The Hidden Heritage
St. Catherine Cathedral
Rediscovering the Old City

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Abstract

In a city that was built on a dream, the idea of having all knowledge stored in one place and a gate to join both sides of the world east and west.

For that reason we must not bury the memory of Alexandria but celebrate it.

Adaptive re-use of monuments “restoring religious buildings with different uses”.

The most important problem today is how to protect the historical heritage. It is necessary to provide contemporary uses for protecting the historical heritage and transfer this attitude and new life to these buildings in order to carry them to the future generations.

The method required for this attempt is adapting these old buildings with new uses which is called as adaptive re-use.

The target of this project is adaptive re-use methods and challenges or benefits of a building that has special significance.

When restoration of religious buildings come into practice, this case is even harder than restoring any kind of monumental buildings, when faced with adaptive re-use examples of religious buildings, this kind of function variations in order to protect the meant values, the researches to be made and the ways to be followed can be described in a systematically manner as: re-functioning process.

Adaptation of the new function to the old building.

Design concept in the revalorization.

In this study the cases of adaptive re-use examples of religious buildings with many implementations different places of the Europe and how the architectural design concept is implemented in these buildings.
1 Introduction

Alexandria, the city of civilizations, emerged as a religious city in the Coptic era. The second among the five Apostolic Chairs (Rome - Alexandria - Constantinople - Antioch - Jerusalem). The source of the Christian culture and civilization in the world.

Egypt has known several architectural styles of the churches derived from the Byzantine architecture, painted with the Coptic character, which showed the Coptic influence in many of the ecclesiastical architecture and the most famous of these architectural styles, the basilica style.

Basilica is a rectangle with many parallel corridors, usually consisting of three to five or more. The middle hall is the largest. These arcades cover the various domes, which end with a pinnacle in the eastern chest to form the sacred structure.

Scholars differed about the origin of the basilica in Egypt. Some of it was derived from the hall of the celebration of King Tuthmosis the Third in the Karnak Temple. Others said that it is a mixture between the celebration hall and the Byzantine architecture of the Byzantine churches. It combines the Pharaonic and Byzantine civilization to give us the distinctive Coptic character.

1.1 St. Catherine of Alexandria (287 – 305)

Also known as Saint Catherine of the Wheel and The Great Martyr Saint Catherine is, according to tradition, a Christian saint and virgin, who was martyred in the early 4th century at the hands of the pagan emperor Maxentius.

The Eastern Orthodox Church venerates her as a Great Martyr and celebrates her feast day on 24 or 25 November (depending on the regional tradition). In Catholicism she is traditionally revered as one of the Fourteen Holy Helpers.

1.2 The cathedral (the building)

- Type: Cathedral - Roman (Latin)
- Patron: St. Catherine
- Address: 3 place Sainte Catherine, El Mancheya el Soghra, The old town
- City: Alexandria
- Country: Egypt

1852 Built on the ruins of the first two churches built in 1632 dedicated to the monks of the Franciscans in the Holy Land.
1840 Mohammed Ali Pasha granted to the monks a larger piece of land on which the church was built in 1842.
1847 to 1856 the basilica was built in the Neo-Baroque by the Franciscan architect Serafino da Baceno.
1852, it was named after Saint Catherine.
1927, the current facade, designed by Mario Avena in the Roman Baroque style was added.

The last king of Italy, King Emmanuel Victor (1869-1947), was buried there.
Church Planning The basilica style clearly shows the church of St. Catherine, and this is why the historical, architectural and artistic importance of the church is reflected in its façade.
1.3 Exterior description

Main iron gate with four iron rods overlooking the main street. The gate adorns the iron castings forms of crosses followed by a long corridor leading to a large rectangular square with a marble square pedestal above which stands the cross, facing the western main façade. On the right side is the administrative building and on the left side a modern building of the school.

Figure 1: Main iron gate of St. Catherine Cathedral, followed by a long corridor leading to a large rectangular square facing the western main façade.

1.4 Main façade

Divided into two lower and upper sections.

The lower part is based on four pillars and its width is approximately 27 m.

The upper part of the center is a rectangular window with a semicircular bridge in the center of Kabul. It is topped by a barrier from the stone pyramid in the shape of the machete and on both sides of the barrier two columns with a hull on a circular base that ends with a Corinthian crown.

