



Tracing the Amber Road

A survey of architectural trade and markets along an ancient trade route

Jake Kellow





Perpetual

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As Lecturer-in-Charge of the architecture course at Sydney Technical College, Hadley built “one of the finest schools of architecture in the Empire” and is credited with gaining Royal Institute of British Architects (RIBA) recognition of the course, which gave post-1923 graduates exemption from the RIBA examinations.

As an architect in private practice, Hadley drew from a wide range of revival styles in his designs for significant urban and suburban commissions, which included two town halls, several multi-storey city warehouses, numerous suburban churches and Sydney University’s original Wesley College and chapel.

Hadley’s “greatest contribution to NSW architecture remains his insistence on the importance of travel in Australian architectural training.” In 1928 and 1929, Hadley sponsored two £25 scholarships through the Board of Architects of NSW. The success of these must have provided the catalyst for his 1937 bequest.

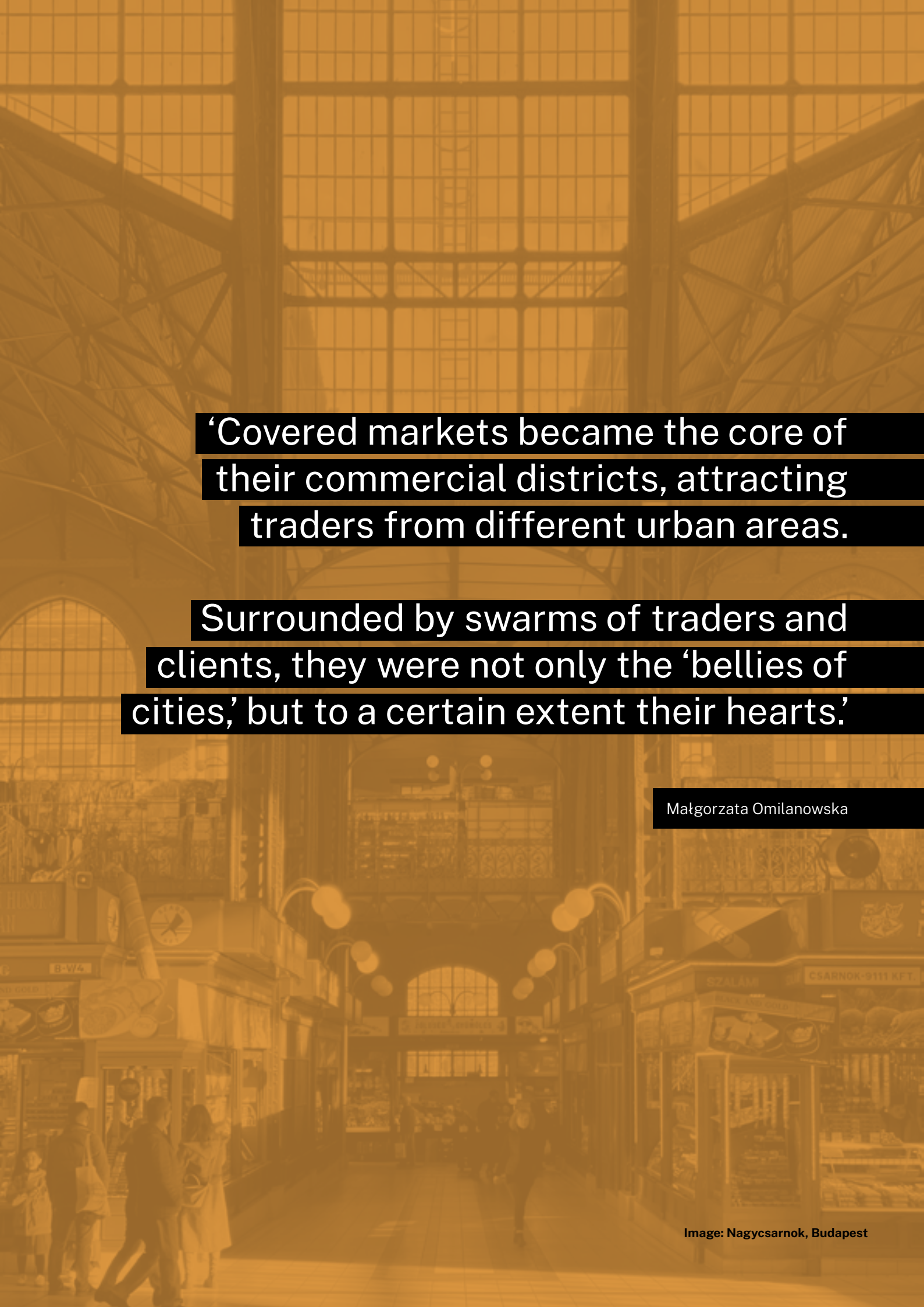
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Jake Kellow was awarded the Byera Hadley Travelling Scholarship in 2019.

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‘Covered markets became the core of their commercial districts, attracting traders from different urban areas.

Surrounded by swarms of traders and clients, they were not only the ‘bellies of cities,’ but to a certain extent their hearts.’

Małgorzata Omilanowska

Image: Nagycsarnok, Budapest

1 Introduction

For over two millennia, the Amber Road served as a major trade route across Central and Eastern Europe. Connecting the Baltics to the Mediterranean, it allowed for the trading of amber, furs, bronze, food and other goods across Europe and the world.

This research seeks to survey the architectural repercussions of trade by following in its ancient footsteps. Travelling from Gdansk to Venice, it traces the Amber Road to explore the history and architecture of trade across a diverse range of social, economic, climatic and cultural contexts.

It focuses specifically on the marketplace typology to provoke investigation at the crux of trade, architecture and public discourse in the built environment. Visiting six case study markets and numerous smaller markets across more than 2,000 kilometres, it documents the social and spatial characteristics of the European market typology as a public space for trade and social life. Whilst their contexts may differ, one thing unites them all - markets are spaces for people to come together as a community and engage with the food that sustain us.



Right: Tržnica Dolac, Zagreb

2 The Amber Road

Throughout history, trade has been a driving force in human development. From the bartering of surplus wheat to the dealing of precious spices, the trading of resources has facilitated the exchange of information, cultures, philosophies and technology around the world.

It is through the commercial ambitions of merchants that a global network of roads and maritime trade routes were established. The ancient Silk Road supplied the Roman Empire with silks from the East; the maritime Spice Route linked producers in South East Asia to markets in Europe; and the Trans-Saharan Trade Route carried goods from the Middle East to North Africa, facilitating the spread of Islam. Commerce, 'like the wind that pushed the grain off,' led to a search for material gain and the rise of globalisation, creating an effective and lasting means of progress.¹

The Amber Road

This research focuses on the Amber Road, an ancient trade route connecting the Baltic Sea in the north to the Mediterranean Sea in the south. The trade route takes its name from amber, a fossilised tree resin highly valued for its beauty and used in the production of jewellery, perfumes and folk medicine. Whilst Northern Europe was rich in many natural resources including furs, timber, metals and fresh produce, amber was the one 'distinguishable and imperishable' material which it traded extensively with the south.²

Since the late Stone Age, approximately 12,000 years ago, amber from the Baltics has been traded across Central Europe and Russia. The trade truly flourished in the pre-Christian era, using Roman roads to reach new markets in the south. This exchange led to the introduction of Roman glass, gold, brass and copper to Northern Europe, encouraging the region's development and prosperity. With the trading of more and more goods came the need for greater protection from thieves and raids, in turn leading to the establishment of Roman military fortifications along the route to protect merchants.

Route and Geography

The amber trade generally followed the course of rivers and valleys, including the Vistula, Oder, Danube and Dnyep, as these were 'natural highways' for the transmission of goods. Easy portages connected the upper courses of these valleys with market towns and tributaries downstream.³

Historically, the Amber Road has followed three different routes: the central route used in the early Bronze Age; the western route used in the middle Bronze Age; and the eastern route used in the early Iron Age. This report focuses on the more recent eastern route, travelling from the Baltic shores of ancient Pomerania (Poland), via Carnuntum (Austria) and Sopron (Hungary) to the Roman city of Aquileia (Italy) at the head of the Adriatic Sea.



This research project visits six case study cities along the Amber Road including Gdansk, Wroclaw, Vienna, Budapest, Ljubljana and Venice. It also visits multiple supporting markets along the way, in cities such as Warsaw, Dresden, Prague, Bratislava, Zagreb, Trieste and Padua.

1. Calabi, D. (2016). *The Market and the City: Square, Street and Architecture in Early Europe*. Oxfordshire: Routledge, p15
2. de Navarro, J. M. (1925). "Prehistoric Routes Between Northern Europe and Italy Defined by the Amber Trade." In *The Geographical Journal* Vol. LXVI No. 6. The Royal Geographical Society, p481
3. Beazley, C. R. (1903). "Mediæval Trade and Trade Routes." In *The Geographical Teacher*, Vol 2. No. 3. Geographical Association, p114

Above: Project travel route (black), significant rivers (orange solid) and the eastern alignment of the Amber Road (orange dotted)

3 Defining the Market

A market is the gathering of people for the purchasing of goods and commodities.⁴ They are primarily spaces where commercial dealings are undertaken, with their architecture informed by the goods or services that they provide. From fresh produce to livestock, financial stocks to information, they exist as spaces for exchange at the very heart of our cities. Regardless of wares, all markets share one thing in common - they are places for people to come together and trade.

From their humble beginning as the central town square they developed into porticos, covered markets, market halls and speciality arcades, before evolving into their modern day equivalent; the supermarket and shopping centre. In the twenty-first century the market typology now extends beyond a physical space, existing as digital marketplaces and online forums.

This report focuses specifically on the covered market and market hall. These typologies represent the markets evolution from an urban situation to a building for the sole purpose of trade. Covered markets played a crucial role in securing the basic human need for food and raising the standard of living for urban dwellers. Perhaps even more importantly, they established a new social meeting point between 'town and countryside,' consumer and producer.⁵

History

The market is the oldest retail trading format in the world.⁶ Its ancient origins lie in the transition from nomadic hunter-gatherers to settled farming

communities. This pivotal shift resulted in the domestication of plants and animals and the start of modern agricultural practices, with surplus produce becoming a new commodity for trading. Goods were often transported from the countryside to urban centres where there was a larger population of buyers and merchants. These market towns soon played an important role in the rural milieu, becoming not just centres for trade but for community life, 'information and stories, too.'⁷ Produce and livestock were traded in public squares at the centre of town where they could be easily accessed and form part of the routine of daily life.

During the Middle Ages, the urban structures of Central European cities were largely developed around the organisation of trade.⁸ For the Teutonic Countries including much of modern day Germany and Poland, cities were centred around a market square where trade was undertaken alongside civic and administrative functions. These large town squares were often overlooked by the town hall, cathedral and guild halls where merchants could promote their goods. Unlike much of Western Europe where the climate is milder, Central European trade occurred in covered markets, arcades or even seasonally constructed wooden stalls to escape the harsh cold weather.

With the rise of industrialisation in the eighteenth century, more and more people moved to urban centres, putting greater strain on food systems and the relationship between producers and consumers.

To improve food security and sanitation, local governments created a new public market system where produce could be better distributed and regulated. The key to this model was a centralised, covered market hall where goods could be sold under one roof, all year round, as pioneered at Les Halles in Paris. Dobraszczyk notes that this public system was 'motivated by municipal authorities desire to assert civic values,' with new market halls becoming symbols of social, political and moral progress.⁹ As a result, the market hall became an important public building, reflecting a sense of civic pride.

Considerations

Covered markets present a number of key elements or characteristics for their successful operation. The most important being circulation - of buyers, sellers and the displaying of goods - which can only be achieved with a large span and functional interior. This necessitates the use of innovative construction systems to achieve greater column-free interiors and flexible stall arrangements. In *The Arcades Project*, Walter Benjamin notes that the first iron structure buildings such as covered markets and exhibition halls served as transitory spaces with 'Iron immediately allied with functional moments in the life of the economy.'¹⁰

Other basic requirements include access, both for customers and producers; a system of internal aisles and stalls to maximise display space; services such as amenities, offices, lifts, refrigerators and plant equipment; and connections to roads, railways or ports for easy loading/unloading of produce and waste. Equally important is the ambience and thermal comfort of the building. Natural and artificial light are required to enable clear viewing of the goods, whilst direct sunlight might cause some produce such as meat or dairy to spoil. Natural ventilation is desirable to clear smells and odours. Whilst central heating is necessary for the buildings occupation in the cold winter months and to avoid soot or ash affecting the produce.

Top right: Hala Targowa, Gdansk

Right: Palazzo della Regionale, Padua



4. Oxford English Dictionary. Market. Accessed 27 June 2024, https://www.oed.com/dictionary/market_n?tl=true

5. Omilanowska, M. (2015). "Market Halls in Scandinavia, Russia and Central and Eastern Europe." In Guàrdia, M. & Oyón, J. L. (ed.), *Making Cities through Market Halls Europe, 19th and 20th Centuries*. Barcelona: Ajuntament de Barcelona, p428

6. Tomlinson, N. & Planas, V. A. (2018). *Contemporary Market Architecture: Planning and Design*. US: Images Publishing Group, p4

7. Ibid, p. 4

8. Omilanowska, M., p402

9. Dobraszczyk, P. (2012). "Victorian Market Halls, Ornamental Iron and Civic Intent." In *Architectural History*, Vol. 55. SAHGB Publications Limited, p174

10. Walter Benjamin, *The Arcades Project*, Rolf Tiedemann (Ed.), translated by Howard Eiland and Kevin McLaughlin, Harvard University Press, Cambridge, Massachusetts, 1999, p154

4 Methodology

Purpose

The purpose of this study is to document marketplaces along a historic trade route to uncover how trade, production and consumption are embedded in the built environment. Using research, on-site observations and sketches, it seeks to analyse the architectural characteristics and urban contributions of each market to determine their markers of success.

