

ARTTE



Applied Researches in Technics, Technologies and Education
Faculty of Technics and Technologies, Trakia University
Vol. 2, No. 4, 2014 ISSN 1314-8788 (print), 1314-8796 (online)

**ARTTE Applied Researches in Technics, Technologies and Education**

ISSN 1314-8788 (print), ISSN 1314-8796 (online)

The Scientific Journal of the Faculty of Technics and Technologies of Yambol,
Trakia University of Stara Zagora, BulgariaThe Journal is available online at: <https://sites.google.com/a/trakia-uni.bg/artte/>

Address of the Editorial Office: Graf Ignatiev 38, 8600 Yambol, Bulgaria

Phone/fax: +359 46 669183, E-mail: artte@trakia-uni.bg, artte@ftt.uni-sz.bg**EDITORS****Editor-in-Chief**

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ICTTE 2014 Edition**International Conference on Technics, Technologies and Education****ICTTE 2014, Yambol, Bulgaria, October 30 and 31 2014**<https://sites.google.com/a/trakia-uni.bg/ictte-2014/>**CONTENTS**

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INNOVATIVE CONCEPT SPATIAL VOLUME IN HISTORIC BUILDINGS

Vaska Sandeva, Katerina Despot, Tamara Veselinova
Goce Delcev University of Stip, Krste Misirkov b.b. P.O. Box 201, Stip 2000, Macedonia
e-mail: vaska.sandeva@ugd.edu.mk, katerina.despot@ugd.edu.mk

Abstract: *Innovation is change, or process input change. Innovation is the process of introducing new, good ideas, services or practices in order to be useful, i.e. innovation is the introduction of cost innovations. To be called innovation, an idea must be profitable and to meet specific needs. Innovation involves the application of information, ideas, imagination and initiative and includes all processes in which new ideas are generated and converted into useful areas. For one historic building to reactivate the present carrying zeitgeist of originating, it is necessary to inject innovation into it. Innovation is an important element in a historic building. The spatial volume it can transform into a different space, a space where merging classic and modern, natural materials and playful colours. The historic building gets on a different character, which suits all generations as well as today's modern age. First, innovations in space are added to meet the needs and expectations of visitors. Innovation doesn't always mean inventing something new. It may mean changing, adapting to changes in the environment in order to realize better ideas. Successful innovation should be built every part of the strategic vision and lead to innovative thinking and creative problem solving.*

Keywords: *industrial design, product, innovation, designer.*

1. DESIGN PROCESS

The design is a process of problem solving. Good solutions for interior design have the power to make people feel positive in their environment.

Interior Design is an exciting task, but also a fascinating profession and provides lifelong personal, aesthetic and intellectual fulfillment. Designing of interiors is a desire that builds and broadens intellectual horizons and at the same time deepens aesthetic sensitivity. The internal structure is alive, full of energy and dynamic: it is never static. As the world changes, so does life, and the interior is in accordance with those changes. Editing styles evolve, our views are changing, and interior adapts to the tides of life.

Even though the focus of our interest in interior design is often personal, of course, should not be limited to our own environment. Today's lifestyle often dictates the pace with which we spend most of the time in working atmosphere and in handling various business services. We also spend part of the time in restaurants, hotels, museums, historical and cultural objects. These areas should be well-planned as well as the domestic environment.

The old saying - a place for everything and everything in its place - almost summarizes the important aspect of well projected space. Most internal spaces should be of particular size to be well designed. If space is sufficient for the things we possess and activities in a logical and orderly way, then life will be much more pleasant. Consideration of space also extends beyond the functional measurements of actual space required for the psychological domain of the perception. Not only the need to have adequate space to move in the same, but the designer should also consider how the mind moves through space. Inadequate space, or rooms without windows where the eye and the mind cannot move, isn't pleasant to many, and for some even claustrophobic. The psychological perception of space is just as important as the actual space.

2. DESIGN ELEMENTS

Design elements are: space, shape or form, mass, line, texture, pattern, light and color, and they are used by every designer in each discipline. These elements were not invented, but were discovered and skillfully included and balanced by artists and designers throughout history.

