Journal of Social Intervention: Theory and Practice – 2010 – Volume 19, Issue 2, pp. 39–60
URN:NBN:NL:UI:10-1-100876

ISSN: 1876-8830
URL: http://www.journalsi.org
Publisher: Igitur, Utrecht Publishing & Archiving Services in cooperation with Utrecht University of Applied Sciences, Faculty of Society and Law

Frans Spierings is a professor at Rotterdam University of Applied Sciences, The Netherlands, where he coordinates the research programme "Growing Up in the City". He has been involved in national and local evaluations of urban policy and urban education policy, urban renewal, and social inclusion. He has published books and papers on urban renewal, social work and community mediation; his work has appeared in publications including *Employee Assistance Quarterly,* the *Boston Journal of Education,* and the *European Journal on Criminal Policy and Research*.
Correspondence to: Museumpark 40, 3015 CX, Rotterdam, The Netherlands.
E-mail: spifc@hro.nl

Received: 2 February 2010
Accepted: 26 May 2010
Review category: Research
Theme: Urban and Community Development

A MODEL OF COOPERATION: THE PACT OP ZUID INFORMATION SYSTEM

FRANS SPIERINGS

ABSTRACT

A model of cooperation: the Pact op Zuid information system
Social work organizations, research institutions, government agencies and housing associations are partners in many urban redevelopment programmes. Combining the interests of these organizations can be an interesting management challenge, and developing information systems to suit the combined information needs of these partners can pose an information management problem. This paper will reflect on the information management issue by analyzing cooperative knowledge production in a case study of "Pact op Zuid", conducted in Rotterdam, The Netherlands. Pact op Zuid is a 1.5 billion euro urban investment programme devised to combat deprivation in an urban

area with 190,000 inhabitants over the period 2006 to 2016. This article provides insights into the literature on innovation configurations and learning networks, concepts that are important to understanding the complexity of urban redevelopment with cooperative knowledge production. It discusses how cooperative knowledge production took place in this case study.

Keywords

Urban renewal, cooperative knowledge production, knowledge circulation, innovation, sustainable development, case study

SAMENVATTING

Een samenwerkingsmodel: De casus "Pact op Zuid"
Welzijnsorganisaties, onderzoekinstellingen, overheidsinstellingen en woningcorporaties zijn alle potentiële partners in stedelijke herstructureringsprogramma's. Het combineren van de belangen van deze organisaties vormt een interessante managementuitdaging. Ook is het een uitdaging om een informatiesysteem te ontwikkelen dat tegemoet komt aan de informatiebehoefte van alle partners, zowel de afzonderlijke organisaties, als het collectief. Dit artikel zal deze uitdaging van informatiemanagement bespreken, door een case study naar *cooperative knowledge production* te presenteren. De case study heeft betrekking op het Rotterdamse stedelijk investeringssprogramma "Pact op Zuid", een programma waarin tussen 2006 en 2016 1.5 miljard euro wordt geïnvesteerd in stedelijk gebied met 190.000 inwoners. Dit artikel geeft allereerst inzicht in literatuur over innovatieconfiguraties en lerende netwerken, concepten die belangrijk zijn om de complexiteit van stedelijke renovatie en *cooperative knowledge production* te begrijpen. Het bespreekt eveneens hoe *cooperative knowledge production* binnen Pact op Zuid plaatsvond.

Trefwoorden

Stedelijke vernieuwing, kenniscirculatie en collectieve kennisproductie, innovatie, duurzame ontwikkeling, case studie

INTRODUCTION

This paper reflects on cooperative knowledge production (Gredig & Summerfeld, 2008) in the Pact op Zuid programme. Gredig & Summerfeld criticize the general model of linear knowledge transfer.

They define cooperative knowledge production as a circular production of knowledge between science and practice, taking into account the hybrid nature of professional knowledge-for-action and the organizational contexts in which the action occurs and knowledge is produced.
Pact op Zuid is an urban redevelopment programme in South Rotterdam, The Netherlands. This programme, planned to continue from 2006 until 2016, was initiated by eight Rotterdam-based organizations, both public and private partners: four large housing associations, three boroughs and the city administration. These partners have joined forces to improve the quality of life in this particularly deprived part of the city, which has 190,000 inhabitants. The partners agreed to spend 1.5 billion euros on comprehensive urban redevelopment.
Two questions will be addressed in this paper: What are the characteristics of an information system that can be used to measure the effects of a multi-actor programme for comprehensive urban redevelopment? How is cooperative knowledge production organized in this case study? First, we will present some basic information about the Pact op Zuid programme. Next, we will review literature on cooperative knowledge production and teamwork. Third, we will use the case study method to analyze cooperative knowledge production in Pact op Zuid and the form and content of the information system that was developed. Finally, we will present conclusions.

URBAN REDEVELOPMENT CASE STUDY: PACT OP ZUID

In October 2006, executives from four private housing associations (COMWonen, Vestia, Woonbron and Woonstad Rotterdam) which together own over 150,000 housing units in Rotterdam, formed the Pact op Zuid (with the word "pact" indicating both agreement and a consortium). They did so together with public administrators from the three boroughs of Charlois, IJsselmonde and Feijenoord, and the Rotterdam City Council. A multi-agency executive team was formed to take decisions on the scope, pace and direction of the urban redevelopment programme in Rotterdam Zuid.
The team first set common goals and developed a comprehensive programme to reach these goals. Team partners shared the problem definition, which was that there was a growing tendency toward selective migration in Rotterdam Zuid. For twenty years, middle-income groups (predominantly Dutch-born residents) had been leaving this part of the city, and lower-income groups (predominantly non-Dutch born) had been moving in. By 2005, this tendency was worsening and the composition of the population had shifted, with two-thirds of all young people under the age of 25 being first or second generation immigrants. The executives in the team also shared a confidence in the reliability of the results of the "Residence Test 2004", which showed that inhabitants of Rotterdam Zuid were on average considerably less satisfied with

