The Reconstruction of the Croatian Coastal City of Zadar

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The Croatian coastal city of Zadar was heavily bombed by the Allies after the Italian capitulation in 1943 and, as a consequence, more than 60% of its urban fabric was destroyed. Because of the complexity of its historic urban structure, the first existing stratum of which dates back to the Roman era, the reconstruction of the city centre after the Second World War was simultaneously a difficult task and a great challenge for architects and urban planners.

Zadar’s Urban Development Through History

Zadar’s favourable geographical situation, on the edge of a fertile plain, on a peninsula that encloses a rather deep harbour separating it from the neighbouring coastal territory has been the basis for an urbanism of two millennia. The first permanent settlement in what is now Zadar was that of the Illyrian tribe of Liburnians who arrived in the region in the ninth century BC. Previously, the territory had been temporarily occupied by a Mediterranean people from whom the name of the city derives - Jader, Jdra, Jadera. This name was changed afterwards into the Greek Idassa. The Romans conquered the city in the second half of the second century BC and around 30 BC founded Coloniae Iulia Iader. Zadar became the second most important Roman city of the typical plan, but slightly changed orientation, on the eastern Adriatic coast. This period formed the basis of Zadar’s urban layout throughout its history.

Coloniae Iulia Iader was built according to the principles of Roman urban planning, meaning that the city, situated on the north-western part of the peninsula, had a slightly elongated rectangular form. Within this rectangle, the streets intersected at right angles thus forming insulae of different sizes. This street grid is still almost completely preserved today. A forum romanum 44 by 95 m in size was located to the west of the cardo - decumanus intersection. Other urban elements of the Roman city included a capitolium with a temple next to the forum, an emporium, thermæ and an amphitheatre on the other side of the entrance gate in the city walls. These city walls, built of half-dressed stone, and the monumental gate protected the city from the south-eastern terrestrial side.

Medieval Zadar was built on the grid of the ancient one, although these two strata are well separated from each other by a metre-high layer of destroyed construction material. The forum romanum became the site of a new religious complex with an early Christian cathedral, the church of the Holy Trinity - the emblem of today’s Zadar, built at the beginning of the ninth century AC (in the fifteenth century the church’s name was changed to its present name, St Donat), and the episcopal palace. The main city square is still on the same site as the Roman platea magna. Many pre-Romanesque churches were built within the city. They are especially significant for the history of Croatian archi-

18.1 Zadar c 2000. [Photograph by the author]
It seems that the beauty of this city of stone city walls and houses and monumental religious Romanesque buildings was so great that the French knights participating in the Crusades admired it highly. Their chronicler, Villeharduin wrote: "... in vain you would search for one richer, stronger and more beautiful". Unfortunately, these same crusaders helped the Venetians conquer the city. The destroyed Zadar of the thirteenth century never regained the beauty and perfection it had had in the twelfth century as a Romanesque city. Under Venetian rule, the look of the city changed considerably. Some new fortresses were built (Kaštel and Citadela), the ramparts towards the open sea were destroyed and porporela - stone barriers built in the sea - put in their place, some parts of the city were completely razed for defence reasons, the terrestrial city walls were reinforced and the moat (fossa) was dug in front, while in front of the new city gate the defence wall (revelin) was built.

The period up to the fifteenth century was marked by the permanent efforts of La Serenissima to conquer the city for good, which finally happened at the beginning of the fifteenth century and lasted for nearly four centuries. Zadar became the centre of Venetian administration on the eastern Adriatic coast, which brought new prosperity to the city. The first Renaissance palaces were built, followed by those of the Baroque style, but none changed the harmony of the medieval city bloc. The short-lived peace was soon threatened by the Turkish raids that had destroyed the surrounding region. As a consequence, at the beginning of the sixteenth century the city’s defensive walls were modernised, changed from orthog-
nal ones to sloping ramparts and afterwards reinforced with many bastions - five of them even being oriented towards the north-east and east, from where the enemy was attacking. The south-eastern part, where the new monumental gate - Porta Terraferma - was built in 1543 (according to the plans of Michele Sanmicheli), was protected by the free-standing fortress (Forte) that was afterwards reinforced by two channels filled with sea water.4 [18.4]