Each design element can be used effectively or ineffectively, and there are a lot of compositions that are not perfect in its use of elements. For example, an interior can have a wonderful space, perfectly balanced light, a good proportion of shape and weight and proper line, but can be fulfilled with poorly selected patterns, structure of materials or color.

2.1. Space

The space exists as a diffuse, endless body until it is defined. Defining the space begins with building the object, whereby allocation of internal and external space is received. The means for limiting the space - walls, floors, ceilings and furniture - create series of spaces with individual dimensions and qualities. These qualities can only be revealed if a person moves through space and senses them one by one: one space flows into another, or it is roughly broken and another one begins. When movement space / time is over, the ideas are gathered in the mind in order to give a true picture and assessment of space.

The separation and limitation in space create the foundations of architectural planning. Interior designers often create an uneven distribution of space objects not only for aesthetic reasons, but also as a response to human needs. Processing of spaces of different sizes leads to two basic human needs. The first is the need for protection, comfort and closure. Small spaces determine territory: they give a sense of pride and ownership and offer the opportunity for marking an own space. On the opposite, small spaces can restrict and close and can cause anxiety and frustration. Small spaces are inadequate for functions performed in them. They can visually expand through the use of bright colors, neutral floor coverings, small pieces of furniture, mirrors and smooth surfaces with textile patterns with small tracteries. Extensive light from multiple sources can also give the impression of more space than it really has.

The great space fulfills the second basic human need as a result of the limitation of the small space. This is the need to be mentally free to jump in an area free from limitations, being driven by the hugeness of space compared with the inconsiderable human volume. The lack of restriction, however, can create a sense of insecurity and inadequacy and a desire to return to a safe, secure place for small spaces. The large interior spaces can be difficult to cope with; there is often a need to make the space seem smaller than it really is. Efficient ways to create greater intimacy in large spaces include using stripe from medium to large size and dark or vivid colors that create a visual advantage, furniture that is heavy or massive, carpets on certain areas (particularly stripe or oya, who visually shrink space), great artworks and grouping furniture in bigger wholes.

Interior designers create interesting places with positive and negative space. Positive space is the space filled with color, material, shape or weight. It can be walls, furniture, artworks, rugs, and even graphics or scenes painted on the walls. Negative space is the empty space that surrounds the positive space - the walls between the windows, the carpet on the floor, the wall around or between the art, the space between the pieces of furniture. In a successful interior, positive and negative spaces should be balanced, as far as according the quantity and the setting. Some places may be initially positive spaces, others initially negative and still have equal allocation between the two.

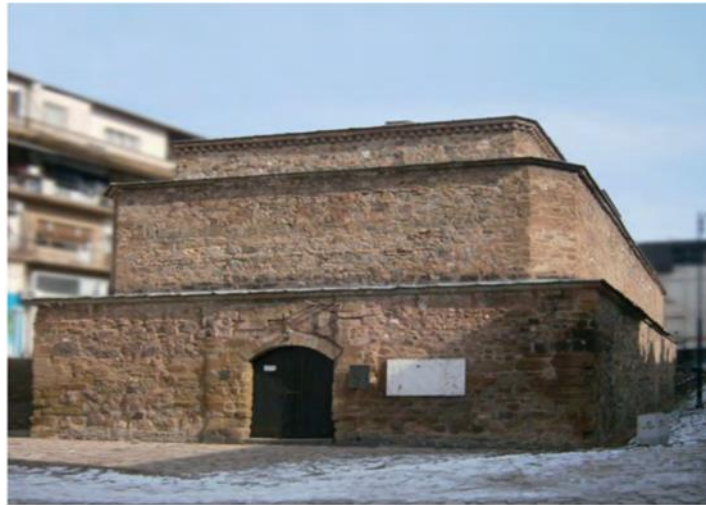


Figure 1. External appearance of the historic building – Bezisten Stip

2.2. Spatial volume planning

The discipline of spatial planning for nonresidential buildings is much more complicated than that for housing ones. Each area has a complex and specialized design, often based on local or national building standards.

In the process of spatial planning, some things should be considered before developing plans and editing. It is quite better to make changes on paper than to crumble and reconstruct space that was supposed to be well planned.

