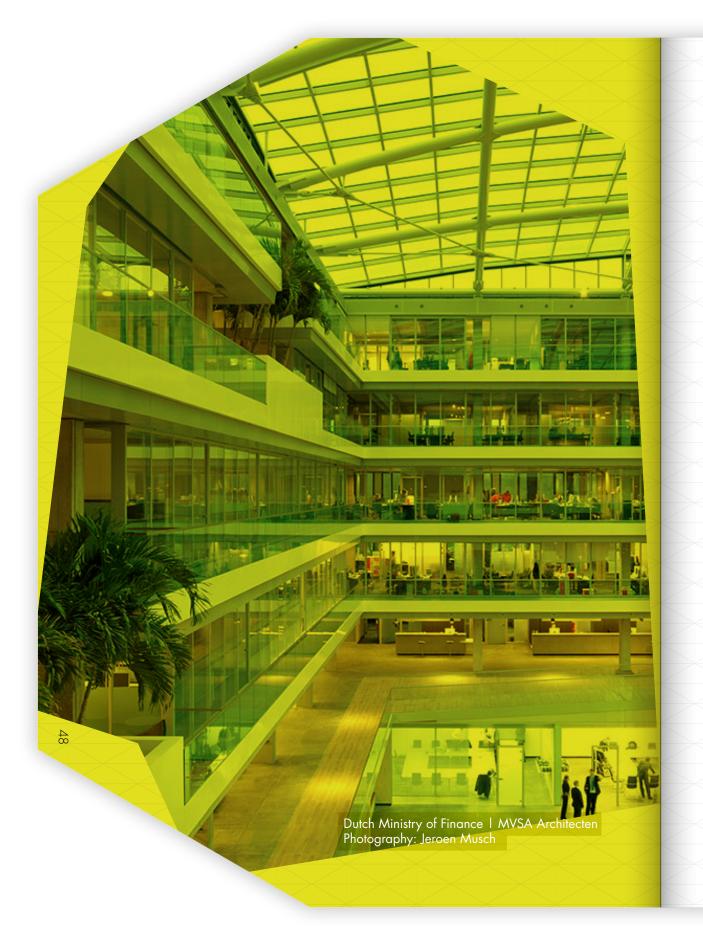
FINANCIAL VALUE 3

The price paid for a service provided; the revenue needed to cover costs and make a profit.



Example

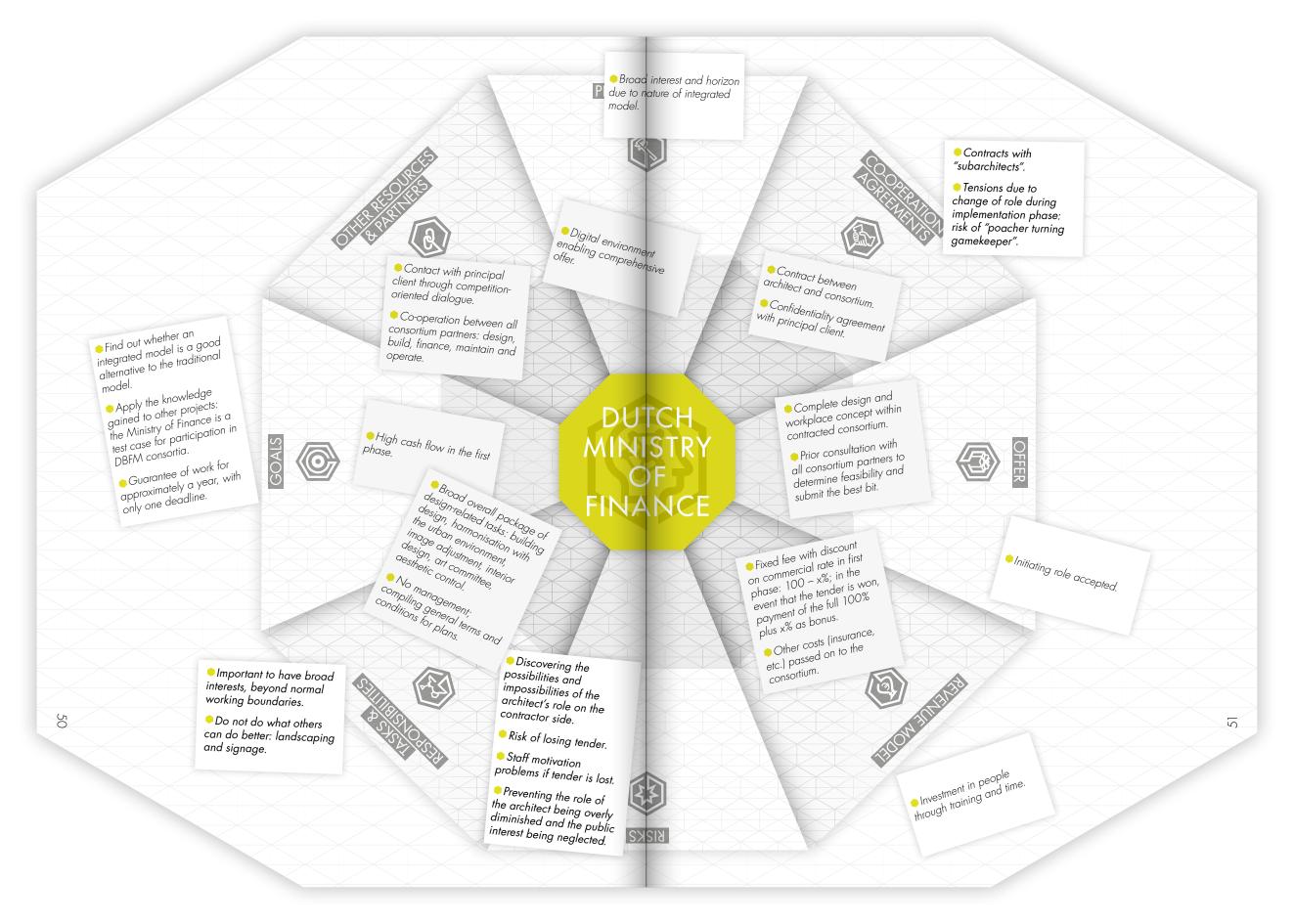
The firm was paid a fee of €80,000 for designing the library. From this it can pay outgoings such as wages, rent and training costs.







As a partner in the Safire consortium, Meyer en Van Schooten Architecten was commissioned to produce a design for the renovation of the Ministry of Finance in The Hague. This was one of the first DBFMO projects conducted on behalf of the Dutch Real Estate Agency (Rijksvastgoedbedrijf). While it was important to maintain the building's brutalist style, Jeroen van Schooten's design completely overhauled its fabric to anchor the structure in the urban tissue of The Hague. For Meyer en Van Schooten Architecten, this participation in a DBFMO consortium was a test project to determine whether such an integrated approach represents a good alternative to traditional forms of collaboration.