their neighbourhood than the inhabitants of the other parts of the city and region. Together, the executives of the eight organizations set about improving the living conditions in Rotterdam Zuid. In order to manage the delicate process of setting common goals and developing a comprehensive programme, the executives acknowledged the importance of involving a wide range of local organizations and generating a common understanding of local issues and problems, strengths and weaknesses. Also important were exchanging knowledge and building trust among these organizations, and enhancing the common capacities to learn and act and thereby facilitate socio-economic innovation to increase opportunities for the inhabitants of Rotterdam Zuid. They decided to put Rotterdam's "roll up your sleeves" attitude into a practical learning perspective. As a first challenge for multi-actor governance they tried to ensure that their culture of innovation was decisive, that it supported innovation and entrepreneurship at the enterprise level and as a partnership while at the same time ensuring that social cohesion between cooperating organizations was maintained.

The team's insight into sustainable development was important to the strategy. Sustainable development has come to dominate the theoretical and practical field of urban regeneration and urban management (Roberts & Sykes, 2000). Sustainable development means not only the enabling of the local market economy, but also the empowering of other parts of the economy (public sector, social economy, cultural sector, low-productivity artisanal production) as well as community life (which means socio-cultural dynamics as a level of human existence in itself, the political and social governance of non-economic sections of society, cultural and natural life) (Healey, 1995; Roberts & Sykes, 2000; Rogers & Power, 2000).

Another challenge the team envisioned was to develop a commonly accepted reliable and valid instrument that could show whether or not adequate progress was being made, with enough speed and specificity to keep all partners involved and highly motivated (Homan, Van Knippenberg, Van Kleef & De Dreu, 2007). In order to do so, they looked for information systems and relevant data sets that were acceptable to all in order to report on progress.

Next, the executives decided to ask an outsider, not directly affiliated with any of the agencies in the multi-agency team, to develop the information system. They chose the "Growing up in the City" research group from Rotterdam University. The multi-agency executive team asked the researchers to develop an innovative area-based information system that could support the collective decision-making process for Pact op Zuid. The executive team wanted a tailor-made, simple and smart information system based on secondary data to report on progress toward the targets (or the lack of it) within the twenty neighbourhoods and in Rotterdam Zuid as a whole. The research team soon discovered that there is no prescribed practice or authoritative source of information for managers and scientists to build valid and reliable information systems for collective

decision-making in urban redevelopment projects. First of all, all urban areas have different data sets. Secondly, many different information systems on urban regeneration are available. Thirdly, there are many different urban regeneration practices in cities and countries around the world. Trying to set the criteria for an information system meant relying on knowledge from case studies on local practices (Rogers & Power, 2000).

The fact that different urban redevelopment programmes involve varying multiple partners further complicates the matter. In London for instance, health organizations are important partners, as are universities. In Denmark local authorities are important, and in the Netherlands, housing associations are important partners. Most significant however, is the fact that all of these partners have specific goals and interests, and therefore require different information sets, adding up to a great diversity of social, environmental and economic issues and information, from improving aspects of the quality of the community (health, education, housing, poverty) to its environmental and economic qualities. All of the partners want to gain specific information about the results (actual and perceived) and effects of their actions. Building a common information system that is valid for all is complicated.

Gredig & Summerfeld's (2008) concept of cooperative knowledge production on action was a helpful starting point in the process of information system management. A circular model, honouring the important role of both practice and research in knowledge development (Steyeart, Spierings & Autant Dorier, in press) is promising. Furthermore, cooperative knowledge production (Gredig & Summerfeld, 2008) combines well with the ideology and practice of sustainable development. Both involve multiple partners, shared targets and an aspect of creating and maintaining multi-agency support.

The research group presented the theory devised by Callon *et al*. (1992) to some of the executives. In this theory, the circulation of knowledge boosts cooperation between organizations in multi-actor programmes. Universities and research and development companies play a significant role in knowledge circulation. Supporting interagency teamwork with multidisciplinary knowledge and advice is known to help exploit the synergy in the working cultures between organizations (Shelton & Sorter, 1980). Effective interagency teamwork depends on setting realistic goals for all, establishing and maintaining open communication among all participants, and recognizing that leadership determines what is accomplished (Everson & Guillory, 1998). Research indicates that bundling public and private sector resources, exploiting synergy in the working cultures of the collaborating agencies, and deploying expertise about innovation are critical success factors in urban redevelopment programmes (Roberts & Sykes, 2000). Effective information systems for multi-agency programmes can be used to collectively analyze the progress (or lack of it) in the programme's set targets as well as help propose changes to the policy and the common agenda.

LITERATURE REVIEW AND HYPOTHESES

Why is the concept of "cooperative knowledge production" (Gredig & Summerfeld, 2008) important? There is ample evidence to suggest that innovation – new ideas put into daily practice – frequently derives from social networks involving both science and practice. Innovation often comes from partners whose shared purpose is to increase profits or cut costs, whether those are social, economic or both. More often than not, innovative organizations do not work in isolation, as is stated in the classical Schumpeterian conceptual scheme, but in close collaboration with each other. Innovation then becomes a product of collective efforts that materialize through the engagement of individual actors in broader learning networks (or processes of interactive learning), just like cooperative knowledge production. In this sense, innovation can best be interpreted as a system, as exemplified by the work of Lundvall (1992). We conceptualize innovation as a social process.

