ABSTRACT
A community school offers children and families a combination of education, welfare, sport and care amenities. The aim of Local Compensatory Policy (LCP) is to stimulate development in disadvantaged districts. Community schools are considered a means of achieving this goal.

The aim of this study is to develop a process model for the construction of community schools. The study looks at the matter from a project manager’s point of view and answers two questions: What does the process of constructing community schools entail? What does the difference between the community school creation process and a traditional building process mean to the project manager?

KEYWORDS: Multifunctional Use Of Space, Multi-project Management, Building With Progressive Insight, Process Management, Multifunctional Accommodation

1. INTRODUCTION
The objective of this study is to develop a process model for building community schools. This article begins by explaining what a community

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school is. Then the research questions are set out and the research methods are described. Following a description of the process, it is compared with the traditional building process and the consequences for the project manager are explained. A traditional building process is defined as follows: A process with a single principal for constructing accommodation for a defined primary process known to the principal. The article concludes with suggestions for further research. A representation of the process model can be found on the last page of the article.

1.1 Local Compensatory Policy (LCP)

A community school offers children and families a combination of education, welfare, sport and care amenities. The aim of Local Compensatory Policy (LCP) is to stimulate development in disadvantaged districts in the largest municipalities in the Netherlands. Community schools are considered a means of achieving this goal. This method makes use of the key role that primary schools play in children's lives. Children attend primary school every weekday for several years at a stage in their lives that is crucial to their life-long development and education. Community schools focus on the development of children through age 12; other district-based activities that indirectly improve a child's opportunities, such as adult education or an ICT club, can also be accommodated in a community school.

Many education, welfare, sport and care facilities are already available, but due to specialisation and targeted grants the institutions that offer these facilities have become highly compartmentalised over time. These institutions must work together in community schools to meet the needs of the district.

1.2 The municipality’s duty of care

In addition to the LCP, which addresses the needs of the population, there is another public policy change that is stimulating the creation of community schools: since January 1997 municipalities have a duty of care with regard to school buildings under the responsibility of central government. In that year, municipalities began receiving lump sum payments from the State, through the Municipalities Fund, to build, maintain the exterior of and provide the first furnishings for schools. As a result of this new responsibility, many municipalities are reviewing their immovable property holdings, which could potentially lead to education, welfare, sport and care institutions being combined to form multifunctional accommodation.
1.3 Participants

The services and facilities involved in a community school vary according to the specific local situation, but pre-school play groups, playgrounds, community/district centres, welfare organisations, sports clubs, libraries and childcare facilities play a role in every community school.

2. RESEARCH QUESTIONS

- How is the process of creating community schools structured?
- The process of creating a community school differs from the traditional building process. How does this affect the project manager?

3. RESEARCH METHOD

Since a community school is a form of multifunctional space use and almost no research has been done on the process of developing community schools, the first step was to study the literature on multifunctional use of space in general. The exploratory research phase also involved a study of the literature on project management and process management. In order to gain a better understanding of the daily practice in the development of a community school a case study of a concrete project was done. This study was based on file research and interviews with concerned parties. To broaden the perspective beyond this single project, interviews were held with practitioners who had experience with multiple projects (local officials, school directors, architects, project managers) after the case study. The interviews provided information about the process involved in developing community schools and the problems that arise. An in-depth literature study was then carried out to gain a greater understanding of these problems.

After completion of these research steps, a description of the process model was produced and presented to expert panels for validation. The description was made somewhat more specific based on the comments offered by the expert panels. Finally, the process described was compared with a traditional building project, the differences for the project manager were identified and conclusions were drawn.

4. RESULTS

The goal of the development process is to facilitate collaboration between primary schools and welfare, sport and care institutions. This collaboration should be based on the needs of children and families in the district and accommodated in a building that best facilitates the collaboration.
The construction of a community school requires a project organisation consisting of various participants. The municipality can acquire assistance from specialists with expertise in a range of fields.

4.1 The process model

The process of developing a community school comprises three considerably different components, which are divided into subprojects: ‘Cooperation Organisation’, ‘Building and Grounds Development’, ‘Management and Operation’. Each of these subprojects has its own project group and project manager (PM), and together they form what is known as a multi-project [Gayà Walters, 1999]. The subprojects are coordinated at a higher level, which is referred to as ‘Multi-project Coordination’. Decisions at that level are taken by a steering group and are general and strategic in nature. The necessity of ensuring that the subprojects are properly aligned with each other makes steering them a complex task. The project director (PD) is responsible for this task.

4.2 Multi-project Co-ordination

Multi-project Co-ordination is the co-ordinating level above the subprojects. At this level we refer to stages rather than phases, because the subprojects are not always in the same phase. The stages are preparation, programming, specification and use. Within these defined stages, the subprojects will for the most part be in the same phase.