At the end of the eighteenth century, Zadar and Dalmatia were annexed to Austria and, aside from a short period (1797-1806)5 under Napoleonic rule, remained a part of the Empire until the beginning of the First World War. The city changed considerably, especially after 1868 when it became the capital of the Austrian province of Dalmatia. Tasteless eclectic architecture that lacked proportions and harmony brought further changes to harmonious medieval Zadar. New public buildings, such as a prison, a barracks, a court building and a theatre were built under the eclectic dogma of false-monumental splendour. The most radical intervention happened in the part towards Zadar’s channel, where the fortifications were completely destroyed and the shallows were filled in up to the porporela in order to build a stone promenade. On the site of the fortifications, sixteen four- and five-storey-high eclectic buildings with apartments to rent were built and for the first time in centuries the city silhouette was changed. Most of the bastions were transformed into public parks, while some parts of the city walls were demolished in order to connect the centre with the rest of the city by a road.

The prosperity of the Dalmatian centre was interrupted by the First World War and the Italian occupation afterwards. The Italian municipal administration continued in the same direction as its predecessor by building without any understanding, lacking any sense of harmony and proportion. One of the rare positive initiatives of the Italian occupation was the social housing, called case popolarissime6, both within the city centre and in the rest of the municipality. [18.5]

The Italian capitulation in 1943 caused the almost complete disappearance of the city centre. In order to avoid a German take-over of the city and their direct connection with Ancona, the Allies bombed the city dozens of times, destroying almost 70% of the centre’s fabric. [18.6] Only 6000 of Zadar’s citizens were still living in the city (in comparison to the pre-war 23,000)7 when the war was over. They were the first to help with cleaning up the wreckage.8 But this ‘cleaning’ had a political background: very often what had not been destroyed by the bombs was burned or razed in an attempt to remove every trace of the twenty-year-long fascist occupation. The aim was to build ‘a new Zadar’.

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4 Arbutina, Zadarski urbanistički i arhitektonski opus Brune Milića, 13.
5 Travirka, Zadar, 10.
6 Oštrić, “Stambena arhitektura u Zadru”.
7 Arbutina, Zadarski urbanistički i arhitektonski opus Brune Milića, 18.
8 Domijan, “Dobra i zla kob”.

18.6 The destruction of Zadar in 1945.
The First Reconstruction Plan after the Second World War

In Europe in general, reconstruction after the Second World War followed one of two concepts: there was ‘the modern concept’ that ignored historical heritage, and a concept of identical reconstruction. Looking at ex-Yugoslavia and its political and social system, it was not strange that the modernist concept was the preferred one. In fact, the interbellum Modernism was mostly about leftist social ideas, thus creating a concept of ‘new humanism’ and healthy living conditions for everyone. The ex-Yugoslav communist party admired the idea of a ‘new society’, a concept which was supported by Modernist architecture and urbanism.

Even during the war, in 1944, the Croatian architect Milovan Kovačević, together with the architects Boltar and Bolanča, was elaborating reconstruction studies and plans for Zadar. The work continued after the end of the war, and in 1947 a new Regulatory Plan for Zadar was introduced based on the designs of architects Milovan Kovačević, Božidar Rašica and Zdenko Strižić. The plan dealt with both the city territory and the whole region, but it paid special attention to the historic city centre, on the peninsula, for which a more detailed plan was conceived.

There they designed a pedestrian city of Mediterranean character, open to the sea and sun. Although one of the authors of this plan, the architect Strižić, criticised the Austrian Classicist nineteenth-century buildings that created an artificial elevation facing towards the open sea, this plan proposed something similar - housing in the south-eastern part of the peninsula in the form of isolated buildings situated on the artificially built sloping terrain with good insulation and orientation to the winds. This, in fact, created another ‘wall’ made of buildings towards the sea. The architects planned a new location for the city centre which was supposed to become the new heart of Zadar. The bay enclosed by the Zadar peninsula was to be filled with earth in order to make it a square - a centre for domestic and international traffic, trade and business. A new port, industrial area and a shipyard were located next to each other. This area touched the sea just in one place, thus preventing destruction or pollution of the coast.