Furthermore, the concept of the technological infrastructure of a learning city (Spierings & Notten, 2006) helps us to understand the involvement of the entities mentioned by Feldman & Florida (1994). Feldman & Florida state that urban growth inevitably takes place in the context of a supportive technological infrastructure localized in a geographical space:

(a) universities' and other higher education institutions' R&D labs that enhance the stock of basic knowledge, generating increased opportunities for innovation across a broad field of economic and social activities in the region;
(b) R&D organizations oriented towards commercially exploitable research activity, i.e. towards the transformation of innovative knowledge into marketable products and processes;
(c) clusters of firms and social enterprises in related activities which facilitate the dissemination of tacit knowledge through supplier-producer and producer-user networks, co-makership practices, strategic alliances and other formal and/or informal forms of networking;
(d) networks of business services providing specialized information on market commercialization and experience.

An innovative urban renewal project on the scale of "Pact op Zuid" definitely takes place in the context of a supportive technological infrastructure localized in a geographical space. Since its inception in 2006, schools, commercial companies, universities, R&D labs and organizations, local and global firms and social entreprises have all become involved in the programme. Support is a key concept in their involvement. Many models of innovation refer to competition as a driving force. Even the concept of culture is subservient to these forces. In this view, culture is considered

relevant to the extent that it is functional to improve the competitiveness of the local or regional economy. Moulaert and Sekia (2002), however, criticize this narrow focus because of its conceptual ambiguity. They argue for the need to broaden the conceptual discussion on territorial innovation in all its dimensions, and consider cooperation and regional proximity to be important concepts. They distinguish six different models in their critical review of literature on innovation and offer a new viewpoint by introducing collective learning. In learning relationships, innovation develops not only as a technological process but as an organizational process as well. The concept of the learning city (Notten & Spierings, 2006) connects network concepts such as social capital and cooperative knowledge production to the problems of urban and regional development.

But what makes networks, groups, or teams work effectively together as cooperative knowledge producers in complex processes? Cohen and Bailey (1997) distinguish four types of teams. Important in this study are the project team, which is cross-functional, and the multi-agency executive team. The definition of a team is based on the work of Cohen and Bailey: "a team is a collection of individuals who are interdependent in their tasks, who share responsibility for outcomes, who see themselves and who are seen by others as an intact social entity embedded in one or more larger social systems, and who manage their relationships across organizational boundaries" (1997, p. 241).

For the most part, project team tasks are non-repetitive in nature and involve a considerable application of knowledge, judgment and expertise. The work that a project team performs may for instance be a new, radically different idea. Frequently, project teams attract members from different disciplines and functional units, so that specialized expertise can be applied to the project at hand. According to Uhl-Bien, Graen & Scandura (2000), self-management is appropriate for multi-disciplinary project teams. Autonomy has a positive impact on performance when work pressure is high and innovation is favoured (Cohen & Bailey, 1997). An important aspect of effective teamwork is functional diversity; on the one hand, separate thought worlds create barriers to innovation, while on the other hand, multiple experiences and perspectives constitute an advantage.

(Urban) management teams are multi-organizational or inter-organizational teams. It is often impossible to determine whether or not they are a "real team". According to Jackson in Cohen & Bailey (1997, p. 267), when the team is meeting regularly to share information or to make strategic or tactical decisions, it can be considered as such. We define the multi-agency executive group as a team.

The concept of group identification (Homan, Van Knippenberg, Van Kleef & De Dreu, 2007) seems additionally crucial to understanding the workings of the teams and the forces of cooperative knowledge production behind them. Homan *et al.* (2007, p. 208) state that people

are more likely to identify with teams that are considered to have high prestige, high status, deliver high performance, or that have another kind of attractive image. Being part of a high status team (possibly Pact op Zuid) is considered to be rewarding whether the group is diverse or homogeneous. Homan *et al*. (2007) also maintain that informational diversity – differences in knowledge, perspectives and ideas – has the potential to enhance the functioning of the team. When participants are made to believe they are working on a very special task, their sense of diversity is diminished, and with it the often associated risk of task conflict, because of "us-them" distinctions within the team (p. 80).

COOPERATIVE KNOWLEDGE PRODUCTION IN THE CASE STUDY

The case study on the development of the Pact op Zuid information system benefits from these theoretical insights and conceptual analysis. When we look at our case study in more detail, we see that knowledge production became partly cooperative and partly competitive. Let us go back to the beginning of the project.

Three of the executives in the multi-agency executive team had previous experience with the work of the University of Rotterdam's research team. They vouched for the researchers in the multi-agency team. The development of the information system for Pact op Zuid was organized as a collective effort, as teamwork. The project team consisted of six people[1] who delivered five separate products.[2] Draft versions of the products were discussed in workgroups of three people, working in different disciplines, for different organizations. This project team, in which the members worked in close collaboration, established the "co-makership" (Tire & Von Hippel, 1997) of the products, through intensive cooperation between science and practice.

In developing the information system for Pact op Zuid, (b) and (d) mentioned above by Feldman & Florida (1994) were absent from the project team. The task of developing a tailor-made information system was organized as a learning network, in which a configuration of people had to develop several products that were to be discussed first in the management team and then in the multi-agency team of executives. The project team discussed content, form, quality, possible impact, and the strategy for presenting the products to the executives, in addition to the preparation of decisions by executives. The researchers in the team developed and improved the products, as discussed by the management team (± fifteen members) responsible for the implementation of Pact op Zuid. Next, they presented the product to the strategic managers (twelve members), and to the tactical managers (twelve members). Several alterations to the products were made during this three-step process. Three of the products were officially printed by a publisher (Uitgeverij IJzer). Looking at this evidence, it appears that the transfer of practical

knowledge is supported by face-to-face contact (Davenport & Bibby, 1999). It even seems to speed up the process since those involved know and trust each other due to past experiences in knowledge work.