The preparation stage differs from later stages in that there is only one project organisation layer, and it is characterised by clear phases and an important substantive process. At this stage, goals and preconditions for the community school are determined. No subprojects have been established and the project does not yet qualify as a ‘multi-project’. Programming and specification are carried out as part of the three
subprojects mentioned above. At this stage the steering group’s main tasks are control and decision-making. Important go/no-go decisions are taken on the basis of decision documents from the subprojects. As many of the participants rely on the municipality financially, important decisions regarding the budget will require approval from the municipal executive.

The steering group members are representatives of the participants’ boards and the municipal executive, a project director in charge of coordination and, if necessary, external experts.

4.3 Cooperation Organisation subproject

The aim of this subproject is to translate the goals and preconditions set by the steering group into concrete activities for the community school. Activities will be set up and a Cooperation Organisation developed to monitor the performance, co-ordination and evaluation these activities during use.

The subprojects have comparable phases, i.e. definition, design, preparation, realisation and aftercare. Because the subprojects are designed at multi-project coordination level, the initiative phase can be omitted.

Because the participants do not have a common primary process before the project begins, this subproject will be very intensive and the participants will need to have full confidence in each other for systematic cooperation to be possible. One way for them to get acquainted is to set up a network organisation. This is a community school without a common building: the participants coordinate their activities and times, and learn to appreciate each other’s work and trust one another. Gradually this leads gradually to systematic cooperation. The network organisation is be very closely related to the design of the activities for the community school and is the most important means of acquiring greater insight during the design process.

The project group for this subproject takes its members from the boards of the participants at district level and is co-ordinated by a project manager. The project group can set up working groups during the project to work out the details of specific issues. The working groups are composed of professionals who work for the participants and – depending on the subject matter – possibly district residents. The project group and the working groups can obtain additional expertise from external specialists. The developments within the project group are discussed regularly with the future users, who are united in a consultative group.
4.4. Building and Grounds Development subproject

The aim of this subproject is to translate the goals and preconditions set at Multi-project Coordination level with respect to the building and grounds, the activities of the community school and the conditions for management and operation translated into a building and fully developed grounds.

The phasing of this subproject is based on the traditional building model. Because the development of the primary process for which the building and grounds are to be realised is incomplete when the subproject begins, and the participants do not know each other, progressive insight plays an important role in the construction of a community school. The definition phase and design phase have been relegated to this subproject in order to postpone final decisions and, in doing so, allow as much scope and time as possible for progressive insight in the Co-operation Organisation subproject.

The project organisation is comparable to that of the Co-operation Organisation subproject. The members of this project group should have experience with their own organisation's property and should not be involved in any other project group. This is to keep the expertise in the project group, avoid putting too much pressure on one person from the organisation and prevent any conflicts that arise in one project from disrupting relations in another.

4.5. Management and Operation subproject

The aim of this subproject is to take the community school's activities, the structure design and the goals and preconditions for Management and Operation and translate them into Management and Operation activities and a management organisation whose task is to carry out and evaluate these activities.

The object of community school management is to 'lubricate' relations between those involved in the building and the activities. When space is shared, it is necessary for example to coordinate the times of the activities accommodated in the same space.

Good management costs time and money. This often comes as a surprise to participants who have never had anything to do with accommodation of this size. The participants will learn about most of the costs they are unfamiliar with during the course of this subproject; it is therefore very important to have a good understanding of the operating costs during the construction process.

The conditions that apply to the aforementioned subprojects also apply to the project organisation and the participants’ representatives.
4.6 Communication between the subprojects

It is the project director’s task to ensure that intensive feedback takes place among the subprojects because each one takes decisions separately regarding the construction of the community school and their results must dovetail seamlessly with each other. The feedback at the programming stage is the most intensive. In total there are 16 feedback moments; to ensure proper coordination the subprojects need to share information with each other continuously. The project managers and the project director are largely responsible for the feedback. They consult with each other and issue independent recommendations to the steering group and the project groups regarding the status of the subprojects and the compatibility of the interim and end results produced by the subprojects. The representatives in the steering group, project groups and working groups must also continually keep each other up to date.

At each feedback moment, the result of the previous phase(s) are linked to:

- the result of the previous phase within the same subproject;
- the latest developments in other subprojects; and
- the goals and preconditions for the community school

4.7 Process description

The critical path of the entire project is described to provide an idea of the 16 feedback moments. The critical path serves as a guideline for planning successive decisions and should not lead to a specific substantive focus on the phases along the path. It is especially important for each subproject to undergo continuous development.

The process description provides a general view of the process as a whole. The figures in parentheses correspond to the feedback moments in the process model.