Each epoch of one civilization creates art that is peculiar and unique. When planning the internal volume of historical object, it is first necessary to determine its function and purpose. Then, in accordance with the purpose, the various functional areas that are necessary for the proper functioning of the object are determined. The functionality is at the first place - Functional analysis is perhaps the most important criteria in the planning area. Function means the intended use of the space.

Ideas consideration - Having determined the basic zones, we consider ideas about what exactly should be contained in these zones. Ideas consideration is a useful tool to put on paper everything that is necessary or required in each zone. Specifics like size of certain elements of the furniture and similar are enrolled. In the process of ideas consideration in nonresidential interiors, ideas for areas will be moving around worker productivity, facilitating communication and which functions are linked to each other.

Historical objects are often old buildings that are under law protection. Therefore, it is not allowed demolition of permanent walls, interior space may be amended and build but not to pull down. A refund of that historic facility is needed, through an innovative concept, in order to develop a modern place combined with stone or wooden constructions, where various cultural manifestations will be held. Reconstruction means renewing of something and returning to similar or to the same form, renewal of existing construction of an object etc. Spatial volume of historic building is a specific space for landscaping, especially if it is about a combination of styles in one space.

But the interiors need renovation - Over time, materials and furniture become time-worn and inadequate. The average life of superior quality of soft furnishings, color and wall coverings is from 6 to 12 years; Once they become time-worn, they should be replaced.

As an example of an innovative concept of spatial volume in a historical building I took the Bezisten, located in Stip. Today, it is the most representative object, an important monument

of culture and a permanent art gallery. After many years of existence the Bezisten deserves to get a reconstruction and different interior decoration. This is important because the Bezisten is today's most remarkable temple art, the center of all cultural events in Shtip. It is a space where world-renowned artists played, and, that, without exception, bear impressions of a lifetime. The extraordinary impression is primarily a result of architectonic and acoustics of this building.



Figure 2. Interior of historical building Bezisten Stip



Figure 3. Innovative concept of spatial volume of historical object Bezisten Stip

The long lasting existence of this object does not stop us to bring innovation into it. The stones of which Bezisten was built show signs of their age, because they need to be honed, providing a new and refreshed, more natural look, and yet keep its initial shape.

The inspiration for the design and indeterminate forms is the upper central part of the Bezisten seen from the outside. Simplifying this form of an eight-angle led to the current design, which is a contrast of the existing circular arcs and vaults. With the new straight, fuzzy forms, new and different effect is achieved.

Following the example of the world-famous museums and galleries, at the entrance or reception area, you need to ask the main desk where visitors can get the information they need. The skillfully and creative planning exploits the best the available space.

The saying - nothing is permanent except change - is good to remember when summarizing spatial planning. What is reality today tomorrow may be just a memory.

The use of natural materials, stone walls, wooden doors etc. reminds us of the zeitgeist elapsed and the moments that we remember with pleasure, that remain as good reminiscence and memories.

The use of lively and cheerful colors combined with simplified rock and modern furniture pieces are the main contours of the space. They are part of the story, along with a variety of lights, placed on the walls, floor and ceiling concealed lighting, giving the space special vitality and uniqueness.

The trends of interior design are constantly changing, new ones are coming, but at the same time the old ones return. By inserting innovation in a historical object, the combination of natural materials with modern decorations and colors creates a completely different space.

That space, that historical object, becomes a place of the trip - inevitable staging post on any random and non-random passerby, a place where old and young generations meet, alternatives, young avant-garde artists, whose time is yet to come.

Mixing of styles make art more flexible. In a historical object with innovative design concept, the combinations of classic and modernity complement each other. The design should surround us constantly and we should treat the design constantly. It is a business of beauty. Every business should primarily be based on beauty- it is before all other human needs. Therefore, we would live in a different world - one that is full of real contemporary inspiring objects, spaces, places, worlds with new experiences.

Nowadays, design is not used to solve problems, but to beautify the already built environment in which we live. The design is connected with the improvement of our lives aesthetically and emotionally. Therefore, the need for innovation in a historic building is big, or the need the design to become a part of the everyday living and to change human mentality, to live in the present and not in the past. The real purpose of the innovation is, people to see life in our time, to participate in the modern world, and to get rid of nostalgia, antiquated traditions, old customs, and kitsch. We should be aware and present in this world, in this moment. With innovative designs, we should create a better place in which various generations will meet and enjoy. Bringing innovation, we give enthusiasm and a hallmark of the modern age the spatial volume.