The executives formulated the objectives of the project's research, in extensive personal interviews. Hindsight shows that the decision to begin the project by interviewing all the executives of the housing associations, the borough chairmen and four city aldermen involved in the programme, was a crucial step in the cooperative knowledge production process, which strongly influenced the support the interdisciplinary research team ultimately received for the five products. A comprehensive transcript of each executive interview was made, and each executive was asked to personally evaluate the transcript. Several executives wrote strategic comments, and notes, further enriching the data collected.

After the first few interviews were concluded, discussion in one of the meetings of the multi-agency executive team began. Some executives stated that the goals of Pact op Zuid should be changed, that they should be more ambitious, and more concrete. They stated that there should not only be a *reduction* of selective migration to nil and a *raising* of neighbourhood satisfaction among the residents, but that there should also be an overall *levelling* of the quality of life in this area in comparison to Rotterdam as a whole. Everybody agreed that this goal of combating deprivation superseded the two goals defined earlier and would become the key target of the programme.

After all the interviews were conducted, a 13-page report containing the collective opinions of the multi-agency executive team was written. The president of Rotterdam University presented these findings to the executives in the multi-agency executive team. One of the executives critically reviewed the findings. In the discussion that followed, the executives criticized each other's choices, opinions and the positions described in the report. The report itself was perceived to be factually correct. After the discussion, the executives supported the findings and together made adjustments in the policy.

What were the important findings? The executives had a shared interest in having an information system based on four elements:

- a short and simple instrument (some called it KISS (keep it short and simple)), with an urgent request not to be bombarded with information;
- a smart system that could be used for rational decision making on investments;
- a system based completely on secondary data, in order to compare all the neighbourhoods and Rotterdam Zuid as a whole with other neighbourhoods and sections of cities;

- an attractive visual product, with photos, charts and other images, designed to rouse people's interest in the programme and to communicate its effects.

Next, the advisor to Pact op Zuid provided important input. He was trying to tackle the challenge of taking differences between neighbourhoods into account in the planning process and asked the researchers to visualize the statistical differences between neighbourhoods. Several tactical managers, and the project advisor, had had prior experience with the diamond-based model that was presented and were quickly convinced, even enthusiastic about it. They supported the advisor and defended the model, explaining to their bosses who participated in the multi-agency executive team that it was an important tool in classic research design.
Next, the project manager and the leader of the academic team decided to ask the researchers to interview the twelve managers on the tactical team. They asked questions about the set of crucial indicators for the information system. They also analyzed the criteria set by the strategic managers with the tactical managers. In the end, choosing the KISS set of key indicators for the diamond-based model was up to the leader of the academic team, together with the statistician. One of the tactical managers recommended that eight indicators be used in the diamond. The leader of the academic team, together with the statistical expert, discussed the methodological soundness of all the indicators. They devised a shortlist of four key indicators that provide insight into ongoing local developments in social, environmental, economic, and safety spheres.
Here, the working theory of "Big City Policy" in the Netherlands was used. This theory is based on the combination of social, environmental, economic and safety investments for urban development. The team chose indicators representing these four development fields. The short and simple visual impact was tested. The researchers worked with a combined classic as well as an innovative research design (Schön, 1983; Yin, 2008), and used theory to support the conceptual decisions. Several members of the working group responsible for the implementation of Pact op Zuid were asked to comment on the interpretation of the data, and they concluded that they could work with it.

The research team prototyped an initial product, based on the four elements (KISS, smart, secondary data, visual product), called the "Leporello". This is a picture book consisting of postcards of special places in South Rotterdam, with comments and statistics added to them. Support for the set of key statistical indicators in a four-dimensional, diamond-based model was first tested with this visual product. The diamond model presented a visual representation of the average score for Rotterdam as a whole, in contrast to the average score of the Pact op Zuid area, and each of the three boroughs. The Leporello was given to each of the twelve executives by the programme manager as a farewell gift, and was personally handed to them at work. A

photographer was present to simulate and stimulate the idea of an important ceremony taking place. All of the picture books were cut and glued by hand, then numbered 1–30 like a work of art, using the ideas of Homan *et al.* (2007). People are more likely to identify with teams that are seen as being prestigious, high status, high performing, or that have an otherwise attractive image (Homan *et al.*, 2007, p. 208). Upon receiving the gift, the alderman responsible for Pact op Zuid said that he had no idea that Charlois was lagging so far behind the other boroughs and behind Rotterdam as a whole. Seeing the information presented in this way made him accept the diamond model method at that moment.

What does the diamond-based model look like and what are its key indicators? Here is an overview:

Table 1: An overview of the indicators.

Indicators/Indices	Descriptor	Procedure/measures
Income	low, middle, high	Data from Statistics Netherlands (the CBS for 2005)
WOZ value	relative development of house prices	Data from local authorities in 2007, relating to 2005
Social quality	perception of actual social quality	Registration data for 2007 and measurement from early 2008
Public safety index	perception of actual safety	Registration data for 2006 and measurement from spring 2007

Income

The most recent income data are drawn from the *Regionaal Inkomensonderzoek 2005* (Regional Income Study 2005) by Statistics Netherlands (CBS). This presents the income of households as gauged on 1 January 2006 for fiscal year 2005. The low-middle-high segmentation is based on the national decile distribution: low incomes are the lowest 40% of the national distribution (up to €22,200), middle incomes are the next 40% (up to €40,600) and high incomes are the upper 20% (€40,600 and above).

WOZ value

The WOZ value is determined periodically by local authorities. Here the figure is from 2007, which relates to the free-market value as of January 1, 2005 and as of January 1, 2003. The appraisal is

based on the value calculated two years previously. The average WOZ value has been calculated for the housing stock as of January 1, 2007, excluding dwellings for which the 2005 WOZ value or the surface area is unknown.

