

A Story of Architectural Heritage: From Ancient *Ca' Granda* Hospital to a Faculty of Medicine

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Historical Background



The *Ca' Granda*, in other words, *Ospedale Maggiore*, is the most significant work of architect Antonio Averlino (also known as *Filarete*, 1410-1470). It was built with the original function of hospital, while nowadays it serves as an educational building (University headquarter).

The first stone of *Ca' Granda* was laid on April 12, 1456, it was built to be especially for the poor on the initiative of the Duke of Milan Francesco Sforza, to provide the city with a single large hospital for the admission and care of the sick (1), which had previously been housed in various hospices scattered around (2).

Although it took over four centuries to be completed due to a series of interruptions linked to the lack of funds, the hospital began to function in 1472 (3). The construction completed in 1805 to carry out its function as the largest hospital in the city of Milan until 1939. In 1939, the patients were transferred to the new headquarters built in Niguarda. After the bombing of the center of Milan by British and American planes, especially the raids that took place on the nights from August 13 to 17, 1943, the structure was severely damaged, with entire wings of the complex destroyed. The damage was repaired at the end of the war by recovering as much of the original material as possible. The restoration continued until 1985 with the renovation of the courtyard of the *Farmacia* and the *Bagni* (4).

Since 1958, it is home of the Facoltà di Medicina e Chirurgia of Università degli Studi di Milano (Faculty of Medicine and Surgery of the University of Milan). In 2005, the hospital was unified with two institutes into a single organization that, since 2010, is called IRCCS *Ca' Granda Ospedale Maggiore Policlinico* (Scientific Institute for Research and Health Care).



Fig 1. Dell'Acqua. View of the Naviglio river from the Roman Gate's Bridge, by Giovanni Battista, 1835 (<http://www.lombardiabeniculturali.it/opere-arte/schede/01010-00041/>)

