1 ABSTRACT
In Europe Church congregations facing a challenge to find re-uses for their church buildings. Based on a rising lack of members and financial incomes, which are needed for the maintenance of their buildings. Due to this financial critical situation, new usages and users must be found. On the one hand the re-use is a cultural question touching many aspects of heritage and community value, but on the other hand it is certainly facing the real estate market. Buildings are often in a very central location, which is suitable for usages, which demand a high number of customers.

Re-use means also that the conversion has an enormous impact in the building structure and asks usually for an enormous investment. Besides the physical task how to handle the building, the way how it becomes reused is various. Different usages like community-based solutions, mixes usages can also be found like commercial or residential reuse. The solutions are mainly based on the building type of the church, on the financial possibilities of the owner but also on the location.

Keywords: adaption, church, reuse, transformation, community buildings

2 SITUATION OF CHURCH BUILDINGS IN EUROPE
Church congregations in Central European countries like the Netherlands or Germany are confronted with substantial challenges: Church memberships and activities are decreasing due to a rising secularization in the society (Vries 1990).

A significant reaction is that the church as a societal institution is transforming, which is caused by the decline of regular worshipper but also the number of members. With that problem and challenge both congregations have to cope. The numbers of worshippers and members are constantly decreasing, while the total amount of churches are stable. Since 1990 both congregations lost in Germany about 13 mil. members, decreasing from 58 to 45 mil. individuals, in the same period the number of church buildings remained with 44.000 churches almost the same (Katholische Kirche in Deutschland, Evangelische Kirche in Deutschland 2018).

The expectation is that membership numbers in Europe will further decrease, which is caused by to less baptisms and constant lowering membership numbers. A consequence will be that between potential users and available church buildings the imbalance will increase.

One problem for both congregations occurs by controlling the costs of maintenance. In comparison the amount of underused buildings requires a comparatively intensive and costly maintenance – facing decreasing membership and membership fees.

A consequence is that the situation sparks the discussion about adaptation, change or re-use of church buildings. Countries like the United Kingdom and the Netherlands show a wide range of differently reused churches which could be exemplary for other European cases. (Krämer, Kuhn 2008) One solution to deal with that challenge could be to find a reuse and adapt them to another usage. Within the academic discourse the main concepts to re-use buildings are based on their cultural and substantial building value, strongly referring to the conceptual work from Alfons Riegl. (Riegl 1903)

Reuse implies changes of use and structure of the building, ranging from adaptations of the facade to extensions by adding new parts to the main buildings. In the discourse the terms reuse and adaptation are often used in a flexible way. Liliane Wong emphasis in her publication of 2017 a systematic overview of the different concepts in the field of adaption of buildings. She stresses that adaptation means the changes that structurally alter the buildings capacity, function or performance, while extension addresses the enlargement of the building, including “expanding of the capacity or volume of a building, whether vertically by increasing the height / depth or laterally by expanding the plan area” (Douglas 2006).

To focus the discussion, it is necessary to approach the topic by differentiating the meaning of the terms maintenance, refurbishment or renovation: They all focus on the actual structural condition and technical status of a building (without changing e.g. functions): maintenance and renovation stresses a suitable
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constructional condition of a building; while refurbishment means more the modernization of a building (Douglas (2006):589).

The terms adaptation and extension are in their meaning often familiar and flexible used, because both are focusing on the optimization and extension of usable space. The field also includes various concepts such as transformation, conservation, remodeling, restoration, etc., which have a similar meaning concerning the structural design of buildings. The consensus of the terms is the maintenance and preparation of an existing building to maintain its usability. The different levels of usage of the terms are related to the type and extent of structural intervention in the building stock. To emphasis this, renovations are aiming to establish a buildings use-value while modernization implies an upgrade of the current building stock.

The position of a church building in the urban pattern has a spatial impact and supports the orientation (Cramer and Breitling 2007). For rural areas the tower of a church building is a visible landmark, which helps to distinguish the places. The public is perceiving a church building as a public place, which is most of the time accessible without any restrictions. Especially in the rural areas the church building is one of the last areas where the community can meet (Beste 2014). Confronted with this meaning of the church building the danger of vacancy is in a rural settlement is not higher than in an urban structure, but for the society it could have more impact. Church building fulfill an established role as a community building and are a symbol of communities in their sense of belonging and social capital (e.g. Putnam, 2000). The special location and heritage and historic role make churches to focal points in the urban pattern (Shopsin 1986). A church is the physical manifestation for religious and social practices and are the physical manifestation for generating memory (Clark 2007).

The treat of a closing or a re-use of a church might disrupt the established social and religious practices and consequently result in internal local conflict. Clark (2007) stresses that the type and type of re-use impacts the individual and particularly religious memory associated with the building. The way of re-use and adaptation might preserve the building as a physical built memory or heritage, but the religious practices and memory will be substituted by other usages. European countries deal with that in different ways. For example, in Germany the practices of re-use and adaptation are still very modest, in opposite to the Netherlands have a rich repository and long-standing practice on the re-organisation of churches.