Public safety index
The data presented here are drawn from the city of Rotterdam's Veiligheidsindex (Public Safety Index) for 2005 and 2006, which used reported crime data for 2006 and responses from a resident survey in early 2007.

Social quality index
The data presented here are drawn from the city of Rotterdam's Sociale Index (Social index) for 2008, which used reported crime data for 2007 and responses from a resident survey in early 2008.

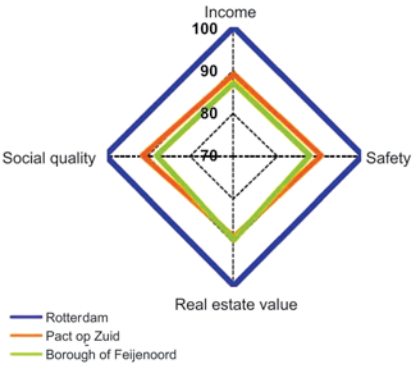
What does the diamond-based model look like? We will present three images: one for the borough of Feijenoord (60,000 residents), and the other two for neighbouring areas that are part of the Feijenoord borough.

Explanatory notes on the diamond model

For the rendering of each diamond model, the scores for the indicators are converted into the difference from the average for Rotterdam. This benchmark is set at 100. A score of 90 means that the district in question scores 10% below this average (a score of 70 means it is 30% lower). The public safety index would normally be presented as a number between 0.0 and 10.0. As an example of the recalculation we use, the score for the borough of Feijenoord (6.3) is compared to the average for Rotterdam (7.6), which results in a score of (6.3 / 7.6) * 100 = 83 in 2006. The score for the borough of Feijenoord is therefore 17% lower than the Rotterdam average.
The images show just how different these areas become in the visualization of the diamond-based model. The blue line represents the score of Rotterdam as a whole, adjusted to 100%. When we compare this with the orange line – the scores for the Pact op Zuid area – the key indicators trail between ten and fifteen percent behind. This is reflected in four characteristics, meaning that the residents in the Pact of Zuid area more often earn a low income, live in housing that is cheap, in neighbourhoods that are less safe or perceived as being less safe to live in, and which have a lower social quality on average. The Pact op Zuid area (combining the boroughs of Charlois, IJsselmonde and Feijenoord) has a low score in comparison to Rotterdam as a whole.

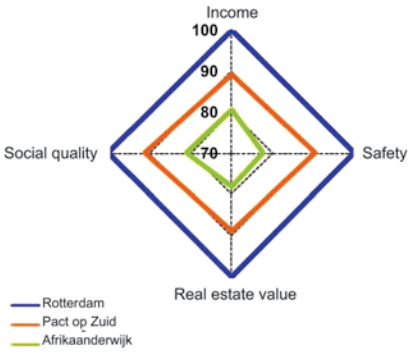
a

	Income	Safety	Real estate value	Social quality
Rotterdam	100	100	100	100
Pact op Zuid	89	90	89	91
Borough of Feijenoord	87	88	90	88



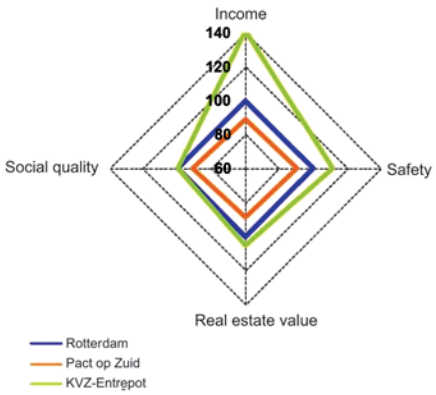
b

	Income	Safety	Real estate value	Social quality
Rotterdam	100	100	100	100
Pact op Zuid	89	90	89	91
Afrikaander-wijk	80	78	78	81



c

	Income	Safety	Real estate value	Social quality
Rotterdam	100	100	100	100
Pact op Zuid	89	90	89	91
KvZ-Entrepot	141	111	106	100



Figures 2a-2b-2c: Images of Feijenoord, Afrikaanderwijk, Kop van Zuid-Entrepot.

We can see that the borough of Feijenoord almost equals the average for the entire Pact op Zuid area. We also see how the neighbourhoods of Afrikaanderwijk and Kop van Zuid-Entrepot have completely different scores. On a map, these neighbourhoods lie within a two square-kilometre area. The neighbourhood of Kop van Zuid-Entrepot has become the rich area of this part of the city (in urban sociology, this is known as the "Gold Coast" a term coined by Robert Park). Averages in this neighbourhood are comparable to the average for Rotterdam; on income level, they are even 30% higher. Note that the well-established theory of a high correlation between housing value and income level does not apply to Kop van Zuid-Entrepot. Afrikaanderwijk, a low status neighbourhood – the name refers to the old days of apartheid in South Africa, Paul Kruger and the Boeren – scores ten percent below the average in the Pact op Zuid area, and up to almost twenty-five percent below average in Rotterdam. It seems plausible that the low quality of life in Afrikaanderwijk negatively influences the value of housing in the Kop van Zuid neighbourhood. At least, the executives in the multi-agency team seem to believe so.

In adopting the concept of the "cooperative knowledge production" (Gredig & Summerfeld, 2008) one might suspect that there was no friction between the objectives of researchers and those of interventionists, but this is untrue.

Although there was not a lot of friction, there was some, which we will consider in detail. First of all, during the process of developing the diamond model, another department of the city administration developed a new tool, the social index. This tool is also used to support investment decisions in neighbourhoods and boroughs all over Rotterdam, but only for social investments. Two different instruments appeared in Rotterdam within a few months. Following that, local politicians started asking questions: How are the instruments related? Why does Pact op Zuid need its own instrument? This led to a struggle for authority between research teams and between different parts of the city council.

