HOUSING MANAGEMENT AND MAINTENANCE PRACTISE OF DUTCH HOUSING ASSOCIATIONS

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Abstract

This paper summarises the state-of-the-art in housing management and maintenance practise of Dutch housing associations based on a survey conducted among almost all housing associations. We address the question what the current developments are in housing management and maintenance practice in the Netherlands.
In a housing stock policy document a housing association constructs a picture of the composition of the desirable dwelling portfolio and sets up market and complex strategies. 71% of the housing associations have formulated a housing stock policy document and 57% of all respondents have formulated management schemes on the level of housing complexes. The housing associations consider housing quality and market perspective as most important in determining their housing stock policy. 60% of the housing associations apply more than one quality level managing their housing stock. 71% of the housing perform condition assessments to draw up the maintenance planning. Just a third one of the housing associations use condition marks to record the technical state of building components. Over 60% of the housing associations use maintenance contracts for responsive maintenance and planned maintenance, especially for the maintenance of central-heating boilers and lifts. 36% of the respondents have concluded performance-based maintenance contracts for paintwork.

Introduction

There are currently 579 housing associations in the Netherlands, which between them manage 2.4 million dwellings. This represents 35% of the housing stock in the Netherlands. Growth is not so much due to new construction or the purchase of dwellings, but is further to an ongoing wave of mergers. Over the past decade, the average size of a housing association's managed stock has increased to 4,700 dwellings (Aedes 2003).
Dutch housing associations are not-for-profit organisations, which are obliged to operate in the interest of housing, in particular by providing decent, affordable housing to lower-income households. This is reflected in the Housing Act and the Social Rented Sector Management Decree (BBSH), which states the rights and obligations of Dutch housing associations (Nieboer and Gruis 2002; Priemus 2003). In the 1990s, the national government granted social landlords considerably more freedom of policy but also diminished the financial support of social landlords. Furthermore, demand for social housing decreased, partly due to a booming economy and changes in housing preferences towards home-ownership. As a consequence, housing associations, which own nearly the entire social rented sector in the Netherlands, began to adopt business-like approaches in their housing management. They had to operate more market-driven and client-driven. For technical management just the lower limits have been set. All dwellings have, in any case, to satisfy the minimal requirements of the Dutch Building Decree.
In this paper we describe the housing management and maintenance practice of Dutch housing associations, based on a recently conducted survey. The reference date is December 31 2003. We wonder if the business-like approaches in housing management are reflected in the way housing associations consider all kinds of aspects in formulating

their housing stock policy and how the policies are worked out. Investments and maintenance strategies will be related to the strategic policy. The strategic housing stock policy may determine the desired quality levels of the housing estates and complexes and/or dwelling types and building components. We wonder if housing associations differ in quality levels and which supporting tools they use in their technical management. Also interesting is how management practises have changed between 1996 and 2004. In 1997 a survey was conducted for a better understanding of the way housing associations operated as private organisations and how they related maintenance and improvement to strategic housing stock policies. The reference date of this survey is December 31 1996 (Straub 1997). In that time Dutch housing associations just acted independently from the government for some years. The survey revealed that some changes to a business-like approach got slowly from the ground. In this paper we describe the outcomes of the survey 2004. If applicable we compare the results with the outcomes of the survey 1997.[1]

Surveys

April 2004 questionnaires were electronically sent to 530 housing associations, members of branch-organisation Aedes. The analyses are based on 125 responses, a response rate of 24%. In total the 125 housing associations administer 542,000 dwellings. That is on average 4,335 dwellings per housing association. We think the survey is representative for all housing associations. In the survey 2004 45 housing associations with less than 2,000 dwelling are represented.[2]

The questionnaire was divided into nine sections, covering general data on the organisation, maintenance expenditures and investments, strategic housing stock policy, quality levels, organisational structure of the technical department and major tasks, in-house direct labour organisations, maintenance planning, maintenance commissioning and contracting and automation. In this paper we focus on the organisational structure, the strategic housing stock policy, quality levels, maintenance planning and maintenance commissioning and contracting.

Organisational structure of housing associations

Historically, the organisational structure of a housing association reflected the main three tasks of the organisation: the letting function, the financial function and the technical function. A technical department was responsible for the maintenance. The technical department also acted as the principal for refurbishment and new development.