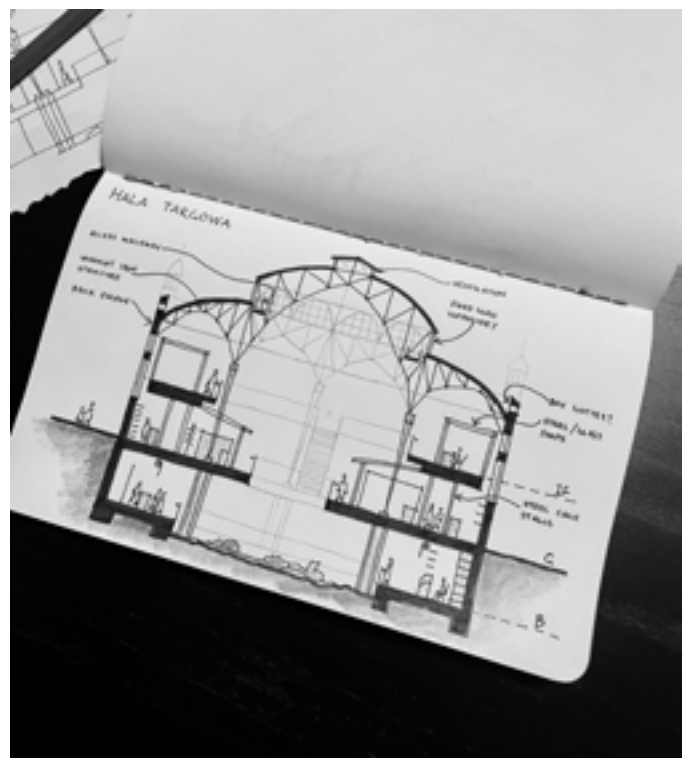
Significance

'Tracing the Amber Road' seeks to educate architects, policy makers and the wider public on the social and cultural importance of civic markets to the liveability of our cities. The market is an intrinsic part of the city and its socio-urban fabric, and is a point of architectural significance worthy of research.

This project follows the Amber Road to specifically align with a current research gap surrounding the study of Central and Eastern European markets. As identified by Manuel Guàrdia and José Luis Oyón, research has primarily focused on Western European markets in the UK, France and Spain, but never Central or Eastern Europe.¹¹

This report provides relevant first hand research and spatial documentation to fill this gap. Through first hand experience, six case study markets are surveyed in terms of plan, section and programme; and analysed in regards to site, history and management, providing insight into how they are used by traders and the public.

Significantly, it frames local marketplaces in relation to larger networks of trade, to understand how architectural ideas are instilled in the urban fabric. By analysing not just the physical or architectural qualities of each market but their wider historical and urban context, this report seeks to provide a deeper understanding of each markets development and contribution to the city. In doing so, it frames the civic market as a public place sited at the nexus of trade, produce and consumers.



Right: Sketch section of Hala Targowa, Gdansk

5

Case Study Markets



‘The space the city allocated to commerce, its articulation and its architectural character, were strongly linked to the nature and intensity of the trade which took place there, and... often influenced the entire form of the city.’

Donatella Calabi



Image: Hala Targowa, Gdansk

5.1

Hala Targowa Gdansk

Location: Gdansk, Poland

Architect: Ernst Otto and Kurt Fehlhaber

Completed: 1896

Typology: enclosed market hall, covered outdoor market, market square

Construction: iron frame structure, brick facade, sheet metal roof

Building area: 4,700 sqm

Stalls: 188

Gdansk is a trading hub and port city on the north coast of Poland. Established in the ninth century, Gdansk is located on a protected branch of the Vistula River before it meets the Baltic Sea. It was here where merchants from Scandinavia and Northern Europe traded furs, amber and fish with continental Europe. The city's strategic location made it incredibly wealthy and prosperous, growing from a small fishing village into a thriving market town and centre for ship building.

In the fourteenth century, Gdansk was captured by the Teutonic Knights and formed part of the Hanseatic League - a network of trading guilds and market city's across Northern Europe. The League united a number of independent city-states to provide protection, access to international markets and promote free trade between members.

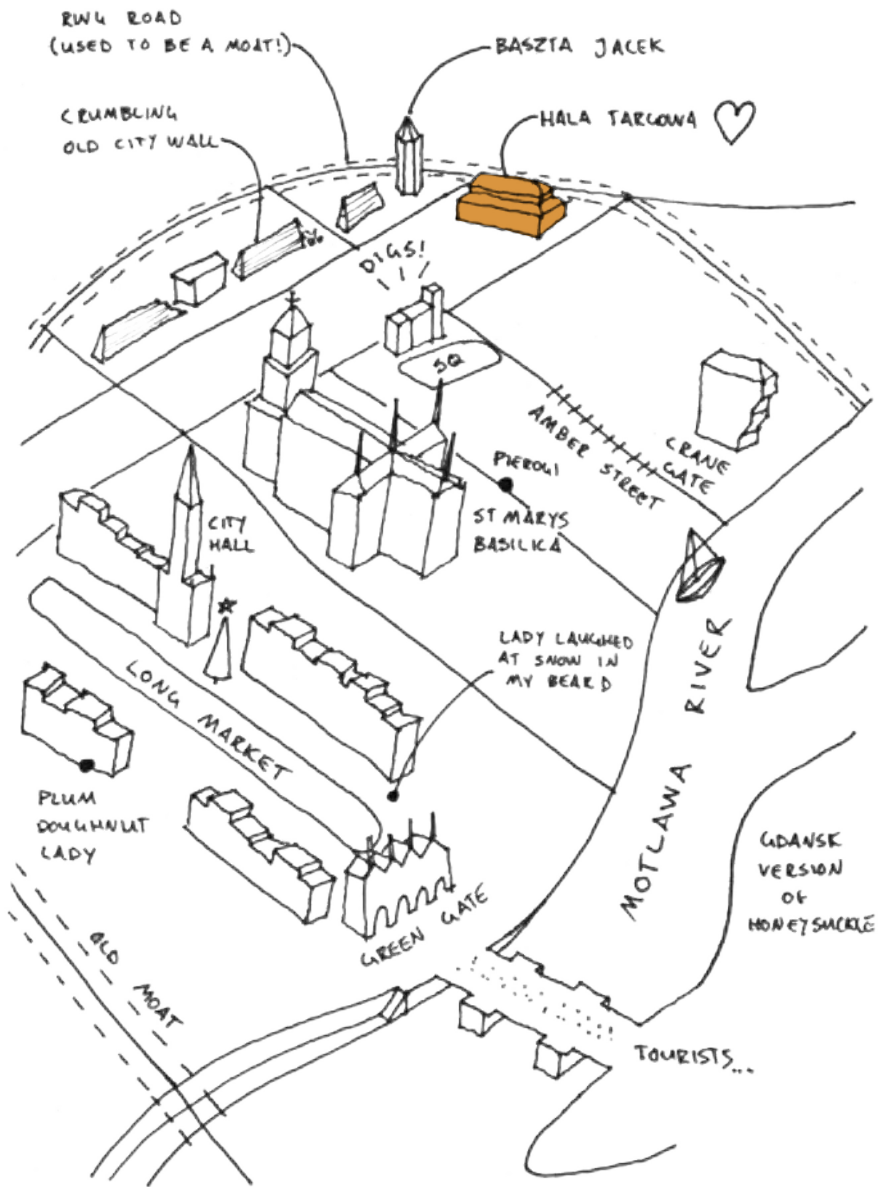
Urban and Historical Context

The layout of Gdansk, particularly Stare Miasto (Old Town), is heavily influenced by its trading past and the Hanseatic League. Situated on the left bank of the Motława River, the city centre is defined by major streets running east-west and smaller transverse streets running north-south. Perpendicular to the rivers edge, the wider major streets ensured easy distribution of goods from the river docks to the central markets. A ring of defensive walls, bastion towers and moats surrounded the city whilst numerous gates and bridges provided access for people, goods and livestock.

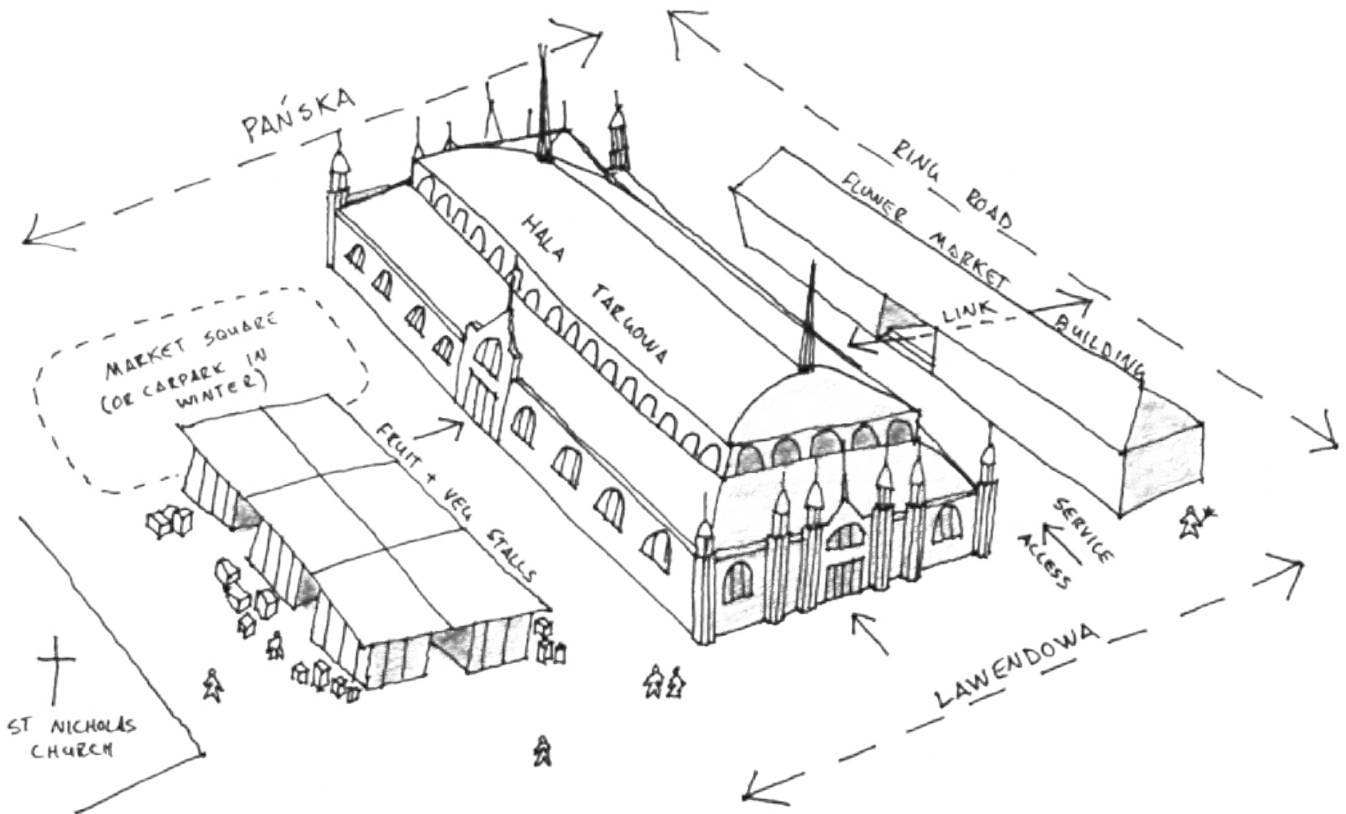
The civic and geographic heart of Gdansk is the Długi Targ, or Long Market. It first began as a merchant road from the Vistula to the market square, and later became a procession route for visiting kings and nobles. As the largest market square in Gdansk, the Długi Targ hosted the livestock and pig market, as well as stalls selling meat, butter and bread. As the city grew, many guild halls, merchant mansions and civic buildings including the town hall were built along the Długi Targ for supervising and regulating trade.

From the fourteenth to the nineteenth centuries, many small and highly specialised markets were established across the city, including the Targ Rybny (fish market), Targ Rakowy (crayfish market), Targ Sienny (hay market), Targ Drzewny (timber market), Targ Węglowy (coal market) and Targ Wąchany ('sniffer market' for quick to spoil products). These markets were often situated 'outside' the city in areas that would later become the 'city centre,' such as at a key intersection, road, wall or gate.¹²

It wasn't until the late nineteenth century that Gdansk decided to remove the open air markets and livestock from Długi Targ as it was becoming increasingly overrun, unsanitary, and a blight on the city. Following many other European capitals, particularly in France and Germany, the decision was made to establish an enclosed, centralised space for vendors to sell their goods, the Hala Targowa.



Top: Gdansk mappings and journal sketch
Above: Typical green market stall
Left: Hala Targowa front entry



Site Analysis

The Gdansk Hala Targowa, or Market Hall, is located at the northern edge of the historic Stare Miasto. It sits on the site of Dominikański Square, a thriving market settlement from the twelfth to thirteenth centuries.¹³ The square was located just inside the city's perimeter walls and moat, at the intersection of a merchant route and road leading to the Pomeranian royal estate. This strategic location at the edge of the city's defences and en route to a large royal household provided the market both protection and regular demand for its goods.¹⁴

From the late thirteenth century the square was the site of the Dominican Friary, a monastery servicing the adjacent St. Nicholas Basilica until its destruction in 1813 during the siege of Gdansk. It wasn't until the early 1890's that the friary ruins were cleared and Dominikański Square was restored as an open air market. By the late nineteenth century however, the culture around market squares was beginning to shift. Europe's growing population and increasing

urbanisation left traditional markets unable to provide a regular, secure, hygienic and controlled food supply for their citizens.

In 1894, the city decided to construct a central enclosed market hall on the site of Dominikański Square. As a traditional place of trading, the square provided convenience of proximity to the Vistula River for easy delivery of goods as well as the city centre for connecting with consumers. Małgorzata Omilanowska observes that it is this pragmatic relationship and familiarity of place that often makes historical market squares the sites for modern market halls across Central and Eastern Europe.¹⁵

Top: Hala Targowa Gdansk axonometric sketch



The Hala Targowa

In 1896 construction was completed on the Gdansk Hala Targowa. Designed by architects Ernst Otto and Kurt Fehlhaber, the building contains two-storeys of retail vendors with a basement food hall selling seafood, meat, baked goods and imported sweets.

To the south of the hall is an outdoor covered green market consisting of six steel and glass pavilions selling fresh fruit and vegetables. To the north, on the site of the city's original moat, is a single-storey brick flower market built in the 1980's and now containing a mix of cafes, flower shops and a bowling alley. A small open plaza, or what remains of Dominikański Square, is situated to the south-west of the hall adjacent St. Nicholas Basilica and is used for events and seasonal markets.