History permits us to say that our diamond-based model was made public in September 2007, but the decision to publish had not yet been made. The research group (including the programme manager and programme advisor to Pact op Zuid) made an attempt to visually incorporate the social index in the diamond model. The publication of this PDF document, which was being prepared for a publisher, was blocked for political reasons. For a short period, the two instruments competed with each other in a zero-sum game. Some local organizations supported the social index, others supported the diamond model.

After several months, meetings were organized with multiple partners to explain how the instruments could be positioned in conjunction with the social index. A decision to combine the instruments and thereby improve the diamond-based instrument was reached.

In a big city like Rotterdam, information management is a fairly complex process to organize. More often than not, this becomes an iterative process instead of a programmed approach. We previously stated that a challenge for governance is to ensure that it does not hinder innovation, but supports innovation and entrepreneurship. Karl Popper (1944) speaks of piecemeal tinkering and muddling through as normal policy practice and cooperative knowledge production can become a part of this process. Perhaps the reality of life in a city is just too complex for a grand design of knowledge management.

Months later, after a period of waiting, the tactical managers of two housing associations (members of the tactical management team for Pact op Zuid) were asking for the production of new diamond models for Pact op Zuid and for the other parts of the city in which they owned housing stock. Furthermore, they organized a discussion with the city administration to incorporate the social index into the diamond model and proposed other changes to it. Members of the multi-agency executive team considered it important to have both instruments available. One instrument could be used to zoom in on social quality in the neighbourhoods. The other could be used to zoom in on the multi-dimensional development of neighbourhoods at social, economic, environmental and safety levels. The city administration's goal is to further develop Pact op Zuid's comprehensive neighbourhood model in the coming years. Ambitions to develop an economic and an environmental index concurrent with the social and safety indexes are now being discussed by the various departments of the local administration.

For some time, the academic role in choosing which information was necessary for outcome analysis had not been a decisive one. Organizational politics were decisive. After members of the research team had waited for some months, new alliances began to form and once again there was room for cooperative knowledge production between researchers and interventionists. This further improved the quality of the research and the development of the tool.

Second, there was friction between the university research team and a team from a large commercial R&D organization also involved in Pact op Zuid. They were not involved in the development of this specific outcome information management system, but were asked by the programme manager to develop another instrument: an output information system. More specifically, the R&D organization was asked to develop an analysis of the social return on the Pact op Zuid investment programme. Researchers and advisors were asked to answer the question: what are the returns on the investments made in Pact op Zuid, and how can executives improve governance? They were working on an assessment of the means, efforts and output of Pact op Zuid, in relation to its outcomes. Somewhere during this process, both

information systems had to be combined so that output and outcome could be linked. Did this happen?

Both research groups could be seen as competitor-colleagues in Pact op Zuid. There was a certain degree of competition, but also of cooperation. The commercial R&D organization had an older contract with the city of Rotterdam, but not with the housing associations. Both research groups tried to become the official research partner for Pact op Zuid. The groups also met several times at the initiative of the programme advisor, who gave both research groups their assignments. He did so in order to find a cooperative strategy and make the researchers work together effectively. Sometimes the commercial R&D organization gave the impression that it did not take the other research group very seriously, but this impression could be mistaken and has not been verified. The advisor was trying to find a consensus and cooperation between both groups and asked the groups to organize collective meetings themselves. However, this did not happen more than twice and the meetings did not become productive. There were exchanges of ideas, but this did not lead to a combined product or combined work process. The university concentrated on delivering its own products assigned in the contract and gave advice to the multi-agency executive team. The other group also designed an instrument and gave advice to this team and they worked on separate products. After some time, each organization went its own way. It was a situation best characterized by the expression, "to live and let live". There was no real cooperation or trust, neither was there any real competition.

In one instance, there was a real divergence of opinion and data. The commercial R&D organization gave advice to the executive team on the investment strategy for the neighbourhood of Wielewaal. They had specific data about this neighbourhood, and concluded that it did not need any physical and environmental interventions because the people living there were satisfied with the social quality and felt very safe. The response of the executive team was inconclusive on this issue at the time. Several months later however, the university's team reached a different conclusion on the basis of the four-dimensional diamond model (see Figure 3). The executive team was very interested to hear the different conclusion and learn more about the method of the four-dimensional model.

Here there was evidence of an element of competitive knowledge production. The university group prided itself on building a more comprehensive analysis and delivering a better diagnosis than its competitor. Although the people in Wielewaal were indeed satisfied and felt safe, the housing associations still deemed interventions necessary for the sustainable development of this neighbourhood, because Wielewaal did not seem to have a sustainable economy and housing situation when looking at income and housing value. Housing associations knew this already,

	Income	Safety	Real estate value	Social quality
Rotterdam	100	100	100	100
Pact op Zuid	89	90	89	91
Wielewaal	72	128	78	100

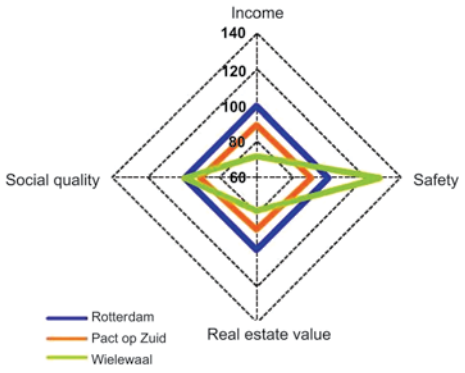


Figure 3: Diamond-based model of the neighbourhood of Wielewaal.

because when tenants left, houses remained empty for a longer period of time and new tenants were not eager to live there, nor did the neighbourhood welcome them. The other partners were less aware of this problem. The public partners, on the other hand, were aware of the residents' satisfaction with the social quality and safety of this neighbourhood, factors that the housing associations were less aware of. Different partners were evidently using different datasets and were drawing different conclusions. This inference added to the conclusion that a more encompassing, multi-layered, neighbourhood-based information system, such as the diamond model, was in fact needed.