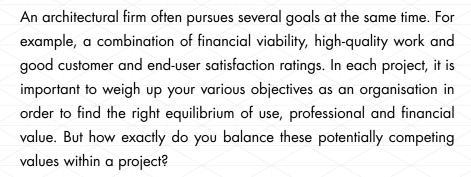






HOW CAN YOU BALANCE

COMPETING VALUES?



Failure to think carefully about the mutual relationships between these different types of values can result in their loss. The firm could end up in a financial tailspin, its reputation might be tarnished, or its employees might might get frustrated.

Architectural firms often trade off values against one another in order to ensure that a project better aligns with their own objectives. The following situations were particularly common in our sample.

SACRIFICING FINANCIAL VALUE IN RETURN FOR PROFESSIONAL VALUE



Example

An architectural firm is involved in a residential construction project for a housing corporation. The client has indicated that, if successful, similar homes will be built on other sites around the country. If that happens, the firm wants to be involved again. Half-way through the design process, it therefore decides to reinvest a large part of its own project fee to hire an interior designer to enhance the use value of the design.

In this example, the firm opts to appropriate less financial value so as to deliver greater use value. At the same time, it also creates more professional value for itself. It is thus trading in financial for professional value. In this particular case it buys in extra expertise, but the same type of trade-off can also be achieved by supplying free or almost free services in the form of additional in-house design work.

SACRIFICING USE VALUE IN RETURN FOR PROFESSIONAL VALUE



Example

An architectural firm is involved in a project to renovate a historic private home. During the process, the architect decides to look for bathroom tiles in the original style in order to benefit the quality of the final result and hence the firm's reputation. But the client subsequently rejects them, because she wants a modern bathroom.

In this example, the firm opts to invest additional time to create more professional value, even though the client is not actually interested in that. So use value is traded in for professional value, potentially creating such an imbalance between the two as to cause friction in the architect-client relationship.

oalancing competing values

UNWILLINGNESS TO SACRIFICE PROFESSIONAL VALUE IN RETURN FOR FINANCIAL VALUE



Example

During the design process for a new cinema, it becomes apparent that the assignment is more complicated than the architectural firm originally thought. Several members of staff have to investigate the acoustics in some considerable depth, spending significantly more hours on this aspect than budgeted for. The firm also calls in specialist assistance from its own network. Fearful of damaging its relationship with the client, the firm decides not to pass on the extra costs incurred.

In this example, the firm opts not to revise its previous financial agreements with the client because of concern that this will undermine their relationship, and hence also the firm's chances of appropriating professional value. In other words, it tries to avoid trading in professional for financial value. However, our research indicates that negotiating greater financial value does not necessarily reduce professional value; in general, clients appreciate architects who are frank about a potential loss of financial value in a project. This is because a substantial imbalance between use and financial value can negatively affect the process of co-creation by the architect and the client, and thus also the quality of the end product. In most cases, being open about such issues is a better way to keep professional and financial value in equilibrium.

Striking the right balance between use value, professional value and financial value within a project is extremely important, but not always easy. It requires, from the outset, explicit consideration in interactions between the client and the other project partners of all three values, their mutual relationships and any potential tensions between them. To this end, determine as early as possible how the values should interrelate and communicate this information to your partners. This makes it easier to intervene in the event of any impending imbalance at a later stage, and to convince the client that corrective measures need to be taken.