Top left: Dominikański Square

Top right: Typical column capital and iron frame truss

Bottom right: North elevation facing flower market



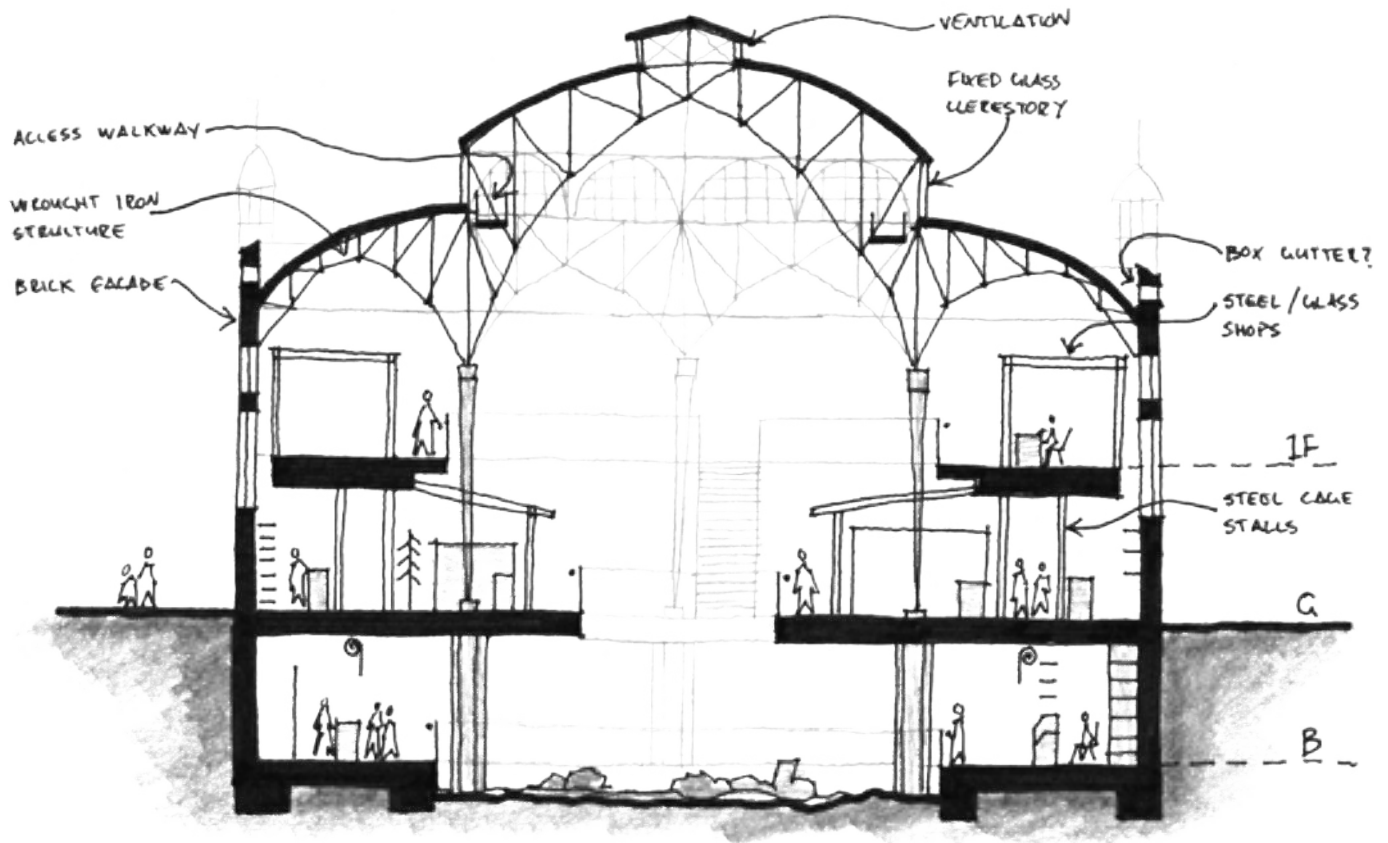
Programme

Starting at the top, the first floor mezzanine of the Hala Targowa is an eclectic mix of clothing stores, offices and service-based retailers such as hairdressers and accountants. Sadly, a large number of shops stand vacant on this level in part due to the reduced foot traffic and lack of visible shop or street fronts. The ground floor contains a number of speciality clothing stores ranging from leather goods, bags and jackets, to underwear and socks. The most active stalls are a jeweller, tobacconist and beauty care shop, all located in close proximity to one of the four building entrances. The basement food hall is by far the most active and bustling part of the market, with many consumers taking the escalators downstairs to purchase necessities such as milk, bread and meat goods. Its subterranean location ensures the produce is kept cold and away from natural light to prevent spoiling. Outside, the green market operates in a reduced capacity over the winter months, but stocked a range of seasonal produce including cabbage and root vegetables.

The Hala Targowa is open 8am to 6pm on weekdays and Saturdays 8am to 3pm. Unfortunately, the main market hall was consistently quiet, regardless of time or day of the week. This is largely due to the high number of vacant retail tenancies and over saturation of clothing stores. The downstairs food hall was a notable exception, experiencing a spike in shoppers early in the morning and again at lunchtime. The outdoor green market was most popular on Saturday's, the traditional market day, as this day attracts the most vendors and offers a wider variety of fresh produce.

Top left: Typical glass framed market store

Bottom left: Central atrium



Interior

The market hall is adorned with decorative motifs such as flowers, grapes, birds, boars and other symbols of commerce. Ornamentation can be found on the lattice entry gates, across the facade, the octagonal roof turrets and atop the tapering iron columns, here taking the form of a lion's head - a symbol for the city. Throughout the Hala Targowa, this ornamentation provides associations to the city's identity and imbues the markets civic importance, 'elevating [it] above the utilitarian.'¹⁷

In contrast to the hall's original features, renovations in the early 2000's replaced all open stalls with freestanding steel framed glass pods, completely separate to the existing structure and its style. This modern reinterpretation allows visibility and daylight through the stalls, but is compromised by the display of wall-to-wall wares. During these renovation works, the foundations of the original St. Nicholas Church and a medieval trade settlement were unearthed below the

building. These ruins have been retained in place and are on permanent display at the bottom of the hall's triple-height atrium.

Management

Since 2000, the market has been owned by Kupcy Dominikańscy, a private company responsible for the halls management and leasing of tenancies. Kupcy Dominikańscy was able to successfully relaunch the market hall following its renovation and years of neglect, capitalising on its local ownership and community connections. However, the impact of COVID and changing consumer preferences, namely the rise of supermarkets, has left many tenancies within the Hala Targowa vacant. In February 2024, a Polish-French commercial property operator submitted plans to renovate the market hall, stripping away the modern 2001 additions and providing a larger food hall with more cultural and restaurant offerings.¹⁸

Top: Short section sketch



12. Calabi, D. p40

13. Medieval Heritage. (21 September 2021). *Gdansk: Dominican Friary and St. Nicholas' Church*. Accessed 10 June 2024, <https://medievalheritage.eu/en/main-page/heritage/poland/gdansk-st-nicholas-church/>

14. Tomlinson, N. & Planas, V. A. (2018). *Contemporary Market Architecture: Planning and Design*. US: Images Publishing Group, p4.

15. Omilanowska, M. p408

16. Dobraszczyk, P. p173

17. Ibid, p175

18. Geniusz-Siuchnińska, A. (23 February 2024). *The Market Hall in Gdańsk will Undergo thorough Revitalisation*, Inntu. Accessed 10 June 2024, <https://news.inntu.pl/klienci/4116/pr/829381/hala-targowa-w-gdansk-przejdzie-gruntowna-rewitalizacja>

Top left: Mezzanine level

Bottom left: Entry gate fretwork

Above: Lion head column capital

5.2

Hala Targowa Wroclaw

Location: Wroclaw, Poland

Architect: Richard Plüddemann

Completed: 1908

Typology: enclosed market hall

Construction: reinforced concrete structure, brick facade, clay tile and copper sheet roof

Building area: 3,590 sqm

Stalls: 190

Wroclaw is a university city on the Oder River in southern Poland. It is located at the intersection of two important trade routes: the Amber Road running north-south, and the Roman Via Regia or 'Royal Highway' running east-west from modern day Russia to the Atlantic.

The city was first established in 940 AD on Ostrów Tumski, or Cathedral Island, a protected stronghold between meandering branches of the Oder River. Wroclaw became both a market town for the surrounding local area and a trading hub for wider Central and Eastern Europe, finding importance as a place to exchange both goods and information.¹⁹ The city's strategic location however, made it the target of many Mongol, Saxon, German, Hungarian and Polish conquests, resulting in a built environment of moats, gates and defensive walls.

Urban and Historical Context

After the thirteenth century, Wroclaw had outgrown the Oder islands and expanded to the south bank of the river, to the area now known as Old Town of Stare Miasto. The first market square and streets were laid out in 1229, following a medieval urban layout of loosely gridded blocks surrounded by an inner and outer ring of fortifications.

Up until the twentieth century, produce was sold at eight outdoor markets across the Old Town, including the

Rynek (main market square), Nowy Targ (new market) and Plac Solny (salt square). The Rynek is Wroclaw's largest surviving outdoor market and surrounds Old Town Hall, a complex of municipal, judicial and trade functions at the centre of the market square. First established in the thirteenth century, the town hall provided a means of managing the city's growing trade requirements and organising merchants.²⁰

Wroclaw's market squares functioned well until the late nineteenth century, at which time the city chose to erect five enclosed market halls in an effort to consolidate open air markets and improve the city's hygiene, sanitation and food safety. The new halls were to be located at key points around Wroclaw so that any resident could reach a market within a ten minute walk.²¹

Of the five proposed halls however, only two were ever realised - Market Hall I on Piaskowa Street and Market Hall II on Kolejowa Street. Both halls were built simultaneously and utilised a similar plan and construction method, with Market Hall I being the larger hall due its location at a key intersection between the Old Town and growing residential suburbs to the north. Sadly, Market Hall II suffered severe damage during World War II and was ultimately demolished in 1973, leaving Market Hall I or Hala Targowa as Wroclaw's sole enclosed market hall.

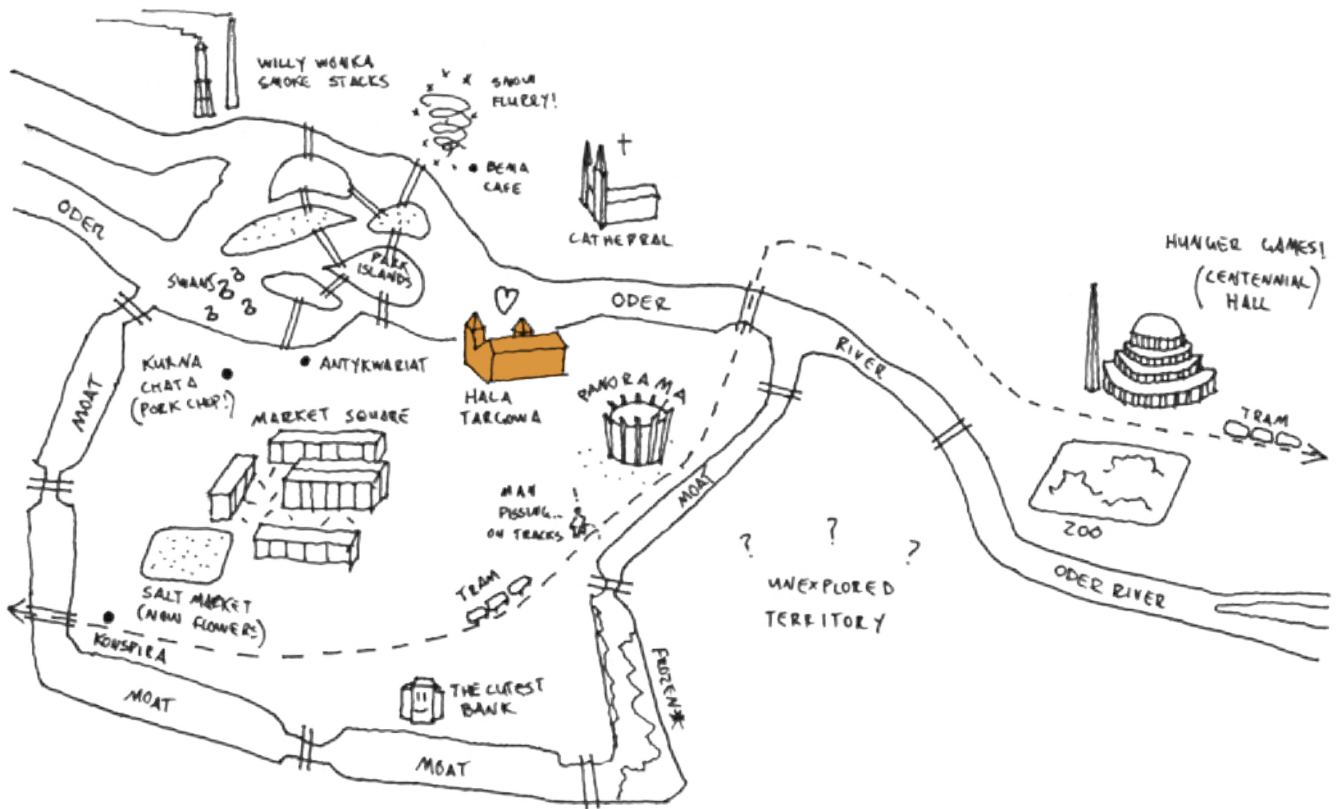


Top left: Exterior from Piaskowa bridge

Bottom left: Rear elevation

Top right: Tower on north elevation

Bottom right: Central hall



Site Analysis

The Wrocław Hala Targowa is located on Piaskowa Street at the north-eastern edge of Stare Miasto. It is situated opposite Nankiera Square and a bustling tram interchange, ensuring easy public transport access and activation of the market.

The site is in close proximity to Piaskowa bridge and the historic city gate, what would have been a critical control point between the original town settlement on Ostrów Tumski (Cathedral Island) and the Rynek (main market square) to the south.²² Similar to Gdańsk, the Wrocław Hala Targowa occupies a site at the edge of its city's defences and at a threshold between producers and consumers.