The negative side of this plan was its radical attitude towards the old city. It was a simplification of the CIAM doctrine and the Fourth CIAM Athens Congress conclusions and statements (isolated buildings in greenery, complete separation of traffic). The plan kept the Roman street grid but the housing block was not well planned since it paid no attention to the ancient enclosed insulae that had been successfully preserved through the centuries. As a result, the historic monuments that were retained, such as the churches of St Donat, St Mary, St Grisogonus and St Anastasia were completely isolated within the new urban structure instead of being incorporated. The most drastic plan was to completely destroy the remaining houses in a historic part of the city called Varoš, and put isolated housing blocks in greenery in their place. The planned changes were so radical because...
they were erasing 2000 years of Zadar’s urban history. Although the plan was never actually implemented, it became a good basis for the post-war ‘cleaning’ and removing of what was left from the historic city centre. The leading specialist in Zadar’s urban history, historian Dr Ivo Petricioli, and its main conservator, Miljenko Domijan, unanimously claim that not only single buildings but complete blocks could have been preserved if it had not been for these actions.13

Luckily, the mistakes were soon realised, and in 1953 the (then) Yugoslav Academy of Arts and Science14 started a competition for the new regulatory plan of Zadar’s historic centre.

The New Regulatory Plan of Zadar’s Historic Centre

In the early 1950s, the Yugoslav Academy of Arts and Science wanted to reconstruct the complex of the Romanesque nunnery of St Mary in Zadar15, but the city centre had been so utterly destroyed that the reconstruction of the complex was not feasible without a good urban reconstruction plan for the whole area of the peninsula. Three Academy members, the architects Josip Seissel, Drago Galić and Andrija Mohorovićić elaborated a programme and guidelines on the basis of which, in 1953, the Academy launched a competition for the new regulatory plan of Zadar’s historic centre.16 The guidelines were rather innovative in Europe, because they paid attention to the city’s historical evolution and asked that the historic urban structure and relations between historic streets and the remaining historic buildings be preserved. Each historically and artistically important building was taken as a focus of a new architectural and urban sequence that would normally have been designed according to the principles of Modernist architecture. As a part of the competition materials, the competing architects were given precise and detailed studies of the cultural, historical and urban-planning development, geographical, geological and climatic characteristics, and a diagram of the existing communal infrastructure and economic lines of direction for development. These studies resulted from a theoretical and practical analysis that included complex archaeological excavations, precise and systematic gathering of all technical data for each building on the peninsula and a geodesic survey.17

The competition jury ended up awarding three first prizes for three completely different concepts18, approaching the city’s reconstruction from different points of view. One conception suggested reconstruction using historical styles and creating monumental backgrounds for the historic buildings retained, thus avoiding conflicts between historic and modern architecture and giving historic monuments the position they deserved. The second conception was the complete opposite of the first one. Like the 1947 proposition, this plan suggested that it was necessary to clean up within the destroyed area, while for the empty parts it envisaged individual buildings designed according to the modernist principles of isolation and orientation, incorporated into the greenery. This pitted new against old in an open conflict. The third conception was in between these two. It postulated an absolute conservation of historic buildings in their post-war condition, allowing only necessary consolidations and some technical improvements to improve their stability, but retaining the state of their urban context after the bombing. The greenery was supposed to serve simultaneously as a connection line between these ensembles and as a curtain

13 Modrijan, "Portreti: Ivo Petricioli"; Domijan, "Dobra i zla kobo".
14 At that moment Croatia was a part of the Republic of Yugoslavia, which explains the name of this institution. Today, it is called the Croatian Academy of Arts and Science.
15 The intention was to transform it into a museum.
16 Narodni odbor gradske općine Zadar, ed, Natječaj za Regulacionu osnovu grada Zadra; Boltar, "Zadar - izgradnja centra".
17 Milić, "Plan regulacije povijesne jezgre Zadra".
18 The winning teams were: the Split team of the architects Berislav Kaloder and Budo Pervan; the Zagreb team of the architects Radovan Miščević, Branko Petrović, Vlado Ivanović and Branko Vasiljević, and the team of the architects Bruno Milić and Miroslav Kollenz. In “Zadarski je natječaj udovoljio”, 3.
As a starting point of their work, the architect Milić and his team produced a very detailed analysis of Zadar’s urban development in order to reach some conclusions for the future. The analysis showed that the peninsula area had been the cultural, political and social centre of the city from its very beginning, and even when the city territory started to expand outside the city walls, this area always remained its nucleus. As development tendencies were aiming in the same direction, the architects immediately abandoned the plan for greenery ‘blotters’ as inadequate. Instead, the analysis further showed the way in which the reconstruction should go, at the same time defining the size and content of the reconstruction and giving it a general programme: by defining the urban function of this part of the city, it showed the content, size and form that should be located there.19

The pre-nineteenth-century city was not so densely constructed and had much more greenery.20 The urban image of Zadar was very picturesque, composed of architectural forms approaching the street lines or set back at a distance, thus forming the free interspaces. Rows of houses alternated with meanders thus creating a vibrant ambience which ensured light, air and space for each home. This type of architecture was not oriented towards the street but towards the interior of the block, towards an inner courtyard.