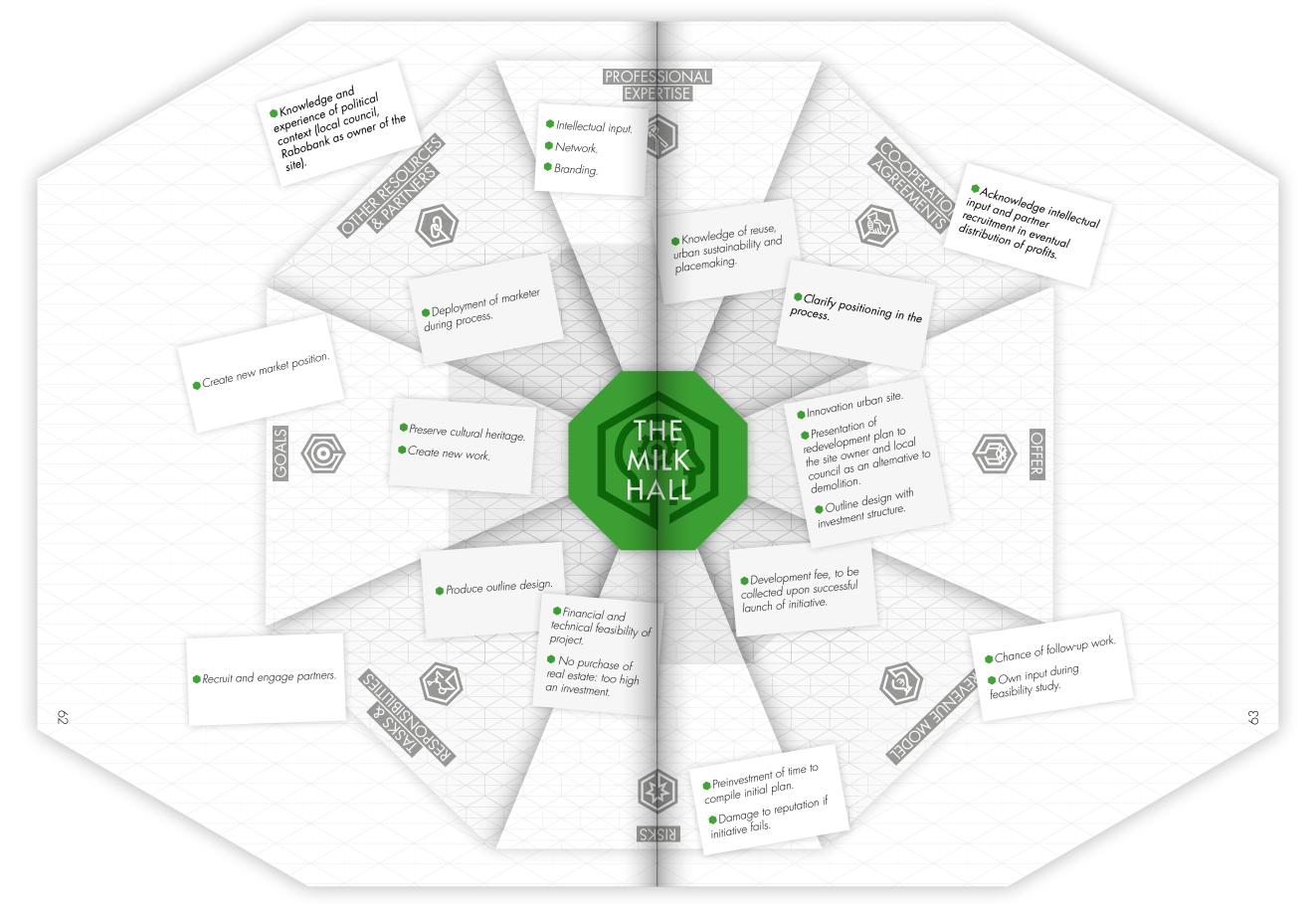


INITIATOR IAA Architecten

THE MILK HALL



IAA Architects itself took the initiative to save the historic industrial complex of the former Lonneker Co-operative Dairy (Lonneker Coöperative Melkinrichting) in Enschede from demolition. Together with developer Vincent Spikker and a group of enthusiastic entrepreneurs, a plan was formed to regenerate the buildings and their grounds. In a reinterpretation of the co-operative concept behind the original dairy, a number of user alliances have been formed, with a focus upon energy, facilities and healthy eating respectively. In the project's early stages, the enormous "milk hall" at the heart of the complex has become a central meeting place for all the new users. New housing is also being constructed on part of the site, and together with the heritage buildings, this will form the hitherto missing link between the town centre and another new residential district, De Boddenkamp. What was once a closed industrial site is thus being transformed into a very varied public space.







HOW CAN YOU BALANCE

PROFESSIONAL AND FINANCIAL

VALUE WITHIN YOUR FIRM?



Every project should contribute towards the firm's corporate objectives and boost its bank balance to a greater or lesser extent. Not that these two factors always have to be in perfect equilibrium: one project might be good for your reputation but also entail financial concerns, while the next does offer greater long-term financial security but less in the way of professional challenges. Managing an architectural firm involves operating on a project basis and therefore requires weighing up projects carefully at the portfolio level. But how do you find the right balance between professional and financial value in your activities?

What this comes down to is making sure that you run a financially healthy business while still pursuing your professional ambitions. In practice, architectural firms apply a number of different strategies in order to find the right internal balance between professional and financial value.

balancing professional and financial value

POSTPONING THE FINANCIAL VALUE OF A PROJECT

Example

An architectural firm is asked to design a new residential block for a housing corporation. Although the client has sufficient financial resources to pay the architect, under its rules full reimbursement is only possible at a later stage, once the board has approved the design. Meanwhile, the firm believes that the project location offers unique opportunities and so proposes a special deal: it will produce the design for a relatively low hourly rate, plus a variable sum related to the finished building's performance. If the firm is able to create a design which achieves substantial energy savings, it is paid an annual bonus once the block is built. As a result, it will eventually receive far more that it would have done had it charged its standard rate up front.

In this example, the firm offers to appropriate less initial financial value and instead prioritise use value first. By including a variable, results-related payment component in the contract, it accepts the risk of not generating additional financial value until the building is in use. This strategy enables it to take on an interesting project, even though this does not seem financially attractive in the first instance.

A strategy of this kind requires very firm written agreements in advance. Only negotiate flexible remuneration deals when you as the architect can actually influence the outcome, you have a realistic prospect of being able to appropriate the additional financial value and your organisation is in a position to bear the risks involved. Although this may seem only logical, our research indicates that, in practice, for architects the lure of professional value in many cases still stifles sensible financial deliberation.



COMPENSATING LOST FINANCIAL VALUE WITH OTHER PROJECTS



Example

For architectural firm X, a request to convert a derelict water tower into innovative office space could not come at a better time. In the coming years it wants to focus on exactly this kind of projects. Unfortunately, the client has a relatively small budget and thus limited resources for architectural services. Despite the fact that this means it will probably lose money on the job, the firm decides to accept it anyway, because it is also involved in other projects which are profitable. Meanwhile, this one will give it the chance to gain knowledge and experience of the kind of conversions it hopes to do more of in the future.

In this example, the firm deliberately decides to accept a project it will make a loss on. Fortunately, it is in a position to compensate that potential financial setback with profits from other projects. And if this one is a success, it improves the chance that the firm will receive similar commissions in the future. So this project enhances its reputation and contributes towards its professional objectives.

Regularly review all your projects at the portfolio level in order to better understand the overall business risk your firm is running. This should help avert financial problems if a profitable project you are using as a "buffer" suffers delays or for some reason fails to deliver its full expected value.



REJECTING A PROJECT



Example

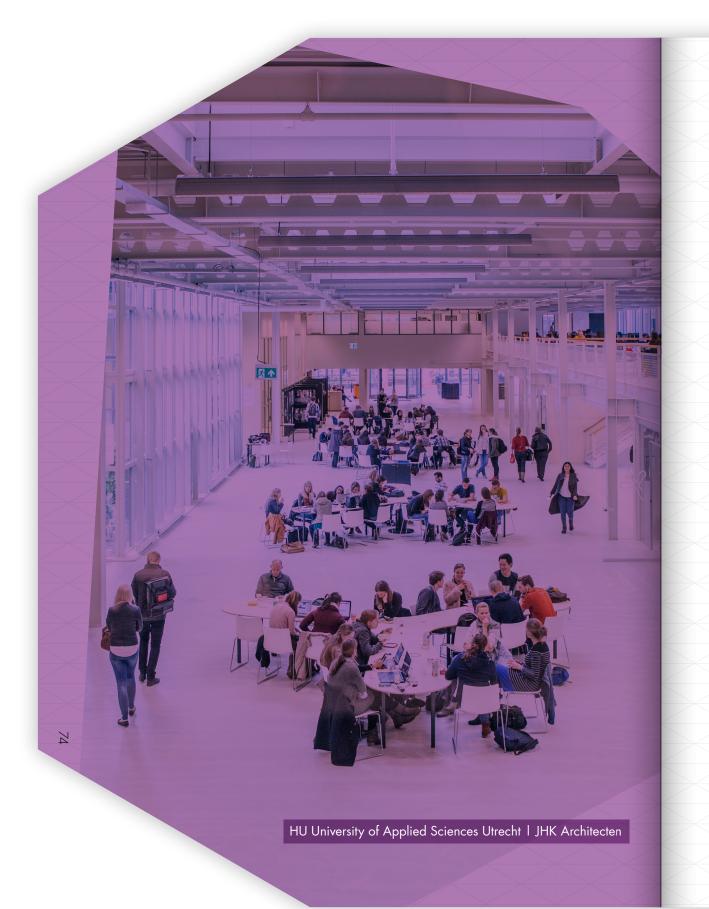
An architectural firm has started to design a sustainable office building with a prestigious regional function. During the construction process, however, the lead contractor decides to change its engineering subcontractor. In the past, the architects have had bad experiences with this new provider and they are convinced that the new firm will not do proper justice to their design. As a result, the architectural firm decides to pull out of the project.