From the thirteenth century, the area was used by the adjacent Cathedral of St. Vincent and St. James as a medieval manor for its residing bishops. In 1511, Wrocław city council purchased the land for use as an arsenal, storing both grain and weapons for the city's security. The arsenal was gradually expanded over time until the site was cleared in 1906 for construction of the new market hall.



Top: Wrocław mappings and journal sketch
 Right: Exterior from Sand Island



The Hala Targowa

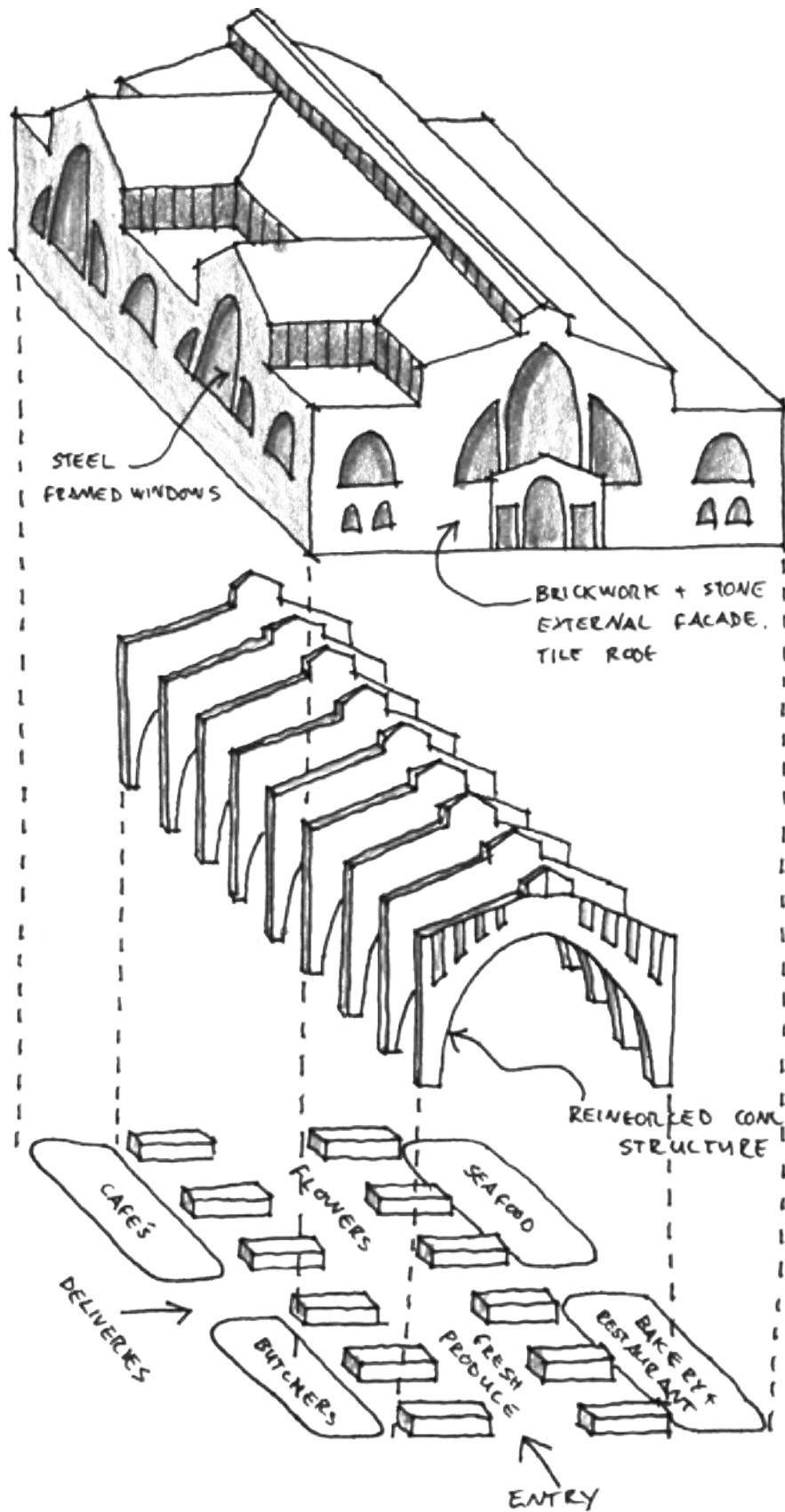
Designed by Richard Plüddemann, the Wrocław Hala Targowa was completed in 1908. The main hall is a two-storey structure containing cafes, retail and food vendors with a basement below for dry and cold stores. Unlike Gdansk, the market is fully enclosed with all produce being sold under one roof.

Construction

A defining feature of the Hala Targowa is its innovative use of reinforced concrete. Heinrich Küster, the building's structural engineer, proposed concrete as the main building material as it provided a 25% saving on construction costs, greater fire resistance and less ongoing maintenance compared to a similar sized iron frame structure.²³ During the early twentieth century a number of experimental buildings were being constructed across Wrocław using concrete, including Centennial Hall and the Panorama. Manuel Guàrdia and José Luis Oyón argue that market halls constructed at this time utilised modern materials and technology to provide a new expression of 'municipal pride, architectural innovation [and] urban renovation.'²⁴

Left: Side aisle

Above: Parabolic concrete arch structure



Above: Exploded axonometric sketch, highlighting structure and ground floor stall layout

Similar to Gdansk, the Wroclaw Market Hall utilises a traditional brick and stone external skin with a technologically advanced internal structure, in this case concrete instead of iron. As such, the Hala Targowa presents a striking contrast between the interior and exterior, with its historically sympathetic facade concealing an interior that ‘expresses the new industrialisation.’²⁵ The northern facade is bookended by two copper clad towers and articulated with stone cannonballs, an homage to the sites history as an arsenal.

The hall’s interior consists of six parabolic concrete arches spanning a wide central ‘nave’ with shorter adjoining aisles either side. The arches provide a clear column-free span of nineteen metres, ensuring maximum flexibility and generous circulation for the market stalls below. The arches are braced by concrete rafter beams and a thin concrete ceiling slab, topped with traditional clay roof tiles. Two levels of clerestory windows, one over the first floor mezzanine roof and the other high in the main gable roof, provide indirect natural light and ventilation.



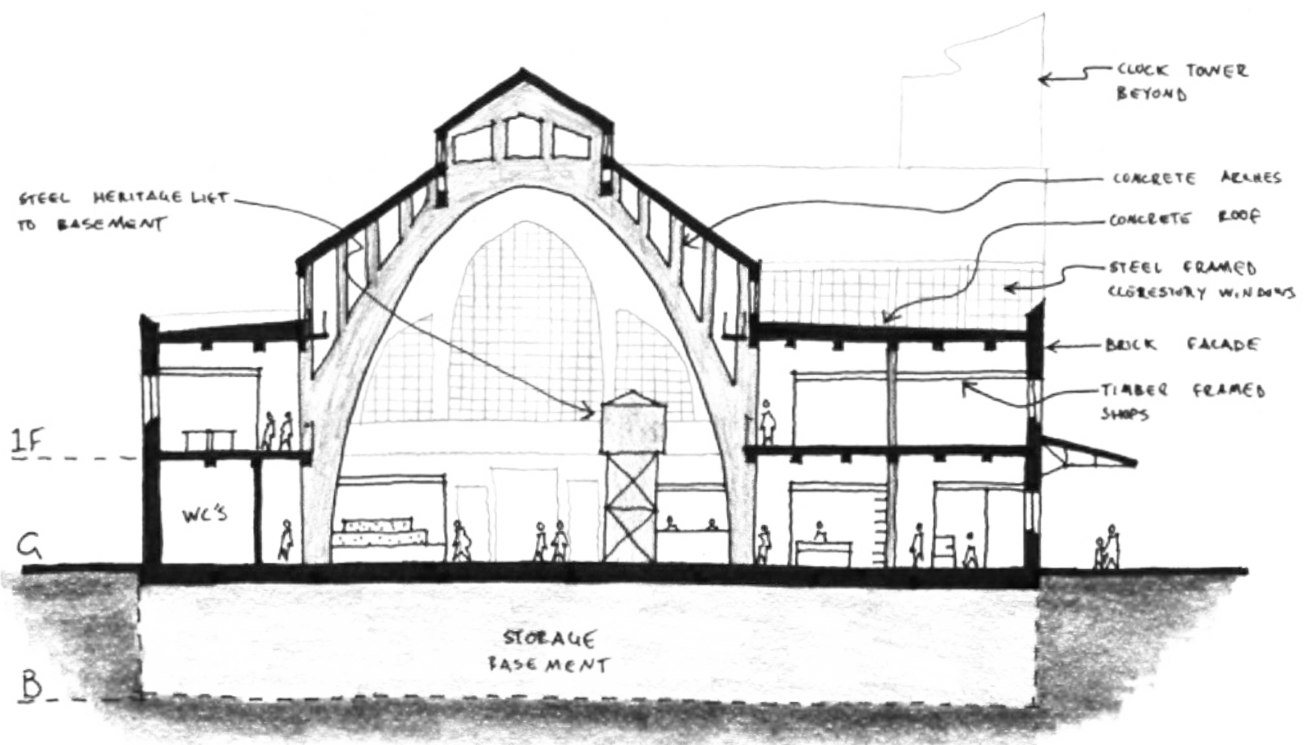
Programme

The Hala Targowa has a rectangular plan, with two main entries at either end forming a short ‘enclosed street’ that encourages passing pedestrians to activate its shops.’²⁶ Split over three floors, there is a clear and functional separation of vendors.

On the ground floor, the main double-height space is occupied by fresh produce and flower vendors, providing a vibrant display of colour that changes seasonally. A mix of butchers, bakers, speciality delis and a fish market are located around the halls perimeter under a mezzanine level. This provides easy serviceability, external ventilation and protection from the direct sunlight of the clerestory windows above. A cafe and pierogi restaurant are located at the western end of the hall, adjacent the tram interchange, with many passers-by stopping for food on their way home from work. The basement floor is entirely occupied by cold stores, storage space and plant equipment for the vendors above.



Top right: Fresh produce vendor in central hall space
Bottom right: Butcher and dairy stalls under mezzanine



The first floor mezzanine predominantly houses service based vendors, including a locksmith, seamstress, watch repair and IT provider, supplemented by office space. Whilst being quieter and receiving less foot traffic than the ground floor, the diversity of offerings attracts customers seeking a particular service.

The Wrocław Hala Targowa is open 8am to 6:30pm during the week and 8am to 3pm on Saturday's. The first floor opens later than the ground floor at 10am, with most shoppers visiting in the late morning, shortly after opening. The ground floor is consistently busy throughout the day, with fresh produce and flower vendors busiest in the morning and restaurant's and food stalls busier at lunch and in the evenings.

Interior

In a departure from other market halls of this time, the Hala Targowa presents an undecorated and functional interior, its civic importance defined through scale and innovation instead of ornamentation. The hall's

brick facade and concrete structure has been left predominantly exposed, maintaining its original raw finish. The base of the concrete arches and columns however, are painted white to protect the surface from oils and moisture in the produce. At the centre of the double-height hall stands two steel clad towers topped by glass lanterns, these are the original goods lifts and are still in use today, connecting the main trading floor to the stores below. A number of stalls have retained their original iron cage shopfronts, continuing the fretwork and detailing used throughout the balustrades and internal light posts.

Management

The market hall is currently operated by Wrocław based company Tradycja i Jakość, controlling thirteen supermarket and shopping outlets across the city. The retail property company has occupied and maintained the Hala Targowa since its renovation in 1983.

Top: Short section sketch



Top: Cast iron light
Above: Service lift
Right: Typical balustrade detail

19. Tomlinson, N. & Planas, V. A., p4

20. Omilanowska, M., p403

21. *Reinforced Concrete and the Groundbreaking Wrocław Market Halls.* (2024). Exhibited Wrocław: Centennial Hall. Exhibition (viewed 14 January 2024)

22. Medieval Heritage. (9 October 2021). *Wrocław: City Defensive Walls.* Accessed 10 June 2024, <https://medievalheritage.eu/en/main-page/heritage/poland/wroclaw-city-defensive-walls/>

23. *Reinforced Concrete and the Groundbreaking Wrocław Market Halls.* (2024). Exhibition

24. Guàrdia, M. & Oyón, J. L., p11

25. Paflik-Huber, H. (2015). "Covered Markets in Germany: From Iron Markets to Central Concrete Markets." In Guàrdia, M. & Oyón, J. L. (ed.), *Making Cities through Market Halls Europe, 19th and 20th Centuries.* Barcelona: Ajuntament de Barcelona, p333

26. Alexander, C., Iihikawa, C. & Silverstein, M. (1977). *A Pattern Language.* New York: Oxford University Press, 177

5.3

Naschmarkt

Location: Vienna, Austria
Architect: Friedrich Jäckel
Completed: 1916

Typology: detached market pavilions, market square (flea market)
Construction: steel frame structure, masonry and timber facade, copper sheet roof
Site area: 18,000 sqm
Stalls: 155

Vienna is the cultural, commercial and administrative capital of Austria. Situated on the Wien River, the city is located at the confluence of major land routes and the Danube, connecting North and South Europe to the Black Forest in the West and the Black Sea in the East.

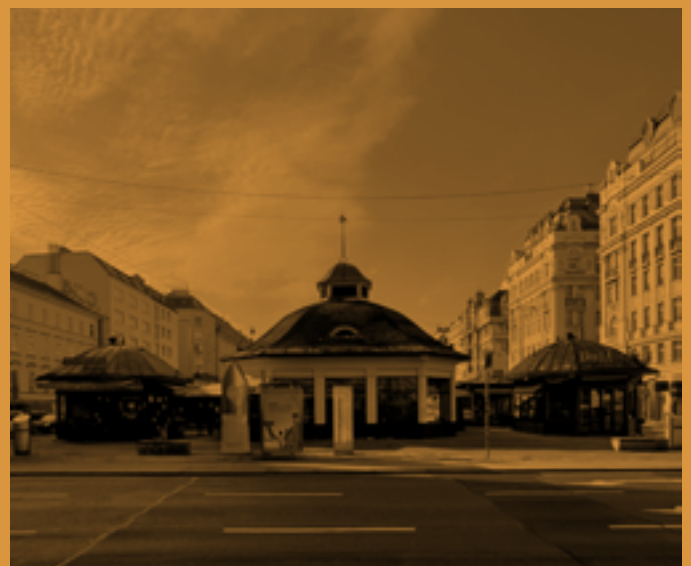
First settled by the Celts in the sixth century BC, Vienna was formally established by the Romans as Vindobona, a military camp at the northern frontier of the Roman Empire. The medieval city was built on the ruins of this settlement and maintains its geometric street layout and concentric rings of defensive walls. Vienna flourished as a market town in the Middle Ages, growing to become the centre of the Habsburg and Austro-Hungarian Empires.