[1] In 1997 questionnaires were sent to all 382 housing associations, which owned over 2,000 dwellings. In 1996 about 800 housing associations existed. The analyses were based on 181 responses, a response rate of 47.1%. The respondents administered, on average, 5,362 dwellings. The questionnaire was divided into five sections covering organisational structure and major tasks, maintenance planning, maintenance contracting, strategic housing stock policy and technical management, and management information and automation. Because of the survey 1997 was just send to housing associations owning over 2,000 dwellings, a scientific rightly comparison is not possible.

[2] We got the addresses of the housing associations from branch-organisation Aedes. Over 90% of Dutch housing associations are member of Aedes.

In 1997 many housing associations were still organised on the basis of their three main tasks: the letting function, the financial function and the technical function. Technical departments were responsible for the planning and the execution of planned maintenance. However, these departments fulfilled, as compared to the situation prevailing before, a more supportive role. Their principals were situated in front offices or in central business units engaged in the strategic housing stock policy. Staff members of front offices were made responsible for all contacts with tenants in a district, including response maintenance and relet repairs (Straub 1997 and 1998). In 1997 we expected that more housing associations would reorganise their organisational structure into models reflecting front office and back office tasks in the years to come. Separate departments for strategic developments would be formed. This department would be made responsible for setting goals and market strategies and all the qualities of the 'products', target groups and rents. A technical service department would operate as a facility department within budget restrictions and quality levels.
Between 1997 and 2004 a lot have been changed. Housing associations operating in a locality have been merged to improve their financial and competitive positions. We never had expected that mergers of housing associations would take place at such a large scale. In the survey 2004 we did not ask for the organisational model. We are aware that between 1996 and 2004 a broad range of organisational models has been developed. The size of the housing association seems to be a very important factor in professionalizing organisations and decisions to reorganize and probably outsource activities. Unfortunately little research is done to the organisational structure of landlords.

Technical housing management

In the survey 2004 the housing associations were asked which part of the organisation is made responsible for executing technical housing management activities. We wonder if those activities are located in technical departments, in front offices (combined with the letting function), in central business units, or are being outsourced.
Technical departments and front offices are being responsible for response maintenance (registration of complaints and breakdowns and commissioning); technical departments being the most important ones. We expected that front offices would execute all activities that involve direct contact with tenants. We think that developments in information technology have encouraged the set up of call-centres for complaints, located at technical departments. Employees located at front offices perform in respectively 42 and 34% the registration and inspection of re-let maintenance. In the other cases technical departments are responsible.
Technical departments and central business units execute planned maintenance activities. 43% of the housing associations have assigned responsibilities to central business units in drawing up long-term maintenance plans and yearly activity plans. Besides, central business units often play a role in budget and quality control, initiating new innovations and ordering of maintenance.

Strategic housing stock policy

In a housing stock policy document a housing association constructs a picture of the composition of the desirable dwelling portfolio and sets up market and complex strategies. 71% of the housing associations have formulated a housing stock policy document. Most of them indicate that the documents have been based upon the organisation mission statement and its goals. The housing associations elaborate their strategies for investments and exploitation mostly on the scale of housing complexes and/or so-called market-product combinations. Market-product-combinations are similar to product groups or product lines.[3]
A housing stock policy document has to be specified for each housing complex or housing estate. 57% of all respondents have formulated management schemes on the level of housing complexes. These documents are guidelines for operational tasks, forthcoming of specified policies for target and client groups (e.g. allocation), rent and rent adjustments, investments, maintenance, services and social housing management. The respondents name rent and rent adjustments and maintenance policy most frequently.

Considerations

Determining their housing stock policies, housing associations consider a broad range of aspects. The housings associations were asked to indicate the importance of several aspects and considerations in their housing stock management. See table 1. The results are very comparable with the results of the same question in 1997.
The housing associations consider housing quality and market perspective (lettability) as most important in determining their housing stock policy. Respectively 89% and 83% approve those aspects to a (very) considerable influence. We acknowledge that housing quality is a complex concept.[4] We are not sure whether the respondents of the survey perceive housing quality the same manner as we do. We think housing volume and aspects of housing comfort, e.g. standard of equipment and finishing of the kitchen, bathroom and toilet, are generally seen as the most prominent ones. If a housing association opt for improvements in housing quality per dwelling (‘one unit at a time’), housing quality comprises the performance categories fire safety, utility safety and health, social safety, energy and water saving, and housing comfort. (Straub 2002b).