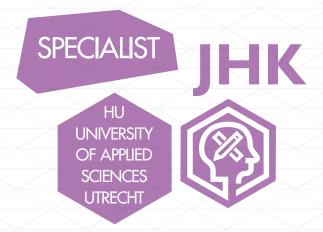
In this example, it becomes apparent during the course of the project that its execution is no longer likely to meet the professional standards the architects have set themselves. In order to avoid damage to its own reputation, the firm therefore resolves to annul its contract. It believes that safeguarding its good name outweighs any financial loss it will incur.

Regularly examine your organisational objectives and professional standards. Before entering into any project, assess how and where it fulfils these aspects of your business and what, if any, risks it exposes them to. This makes it easier to decide whether or not to take on a particular job. Good advance agreements about the project framework and conditions also reduce the chance of unpleasant surprises during the process.

In short, it is important to have clear organisational objectives. This makes it easier to determine which projects suit your firm and which do not. Firm agreements with the client and a good understanding of one another's interests are also crucial in order to mitigate the risk of discovering a "mismatch" later on in the process. Regularly reviewing your projects at the portfolio level makes it easier to determine whether you are still on track to achieve your objectives as an organisation and so enables you to maintain the right balance between professional and financial value.







After winning an open selection competition, JHK Architecten is now working closely with the client and a team of advisers on virtually every aspect of the relocation of HU University of Applied Sciences Utrecht to a single campus. From strategic advice to the elaboration and review of various renovation and construction projects, plus the compilation of performance requirements for a number of design-and-build commissions. To ensure that this ambitious operation runs as smoothly as possible, a strategic advisory report has recommended linking the hardware (existing buildings and infrastructure) and software (project plans and objectives) aspects so that the right choices are made during the process. As part of this, the university's property portfolio is being cut back from about 180,000 m2 (gross floor area) to about 120,000 m2. From the design-and-build phase all the way to completion, JHK Architecten is heavily involved in ensuring that everything meets the exacting standards set.

Good reputation and reference project needed to win traditional architect selection process.

PROFESSIONAL

- Readiness to co-operate.
- Challenge was acting as strategic consultant architect.

Power to

opportunities.

Empathy for all stakeholders.

communicate through design, visualising all wishes and exposing Always think in terms of a collaborative model involving all stakeholders - something the architect, given their role, should be quite capable of.



 As consultant architect, possibly leave the design work to the designing architect in the consortium.



Co-operation with the architect on the "other side" of the contract.

Enhance role to become strategic adviser and premises consultant with remit to review and check.



Intellectual partner for client in contraction of existing property portfolio.

Help the client to define their requirements and vision by producing a structural design.

From a huge pile of complicated documents and spreadsheets to one clear ambition, in visual form.

One principal

commission.

commission, but with many

Hourly rate based upon

subsequent divergences.

standard fee for design



A strong professional role based upon experience as a designing architect; not just support and advice, but also checks and controls.

Focus upon the frameworks of the contractor assignments, not upon realisation of the design.

- Strategic advice on the "hardware" (existing buildings and infrastructure) and "software" (project plans and objectives).
- Compilation of structural plans and terms of reference for design-and-build assignments.
- Oversee checks and acceptance procedures
- Safeguard standard of design-and-build assignments.

Original commission was not clearly formulated, leaving ultimate objective vague.

> Due to long-term cooperation with the client, with the design-and-build contracts within this project it is not possible to act in a traditional role as designing and technical architect.

Risk of a loss of "traditional" income due to a shift in the nature of the work, from technical design to strategic consultancy.



 A different kind of work, so a surcharge of at least 50% is required.

Guide realisation of the design.



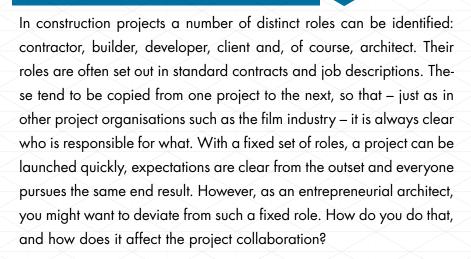
7





HOW CAN YOU CHANGE YOUR

ROLE AS AN ARCHITECT?



What a role entails only becomes clear when it is viewed in relation to other roles. After all, it is the interaction between roles which determines how a project is organised. With the increase in the number of disciplines involved in construction projects, good inter-role cooperation is more essential than ever.

82

To remain of maximum value, architects have to push the boundaries of their role and position within the project organisation. And it goes without saying that, as soon as you as an architect expand – or indeed limit – your own role and hence shift your position in construction process, this has a knock-on effect for the tasks and responsibilities of everyone else involved. If the other parties are not sufficiently aware of this, tasks can be duplicated or, because they fall between two stools, overlooked altogether, with the potential results that the project overruns, exceeds its budget or falls short quality-wise.

If you as an architect adopt a proactive attitude and expand your role, it is important to bear in mind how this change affects the other project participants. Simply announcing it once at the beginning of the project is not enough; you need to keep drawing attention to the implications of the role change throughout the duration of the collaboration. Changing an established routine takes effort and time. Effort in the form of joint familiarisation with a reflection upon the changes, and time because of the need to consider them repeatedly throughout the process. To adopt a new role successfully, it is vital that you first explain it clearly and then reassert it on a regular basis.

AKE 92839 KI



By clearly explaining your change of role, you ensure that everyone else involved fully appreciates how this will affect the project organisation as a whole and the other roles within it. One way of doing this is to use the old role structure as a reference; that makes it easier for the other parties to understand the change.





Example:

The architect of a project to build a railway station has claimed an expanded role: in the interests of quality control, he has assumed responsibility for selecting the subcontractors. He also introduces a new tendering procedure, with selection based not only upon price but also upon an innovative solution in the design. The architect organises special meetings with subcontractors to clarify the change of procedure. By explicitly comparing the new version with the traditional one, they are introduced to the modified situation in a transparent manner.



When explaining a change, try to refer to existing roles everyone is familiar with in order to clarify similarities and differences.

2 REASSERTION

With every change, repetition is essential. Explaining it once is not enough. It is therefore important that you return regularly to the changes you have made in each successive phase of the project in order to reassert them. Otherwise, there is a good chance that the organisation will revert to traditional role structures.