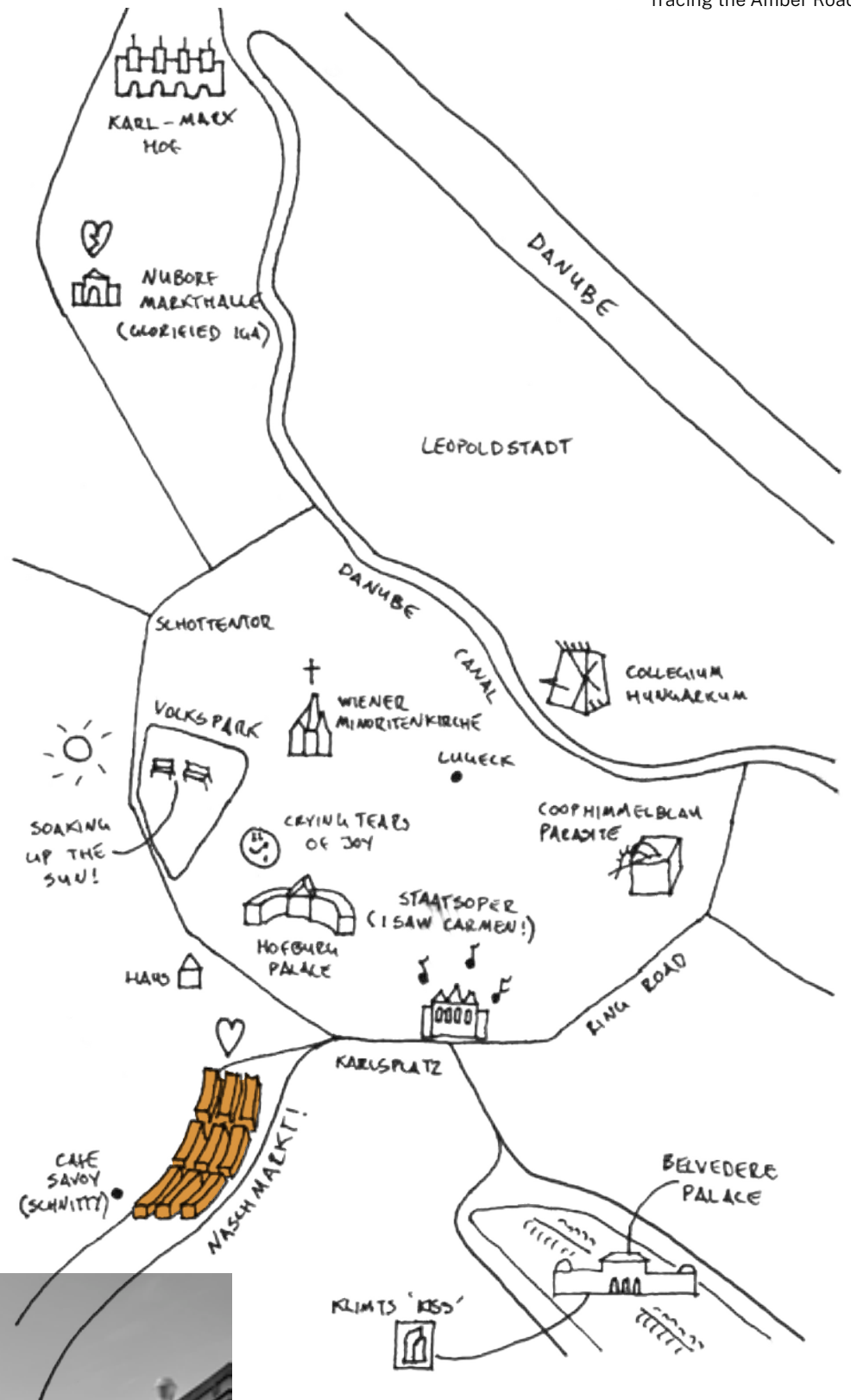
Urban and Historical Context

The urban structure of Vienna, particularly the historic city centre or Innere Stadt, is characterised by its history as a Roman fortress. Situated two kilometres south of the Danube River, the settlement was built on a flat site above the flood plain and circled by city walls and glacis to protect against raiding Germanic tribes to the north. Much of the city's former defences were removed in the nineteenth century and replaced with a grand boulevard, or Ringstraße, around the city centre. During the Middle Ages, Vienna became a centre for trade and visiting merchants, attracted by the protection that its fortifications provided.²⁷ The city also benefited from unique trade privileges known as stapelrecht, or stapling rights, requiring all passing trade to be stopped and offered for local sale before it could move on. Stapelrecht affected goods were

sold at over twenty speciality markets across the city, typically outdoors and located close to the Wein River, Danube Canal or railways for easy distribution of goods.

It wasn't until the 1850's that Vienna sought to develop an urban network of covered markets for the distribution of food and goods. Following in the footsteps of Berlin and Les Halles in Paris, Vienna utilised a central market model defined by a large central market, supplemented by smaller district markets.²⁸ In 1879 the Wiener Zentralmarkthalle, or Vienna Central Market, was completed in District Nine, with six smaller district markets completed by the 1890's. Similar to Gdansk and Wroclaw, many of Vienna's early enclosed market halls utilised a basilican ground plan and masonry construction.²⁹ Sadly, the Zentralmarkthalle was demolished in 1979.





Above: Vienna mappings and journal sketch
Left: Naschmarkt shopping street



Top: Typical bell-shaped roof pavilion
Above: Clock tower pavilion

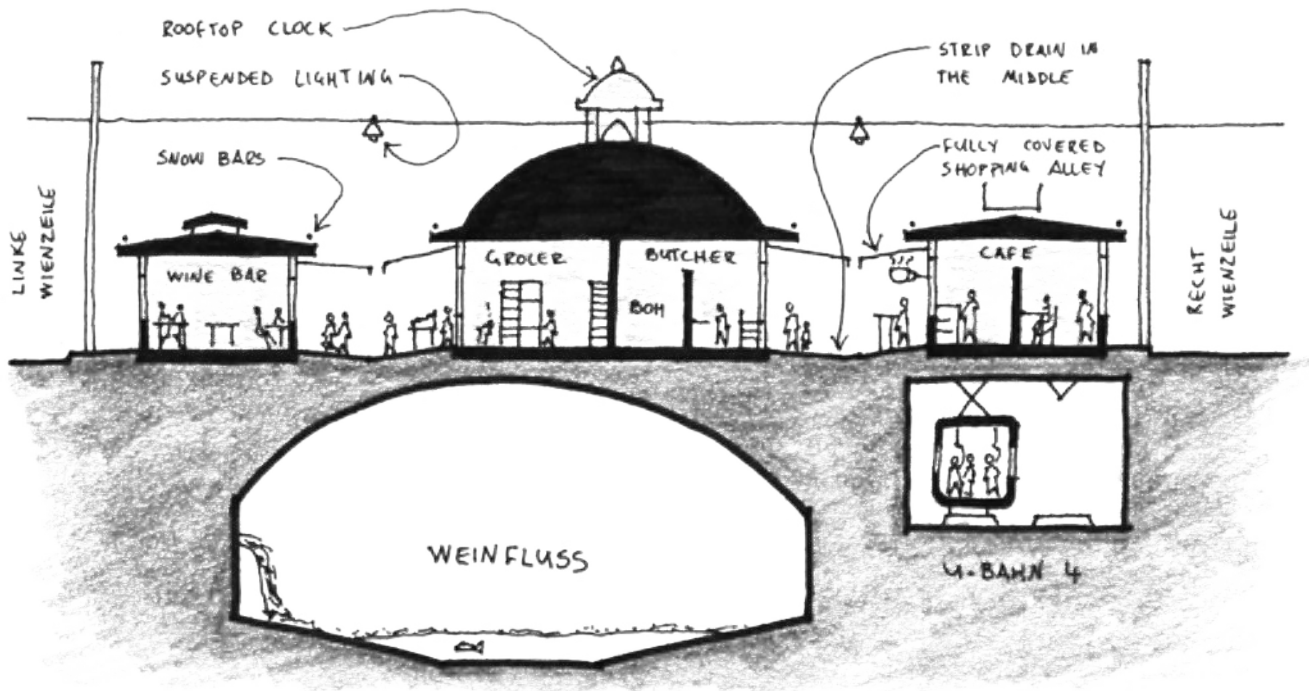
Site Analysis

The Naschmarkt, or Snack Market, dates back to the sixteenth century when it was an outdoor fruit and vegetable market held beyond the former city walls. Located on the banks of the Wien River, the city's growing population required a more formal and organised market to regulate produce and ensure food security.

During the 1890's when the city was constructing its district markets, the Wien River was simultaneously being capped and covered to provide greater flood mitigation and improve sanitation. This work created a new greenfield site in close proximity to the Innere Stadt, between Karlsplatz and Kettenbrückengasse. This location, whilst well serviced and adjacent key transport connections, was essentially residual space, occupying a narrow and irregular shaped parcel of land between two major roads and over a shallow U-Bahn line. Regardless of these difficult constraints, the Naschmarkt moved to its current location in 1897.

The Naschmarkt

The 'Neuer' Naschmarkt was built in 1916 to formalise the city's largest open air market which occupied the site since 1897. At only forty metres wide yet stretching almost 1.5 kilometres long from the Secession to the Kettenbrückengasse metro station, the market is not a single enclosed market hall but rather an assemblage of individual market pavilions.



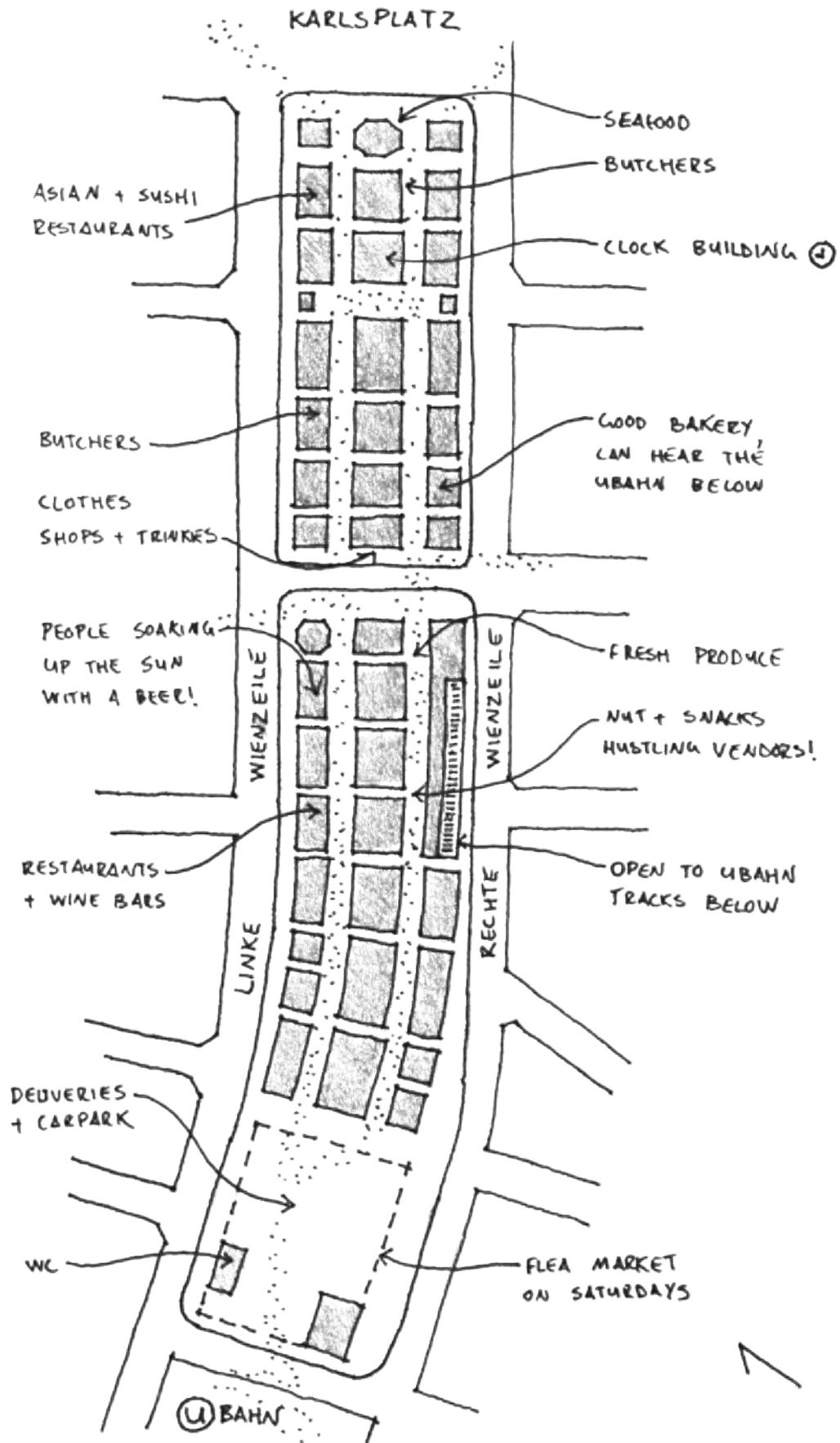
Construction

The market consists of fifty-seven buildings arranged in three parallel rows. The original pavilions were designed by Friedrich Jäckel and are single-storey masonry construction featuring white rendered walls and unique bell-shaped copper roofs. A number of modern, steel framed pavilions have since been constructed in a sympathetic style and colour to Jäckel's original buildings. Together, the rows of pavilions frame two intimate shopping 'lanes,' each approximately five metres wide with retractable canvas awnings providing shade and rain protection when required.