After the main information system product was ready, the Guidebook 2008, it became immediately apparent that it was well received by all the parties involved. The cooperation between both research groups improved and they started working together on advice for defining smart targets for Pact op Zuid in 2016.

A more interesting question might be: why was friction relatively absent? There are several possible reasons, some with connections to the combination of capacities in the research team. First of all, the strong orientation of the university towards innovative research for the region and the city seemed important. This university strives to be a socially responsible partner to the city and the region and to involve itself as both a commercially and non-commercially operating partner, contributing to education and innovation in a vital urban culture. The university

is recognized for this role and has been awarded many grants for its innovative research. Furthermore, the university is cooperating with Pact op Zuid on a larger scale, providing many hundreds of students who practice and improve their work skills and carry out research projects in South Rotterdam. In addition, several of the university's researchers are currently writing a doctoral dissertation on the issue of South Rotterdam, providing the partners in Pact op Zuid with new insights.

The decision to ask for extensive feedback on the draft products has been important in convincing the executives and the programme manager of the feasibility of our instrument. Organizing a monthly opportunity for feedback between researchers and policymakers was important. Also, the involvement of policymakers in revisions to the report, the presentation of the results, and the writing of articles about the project was significant.

Another set of reasons is connected to the way that team members defined their roles. The researchers showed how their work is based on theoretical concepts/models and traditional data collection techniques, and used innovative methods of visual studies in combination with statistical analysis. Also important was the city advisor's position on research, for he believes that knowledge transfer results in better governance. He was one of the prime movers behind the idea of using visual information to improve decision-making processes (Spierings & Meeuwisse, 2008a; Spierings, Meeuwisse & Van der Zanden, 2008). Every decision became a collaboration between research and practice. Every step was extensively discussed against the background of the organizational contexts in which the information was to be used, and in which it had to be meaningful and functional.

What are the necessary conditions for good collaboration between researchers and interventionists? They are: working in multi-disciplinary teams, reaching a common understanding between practice and research, deep personal involvement, selling and planning of draft products, a constant exchange of ideas, sharing ideologies relevant to practice-based research and scientific soundness (Schön, 1983; Yin, 2008). Both researchers and policymakers were involved in the revisions of the reports, guaranteeing a fit between relevance and methodological soundness. The researchers wrote articles about the project and made presentations, and in some instances the policymakers were co-presenters and co-authors, honouring their work and intellectual input. Now the instrument is considered to be more or less complete, with most of the innovative work done. Every year, a new report will be made on the same methodological basis. The project team has changed. There are fresh research assignments now, and other partners have a stronger influence.

CONCLUDING REMARKS

There are some advantages to an in-depth case study that contradict Grabher and Hassink (2003), who blame the lack of clear conceptualizations in urban studies on the anecdotal selection of case studies, which does not allow researchers to draw lessons for the future of cities and regions. How is cooperative knowledge production organized in this case study? What are the characteristics of an information system that can be used to measure the effects of a multi-actor programme for comprehensive urban redevelopment? The following lessons can be drawn.

A multi-disciplinary research team developed a new information system for a multi-agency urban renewal programme called Pact op Zuid. The research team's self-management strategy fitted well with the leadership philosophy of Pact op Zuid (Uhl-Bien, Graen & Scandura, 2000). Autonomy has a positive impact on performance when work pressure is high and innovation is favoured (Cohen & Bailey, 1997). The research team started the project by listening closely to the ideas of the executives. In their opinion, the standard systems led to an information overload and an overemphasis on target groups or specific, isolated themes. The biggest problem they experienced was the lack of conceptual coherence of the available information systems. As a consequence, they did not use the available local information systems. The diamond model for neighbourhoods provided them with better oversight.

Both the research team and the multi-agency executive felt they were a special team working on a prestigious task (Homan *et al*., 2007). Together, they developed a cooperative knowledge production practice in which researchers and interventionists operated in co-makership and formed strategic alliances with other organisations. As a first result, the analyses will be repeated every year. Two keywords are perseverance and passion. Even if the initial positive effects of Pact op Zuid cannot be demonstrated immediately, the partners want to be able to continue the programme. Even if the statistical data did not show progress yet, the partners want to garner expertise and information that helps them keep faith in the Pact. In this respect, belief is probably just as important as being certain that something is working or not. Partners are convinced that, as long as people believe in it, the Pact will continue and will remain a necessity. There is a great deal still to be done in South Rotterdam, and on many fronts simultaneously: higher levels of employment, better education, improved housing, attractive public spaces, beautiful homes and satisfied people. As a secondary result, all the other neighbourhoods in Rotterdam will also be analyzed with the diamond model.

The principle of KISS and smart data collection – directed towards better governance – was theoretically based on the conceptual model of urban development. This case shows the results of a mutually supported process of knowledge production and knowledge circulation on information

management in urban renewal. These results can withstand some of the inevitable friction and stalemates if one is patient and respects politics and changes in power. The researchers and interventionists learned during this process that the products have to be cleverly marketed (Homan *et al.,* 2007). Spending too much time on developing the product, and not focusing intently enough on communicating and selling ideas to other organizations in the city was a weakness in our project which almost frustrated its progress and efforts at cooperation. Communication with all the relevant power structures in the city is crucial.

The team is still working together. The team members are aware that they need to add an evaluation phase to further test the instrument and levels of cooperation. They need to support the proliferation of the basic ideas, and to improve the communication strategy. This paper posed the question of whether competition or cooperation was dominant in this case, or whether both factors were in play. Both forces were operating in Pact op Zuid at the same time, together leading to the development of an innovative product.