3 MATERIAL AND METHODS

The Netherlands have a longstanding experience in reusing churches, which became after the second world war an intensive drive. Due to that it was possible to develop a broad knowledge and existence of realized projects allows reflection on different ways of reuse practices, the linked challenges and occurring barriers, which have been experienced in this research based on four major streams: a) use related, b) structural, c) urban and d) governance/process related characteristics. The research approach relies on mixed methods, combining different mapping methods to assess the spatial and structural characteristics, a policy analysis and semi-structured interviews to approve the governance and institutional dimension.

The policy analysis and interviews are important to show the different legal and institutional situation for church buildings. Most church buildings are protected by law, which create the framework for structural interventions and show the possibilities and ways to reuse. Financial instruments like membership allowances, fixed taxes or furtherance have a critical position regarding the financing of the mainlanders of the building. The further development of re-use concepts or implementation strategies operation seem important in that context.

The complete sample includes an initial exploratory mapping of 110 reused churches, containing a) types of reuse, b) denomination, c) building date and time period that the church and converted, monument status and d) spatial embeddedness in the urban or rural landscape. Based on this first stage of the mapping, 35 cases were selected for a further study. The selection was based on the different types of reuse (e.g., mixed uses, housing, healthcare facilities, etc.) or in some cases were outstanding in the sense of extreme examples.

Within the research process 13 semi structured interviews were done with Dutch experts: three with an architectural background, three real estate developer, three church representatives, four NGOs. The range of different stakeholders reach from the heritage ministry, different kind of church institutions, architects and planners, working in practice to specialized foundations. The interviews were taped, transcribed and a
content analysis performed base on Mayring (2002). Field works was mainly taking place between 2013 and 2015.

![Tab.1: Operationalization of the conceptual framework](image)

4 POSSIBILITIES OF REUSING CHURCHES

From the 1970s onwards, the transformation of church buildings became continuously part of the Dutch planning practice. (Rijksdienst 2011) A precise number of the total amount of all re-used or demolished churches is not known. A strategic plan of the Bismarck van Haarlem-Rotterdam reported in 2008 the figure of 900 churches that were transformed from sacral to civic use since 1975. In 2011 the Ministry of Heritage extended the amount to the total of 1340 churches, which have been converted since 1975 (Rijksdienst 2011).

Within the accomplished research project, the examples can be divided in four different categories types, which have a specific meaning for the real estate market and its economic value.

Type I: ‘Community-Based’

![Fig.1: Community based Usage of churches in Breda (1) and Eindhoven (3)](image)

This type of churches have a reuse function which delivers a service to the surrounding neighborhood. These services bundle usually different community services (see table 1) like social and health services, offices etc. Mostly they are in central locations, which are easily accessible and connected with Public Transport (PT). Important for the real estate development is that the church buildings and the plots provide development space for structural adaptations, which is important to extend the total floor space to receive more flexibility to combine different functions. This is necessary to broaden the range of community functions. This takes place by two main structural changes: i) to develop a flexible room layout and space development in the church; ii) expansion of the usable area. However, the focus with this type is on the maintenance of the
church and the provision of community services and not on commercial profit. The two projects like the OLV van Altijdurende Bijstand (1) in Breda or the Pastor van Arskerk (3) in Eindhoven represent the mixed group.

Both examples are similar in their layout, because they make a flexible usage possible, which is orientated towards the needs of the local community. Both have a gastronomical usage, which is necessary as a financial basis for maintenance and operation of the building. However, partly strong interventions and structural changes by extending the building are impacting the sacral character of the churches.

Type II illustrates a Mixed Usage approach, consisting of at least two or more permanent or temporary or timely limited functions (e.g. case 16, 19; see also table 1). Churches of this type are mostly entirely repurposed to non-religious uses: the sacral purpose is replaced by a mix of different (also commercial) activities. In some cases the religious function has a subordinated function.

Most mixed-use churches are located in urban and peri-urban landscapes and are well connected to public transport; but there is no direct link between spatial conditions and implemented usages. Implementing those usages are linked to structural changes. For example, the Pnielkerk in Amsterdam (16) has been changed by a horizontal partition to divide the function of the café in the basement with the above lying theatre and with an additional entrance for the doctor’s surgery. Additional entrances are crucial for the accessibility of the building and its new internal utilisation to ensure a conflict free operation.