Example:

In a project to build a school, there was no lead contractor. Instead, the architect acted as "integrator". In this role, he allows both the client and the end user to suggest quality improvements until a relatively late stage in the construction process. However, this demands greater flexibility on the part of the subcontractors. Although all this was explained clearly at the start of the project, as it unfolds the subcontractors increasingly revert to their traditional roles and behaviours. Consequently, it proves impossible to implement the suggestions made by the client and the end user, resulting in huge dissatisfaction all round and a lack of innovation in the final product.



Bear in mind that, when reasserting a new role, you need to address not only what has changed but also how that affects the day-to-day work of all those involved in the project.



Role structures offer stability. Because of this, they enable individuals and organisations that have never previously worked together to join forces on a project with relative ease. The established structures clarify the roles each party will play, and what is expected of them. But when you as an architect want to change your role, such structures can stand in your way. This is why it is important that you explain the change clearly and reassert it regularly during the process.



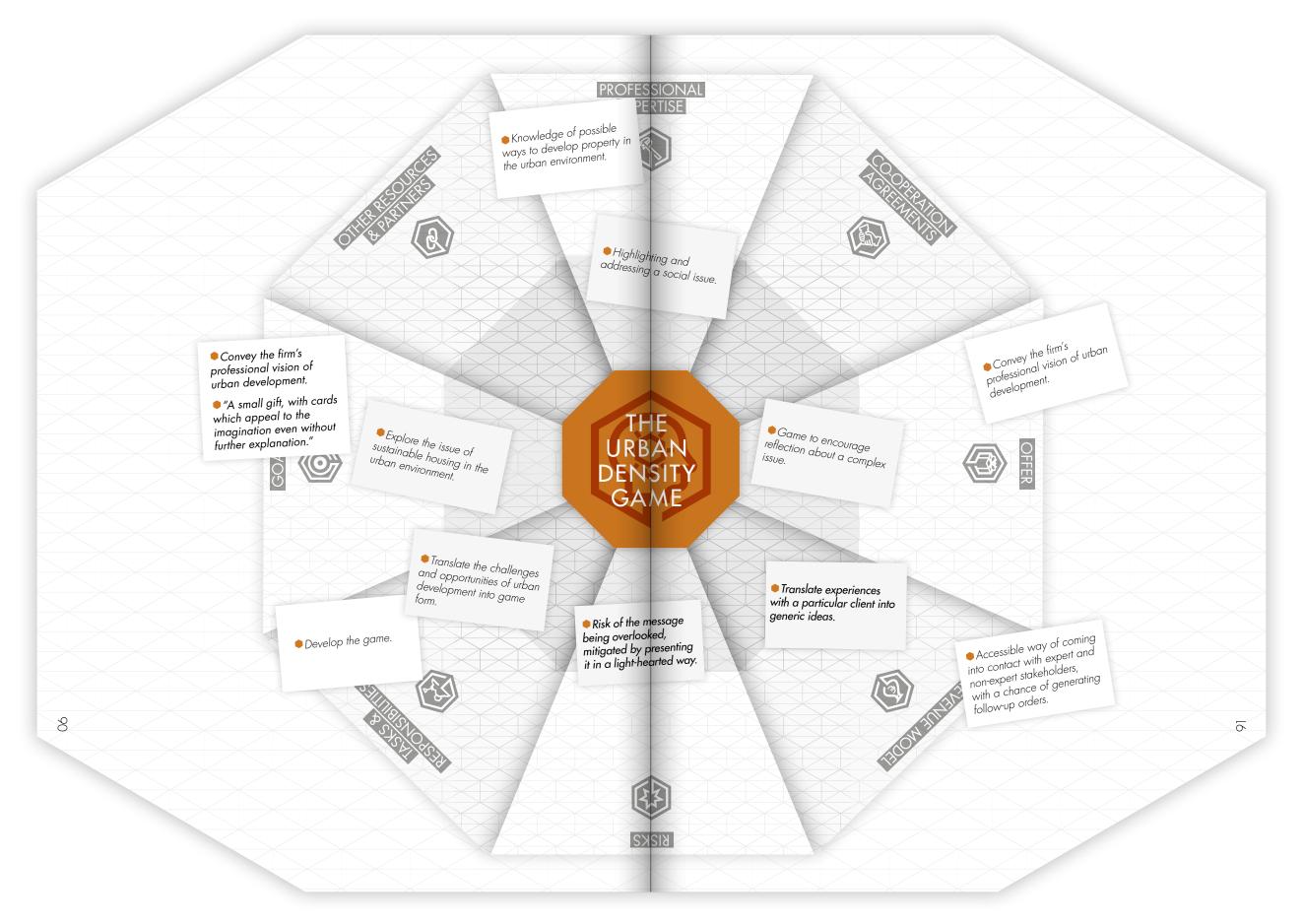


DeZwarteHond.





De Zwarte Hond first investigated opportunities to build within an existing urban setting in the city of Leiden. The toolbox it developed was subsequently recast as serious game, the Urban Density Game (Het Verdichtingsspel). This encourages players to think about the complex issues in their own town or city. Local government officials, property developers, architects and designers can play the game not only with their fellow specialists, but also with other less expert stakeholders such as residents and shopkeepers. It is an accessible way to stimulate discussion, to explore development opportunities and to share ambitions and objectives.

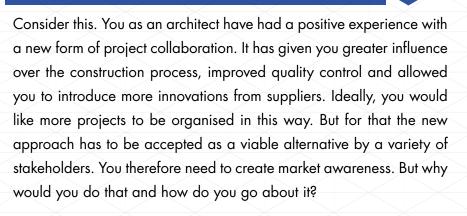






HOW CAN YOU INSTITUTIONALIZE

AND CONSOLIDATE CHANGE?



There are various reasons why you might want to draw wider attention to a change like a new form of project collaboration, in order to consolidate it. Our research has revealed that three of these predominate:

LEGISLATION AND REGULATIONS

When you as an architect want to take part in a European tender, regulations may require competition that prevents you from acting as a sole bidder offering a new form of collaboration. It is therefore important to create sufficient competition by mobilising other architectural firms with a similar identity to adopt your system.

FAMILIARITY

It takes a lot of time and effort to repeatedly convince clients of the benefits of a new way of working. But the more a new way of working becomes common practice and is used by other firms as well, the greater its legitimacy in the marketplace and so the more likely clients will be to consider it as an option.

IDEOLOGY

Many new standards emerge from an ideological drive to improve the construction sector. Industry professionals are convinced that new forms of collaboration make project organisations more efficient and so deliver better quality for the client.