The scale and construction of the Naschmarkt reflects the site's difficult constraints. Built over the Wein River and a shallow U-Bahn line, it was not spatially or technically feasible to construct a large multi-storey market hall at this location, necessitating a single-storey design response. Community consultation at the time also revealed that local residents were eager to retain the character of the existing open air market, requesting a market that is 'as open as possible, with smaller blocks and many passages.'³⁰ As a result, the Naschmarkt consists of smaller human scale buildings, a unique departure from the enclosed market hall typology which came to dominate the retail landscape of European cities throughout the twentieth century.



Top: Short section sketch, showing market relationship with the Wien River and U-Bahn line
Right: Exposed section of U-Bahn



Above: Naschmarkt site plan sketch



Above: Saturday flea market

Right: Naschmarkt restaurant / eating street



Programme

The Naschmarkt consists of 155 permanent vendors spread over a site of 18,000 sqm. Due to the market's size and surrounding context, a clear separation of goods and vendors has developed, roughly divided into four cardinal sections.

At the market's northern end, adjacent the Secession and former city wall, vendors sell a mix of fresh produce, seafood and baked goods. As the oldest section of the market, it has largely retained the original bell-roofed pavilions by Jäckel. The eastern edge of the market is primarily fresh produce and confectionary with a small number of second-hand clothing stalls marketed to tourists. This boundary faces onto Rechte Wienzeile and has a dedicated zone for vendor parking, providing easy delivery access for the fast selling food stuffs.

The western edge of the market fronting Linke Wienzeile is dominated by restaurants, bars and cafes as well as public amenities and a market operations building. Here, spaces for eating and drinking extend into the western shopping 'lane' creating a semi-enclosed promenade for people watching and spectacle. Interestingly, the restaurant focus on this side of the market relates to the plethora of bars and Viennese cafe shops on the opposite side of Linke Wienzeile.

Directly to the markets south is a large open carpark. On Saturday's, this site is transformed in to one of the largest flea markets in Europe hosting over 400 vendors selling everything from clothes, handbags and jewellery, to chandeliers and animal horns. This is the busiest day of the week for the Naschmarkt, attracting both tourists and locals.

The market is open 9am to 6:30pm on weekdays with reduced hours on Saturday's. The eastern 'lane' containing the fresh produce and clothing stalls was consistently busier in the mornings, with the western 'lane' busier in the evenings. Thanks to its detached layout, many pavilions operate on a schedule that suits the goods or services that they provide. For example, many of the fresh produce vendors open during setup, well before 9am. Whilst the restaurants open closer to noon and have extended hours for dinner service, closing closer to 9 or 10pm.



Interior

In contrast to the other markets visited, the Naschmarkt does not exhibit a uniform interior but is rather composed of many individual buildings each with their own interior, suited to the goods that they sell. Typically, the counters and displays wrap the entire building envelope, ensuring maximum visibility of goods through the glass facade of each pavilion. The internal space is then relegated to the retailer, used for preparation, kitchens or storage. Eaves and retractable canvas awnings provide cover and protection to the shop fronts, whilst filtering the light and creating an intimate environment for shoppers.

Management

The Naschmarkt site is owned by the City of Vienna and operated by Wiener Marktamt, or the Vienna Market Authority. Established in 1989, the Wiener Marktamt is a publicly owned government entity overseeing the operation and management of multiple public markets across the city. This ownership model ensures the Naschmarkt remains in public hands and adheres to local authority regulations and planning policy.

Top left: Typical bell-shaped roof pavilion

Top right: Collapsible awning system



27. Tomlinson, N. & Planas, V. A., p4

28. Guàrdia, M. & Oyón, J. L., p32

29. Ibid, p40

30. Békési, S. (22 October 2021). *To redesign the Naschmarkt*, Vien Museum Magazin. Accessed 10 June 2024, <https://magazin.wienmuseum.at/zur-umgestaltung-des-naschmarkts>

Top left: Naschmarkt shopping street

Bottom left: Typical market stall with extended awning

Above: Fresh produce vendor and small shrine building beyond

5.4

Nagycsarnok

Location: Budapest, Hungary

Architect: Samu Pecz

Completed: 1897

Typology: enclosed market hall

Construction: iron frame structure, brick and stone facade, glazed tile roof

Building area: 10,000 sqm

Stalls: 180

Budapest is located on the Danube River in central Hungary. The city is comprised of three historic districts: Óbuda; the original Roman settlement, Buda; the hilly castle district on the right bank, and Pest; the flat commercial centre on the left bank.

The unified city of Budapest is situated on an ancient trade route between the Transdanubia Mountains to the west and fertile Great Hungarian Plain to the east. In the Middle Ages, it was at this narrow point on the Danube that a crossing was first established for merchants and goods to travel across Central Europe.

Urban and Historical Context

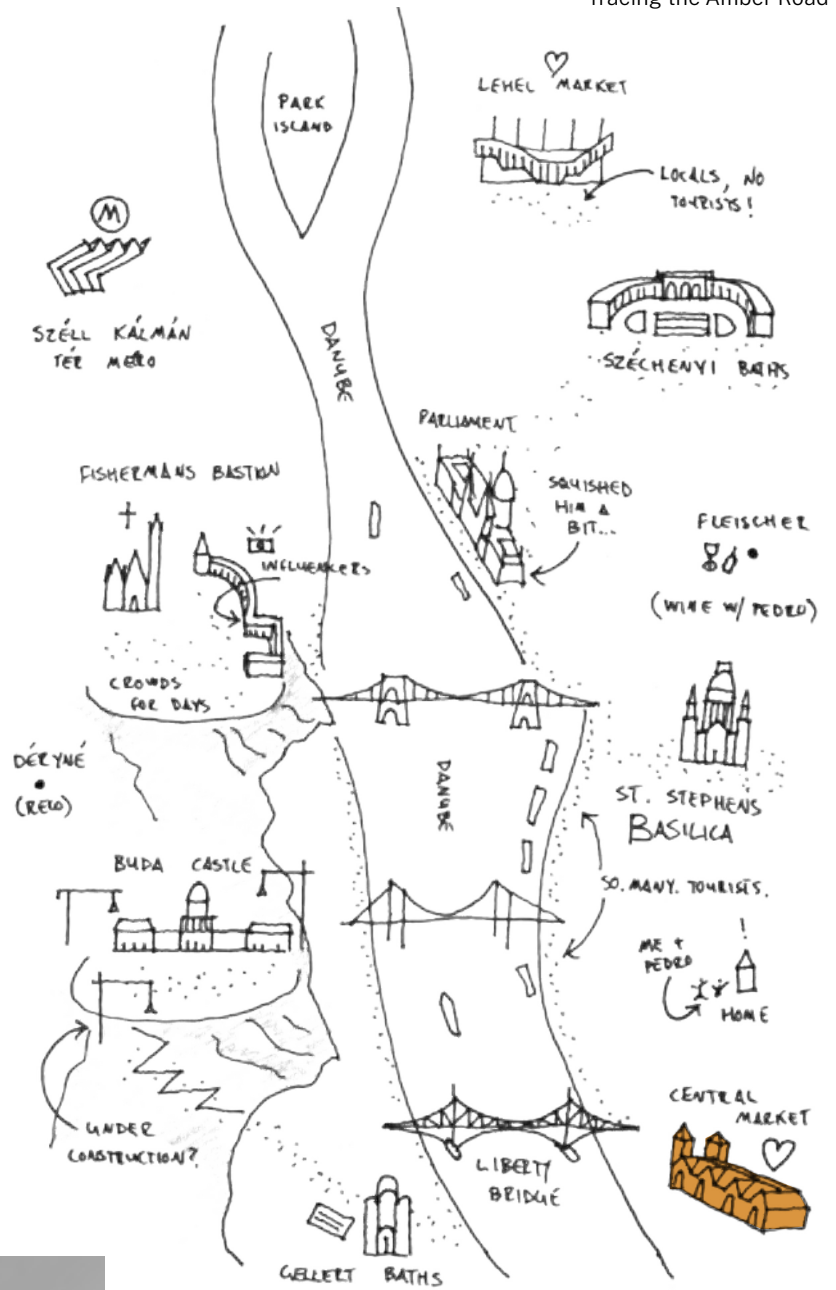
The commercial and trading centre of Budapest is District V, the historic town of Pest. Situated on the flat left bank of the River, it is characterised by dense blocks and narrow streets surrounded by a wide ring road, following the path of the city's medieval walls. Parallel to the rivers edge is Váci utca, the main commercial route through the city and the location of many merchant stalls, workshops and trade halls. At its northern end is Vörösmarty tér, an iconic public square and previously the site of an old city gate linking Pest to Buda. The southern end of Váci utca terminates at Só tér, a marketplace for the trading of valuable salt.

Up until the mid-nineteenth century, Budapest relied solely on a network of open and partially covered markets for its food supply. These markets were primarily concentrated in Pest and the merchant trade on the Danube, often without hygiene or quality control measures. In 1879, the Public Food Committee was formed to take control of the city's markets and

establish a system of functional halls to provide fresh, healthy and affordable food for the growing population.³¹

Following the lead of Paris and Berlin, Budapest developed a network of small district markets supported by a larger central market. The district markets were evenly distributed across the city, acting as a 'nucleus for different urban groups' to facilitate its services and provide convenient access to fresh produce.³² Planners utilised the city's well established river and rail links to supply the central market hall and serve as the main distribution source for the surrounding district markets.³³ In the 1890's, six market halls were simultaneously opened in Districts II, V, VI, VII, VIII and IX.



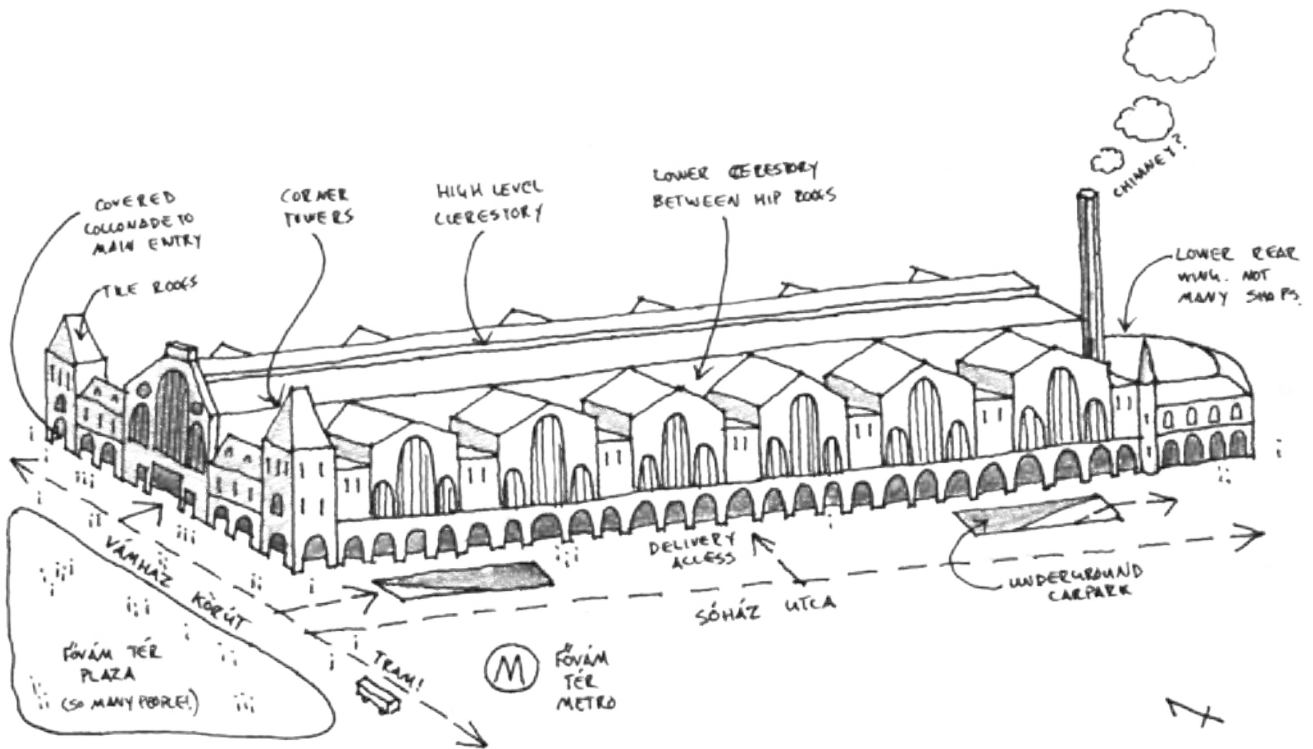


Above: Budapest mappings and journal sketch

Left: South elevation

Below: Central hall





Site Analysis

The first enclosed market hall, or Market Hall I, is located in Pest at the boundary of Districts V and XI. It is situated at the southern end of Vaçi utca, the city's historic high street, and opposite Fővám Square; a key transport interchange for metro and tram services. As a result, the market is highly activated, pedestrian accessible and well connected to the broader city.

From the Middle Ages, the area was occupied by Só tér, or Salt Square, an open air market for the trading of precious salt and other produce. Located in close proximity to the Danube River, Liberty Bridge and key railways meant that goods could be easily transported to the site via road, rail and ship.³⁴ Directly to the west of Só tér, between the square and the Danube, is Main Custom House. It was built in the nineteenth century as a control point for organising trade and regulating goods passing through Budapest.

Above: Nagycsarnok axonometric sketch
Left: Front elevation



The Nagycsarnok

In 1897 construction was completed on the Nagycsarnok, or Budapest Great Market Hall, on the site of the old Salt Square. Designed by local Hungarian architect Samu Pecz, the building is spread over three floors with fresh produce, restaurants and souvenir stalls occupying the main double-height hall space and a supermarket, butchers and pickle vendors located in the basement. The Nagycsarnok is a fully enclosed market hall and the largest in Budapest, it is more than double the size of all other case study halls.