The Approach between Health and Landscape Architectural Design

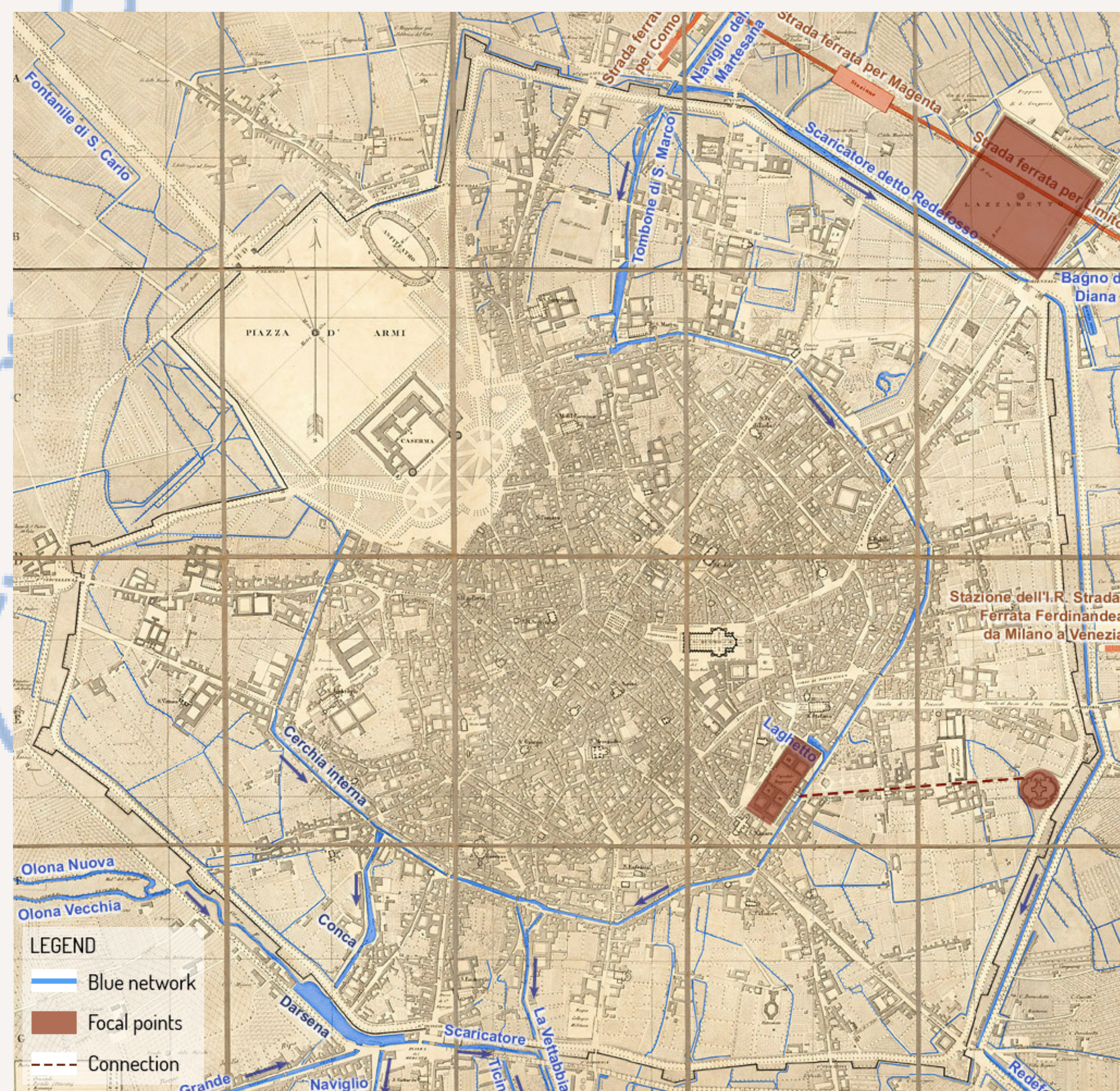


Fig 2. *Ca' Granda, Rotonda della Besane and Lazaretto*, Map of surface water by Giovanni Brenna, 1860 (<http://www.stagniweb.it/>)



Fig 5. The Cloister of the Ospedale Maggiore, Anonymous, 1600 circa (<https://www.fondazionememarchi.it/2017/04/rievocazione-storica-della-festa-del-perdono/>)



Fig 6. The *Ca' Granda* in the Via Festa Del Perdono, Luigi Premazzi, 1842 (<https://www.compro-antiquariato.it/>)

Ca' Granda was not thought in an isolated way from surrounding, it has a strong connection with urban blue and green infrastructures. Its system used a running water system. Naviglio canal has been played a big role in emergence of socioeconomic structures, policies, and cultures since they started to be built. In addition, canals are evident for the history of technological development. The line and waterproofing of the water channel, the engineering structures of the line with reference to comparative structural features in other areas of architecture and technology, the development of the sophistication of constructional methods are clear. Secondly, with the canals, there is an extensive tangible network of infrastructure, buildings, and urban form in Milan. In this case, it was referring to a boundary between inner and outer part of the city instead of walls and the *Ca' Granda* was built at the outer part. It had direct link with the cemetery complex, *Rotonda della Besane*, which was built between 1696-1773 as a part of *Ca' Granda* due to problems of space in the crypt of the hospital that was insufficient to host the deceased people (5).

A pollution-free water supply was important, which also required a non-polluting wastewater drainage system. The distribution, organization and building of this healthy service in the city was centered on its water supply. *Ca' Granda* could be regarded as a model for the supply of good-quality water and wastewater disposal without polluting the city (6).