1.5 Internal description

Main entrance follows a broken corridor leading to the crossed gallery. The church is divided vertically into three sections middle hall and lateral wings.

The gallery extends from south to north, and is presented by the wooden veil that reaches from the floor of the church to its roof. It is mounted on the wooden platform of the church choir and inside it is the church’s organ.

The southern side is made up of four simple plaques with four statues inside each of them. These are for the Virgin Mary - Jesus - St. Anthony the Bedouin - St. Francis of Issy, the founder of the Franciscan Order.

The north side is almost the same as the south side. It also contains four niches, which were also distributed in the south with the different shape of the architectural niche, adding to each niche a wooden veil that separates them from the people, adding the Coptic side to the north side. Each contains a statue representing St. Rita the Crucifixion of St. Joseph the Carpenter carrying the Child Jesus - The Sacred Heart of Christ - Statue of the Immaculate Conception of the Virgin Mary.
1.6 Collectibles of the Church

The main feature of the church’s holdings are oil paintings, statues and icons.

The wooden icons of the Journey of the Christ are the best example of the art of engraving and the power of his embodiment of the Savior, Jesus Christ, and the number of icons 12 icons placed on the columns separating the center gallery from the lateral lobes.

The sculpture of the Crucifixion carved by the Maltese Salvatore Cat, to be placed on the upper altar of the Church. The crucifixion of the crucified Christ is a characteristic of the Renaissance.

In 1873 Professor Emilio Santarelli gave the church the statue of Saint Francis of Assisi and the statue of the Virgin Mary of the Immaculate Conception, sculpted and shaped by himself.

The artistic icon of St Catherine’s Church is complemented by magnificent oil paintings. The most important of these oil icons is the Saint Catherine icon, which was presented by King Ferdinand I of Austria in 1847 and painted by the Italian artist Francesco Japsi. It shows St. Catherine speaking to the pagan philosophers in the presence of Emperor Maxinus II.

1.7 Saint Sabina

Small chamber with a glass sarcophagus inside the body of Saint Sabina, who was martyred end of the 3rd century in Rome, is attached to the southern side of the church.

What distinguishes the Church of are some of the symbols of the Church of the Holy Land Tra Santa, including the symbol of Jesus in Greek, the use of the three Greek initials of the word Jesus, which is found on the wooden main entrance as well as the domes of the church.

In conclusion, the Church of St. Catherine in Alexandria is one of the richest churches, archaeological and historical and artistic excellence of the architectural and artistic, but it does not receive any light tourist and neglect, despite its importance.

2 Advantages Of Adaptive Reuse

The process of adaptive reuse generates additional economic activity, and results in either renovation or development of the surrounding infrastructure. The conversion of underused historic buildings into functional properties increases the city’s tax base and may spur additional investment in the area

2.1 Construction Costs

Historic buildings are often cheaper to convert to new uses than new buildings cost to build.

Rehabilitation projects can be done faster than new construction unless extensive structural reconstruction is required.

2.2 Urban Sustainability

There is growing support that adaptive reuse of historic structures satisfies a key Concept of sustainability (Bullen and Love, 2009). Adaptive reuse is an efficient “green” approach
that protects environments and increases sustainability in urban areas.

Environmental benefits from adaptive reuse arise through the recycling of materials, reuse of structural elements, and the reduction in generated landfill. These benefits translate into cost advantages to the developer or the owner in addition to the wider environmental considerations (Langston, Wong, Hui & Shen, 2008; Bullen and Love, 2009).

2.3 Historic Preservation

Urban history is an act of recovery as well as a creative gesture toward the future – a way to comprehend and build upon places over time.

2.4 Urban Revitalization

Urban revitalization is a function of both local physical characteristics, including geographic location and urban amenities, and human capital. Adaptive reuse may be considered a catalyst for neighborhood revitalization and renewal of distressed urban areas by positively stimulating the local economy through job creation.

Adaptive reuse projects require less material and fewer natural resources, but they are more labor intensive. In other words, adaptive reuse projects generate economic multiplier impacts.