Construction

The Great Market Hall is an iron frame structure with an external masonry facade, similar to the market halls observed in Gdansk and Wroclaw. This hybrid construction system provides a maximum column-free span to the halls interior, allowing for easy circulation, flexible retail arrangement and generous access to daylight and ventilation. The buildings external envelope however, is more sympathetic to the surrounding streetscape, clad with red brick, yellow stone and colourful roof tiles in a similar style to other prominent civic buildings across Budapest.³⁵

The Nagycsarnok has a basilican plan with an impressive sixty metre wide central nave and two side aisles. The central space is a 150 metre long double-height atrium topped with clerestory windows and an open gable roof, creating a dramatic public promenade through the market.³⁶ Interestingly, the floor of the hall slopes from west to east, following the natural fall of the site to align with adjacent streets. When the building was completed, a rail line ran through the western side of the hall, connecting local consumers with regional and European producers.

The hall is divided into six bays by a grid of ornate truss columns with each bay further defined by a lower cross gable roof. A lower-height brick annex is located to the south of the main hall, shaped by the irregular layout of the surrounding streets. This wing was historically the poultry market and wraps around a services core and ventilation chimney.

Top left: High level windows lighting iron truss structure
Above: Tower to front facade

Programme

Spread over three floors, the Nagycsarnok is a mix of retail and food offerings. Starting at the top, the first floor mezzanine is predominately vendors selling souvenirs and clothing, supplemented by a small offering of restaurants and management offices. The souvenir stalls are simple displays of open shelving with lockable doors or canvas coverings for security and lock-up.

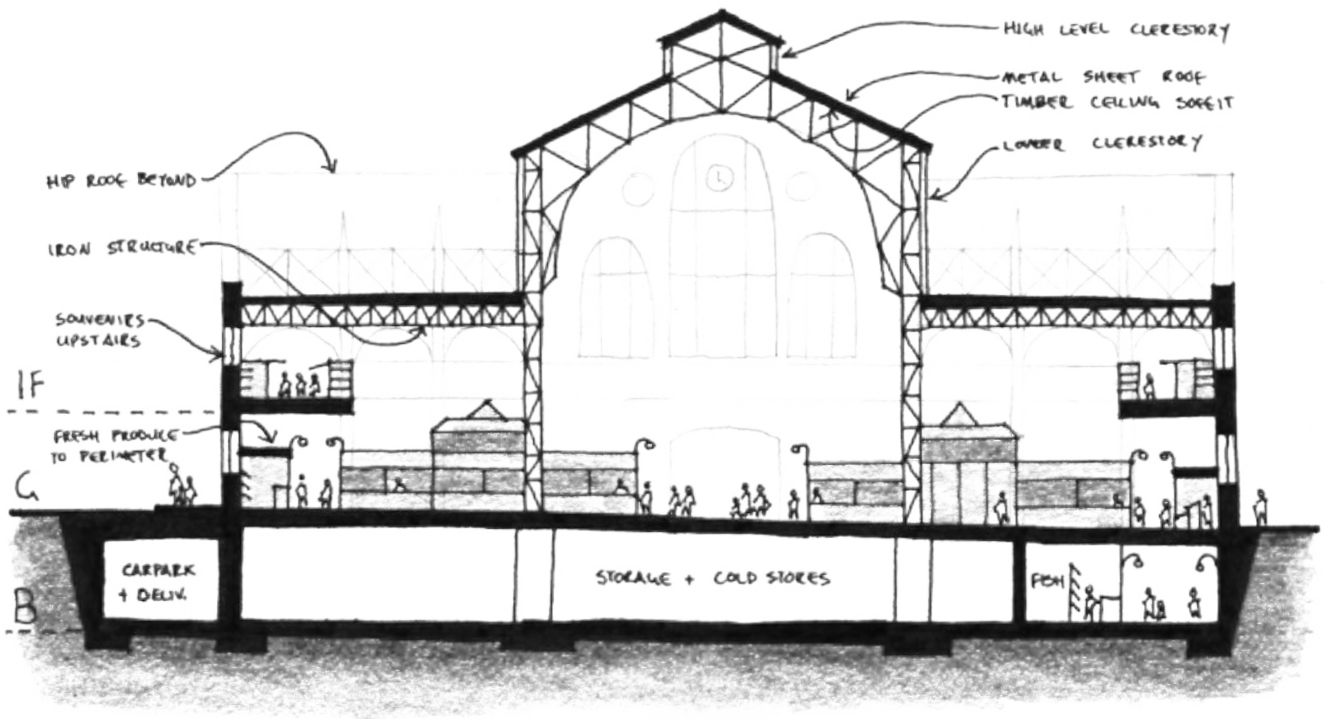
The ground floor is the main market level and the busiest in terms of pedestrian foot traffic. Hungarian speciality stores marketed to tourists are concentrated along the main promenade, selling paprika, cured meats and kürtőskalács, or chimney cakes. Around the halls perimeter, fresh vegetables and fruit vendors are located to the east with butchers and bakers to the west. This allows for easy servicing and delivery, simultaneously providing convenient access for many locals to quickly pop in.

Downstairs is a large chain supermarket and row of small retailers trading smellier goods such as seafood, pickled produce and household supplies. Sadly, a number of these smaller shops were vacant or closed due to the reduced foot traffic on this level. The remaining floor area of the basement is occupied by dry and cold stores. Uniquely, a 120 metre long tunnel at the southern end of the building connects the market to the Danube River and was historically used for the loading and unloading of goods or waste via ship.³⁷

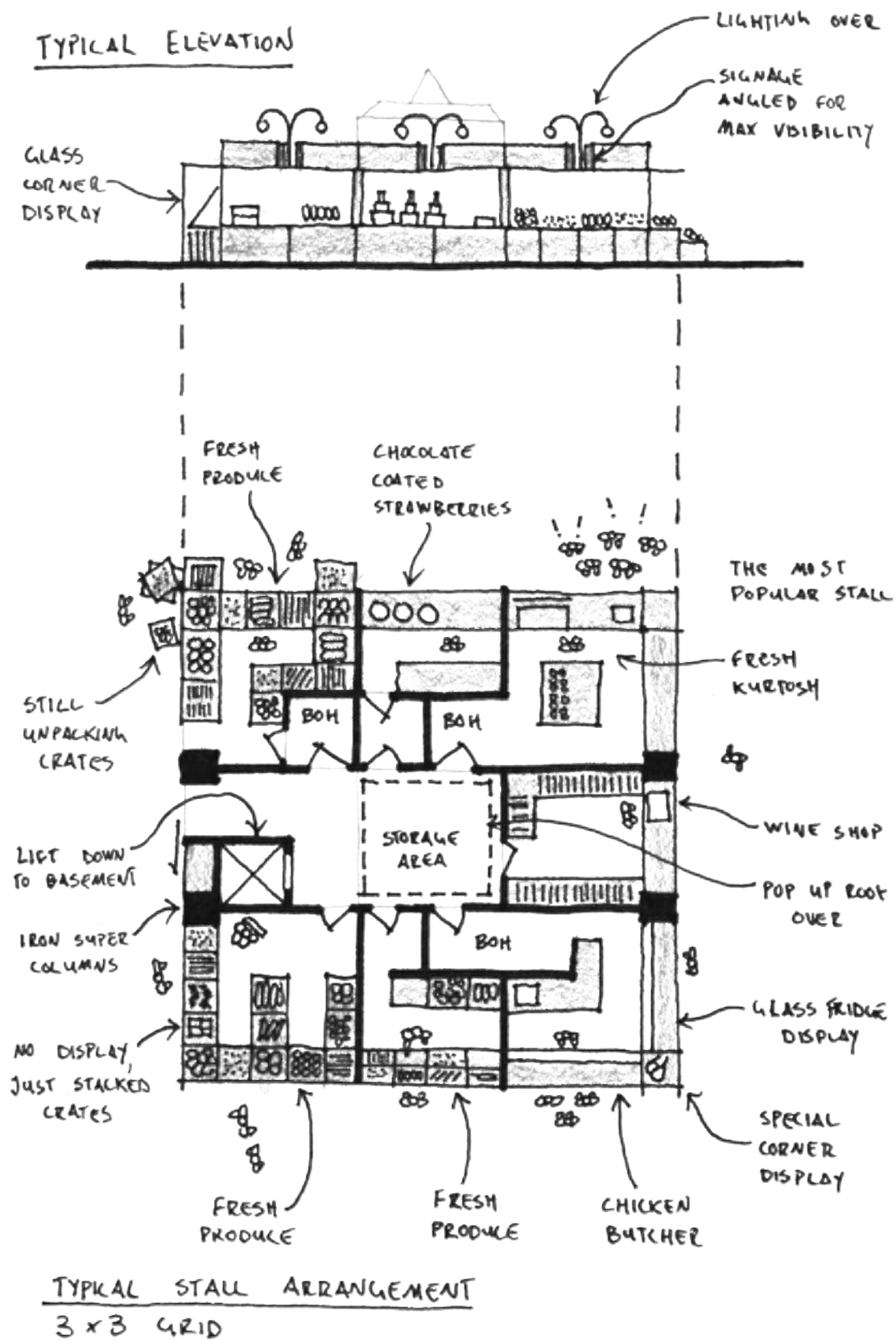
The Nagycsarnok is open Monday to Saturday, from 6am in the morning to 3pm - 6pm in the afternoon, depending on the day of the week. The fresh produce stalls are most popular with locals in the morning, whilst the afternoons are frequented more by tourists shopping for souvenirs, speciality goods and Hungarian snacks.

Top right: Central atrium and mezzanine bridges
Right: Side aisle





Top: Short section sketch, showing sloping ground floor and relationship with adjacent streets
Above: Side aisle and high level windows over
Left: Fron entry portico



Above: Stall arrangement plan and elevation sketch



Interior

Internally, the Nagycsarnok continues the warmth of the external material palette with yellow rendered walls and a timber board ceiling. The market stalls stand as independent pavilions within the hall space, completely separate to the main structural system. The use of smaller, more traditional shops within a larger covered space maintains a human scale for the shopper whilst combining two architectural solutions in one.³⁸ Sitting on tiled plinths to navigate the sloping floor, they are light-weight timber and steel frame construction topped with metal roof sheeting. The stalls are set out on a grid of 3 x 3, allowing most vendors to have a prime corner position for maximum product display. The stall configuration resembles a doughnut, with the central 'hole' space occupied by storage, services and lift access to the basement for deliveries. High-level lighting and signage are located over the individual stalls, ensuring easy adaptability to suit each vendor and their goods.

Management

The Great Market Hall has been owned and operated by the Municipality of Budapest since its opening in 1897. Similar to the Naschmarkt in Vienna, it is a public facility managed by local authorities, specifically the Market Management Department of Budapest Municipality. This ensures not only regulation and oversight of goods as per its original design intent, but also continued public access and cultural preservation.



31. Market Management Department of Budapest Municipality. (2 August 2015). *History of the Great Market Hall*. Accessed 10 June 2024, <https://budapestmarkethall.com/history-of-the-great-market-hall>

32. Guàrdia, M. & Oyón, J. L., p53

33. Siegel, A. (2015). "Budapest: Food, Cities and the Evolution of the Market Hall." In Guàrdia, M. & Oyón, J. L. (ed.), *Making Cities through Market Halls Europe, 19th and 20th Centuries*. Barcelona: Ajuntament de Barcelona, p375

34. *Market Hall No. 1* (2024). Exhibited Budapest: Nagycsarnok. Exhibition (viewed 12 February 2024)

35. Dobraszczyk, P., p173

36. Guàrdia, M. & Oyón, J. L., p42

37. *Market Hall No. 1* (2024). Exhibited Budapest: Nagycsarnok. Exhibition (viewed 12 February 2024)

38. Omilanowska, M., p407-408

**Top left: Typical market stall 'pavilion' within larger hall space
Above: Side entry**

5.5

Central Market

Location: Ljubljana, Slovenia

Architect: Jože Plečnik

Completed: 1939

Typology: enclosed market hall, covered outdoor market, market square

Construction: concrete structure, stone and rendered masonry facade, concrete roof tiles

Building area: 1,900 sqm

Stalls: 150-200

Ljubljana is the cultural and political capital of Slovenia. Built on a flat marshland between Castle Hill and Mount Saint Mary, the area has been continuously occupied for over four thousand years. Situated on the Ljubljanica and Sava Rivers, the city is located at a strategic crossing point for trade between the Adriatic Sea and the Danube River valley.

The city developed as a Roman military settlement in 50 BC, growing to become a thriving market town and trading centre in the Middle Ages. Ljubljana has been conquered many times throughout its history, occupied by the Habsburg's, Austro-Hungarian Empire and Fascist Italy.