The example of the Remonstrantse kerk in Groningen (18) has been extended by an additional entrance, which forms with a different architecture a clear contrast to the existing church building. These two entrances are needed, because the building is used by different users. The new side entrance is permanently used by the office function and the assembly rooms, which are hired on a daily or hourly base. The former main entrance of the church can be independently used to approach the former nave. This space is temporarily used by conferences, concerts or other semi-public activities. By adding the new entrance, it is possible to use the former church by different user groups in various time periods.

For the mixes use type the sacral character of the building only plays a minor role for the repurposing, compared to spatial an operational requirement, which leads to rather pragmatic structural solutions. Some usages such as cafes, theatre or museums still allow public access and experiencing the church building at least temporarily.

![Fig.2: Separate entrances make an undisturbed parallel usage like in the case of the Remonstrantse kerk in Groningen (19) possible](image)

The third type ‘Commercially Utilize Churches’ are permanently used for retail, supermarkets, cafes, restaurants and hospitality, recreation and sports or offices. The location related factors and especially the centrality or high population density are playing an important role for decision making regarding their specific re-use function. A central location is for functions like bookshops, cafes, retail or shops central
locations important to be endowed with high customer and pedestrian frequency; for destination activities such as sports or recreation more peripheral the location factor matters this less.

Usually the adaptation to commercial, sports and recreational activities lead to the entire clearing of the churches’ interior, furnishing and embellishments and its replacement by gym- or sports equipment (e.g. skateboard grounds, trampolines) or technical appliances such as refrigerating facilities, lightning or the attachment of labels and posters on the façade of the church. Additionally, the layout organisation and addition of storage rooms, lavatories or the delivery of goods are posing organisational and structural challenges. Also, there is a need for technical interventions such as kitchen facilities, lavatories and the compliance with safety regulations.

An interesting form of reuse which is quite frequently represented in the media is the function of a bookstore in a church. The most famous and media relevant is the Dominicanenkerk in Maastricht.

In the meanwhile, a second case in Zwolle (24) has been developed. It illustrates how the building stock and the included sacral character and ambience in the re-design can be kept. The main characteristics and the original structural composition (e.g. building height, zoning, internal organisation) – has been preserved. The research shows that especially the characteristic of organisational and structural adaption for retail or recreational activities is handled in a very pragmatic and straightforward approach. Often when it comes to repurposing and structural interventions the cubage of the building is considered valuable and is the main factor for decisions on repurposing. This can be seen in the example of the highly protected St. Josepghskerk in Amsterdam (28). There the characteristic of the interior has been removed years ago. The newest function, after being a church for climbing, is an indoor playground for kids. Due to the concrete interior the new colorful installations form an explicit contrast. The main advantage of the church is that it delivers a big amount of space which can be flexible used by the installations.

For churches of the third type also the surrounding plot is often from importance, when the building is located outside of a central situation. In this case visitors and clients demand in most cases the possibility to have a place for car parking.

The last type, which has been identified, is illustrating re-purposed churches for ‘Residential Use’. In opposite to the previous type’s ownership structure have an important meaning, because they belong to private owners or in some cases to housing companies. The housing type can be found in rural and sub-urban landscapes, with a similar characteristic of the need for enough space for possible expansions of the building and parking lots (on the property or street parking). For the purpose of housing the church buildings need significant structural changes. Usually a horizontal partition is needed to develop additional floor levels. Also, the provision of technical infrastructure and significant changes of the building envelop are necessary to ensure the appropriate lightning and ventilation of the apartments. The change for residential use leads in
general to the entire utilisation of the building volume, which includes static and structural challenges because the building was designed for representation and church services and changes and structural inserts of such extent were not part of the initial design question. This change of the building volume demands high expenses and necessary investments that project developers try compensating by a significant floor space developed.

Fig.4: Two main consequences of a residential re-use can be found at examples like the Elbakerk in Haarlem (32). The addition of extra floors to create more ground space and also the addition of windows to ensure a sufficient lightning inside.

5 CONCLUSION

The reuse of church buildings is on the one hand a planning challenge for urban and rural communities, but on the other hand it can also have an impact on the real estate market. The reason for that is, that this type of building has a unique architectural value, which is challenging to develop in an economical appropriate way.

Especially in the rural context the debate of reuse seems more urgent due to a lower population- and customer density, which shows that commercial solutions utilizations into contested re-development approaches. A main challenge is that there are no standard solutions for sacral buildings in urban or rural contexts, because every repurposing is strongly related to the structure of the church building, its location, the ideas and capacity of the new owner and the local church and civic community. As one of the results the research confirms that all types of re-use are either adding to or replacing in different extent religious narratives and memories with secular ones. Those change of narratives indeed result in the preservation of the building structure but isolated from its initial religious meaning and practice. Concluding the reuse of a church building means a difficult process which is not only depending on the development of planning and governance processes, but also on the development of the real estate value. Concluding these challenges appear as an urgent task for developing suitable and societally acceptable solutions for the re-use of (abandoned) churches.

6 REFERENCES