To institutionalize any new form of collaboration, it is important that you as an architect publicise it externally and mobilise other stakeholders to back it. United action is essential to winning acceptance, which requires other activities and skills, too. Our research reveals the three activities that contribute significantly towards the consolidation of new initiatives and role patterns:

1 CREATING AWARENESS

Inform as many people and organisations as possible about your new form of collaboration, and as soon as possible. Enthuse them about the solutions it offers to their problems, and how it better satisfies the wishes of all concerned. As well as the other participants in a standard project organisation, tell your fellow professionals, public institutions and other organisations. Use the trade press, social media and television programmes to position yourself as a positive force for change.

2 SELECTIVE NETWORKING

Seek out interaction with interested parties in your potential target group. Carefully select a limited number of networks likely to back your new form of collaboration. Speak at specific industry events and give presentations introducing your approach. By raising your profile among influential players in this way, you legitimise your change.

3 BUILDING COALITIONS

Form a partnership or consortium around your new form of collaboration. Or found a professional group for architects interested in it. Joining forces with like-minded individuals and organisations provides impetus and creates critical mass, substantially increasing your chances of successfully disseminating your initiative.

Institutionalizing and consolidating change thus requires a variety of activities. It is also takes time, and the road is not always smooth. And you need to be aware of the context in which you are attempting it. Persuading fellow professionals in an intimate setting is one thing, but the dynamics are very different when faced with a large group of subcontractors at an industry-wide event. A situation in which you can relate your new form of collaboration to existing practices, where you have considerable influence as a driver of change and with a co-operative atmosphere lends itself particularly well to the introduction and consolidation of change.

When building a coalition for change, it is important that everyone you recruit becomes a genuine stakeholder in that change. You can achieve this by giving them real influence, and by being open about the investments, timescales and processes involved. A licensing strategy may be appropriate if you need to protect a change like a new form of collaboration against copycats.

institutionalizing and consolidating change



INTEGRATOR

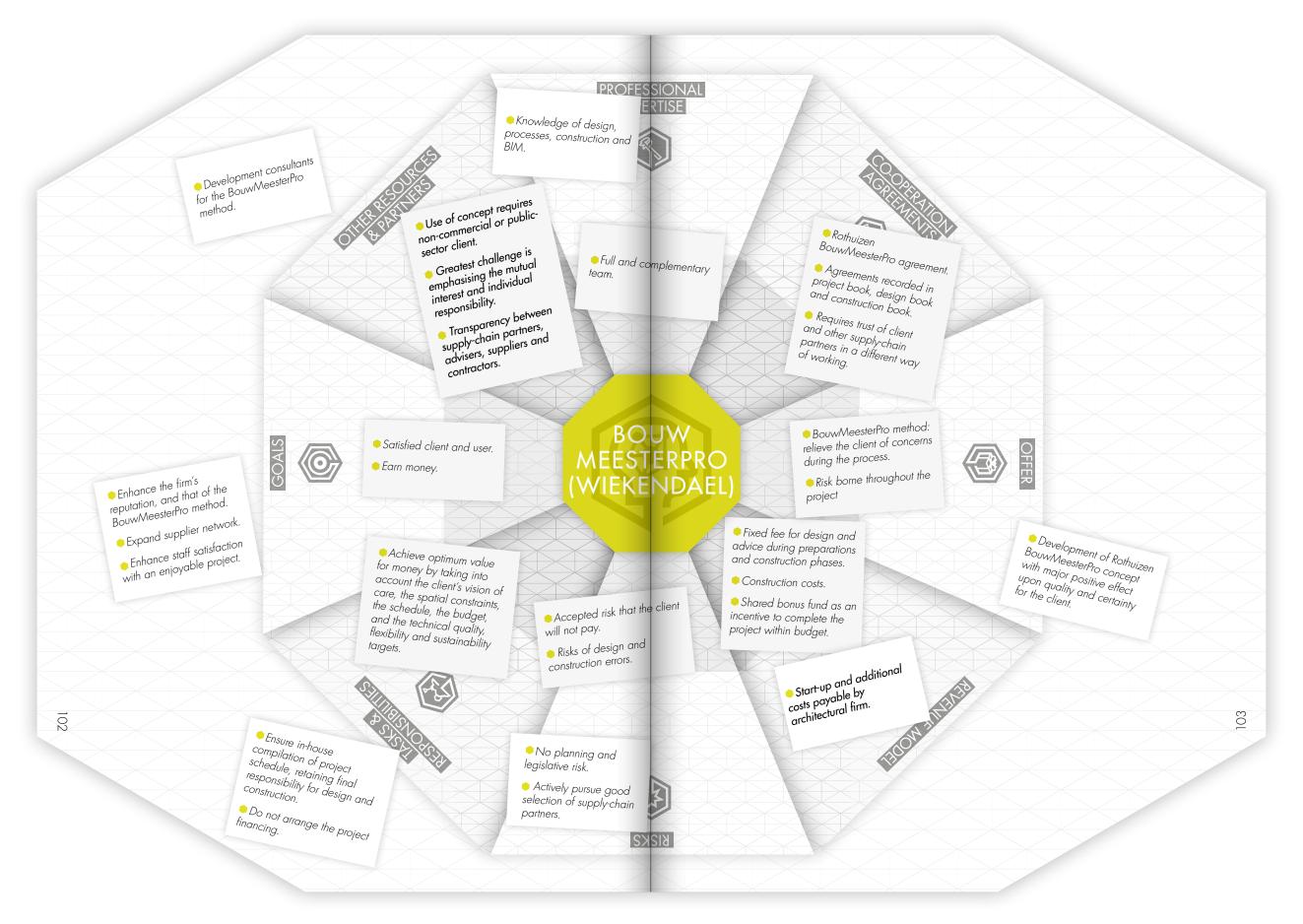
ROTHUIZEN

ARCHITECTEN STEDENBOUWKUNDIGEN EN *WAARMAKERS*

BOUW MEESTERPRO (WIEKENDAEL)



Rothuizen BouwMeesterPro was commissioned by the Groenhuysen Foundation (Stichting Groenhuysen) to restructure its Wiekendael treatment centre in Roosendaal. The objective was to create a regional treatment, care and residential centre for elderly people with specific care needs. Flexibility, a human scale and a homely atmosphere were essential requirements. The client's vision of care, the spatial constraints, the schedule, the budget, and the technical quality, flexibility and sustainability targets were all factors to be considered in achieving optimum value for money. In this project, Rothuizen Bouw-MeesterPro was responsible for the co-ordination of the entire design, engineering and construction process.



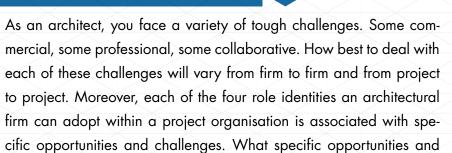




WHICH SPECIFIC CHALLENGES DO

FUTURE ROLES POSE?

challenges does your future role pose?