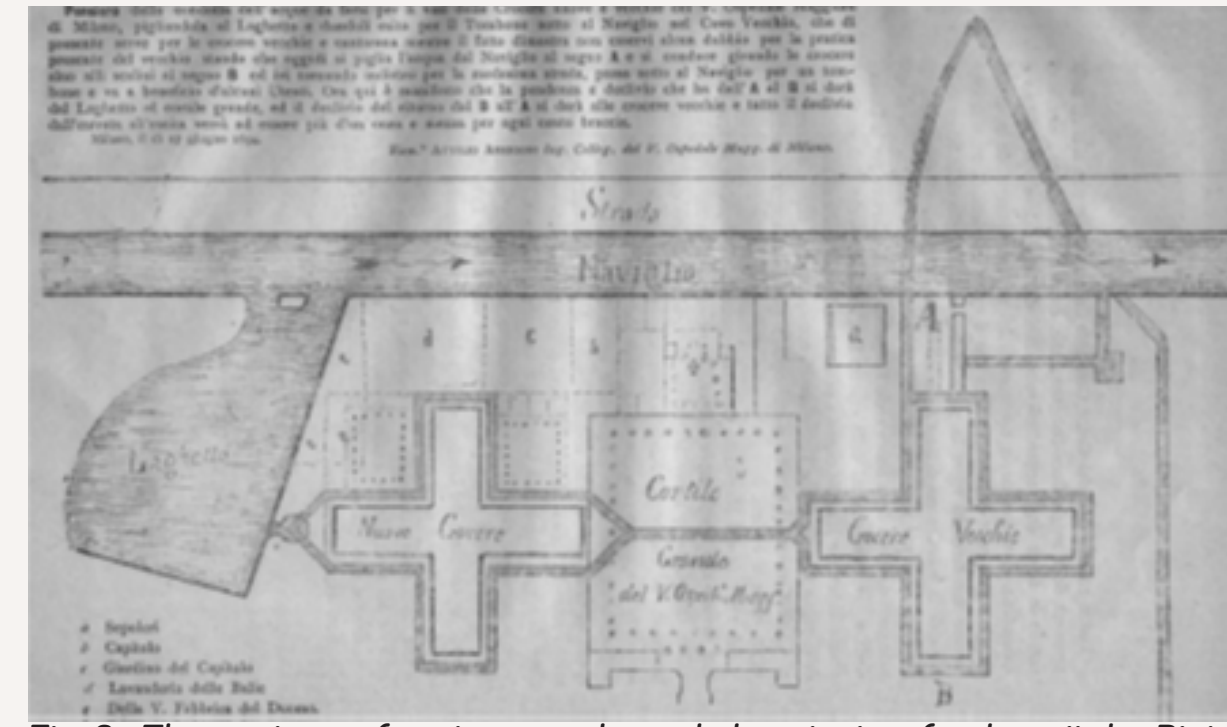


Fig 3. The system of water supply and dewatering for hospital, Pietro Canetta, 1884 (6)



Fig 7. The buildings of the Archive and the apse of the Church along the Naviglio, before its covering (Archive Ospedale Maggiore of Milan)