NOTE

1 The project team consisted of an *urban planner* working for a housing association who was hired by the city council to work as programme manager of for "Pact op Zuid"; an *economist* working within the city administration who was hired as the programme advisor to "Pact op Zuid"; an *information technologist* working for Rotterdam University as a project manager; a *social geographer* working within the city administration research department; an *urban sociologist* and research leader working for the University of Rotterdam research group "Growing Up in the City", and a *psychologist* working as a teacher/researcher at Rotterdam University.

2 Spierings & Bik, 2007a, 2007b; Meeuwisse & Spierings, 2007; Spierings & Meeuwisse, 2008a, 2008b.

REFERENCES

Callon, M., Laredo, P., Rabeharison, V., Gonard, T., & Leray, T. (1992). *The management and evaluation of technological programs and the dynamics of techno-economic networks: The case of the AFME.* Research Policy 21. North Holland. 215–236.

Carley, M., & Christie, I. (2000). *Managing Sustainable Development*. Earthscan Publications Ltd.

Cohen, S. G., & Bailey, D. E. (1997). What Makes Teams Work: Group Effectiveness Research From the Shop Floor to the Executive Suite. *Journal of Management, 23*(3), 239–290.

Davenport, S., & Bibby, D. (1999). Rethinking a national innovation system: The small country as 'SME'. *Technology Analysis and Strategic Management, 11*(3), 431–462.

Everson, J. M., & Guillory, J. D. (1998). Building statewide transition services through collaborative interagency teamwork. In F. R. Rusch & J. Chadsey-Rusch (Eds.), *Transition from school to work: New opportunities for adolescents* (pp. 299–317). Pacific Grove, CA: Brookes/Cole.

Feldman, M. P., & Florida, R. (1994). The Geographic Sources of Innovation: Technological Infrastructure and Product Innovation in the United States. *Annals of the Association of American Geographers, 84*(2), 210–229.

Grabher, G., & Hassink, R. (2003). Fuzzy concepts, Scanty Evidence, Policy Distance. *Regional Studies, 37*(6–7), 699–700.

Gredig, D., & Summerfeld, P. (2008). New Proposals for Generating and Exploiting Solution-Oriented Knowledge. *Research on Social Work Practice, 18*(4), 292–300.

Healey, P. (1995). Discourses of Integration: making frameworks for democratic planning. In P. Healey, S. Cameron, S. Davoudi, S. Graham & A. Madani-Pour (Eds.), *Managing Cities: The New Urban Context*. Chichester: John Wiley & Sons.

Homan, A. C., Knippenberg, D. van, Kleef, G. A. van, & Dreu, C. K. W. de (2007). Bridging faultlines by valuing diversity: Diversity beliefs, information elaboration, and performance in diverse work groups. *Journal of Applied Psychology, 92*(5), 1189–1199.

Lundvall, B. A. (Ed.). (1992). *National systems of innovation*. London: Pinter.

Meeuwisse, M., & Spierings, F. (2007). *Samen werken aan Pact op Zuid* [Cooperation on Pact op Zuid]. Rotterdam: Hogeschool Rotterdam.

Moulaert, F., & Sekia, F. (2002). Territorial Innovation Models: A Critical Survey. *Regional Studies, 37*(3), 289–302.

Popper, K. (1944). The Poverty of Historicism, II. A Criticism of Historicist Methods. *Economica*, *11*(43), 119–137.

Robert, P., & Sykes, H. (Eds.). (2000). *Urban Regeneration. A Handbook*. London: Sage.

Rogers, R., & Power, A. (2000). *Cities for a small country*. London: Faber and Faber.

Schön, D. (1983). *The Practitioner as Researcher. How Professionals Think in Action*. New York: Basic Books.

Shelton, H., & Sorter, B. (1980). *Improving Interagency Teamwork.* Retrievable at http://www.joe.org/joe/1980november/80-6-a3.pdf

Spierings, F., & Bik, P. (2007a). *Rapportage Bestuurdersronde Pact op Zuid* [Administrative report on Pact op Zuid]. Rotterdam: Hogeschool Rotterdam.

Spierings, F., & Bik, P. (2007b). *Rapportage Directeurenronde Pact op Zuid* [Executive report on Pact op Zuid]. Rotterdam: Hogeschool Rotterdam.

Spierings, F., & Meeuwisse, M. (2008a). *Pact op Zuid Reisgids 2008* [Travel guide to Pact of Zuid 2008]. Utrecht: Uitgeverij IJzer.

Spierings, F., & Meeuwisse, M. (2008b). *Wijken in beweging* [Neighbourhoods in transition]. Utrecht: Uitgeverij IJzer.

Spierings, F., Meeuwisse, M., & Zanden, W. van der (2008). *Pact op Zuid sociaal gezien* [Pact op Zuid from a social perspective]. Utrecht: Uitgeverij IJzer.

Spierings, F., & Notten, T. (2006). Researching, Teaching and Professional Development: Contributions to the Improvement of Social Quality. *Journal of Education, 186*(1), 47–55.

Steyaert, J., Spierings, F., & Autant Dorien, C. (in press). Promoting a practice-minder culture in research organizations. European Journal of Social Work.

Tire, M. J., & Hippel, E. von (1997). The Situated Nature of Adaptive Learning in Organisations. *Organisation Science, 8*(1), 71–83.

Uhl-Bien, M., Graen, G., & Scandura, T. (2000). Implications of leader-member exchange (LMX) for strategic human resource management systems: relationships as social capital for competitive advantage. In G. R. Ferris (Ed.), *Research in Personnel and Human Resources Management* (pp. 137–185). JAI Press, Greenwich, CT, Vol. 18.

Yin, R. (2008). *Case study research: Design and methods*. Beverly Hills, CA: Sage Publishing.