[3] A housing association classifies its property in product lines according to a number of product, client, price and exploitation characteristics. One or more housing complexes belong to a product line. A technical complex can consist of one or more buildings (Straub 2002b).

[4] We define housing quality as: the physical characteristics of a dwelling, which are relevant to the use of that dwelling, including the plan features and facilities provided (Straub and Vijverberg 2004). Plan features are those, which are determined by, or are evident from, the building structure and layout of the floor plan of the dwelling in question, i.e. the volume and floor space, the (number of) rooms, their size and layout in relation to each other; internal and external accessibility (e.g. availability of a lift), outside spaces, such as a balcony, loggia, (roof) terrace or garden and external structures (shed, garage) or off-street parking space. Facilities include the standard of equipment and finishing of the kitchen, bathroom and toilet, heat and noise insulation, security features, etc. and (central) heating and hot water installations, climate control, electrical systems, lighting and communication. The type of dwelling, i.e. single-family and multi-family, as well as its internal and external accessibility largely determines the plan features. Other determinant factors include the year of construction (built before or after the second world war and built after 1969) and tenure.

Also being ranked as important factors are the type of dwellings, social issues in street and neighbourhood and the technical quality. The housing associations consider the availability of subsidies, the environmental quality, regulations and life-styles of inhabitants as not important factors. We thought that life-styles, being a very prominent subject in the actual debate, would be ranked higher. Housing associations perceive the influence of the environmental quality still as very low. Sustainable long-term management of the existing stock plays still a minor role in decision-making process of housing stock policy.

Table 1 ***Percentages of housing associations according to the perceived influence of different aspects and considerations, as for 2004 (between brackets the percentages as for 1997)***

Aspect and consideration	**No influence**	**Some influence**	**Considerable influence**	**Very considerable influence**	**N**
Technical quality	1,1 (2,3)	32,2 (29,5)	52,2 (53,0)	14,4 (17,4)	90 (132)
Housing quality	1,1 (0,7)	10,0 (13,4)	57,8 (50,0)	31,1 (35,8)	90 (134)
Environmental quality	25,6 (27,1)	57,8 (55,8)	16,7 (17,1)	0,0 (0,0)	90 (129)
Urbanistic quality	15,6 (9,9)	53,3 (45,0)	31,1 (36,6)	0,0 (8,4)	90 (131)
Government regulations	30,0 (28,9)	48,9 (53,1)	18,9 (16,4)	2,2 (1,6)	90 (128)
Type of dwellings (single/multi-family etc.)	5,6 (5,2)	26,7 (26,7)	57,8 (50,4)	10,0 (17,8)	90 (135)
Year of construction or refurbishment	12,2 (22,6)	43,3 (53,4)	37,8 (21,1)	6,7 (3,0)	90 (133)
Social issues in street, neighbourhood, district	10,0 (1,5)	31,1 (24,2)	48,9 (52,3)	10,0 (22,0)	90 (132)
Market perspective (lettability)	2,2 (0,0)	15,6 (5,3)	42,2 (25,6)	40,0 (69,2)	90 (133)
Life-styles of occupants*	24,4	46,7	27,8	1,1	90
Wishes of sitting tenants	8,9 (6,9)	51,1 (39,2)	38,9 (43,1)	1,1 (10,8)	90 (130)
Exploitation result	10,0 (3,7)	40,0 (27,6)	43,3 (48,5)	6,7 (20,1)	90 (134)
Book-keeping value and/or going-concern value (net present value)*	11,1	48,9	36,7	3,3	90
Market value*	17,8	40,0	36,7	5,6	90
Social return*	13,3	41,1	38,9	6,7	90
Availability of subsidies	46,7 (38,3)	46,7 (44,5)	6,7 (14,8)	0,0 (2,3)	90 (128)
Own capital and/or solvency	10,0 (7,6)	36,7 (30,3)	44,4 (44,7)	8,9 (17,4)	90 (132)

* No figures as for 1997.