The new regulatory plan [18.8-18.9] accepted this conception, and simplified it by making rows of meanders around common garden spaces intended for children’s playgrounds or for leisure. The architecture was opened towards the inside with big windows, balconies and galleries, while it stayed closed and modest towards the outside (the street). In that way, the widths of former streets were preserved without unpleasant violations of privacy, with at the same time enough light,

19 The competition material prepared by the Academy architects already defined the programme of development for the whole territory of Zadar in general lines as a cultural, educational, administrative and tourist centre as well as the centre of light industry, trade, craftsmanship, and terrestrial and maritime traffic for its region. From Narodni odbor gradske općine Zadar, ed, Natječaj za Regulacionu osnovu grada Zadra.

20 From the beginning of the nineteenth century until the end of the Second World War, Zadar was constantly living in architectural and urban decadence.
air and free space for more intimacy, and more cultural and social life. Car traffic was allowed only along the city perimeter, while all internal streets were pedestrian, a very advanced idea for the period. These were the streets of a typical Mediterranean size and shape, which integrated historical ambiances with the new ones. In this way, it was possible to give value to the basic and the most important planning element of Zadar’s heritage - its characteristic and rich urban space, street grid and squares - while at the same time respecting all the principles of contemporary urban planning regarding traffic and living spaces. The historical street grid was completely respected and reconstructed where needed, while some minimal changes were foreseen in order to fulfil the demands of contemporary traffic. All historic squares were kept as such. The ramparts were given back an exceptional urban role, the one they were playing throughout centuries of the city’s history in the city silhouette by giving it a character and a physiognomy reflecting the urban organic and plastic structure towards the outside. The western part of the city walls, destroyed by the Austro-Hungarian Monarchy, was filled with greenery in order to imitate ancient ramparts and to bring back the landscape setting of the episcopal complex. The historical urban-planning analysis indicated dimensions and measures as well, limited by the size of the peninsula in the first place and then conditioned by relations between urban spaces, streets, squares and their architecture. A maximum height of three storeys was planned, with four as an exception. Architectural volumes, especially those in visual contact with historical objects were articulated in their plans and elevations in order to preserve and accentuate the historical dominants and their aesthetic values, both within the interior city views and in its exterior silhouette.

Defining the urban function of each city part and giving value to the city structure, streets and squares produced elements that helped integrate the new city plan. Old and new were not juxtaposed, but acted as one.21

The new regulatory plan was completed in 1955. Being very innovative and advanced for its time, it was successfully presented not only in Yugoslavia but all around Europe: in 1957 at the congress of architects-conservationists in Paris, in bigger European cities in the scope of the UNESCO exhibition ‘Unsterbliches Europa’ and at Milan’s Triennale. In 1958, the plan was presented in Moscow at the congress of architects, and in 1959 it was exhibited in London at the exhibition of recent urbanistic and architectural practice.22

Implementation of the 1954 Plan

But what was the destiny of this plan in Zadar itself? The plan was publicly presented and accepted in 1955. And afterwards, it was not respected. Instead, architect-designers of individual buildings dealt with the implementation of the plan in their own ways, which often resulted in rather uncoordinated constructions.23 In an interview given in 195724, the architect Milić was already commenting on the first mistakes made after the plan had been accepted. He claimed positive results only if there had been a close collaboration between an architect-designer of a building and an architect-urban designer, stating that they could not act individually. This, of course, was not the case and as a consequence, generally speaking, individual construction did not reach the level of the urban reconstruction plan, although the Pleiad of Croatian Modernists25 was involved. But on the other side we cannot claim that everything that was built did not have a certain quality, or that the plan was