Below we present a number of typical challenges and opportunities associated with the four role identities. But these are only the tip of the iceberg – countless more are conceivable, of course. The board game accompanying this publication should help you identify those associated with your specific role identity in a given project, bearing in mind its particular characteristics and those of your own firm.



108



INITIATOR

As an initiator, you have to engage other participants in order to make the project a success. In so doing, you run the risk that they are pursuing different objectives and may thus hinder the creation of professional value. In the end, they might even run off with the spoils.

Do you want limit the other participants' stake in your project as much as possible? If so, ensure that your firm has enough of a financial buffer to get the project off the ground on its own initiative. To achieve that, you may have to buy a building or land, pay legal fees or pre-finance at least part of the cost of construction. At whatever stage you bring in other participants, good initial agreements with them are essential. These should cover such aspects as shared project aims, who does what, who assumes what risks and how the project costs and revenues are to be divided up. It also pays to start thinking at the outset about what final return you expect on your investment in the project, and how you earn that. For example, you might share in the income from selling or renting out the finished property. Whatever the case, before anything else make watertight agreements with your partners.



SPECIALIST

As a specialist, you have to persuade other participants about the benefits of new revenue models because the traditional ones may not generate enough turnover for a specialist role. It is also possible that you are better off advertising your activities in an alternative manner, separating them from the traditional role of the architect so that they appeal to a broader customer base.

9

Ensure that you work to your strengths, making the most of your expertise. Think carefully about what is crucial that you do yourself, and outsource everything else. In this way, you are recognised in the market as the specialist in a specific domain. This focus also helps you keep your expertise up to scratch and so remain at the forefront of your specialist area. If you intend to adjust your revenue model, too, persuade the other participants of the benefits and so engage them with the change. If you raise your hourly rates, for example, then link them directly to specific products or services. Also think carefully about the value you offer your client and how much that should cost them. And look beyond the boundaries of the construction industry: your expertise could add huge value in other fields as well.

specific challenges per

specific challenges per role



PRODUCT DEVELOPER

As a product developer, you deliver a complete product which responds to a particular consumer need or demand. To market this correctly, you have to thoroughly weigh up the pros and cons of providing a standard product delivering economies of scale, a bespoke product that better meets the requirements of individual users or a combination of the two.

Enter into lasting relationships with co-creation partners so as to maximise the fruits of your collaboration. Long-term co-operation breeds familiarity, which in turn facilitates efficiency. Also, make sure that your co-creation team covers a broad range of disciplines as this helps you to jointly devise smart ways of pushing down production costs and pushing up demand for your product. Develop a shared revenue model, bearing in mind how this relates to actual use of the product. Interesting earning opportunities might include lease or rental arrangements, or maintenance services.



INTEGRATOR

As an integrator, it is possible that you are not commissioned and paid for all the tasks you consider essential for effective integration. It is therefore important that the other project participants accept your linchpin role and are prepared to pay for it. Because integration is at the heart of the project, on occasion some of your own professional goals may have to take second place to project objectives. You therefore need to be able to see the bigger picture of a greater common interest and think accordingly to ensure that the final result satisfies the wishes of everyone involved as far as reasonably possible.

QO

To play the role of integrator, you have to be prepared to step back a little – and sometimes a lot – from many hands-on aspects of the job. So make sure that you have a good variety of expertise in house or in your network. When working with different partners, it is important that they be aware of, and respect, each other's objectives. And that clear joint agreements be reached at the outset as to each participant's tasks and responsibilities within the project. In this way, everyone bolsters everyone else with their work. Finally but crucially, make sure that you find a way to be paid for all co-ordinating efforts.







hijs Asselbergs architectuurcentrale





"Open de Koepel" is an initiative by the Panopticon Foundation to convert Haarlem's historic former panopticon prison complex into a university college campus. By opening up the site, links between eastern Haarlem and the rest of the city will be strengthened, creating new use value in the area. As well as the college, the new campus will feature a conservatoire, housing, hospitality outlets, a hotel and public open spaces. Thijs Asselbergs Architectuurcentrale is one of the initiators of the project.

- Network organisation with other architects.
- Local authority: for the project to succeed, the architect must assume part of the role played by council officials

 Generalist and unifier in the fields of imagination, communication and realisation.



- It is important to create trust in the development, though a dialogue with the
- There are two clients: the foundation Open de Koepel as both commissioning and contracting body, but above all the people of Haarlem.
- Work based upon trust and consensus model.
- Organisational diagrams and associated monetary flows.
- Foundation model for this kind of collaborative projects.



- Supply-chain collaboration with architects.
- Clear distribution of tasks to benefit identity.

Project is an acquisition tool, with media help.

Balance three Ps: pleasure, prestige, payment.



• Win the Golden Pyramid award for excellence in commissioning work.

• Set an example to the

• Secure media help for market.

- this.
 - Involved as a generalist in three areas: imagination, communication and realisation.

Public support with the

Investor, but financing not out of the same pocket.

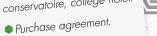
On-site project bureau.

help of social media.

No specialist tasks like preparing business cases, leading contractor, builder, lawyer.



◆ "Open up" the prison for the city with a diverse range of functions: university college, housing and student halls, hospitality outlets, conservatoire, college hotel.





OFFER

High profile initiative clearly emphasising the value of architecture.

 Risk taken with purchase of site.

 No risk taken that quality could not be achieved.

Recoup advance investment from sales of land and buildings.



Working without a fee; deadline of nine months to recruit the university college as an occupant, otherwise the complex would revert to the original

owner.

 Approach comparable with area development: balance revenues and

 Regard payroll and complex management costs as an investment.

11

• Master builder: a generalist involved in every 115





HOW CAN YOU DESIGN YOUR

FUTURE ROLE AS AN ARCHITECT?



to strengthen your negotiating position and to reinforce project collaboration. The game comes with a set of cards designed to make the player reflect upon important choices related to their own organisational management and their co-operative relationship with project partners. In other words, how do shape your role identity within a project, and on that basis how do you design your future role as an architect?

When playing the game, you focus upon a specific project. You can make the initial

this to develop a strategy for a specific role identity within a project,

When playing the game, you focus upon a specific project. You can make the initial situation even more concrete by first deciding which role identity you have been assigned or want to assume. As you play, you are made aware of possible differences between an allocated role and one you aspire to, given what you stand for as an organisation. The game helps you to make choices in this respect, to justify them and, from there, to align your actual role as closely as possible with your professional identity and the goals you have set yourself.

ELEMENTS OF THE GAME

The game has eight elements. The first four, "offer", "expertise", "goals" and "risks", determine what role identity you can and want to fill in a project. Ideally, these should be completed first. The other four elements, "tasks and responsibilities", "resources and partners", "co-operation agreements" and "revenue model", play a supporting role: they help to define your role identity more clearly, thus narrowing the gap between your ideal situation and what you are actually in a position to do.