Programming and specification of a community school are preceded by intensive preparation. Participants get to know each other; the needs of the district and the participants’ strategies must be melded into shared goals and preconditions for the community school. Information acquired from experience is used to conduct a feasibility analysis on the basis of the goals and preconditions set. The feasibility analysis comprises a risk analysis and a general budget calculation. The first feedback moment (1) entails deciding whether the project as a whole is feasible. If the risks and the general budget are deemed acceptable, all the subprojects are carried out. All the participants sign a declaration of intent and the Cooperation Organisation subproject is set up. At this time, it should be known which party will have ownership of the community school: the municipality, the participants, an external party or a combination of these.
Based on the goals and preconditions defined at Multi-project Coordination level, specific requirements are drafted within the context of the Cooperation Organisation subproject for the community school activities and for the Cooperation Organisation. These requirements are checked against the goals and preconditions for the community school at feedback moment (2).

During the design phase, the requirements are translated into specific joint and individual community school activities and a design is drawn up for the Cooperation Organisation. The Building and Grounds Development subproject can be launched on the basis of the approved design-in-principle (3). At this point it is essential to know who has ownership of the community school so that the owner can give input on the design of the building and the grounds.

The functional Schedule of Requirements for the building and the grounds is drafted based on the goals and preconditions and the design-in-principle from the Cooperation Organisation subproject. Once the functional Schedule of Requirements is approved (4) the structure design (SD) is produced.

On the basis of the approved SD (5) the Management and Operation subproject is set up, whereby the community school activities and the SD requirements are drafted for Management and Operation on the basis of the goals and preconditions. After these requirements have been approved (6) they are translated into a design for the Management and Operation activities and the management organisation.

Upon approval of a design-in-principle for Management and Operation (7), building performance conditions can be defined and set out in the spatial schedule of requirements. Following the related feedback moment (8), a provisional design (PD) can be produced on the basis of the spatial schedule of requirements. Once the PD has been approved (9) the technical Schedule of Requirements and definitive specified requirements can be drawn up. These requirements must be unambiguous and, after approval (10), will form the basis for the definitive design (DD). Once the DD is approved (11), in principle no further changes may be made to the building or the grounds. A final cost estimate can be made to determine how the community school will be financed. If agreement is reached on these points, a legally binding cooperation agreement is signed. Now it is time to produce the specifications, invite tenders and award the contract (12) for the project. After the contract is awarded, the building is constructed and the grounds developed. By the end of the realisation phase the designs for the Cooperation Organisation and Management and Operation subprojects must be completed. Once these designs are approved (13), preparations can be made for what should be a flawless start of the activities and the organisations that will keep them running (training people, purchasing support materials). The activities are launched and the organisations are set up after (14) and right before handover of the Building and Grounds. The activities begin and the Building and Grounds
are put into use after the handover (15). An organisation is in place to supervise the day-to-day operations. Periodic evaluations are carried out to check whether the activities are meeting the specified needs or achieving the desired results and whether the management, building and grounds are well-suited to the primary process of the community school (16). Conclusions are drawn from these evaluations, which may result in adjustments being made to certain aspects.

5. CONCLUSIONS

5.1. Comparison with the traditional building process

The traditional building process and the process of constructing community schools are alike in that they both entail the development of a building and grounds that are suited to the principal’s primary process and both involve taking management decisions. However, the process of developing community schools has the following distinct characteristics:

- At the start of the project, the primary process has not yet been developed.
- The principal is actually a group of participants which, in most cases, do not know each other and are unfamiliar with one another’s work.
- Even the principal (steering group) does not have the authority to make major decisions (particularly regarding the budget) and must obtain the municipality’s approval.
• The project is divided into subprojects, each with a specific output, so the building process is not autonomous.
• Intensive interaction between the subprojects is needed to ensure their mutual alignment.

These features make this process much more complex than a traditional one. The complexity is the result of the feedback between the subprojects (substantive) and the feedback among the participants (social).

5.2 Consequences for the project manager

A project manager in a traditional building process can fulfil the role of the project manager in a Building and Grounds Development subproject and of the project director for the multi-project.

A project manager has to have knowledge of his own field (construction), but in both of these cases, the differences also require him to understand other fields and respond to developments originating from them. In addition to project management he must be familiar with multi-project management and process management. The project manager must have well-developed expertise and social skills, so that he/she is able to communicate with all the participants.

The level of abstraction is higher for the project director; his tasks are strategic in nature and are more remote from the end result.

6. RECOMMENDATIONS FOR FURTHER RESEARCH

To supplement this research, it would be useful to explore the processes involved in the Cooperation Organisation and Management and Operation subprojects in greater depth. To ensure that nothing is missed and to clearly identify the consequences of decisions during new development processes, it is advisable to collect information gained by experience and use it as a checklist for developing community schools. Experiences with respect to upkeep could provide important input too. There is still a great deal of uncertainty about ownership and financing, and further study in these areas is definitely needed. Finally, the internal consequences of the development process for the participants also requires further research.
7. REFERENCES


http://www.bredeschool.net
http://www.habiforum.nl (multifunctional use of space)