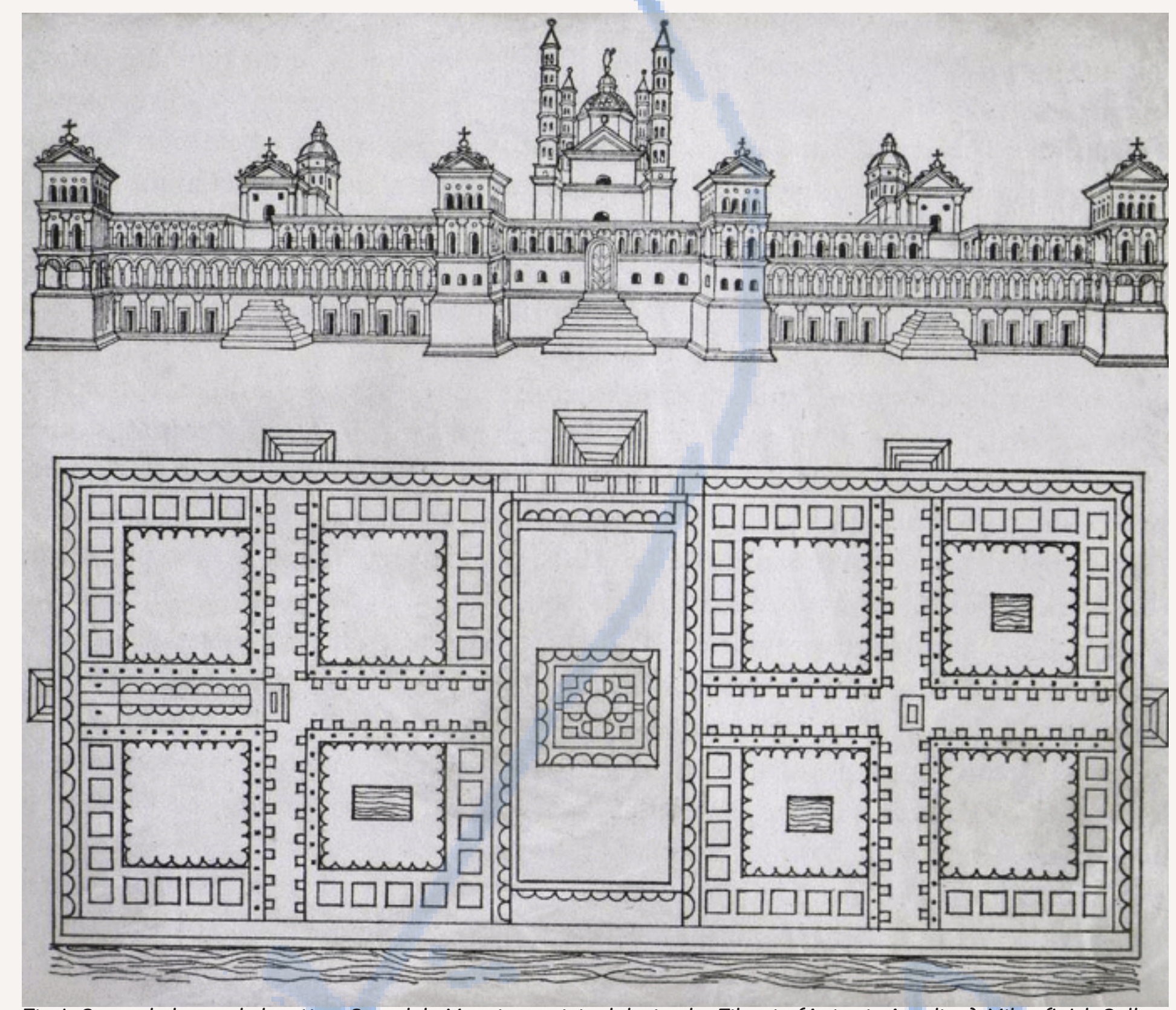


Fig 4. Ground plan and elevation, Ospedale Maggiore original design by Filarete (Antonio Averlino), Milan (Web Gallery of Art) (<http://www.lombardiabeniculturali.it/opere-arte/schede/01010-00041/>)



Fig 8. Rotonda della Besane, Marc'Antonio Dal Re, 1745 (<http://www.storiadimilano.it/>)

Hints from then to now

Water has served and sustained communities in the past. People have benefited from it for the development of cities. The diverse systems of the past are needed to be preserved and reused besides new systems. Policymaking and design work together to build on traditional knowledge and skills as imagining how it helps to develop sustainable futures for cities, landscapes, and water networks (7).

Both *Ca' Granda* and *Rotonda*, at those times were built in the outer part of the city with concerns to control infectious diseases. In the crypt of the hospital, there were about 150 thousand corpses deposited between 1637 and 1695 (8) since it was built big enough. During the plague in 17. century, the *Lazaretto* (9) which served especially for people who suffer from this contagion, was also located in the outer part. The *Ca' Granda*, both as architectural and cultural heritage, is extraordinarily rich, which is extremely meaningful not just for the history of health assistance and care in Lombardy during the last millennium, but for social, art, economic, and landscape history (10). From a social perspective, together with natural elements, *Ca' Granda* was a preliminary example. These elements improve the environment, public health, and quality of life in general. People who interact with nature more may have better mental health. Specifically, in or near hospitals, they improve the conditions of both sick people and staff even if the relationship is only visual. In relation to pandemics or disease as in the recent case of Covid-19, this situation has been attracted more attention for the wellbeing of all inhabitants.