PROFESSIONAL ROLE ELEMENTS



What you as an architectural firm have to offer the project.



EXPERTISE

The expertise you possess and want to contribute to the project.



GOALS

The professional and financial goals you set yourself with this project.



RISKS

The risks you are prepared and not prepared to take in order to achieve your goals.

PROJECT ROLE ELEMENTS



TASKS AND RESPONSIBILITIES

Your tasks and responsibilities in this project.



RESOURCES AND PARTNERS

The resources and partners you need to complete your project tasks successfully.



CO-OPERATION AGREEMENTS

The formal and informal agreements you reach with your partners to ensure that the goals set are achievable.



REVENUE MODEL

How you cover your costs and generate income.

designing your future role

23

HOW TO PLAY

- Start by choosing a case or project.
- Select the card showing the relevant role identity for your chosen project,
 write the name of the project on it and place it in the middle of the board.
- Add the question cards for your chosen role identity to the set of general cards.
- Go through the questions on the cards one by one. Agree on your answers as a group and write these on the cards, then place them in the appropriate space on the board.
- Place the cards with project-led questions and answers closer to the centre of the board and those with professional questions and answers closer to the edge.
- Move the cards around until you have a clear picture of the situation. You can also remove cards from the board in order to sharpen the focus of your chosen strategy.

HOW TO MAKE THE GAME A SUCCESS

- Play the game as a group so that you can discuss the questions and answers. This stimulates your thought processes and encourages you to look at a wider range of alternatives.
- Appoint an independent facilitator to watch the time, monitor the game and ask critical questions.
- Create a setting in which players are comfortable being critical of each other and dare to make real choices.
- Use a marker pen to highlight those elements which require extra attention or take priority so that they stand out.
- Create an active setting. Ideally, the players should be standing.
 Encourage them to play dynamically.
- Allow plenty of time for discussion and to reconsider choices. Multiple rounds should allow you to hone your strategy and better harmonise its underlying elements.
- Play the game how you want to. It can be used in a variety of ways and situations, but it works best when you adapt it to suit your own needs and way of working.

125

SUMMARY

A variety of societal and technological developments in recent years have brought changes to the role played by architectural firms within the construction industry, and with them three basic challenges for the profession:

- How do you as an architect deal with your changing role in projects, in relation to your own professional identity?
- At the project level, how can you develop strategies for the successful capture of both professional and financial value?
- How do you institutionalise and consolidate changes to your role?

This book looks explicitly at the role of the architect, both as a participant in projects and as a professional in their own right. It outlines three strategies they can use in negotiating their project role – "reinstating", "bending" and "pioneering" – and presents four generic role identities filled by architectural firms within project organisations: "initiator", "specialist", "product developer" and "integrator".

Three forms of value are particularly associated with the business model generally adopted by architectural firms, namely use value, professional value and financial value. Interaction between these is essential. At present, values are often traded off against one another, which can create tension within the project organisation and hinder the achievement of some of its goals. The findings of the futurA project should help create and maintain a better value equilibrium in future projects. We then go on to elucidate a number of strategies the architectural firm can use to facilitate that equilibrium, such as postponing financial value in a project, compensating a lack of financial value across projects or rejecting a project.

Following an explanation of the phenomenon of role structure, we describe two techniques you as an architect should deploy if and when you what to change your role on the ground. These are explanation and reassertion. To consolidate a change, however, more is needed. So we also suggest three activities to achieve that: creating awareness, selective networking and building coalitions.

The role of an architect is no longer set in stone – it is subject to constant change. The findings of the research undertaken by the futurA project have resulted in this practical design guide for architectural firms to enable them to shape their own future. Both the book and the accompanying game provide useful tips to help them make more considered choices in respect of their own organisational management and their supply-chain partnerships. They also encourage firms to critically review those choices in relation to one another, and to retain or adjust them as necessary in order to keep the organisation moving forward. After all, designing your own role is as important as designing the built environment.



WANT TO FIND OUT MORE?

Below is a list of the principal academic publications related to our study.

- Bos-de Vos, M. (2018), Open for business: project-specific value capture strategies of architectural firms. PhD thesis, Delft University of Technology.
- Lieftink, B. M., Smits, A. A. J., and Lauche, K. (forthcoming), Dual dynamics: project-based institutional work and subfield differences in the Dutch construction industry. International Journal of Project Management.
- Brejaart, E. (2018), From start-up to scale-up: a study about the characteristics of starting architectural firms and their business models. MSc thesis, Architecture and the Built Environment/Management in the Built Environment, Delft University of Technology.
- Bos-de Vos, M., Lieftink, B., Wamelink, H., and Kraaijeveld, J. (2017), Challenges in the business models of creative professional service firms. In: Hay, R., and Samuel, F. (eds.), Conference Proceedings of the Professional Practices in the Built Environment Conference, 27-28 April 2017, University of Reading, UK. Reading: Value of Architects, University of Reading, pp. 35-43.
- Lieftink, B. M., & Bos-de Vos, M. (2017), How to claim what is mine? Boundary work of professionals in inter-organizational projects. Paper presented at SSE/Saïd Business School Conference on Professional Service Firms, Stockholm, Sweden, 9-11 July 2017.

- Bos-de Vos, M., & Volker, L. (2017), Constructing Business Models around Identity: Tensions in Architectural Firms. In: Chan, P. W., & Neilson, C. J. (eds.), Proceeding of the 33rd Annual ARCOM Conference, 4-6 September 2017, Cambridge, UK. Manchester: Association of Researchers in Construction Management, pp. 491-500.
- Lieftink, B. M., Smits, A. A. J., & Lauche, K. (2017), Institutionalizing a new organizational role in a mature project-based industry: from project to field-level constraints. Paper presented at 33rd EGOS Colloquium, Copenhagen, Denmark, 6-8 July 2017.
- Bos-de Vos, M., Wamelink, J. H., & Volker, L. (2016), Trade-offs in the value capture of architectural firms: the significance of professional value. Construction Management and Economics 34(1), pp. 21-34. https://doi.org/10.1080/01446193.2016.1177192.
- Lieftink, B. M., Smits, A. A. J., & Lauche, K. (2016), Developing new collaboration practices and role structures in inter-organizational projects. Paper presented at Academy of Management Annual Meeting, Anaheim, USA, 5-9 August 2016.
- Lieftink, B. M., Smits, A. A. J., & Lauche, K. (2015), Under construction: re-imagining role structures for coordinating inter-organizational projects in the building sector. Paper presented at 31st EGOS Colloquium, Athens, Greece, 2-4 July 2015.

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