3 Guidelines

1. Restoration Concept
2. Use and Function
3. Quality of Design
4. Respect the Context
5. Materials and Techniques
6. Flexibility and Reversibility
7. Economic Viability
8. Interdisciplinarity
9. After-Life

Guidelines should be set up to help users in taking decisions; the designer involved can play an important role. After all, he could be the contact person to consult if the user has a question or wants to change something corresponding to his current needs.
3.1 Adaptive Reuse of Churches - Potential and Limits

Churches are buildings with different values, designed and built to represent God and as an institution in our culture and society. When it comes to the use and reuse of church buildings, different people have different opinions about which use is proper, and these opinions are based on the values people apply to churches. The adaptive reuse of churches therefore often provokes discussion and causes controversy in terms of acceptable new uses and changes to the structures.

This paper focuses on the adaptive reuse of churches.

3.2 New uses for churches and case studies

New uses can be defined by how different they are from the original religious use of the church building.

The extended types of reuse:

- Events
- Performances and recreation
- Public cultural and social use
- Residential
- Office use
- Commercial use

The following case studies represent the scope of new uses for churches in the U.S. and Germany. Each example includes a short overview of the church’s history and the adaptive reuse project. The case studies also contain an analysis of the different values that were involved in adapting the church to a new use. Each case study is analyzed in terms of three major values:

- Use
- Architectural
- Representational/Symbolical

Use value reflects the new use of the church building.
Architectural value relates to the architectural appearance of the church.
Representational or symbolic value is closely connected to both use and architectural value.

4 Extended Use of Churches

An extended use of churches implies that the Church is still the owner of the church building and it continues to be used for religious purposes and worship. In addition to that, the building is opened for other purposes that relate more or less directly to the church’s work and activities.

Sacred Heart Cultural Center in Augusta, GA, USA (Figure 2)

- Developer: Knox Limited
- Built: 1900
Mihy, Walid, Badawy, Almihy

- Adaptive reuse: 1987
- New use: events, office space
- Cost: n/a

Figure 2: Sacred Heart Cultural Center in Augusta, GA, USA; public cultural and social use.

McColl Center for Visual Art in Charlotte, NC, USA (Figure 3)

- Owner: Bank of America
- Built: 1926
- Adaptive reuse: 1999
- New use: multi-functional, arts
- Architects: FMK Architects
- Costs: $6,000,000 / $175 per sq. ft.

Heilig-Geist-Kapelle in Kempen, Germany (Figure 4)

- Owner: Katholische Propstgemeinde Kempen
- Built: 1421
- Adaptive reuse: 2005
- New use: religious book store
- Architects: Dewey+Blohm-Schröder Architekten
- Client: Chorus Dienstleistungen für Religion GmbH
- Costs: n/a
Figure 3: Interior view of McColl Center for Visual Art, showing the 3-story galley (Courtesy of FMK Architects, www.fmkarchitects.com).

Figure 4

(a) Floor plan of the Heilig-Geist-Kapelle, second floor (Courtesy of Dewey+Blohm-Schroeder Architekten).

(b) Section B-B of the Heilig-Geist-Kapelle (Courtesy of Dewey+Blohm-Schroeder Architekten).
5 The Project

1. **Value of the Project within Old City Fabric (Figures 5–7)**
2. **Value with city monuments and landmarks (Figures 8–10)**
3. **Time Line (Figure 11)**
4. **Architectural Sections (Figures 12–13)**
5. **Layout and Functions (Figures 14–15)**
6. **External Piazza for Casual Events (Figures 16–18)**
7. **The Market (Figures 19–20)**
8. **Internal Piazza for Religious Events – Library – Public Cultural and Social Use (Figure 21)**
9. **Existing Backyard for Grand Events – Social Open Air Activities (Figure 22)**

Figure 5: Value of the Project within Old City Fabric.
Figure 6: Value of the Project within Old City Fabric.

Figure 7: Value of the Project within Old City Fabric.
Figure 8: Value within city monuments and landmarks.

Figure 9: Value within city monuments and landmarks.
Figure 10: Value within city monuments and landmarks.

Figure 11: Time line.

Figure 12: Architectural sections.
Figure 13: Architectural sections.

Figure 14: General layout.
Figure 15: Bird eye general view.

Figure 16: Underground Parking below Piazza.
Figure 17: External Piazza for Casual Events.

Figure 18: External Piazza for Casual Events.
Figure 19: The Market.

Figure 20: The Market.
Figure 21: Internal Piazza for Religious Events – Library – Public Cultural and Social Use

Figure 22: Existing Backyard for Grand Events – Social Open Air Activities
References


St. Catherine Cathedral