Interior design is a way by which the space becomes pleasant and functional. In our dynamic society life is often filled with stress, and badly arranged interiors can sometimes contribute to this emotional burden and be a source of unnecessary frustration. The design as a process follows a particular situation, a problem and occupies with its solution. The design helps us in our lives by speeding up things, it removes the tension between us and the final result we want to achieve. The design makes our life more safe - the good design creates warm and pleasant atmosphere. The design warms us, the design feeds us.

The design has goals, and objects are created and enhanced for a specific position and a specific purpose. An important part in interior design is the lighting. Good lighting is one of the most important elements in and around an object. A room can be made beautiful and decorated to detail, but with irregular and inadequate lighting will not get the desired effect.

No matter whether the lighting is natural or artificial, it creates certain effects in space. As a result of illumination, the space gets a different look and elegance. The light is also a 'material' like the stone, the brick or any other material applied during construction. The wall would not be a wall without its components, that wall does not exist for us if we don't feel it with our senses and understand with our mind. Because light is necessary for us to see anything, it is one of the primary factors in architectural design. This understanding is confirmed by the history of architecture. Natural daylight determines the look of the space, while enabling room lighting through windows, the inside of the room must be modeled in a special way, regarding the entry of light. As for the artificial light, it can be said that what was true for natural light, it is now true for artificial light. In many architectural projects it is shown that artificial lighting would be more economical than natural. Accordingly, the architect is the one who should decide what type of lighting to use, natural or artificial, depending on the conditions, needs and functions of the projected space.



Figure 4. Innovative concept of spatial volume of historical object Bezisten Stip

The effects of illumination are also a part of the innovative concept of spatial volume of historical object. In certain times of the day, and in some annual periods there will be no choice and alternative, because there is no daylight then at all, while in the other parts of the day, the daylight features can be such, so it can be suitable for performing certain activities but not to fully illuminate the interior.

The great development of artificial light sources, as well as the elaborated technique of using that kind of lighting, enabled efficient ways of using such a light. Nowadays artificial light sources contribute nearly as much as natural daylight and even more, not only in functional lighting, but also in shaping the space and the objects in it. Today we have the opportunity to use light in different colors and with different intensities, accentuating certain parts in the space and leaving others in shadow. In that way, we accentuate the dominance of certain items.



Figure 5. Innovative concept of spatial volume of historical object Bezisten Stip



Figure 6. Innovative concept of spatial volume of historical object Bezisten Stip

3. RECOMMENDATION FOR USE OF AN INNOVATIVE CONCEPT IN HISTORIC BUILDING

1. First need the historical object of entering something new and modern;
2. Leaving mark the time in which we live;
3. A combination of natural and composite materials, dark with bright and cheerful colors, and modernism

4. CONCLUSION

Innovation is important for every space. To bring something innovative in the space means to change something, to bring a new idea, using creativity to create a different atmosphere in the spatial volume.

A historical object is in need of innovation input in it. First, its function and purpose need to be determined, then the ideas should be discussed, the plan should be made, materials and colors should be chosen, and a new interior in that spatial volume should be created. The purpose of the innovation is to leave a mark of the time in which we live, to leave something behind, to society and humanity. With the implementation of modern furniture, cheery colors and effects of illumination in a historical object built of stone and brick, we enrich the space, and he gets even greater historical importance, because we leave mark of our time.

The need for innovation in a historical object, means a need for flexibility and a concept of complete satisfaction, in step with new trends. The innovative concept with integrated components of creativity, contemporary design and comfort, is a necessity of modern man.

5. REFERENCES

- [1] Misevic R. (1989). Source of texts for studying the subject theory of shapes. Belgrade.
- [2] David A. Taylor. (2011). Enteriers. Skopje.
- [3] Bogdanovic K. (1991). Theory of shapes. Belgrade.
- [4] Kandinsky V. (1976). For the spiritual in the art. Skopje.
- [5] <http://www.design.mf.edu.mk>
- [6] <http://www.picturesocial.com/group/art-of-photography>
- [7] <http://www.mirkobeovic.com>