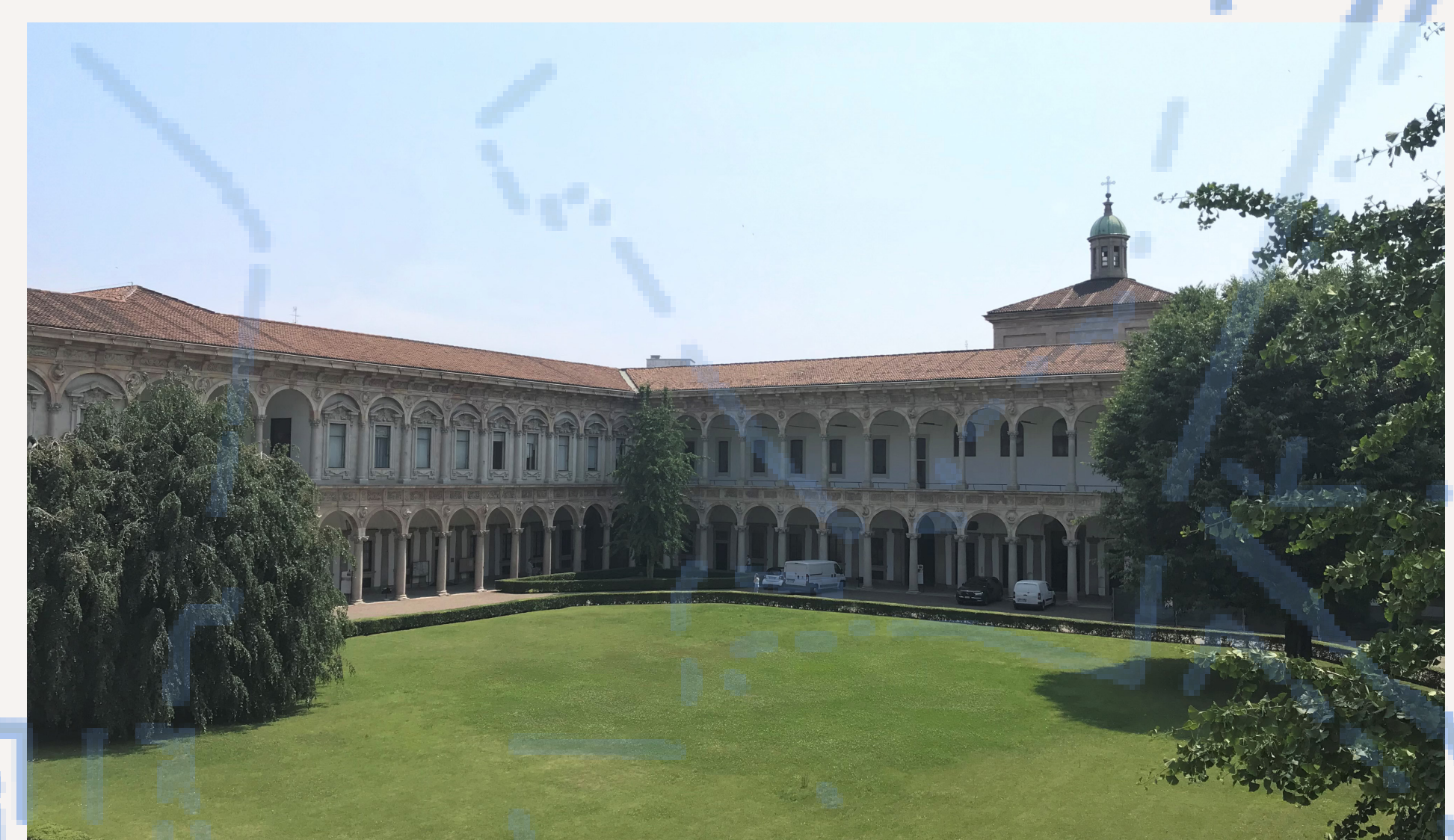


Fig 9. The central courtyard of *Ca' Granda*, photo by authors, 2021