21 Milić, “Plan regulacije povijesne jezgre Zadra”. This is an excerpt of the speech given by architect Milić at Milan’s Triennale in 1957.
22 Arbutina, Zadarski urbanistički i arhitektonski opus Brune Milića, 38.
23 This praxis had already started before the plan was accepted.
25 Such as Denzler, Vitić, Rašica, Bartolić, Šegvić, etc.
not respected at all. The ancient street grid was completely preserved. The ancient type of block - insulae - , opened towards the inside and filled with greenery, was also preserved although very often architects made mistakes by opening ground floors to the streets, using arcades to artificially widen the streets. The peninsula remained the heart of the city as it had been through the centuries. It has indeed become the pedestrian part of the city with a road along the coast encircling the pedestrian part. In this way foot and car traffic have been separated, creating an extremely pleasant atmosphere for the city’s inhabitants and visitors. The coastal part towards the open sea remained free from construction, respecting the historical matrix. The high-rise greenery was planted on the site of the historic city walls. As more than 60% of the urban fabric had been destroyed, new buildings were constructed, many of them for public use. Probably the most successful example of the new construction was the Archaeological Museum designed by architect Mladen Kauzlarić. It was built on a sensitive location close to the episcopal complex. Since its construction in 1972, the beautiful white stone parallelepiped of the museum corpus has been an excellent example of contemporary architecture harmonically incorporated into a historic complex. [18.10]

An important part of the peninsula territory was allocated for apartment construction, which was the biggest need. Because of his concerns about this, Milić insisted that plans for apartment buildings ought to be designed by a team of professionals of different backgrounds. That did not happen, the only true exception in post-war apartment construction being an apartment building designed by the architect Alfred Albini in 1954. This building, built on the main street, Kalelarga, ex decumanus maximus, entered the annals of Croatian Modernism exactly by its relationship to the ancient: it did not adapt, it was not a facsimile, but at the same time it neither neglected history nor denied the ambiance. On the contrary, it was recreating the ambiance by using something which has been special for the Mediterranean: geometry. The other examples of post-war apartment buildings in Zadar, designed by, for example, Božidar Rašica, Ivan Vitić or Josip Budak, are mostly known not because they are well inserted into Zadar’s historic urban fabric but because of their innovative dwelling typology using a gallery system.26

Architectural Reconstruction as a Part of the 1954 Plan

Apart from construction of new buildings, something very important for post-war Zadar was the architectural reconstruction of its heritage. Three different types of reconstruction took place, sometimes in combination within a particular building or complex: - Restoration of existing fragments, buildings or complexes wholly according to historical formal appearance. The technical method of

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26 Oštrić, “Stambena arhitektura u Zadru”.

18.10 The Archaeological Museum designed by architect Mladen Kauzlarić and the Benedictine nunnery of St Mary.
work was not important; it could have been completely contemporary, as long as it did not affect the exterior architectural appearance of building. If it was necessary for functional reasons, the interior could be adapted according to new needs.

- Historicist new construction of a building or a block, following new plan composition but with techniques and methodologies from the period when the building was built. This method was used in cases where the functional or visual concept of a building needed to be changed in relation to its surroundings, while architectural ambiance required adaptation of new parts to the material treatment of ambiance.

- Reconstruction by designing contemporary new buildings, using all the construction and formal possibilities of Modernist architecture, which at the time was contemporary architecture. This method was used when buildings were too devastated, or with complexes where it was not possible to harmonically connect the parts into a whole. It was also used when the surroundings of a complex or a building did not have unique architectural expression as to the material treatment, or the historical period. As this method used contemporary means of expression, architects should have ensured that new elements in the architectural environment were not too intrusive towards historic buildings.27

An example of the first and second method was the reconstruction of the complex of the Benedictine nunnery of St Mary where a part of the complex was used as a museum, while the other part was preserved as a nunnery. The external appearance of the complex required old techniques and procedures, while its interior was adapted according to new needs and new functions.

An example of the third method has been the already mentioned Archaeological Museum designed by architect Mladen Kauzlarić as a part of the pre-Romanesque and Romanesque episcopal complex.

**Conclusion**

Regarding Zadar’s peninsula today, sixty years after the Second World War ended and fifty years after the regulatory plan for its territory was completed and accepted, it is important to stress that, although the post-war urban reconstruction was not performed completely according to the plan and although many mistakes were made, the city managed to preserve its two-millennium-long urban history. Every stratum of this history is still visible and recognisable in the dense urban fabric, starting with the ancient Forum romanum, through pre-Romanesque and Romanesque religious buildings, Renaissance palaces, Baroque churches, eclectic public buildings and on up to the beautiful twentieth-century examples of Modernist architecture. Today, the peninsula offers pleasant living conditions to its inhabitants and satisfies all needs of the regional centre, while after nearly a ten-year interruption28, the city is becoming an important tourist centre again. All these elements speak for the success of the post-war reconstruction.

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27 Vitić, “O rekonstrukcijama”.

28 This interruption was caused by the 1991-1995 war in Croatia.