Quality levels

The outcome of the strategic housing stock policy will often be complex and maintenance strategies, including desirable quality levels. In our definition a quality level may include the technical quality, the housing quality, the quality of collective building parts and grounds (multi-family dwellings) and the level of services. 60% of the housing associations apply more than one quality level managing their housing stock. However, that means that 40% of the housing associations do not differ in quality per housing complex or housing estate.
The housing associations that apply more than one quality level were asked how the maintenance strategies are linked to complex strategies, like demolition, refurbishment and consolidation (continuing exploitation of housing complexes). For the period until demolition 92% of the housing associations apply an adapted maintenance strategy, for the period until refurbishment 67% and the period until sale 35%. We also expect that, if complexes are consolidated for a long term, the maintenance may depend on the product line, the particular client group or the individual clients or maybe the life-styles of the tenants (Straub 2002b). We are not able to underpin this assumption by the survey. Implementing quality levels, aspects of housing quality and technical quality are most frequently used, respectively by 92 and 81% of the housing associations. Only one third of the 75 housing associations that say to apply more than one quality level differ in service levels.

Maintenance performance levels
Maintenance strategies of housing association depend on anticipated interventions. A housing association can distinguish maintenance performance levels for the different kinds of maintenance: breakdown services (response maintenance), re-let maintenance and planned preventive maintenance (condition-based maintenance).
In 1997 housing associations distinguished in general, three maintenance performance levels: average, above average and below average. A performance level influences the budget for maintenance and the relation between planned maintenance activities, response maintenance activities and relet repairs. If a housing complex has been labelled ‘above average’ over 100% of the average maintenance budget might be spent. The strategic housing stock policy would determine the dwellings for target groups requesting for a higher housing quality and maintenance performance level. The dwellings could be maintained at a higher level when executing planned maintenance and/or reach a higher housing quality level at the time of executing relet repairs. Some planned maintenance activities can be executed more frequently or with higher quality materials. A complex can be labelled ‘below average’ if the strategic policy opts for refurbishment, demolition or sale in the near future. Only response maintenance, minor repairs and no replacements, will be executed for the remaining exploitation period.
According to the survey 2004 84% of the housing associations that apply more than one quality level uses maintenance performance levels in planned maintenance, 80% in re-let maintenance. Not so surprisingly just 43% differs in the quality of response maintenance. We think that differentiation in response maintenance is applicable in just a few circumstances. If a housing association has formulated a variation in quality levels, they have to implement these in all operational processes. 38% of the housing associations use maintenance budgets to differ in maintenance performance levels. 64%

use admitted maintenance activities to differ in maintenance performance and 58% of the respondents differ in maintenance activities cycles.

Maintenance planning

Maintenance policies related to the strategic housing stock policy have an impact on the form and meaning of long-term maintenance plans, techniques and instruments which support the planning of maintenance, e.g. the data collection and data processing. Data collected during a condition survey on-site and long-term maintenance plans should support policy-making in a variety of ways such as for choosing appropriate maintenance performance levels for housing and/or building components, prioritising maintenance activities and setting budgets.
We supposed that almost all housing associations use long-term maintenance plans. The housing associations were asked if they perform condition assessments to draw up the maintenance planning. 71% of the housing associations say doing that. It means no less than 29% do not perform condition assessments. The frequency of the condition assessments varies enormously. 43% of the housing associations that perform condition assessments are doing that yearly. On the other hand 29% of the housing associations actualise condition assessments one time out of three years. Theoretically there is a distinction between the inspection for the annual actualisation of the planning and a re-inspection or condition assessment. A re-inspection means exhaustive assessment of all building components: defects, condition marks, maintenance activities, etc. During an actualisation, only the need for the pre-planned maintenance activities is being checked. Condition assessment is not meant for preparing the year maintenance budget and planning of the work. Supplementary information is needed in the phase of preparing execution of remedial work (Straub 2003).

Data registered on-site: condition marks
A condition-dependent approach to planned maintenance leads to a decoupling of quality assessment from the determination of maintenance activities. Table 2 shows the data registered per building components on-site, by building inspectors.

Table 2 ***Data per building component registered on-site by building inspectors***

Type of defect	93%
Extent of defect	89%
Intensity of defect	58%
Condition mark building component (six-point scale)	33%
Type of maintenance activity	64%
Extent of maintenance activity	61%
Planning year	67%

Approximately 90% of the inspectors register the type of defects and the extent of these defects. It was expected that a large number of housing associations would express the state of building components in condition marks. But, just a third one of the housing

associations use condition marks to record the technical state of building components. We think that the use of condition marks makes the state of maintenance transferable between building inspectors and maintenance managers and the maintenance department and those involved in setting up the strategic housing stock policy. It is also very useful for data processing. We expected that as a result of several research projects, use of the method in the Dutch House Condition Survey, and being a popular subject in trade journals, continuing education, seminars, etc., the process of condition assessment using standard lists of defects and a six-point scale would have become more popular among housing associations.

Use of maintenance planning systems

A maintenance planning system fulfils a central role in the support of technical management processes. In 1997 almost all housing associations used maintenance management systems. The use of maintenance management systems according tot the survey 2004 is divers. Most of the housing associations use standard software packages provided by the market, sometimes linked to company information systems that support the main processes of the housing associations.

Although the fact that maintenance planning programs are widely used we wonder if those systems underpin the strategic stock policy making process. The maintenance management system must be capable of being used as a policy instrument, e,g, by enabling users to calculate maintenance performance levels based on the condition of building components before and after executing maintenance work. In this approach assessed defects and condition marks before at one side and acceptable defects and conditions marks after executing maintenance work at the other side, are steering instruments in the planning process. It should be pointed that the most of the programs used in 1997 were inadequate to use as a policy instrument and to translate strategic stock policies into differentiated maintenance policies.

Maintenance commissioning and contracting

The housing associations' direct labour organisations account for 9% of the total maintenance expenditures (Aedes 2003). The emphasis of the work of direct labour organisations lies on response maintenance and relet repairs. More than 90% of maintenance is outsourced to external building contractors. Offers from several contractors are most popular in maintenance commissioning (86%). Public tenders are used, for a small kind of the maintenance work, by 9% of the housing associations. Over 60% of the housing associations use maintenance contracts for responsive maintenance (breakdown services contracts and comprehensive contracts) and planned maintenance, especially for the maintenance of central-heating boilers and lifts.

If the strategic housing stock policy and maintenance strategies have been formulated clearly and performance requirements have been defined and made measurable, contractors could be made more responsible for the choice and implementation of maintenance activities. So-called performance-based maintenance contracts are being concluded with growing frequency between housing associations and maintenance contractors. 36% of all 125 respondents have concluded performance-based maintenance contracts for paintwork.

We think that the size of the housing association is an important factor in applying (performance-based) maintenance contracts. For large housing associations it is more or less essential to explore alternative means whereby maintenance processes can be managed efficiently and effectively. An additional factor is that the housing associations have chosen to re-focus on their core business, and a number now regard maintenance as a secondary process for which outsourcing, provided it is organized in a responsible manner, is preferable (Straub 2002c).

Discussion

We wondered if the business-like approaches in housing management are reflected in the way housing associations consider all kinds of aspects in formulating their housing stock policy and how the policies are worked out. We expected the implementation of housing stock policy documents and management schemes in almost all organisations and the use and further developments of instruments as condition-assessment and performance-based maintenance contracts. The results of the survey 2004 are in this sense a little bit disappointing. Just 71% of the housing associations have formulated a housing stock policy document and only 57% of all respondents have formulated management schemes on the level of housing complexes. 60% of the housing associations apply more than one quality level managing their housing stock. However, that also means that 40% of the housing associations do not differ in quality. But, we have to analyse the results in more detail before jumping to conclusions. We think the size of the organisation and market circumstances play a dominant role in the development of Dutch housing associations and that the development of housing associations diverges. The survey gives not enough reasons to say that housing stock policies of Dutch housing associations are strategic or not, according to Nieboer and Gruis (2002). The policies are in any way market oriented.
The strategic housing stock policy-making and maintenance policy-making should be based on objective, reliable information about the performance of housing complexes and building components. Data are required on the technical condition of the building components (e.g. condition marks), the housing quality (e.g. standard of equipment and finishing of the kitchen), the environmental quality (e.g. use of materials, energy-use and kind of heating system), adaptability for changes in housing and environmental quality and the realised costs for maintenance and improvements. Forecasted budgets needed to implement complex and maintenance strategies, should be part of the calculated going-concern value. 71% of the housing associations perform condition assessments to draw up the maintenance planning. Just a third one of the housing associations use condition marks to record the technical state of building components. It seems to be that condition assessments are still used for operational reasons: drawing up yearly activities plans and prioritising maintenance activities. We think that a clear coupling between the strategic stock policy and the technical management with respect to planned maintenance is still lacking in many cases. We also think that a gap between the information needs of managers and management information provided by standard software packages, still exists. New software is needed to facilitate policy-making by easy calculations and comparisons of budgets, quality levels and performance requirements.

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