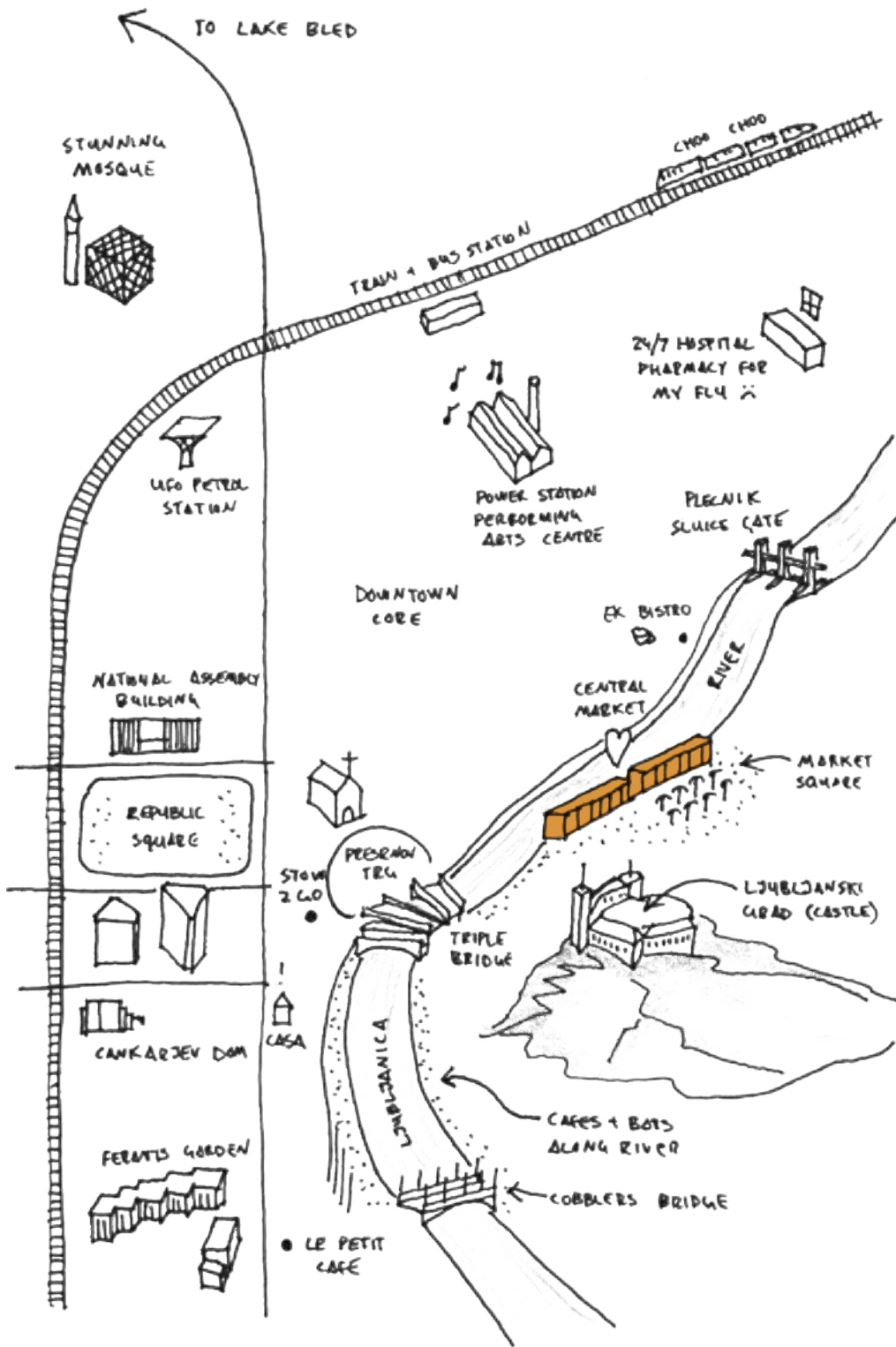
Urban and Historical Context

Ljubljana is built on the ancient Roman settlement of Emona, set out as grid of rectangular streets with a forum at its centre and surrounded by a perimeter stone wall. Emona was established below Castle Hill at a navigable point of the Ljubljanica River. It was here where trade routes intertwined and a lively exchange of goods could flourish.

Since the thirteenth century, the Ljubljanica River served as the main trading route through the city. Its banks were historically a site for the buying and selling of goods travelling to the Adriatic from the fertile agricultural regions of the Danube Valley.³⁹ This activity was concentrated in and around Stari trg, or Old Square, at the former entrance to the walled city.

In a similar pattern to Gdansk and Wroclaw, Ljubljana's first marketplace was located at a strategic crossroads and adjacent the city's fortifications for protection. With the expansion of the city, unregulated outdoor markets sprung up along the rivers edge, expanding and contracting depending on the season or occurrence of market days.



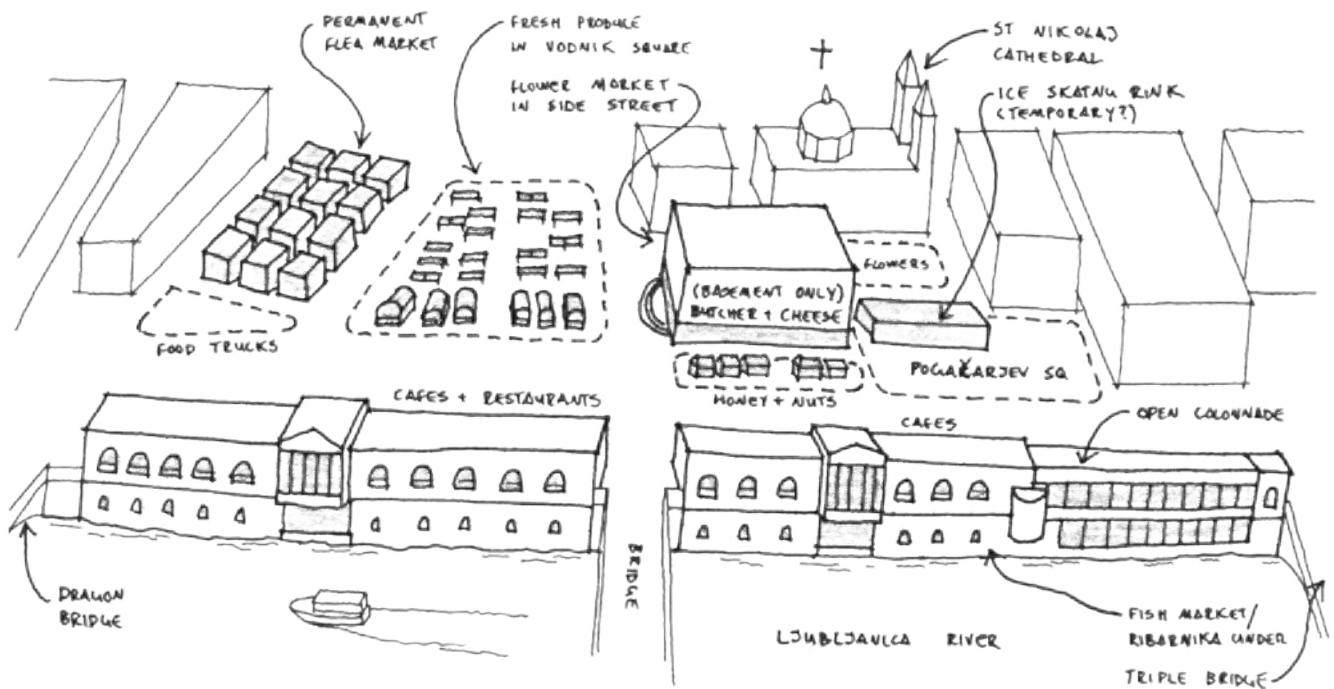


Site Analysis

Ljubljana’s first formalised market is located on the edge of the Ljubljanica River between the Dragon Bridge to the east and the Triple Bridge to the west. Up until the early 1800’s, the site was an undeveloped and flood prone parcel of land in the centre of the city. It is situated opposite the main square of Prešernov trg, the civic meeting point where ‘everyone from the countryside and nearby villages gathered’ at the feet of Castle Hill.⁴⁰ By 1813 the site had become the location of the city’s butcher sheds and stalls, nestled

between an avenue of chestnut trees. Following the devastation and blight of World War I, the City of Ljubljana proposed the construction of a new enclosed market on the site as it represented one of the most unhygienic and unsanitary parts of Ljubljana. The local council prioritised its redevelopment to improve local health and restore Ljubljana’s ‘pure’ image.⁴¹

Top: Ljubljana mappings and journal sketch



The Central Market

Completed in 1942, the Ljubljana Central Market is a collection of enclosed, covered and open air markets. The market's defining feature is a monumental colonnade building designed by local architect Jože Plečnik. The building stitches together a series of smaller markets and squares including Vodnik Square, Pogačarjev Square, the Pokrita Tržnica and a small flower market along Dolničarjeva ulica.

Construction

Plečnik's market is a two-storey masonry building on the edge of the Ljubljanica River. The Central Market has a linear layout and from west to east consists of a small brick flower pavilion, a concrete pillared portico, and two arcade buildings separated by the Butchers Bridge. The buildings north side is fully integrated with the concrete embankment of the river, featuring a rusticated stone base with semicircular window openings and arches, reminiscent of the old city walls surrounding Castle Hill.⁴² The building is essentially only

Top: Central Market axonometric sketch
Left: Open portico and drinking fountain



one room wide, containing vendors and restaurants on ground level with storage and services below. The market is topped by concrete roof tiles on a single pitch roof structure supported by timber rafters and beams.

A double height colonnade of concrete columns runs the full length of the southern facade, providing shade for vendors and a covered path of travel for pedestrians. As observed by Guàrdia and Oyón, the colonnade is an intermediate step between the outdoor market square and the enclosed arcade spaces. It acts as a transition space ‘between a street sociability and a sociability welcomed by the interior,’ uniting the historic market square with its modern interpretation, the shopping centre.⁴³ Steps along the colonnade edge, as well as a change in ground pavement from bitumen to stone, define the markets boundary and further highlight its civic importance.⁴⁴ The arcades are each divided by a central open loggia, providing public drinking fountains and views across the river.



Top left: South elevation of colonnade building

Top right: Typical arcade shop front to colonnade building

Right: Open colonnade along the Ljubljanica River



Programme

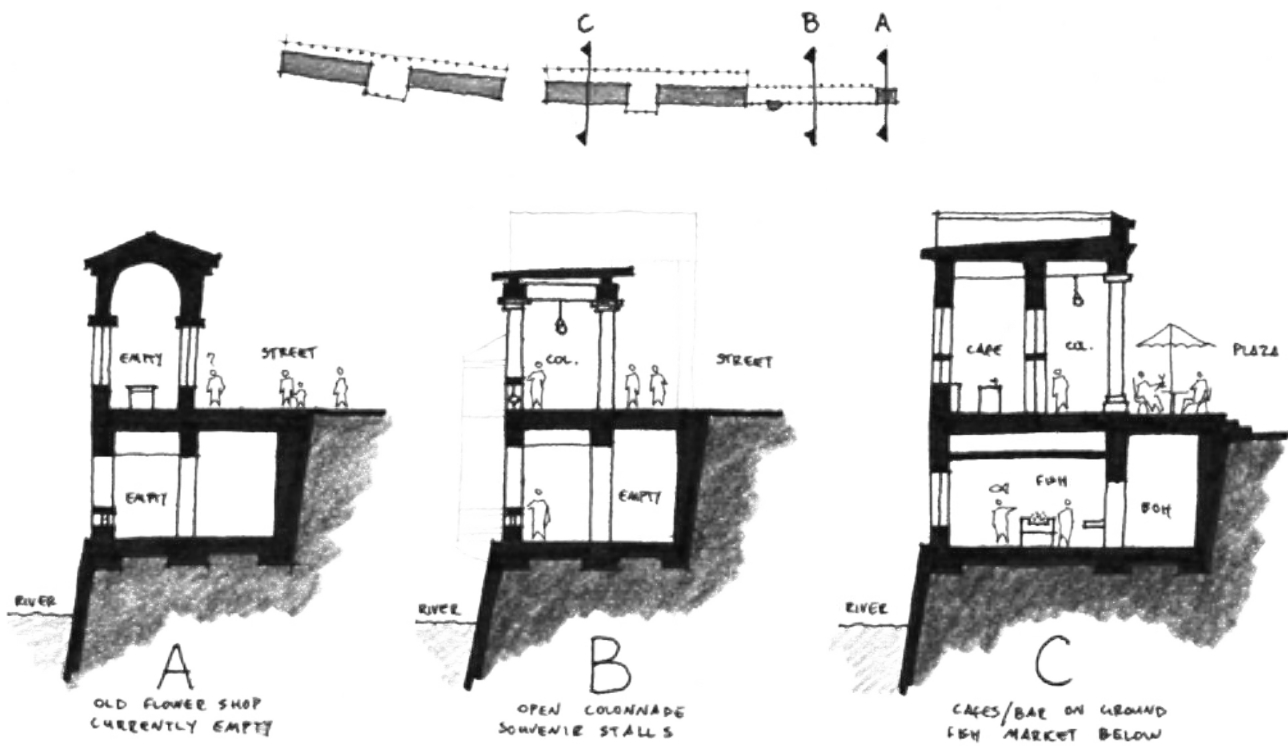
The Ljubljana Central Market is spread across multiple market buildings and squares. On ground level, the arcade building is occupied by restaurants, cafes and gourmet food shops facing the market squares to the south. Historically, these retail tenancies contained space for fifty butchers, giving Butchers Bridge its name.⁴⁵ The Ribernika, or fish market, is located in the basement adjacent the Triple Bridge whilst an art gallery now occupies the eastern end near the Dragon Bridge. Connecting the two floors is a stone spiral stair that cantilevers out over the river, with concealed platform lifts in the pavement providing vertical circulation for produce and deliveries.

Directly south of Plečnik's arcade buildings are two market squares. Vodnik Square is located to the east adjacent Dragon Bridge and is the site of an open-air fresh produce and clothing market. It operates six days a week but is significantly larger and more activated on Saturdays. To the west, Pogačarjev Square is a small plaza outside St Nikolaj Cathedral used for seasonal events such as Christmas markets. Dividing the two market squares is the Pokrita Tržnica or covered market hall. It is located in the basement of a four storey seminary building and contains butchers, bakers and delicatessens. A small flower market is tucked in a laneway behind the Tržnica, creating a shortcut between the two squares.



The Central Market is open 6am to 6pm Monday to Friday and 6am to 2pm on Saturday's. During the summer months it is open an additional 2 hours daily to take advantage of the longer days. Similar to the other markets visited, the markets busiest day is Saturday, attracting the greatest number and diversity of vendors as well as local and regional visitors. Fresh produce and seafood stalls were most popular on Friday and Saturday's, whilst clothing stalls and restaurants had a more consistent visitation through the week.

Top: South elevation of colonnade building
Left: Vodnik Square fresh produce market



Top: Short section sketches through different parts of the market

Above: Open colonnade

Right: Open portico viewed from Vodnik Square



Top left: Curved stair down to the Ribernika
Top right: Typical shop front in the Pokrita Tržnica
Above: Butcher store with original concrete plinth and displays

Interior

The Plečnik arcade buildings have an undecorated and functional interior, serving as a continuation of the highly ordered and monumental exterior. Internal walls are finished with render and ceramic tile, both in a white finish to reflect daylight and serve as a neutral backdrop for the colourful produce on display. Downstairs in the Ribernika, the original polished concrete ‘butcher blocks,’ countertops and basins have all been retained, tying into the classical Roman motifs of the larger market. Whilst the ground level restaurants and cafes have been largely adapted and reconfigured to suit their commercial purposes and aesthetics.

In contrast, the interior of the Pokrita Tržnica is much more intimate and reflects the Slovenian vernacular. Here, the market stalls are squeezed within a grid of low-height vaults under the existing seminary building above. The stalls, roller shutters and counters are all timber, featuring beautifully detailed arched doors and ventilation grills. The walls are finished with a yellow, green and white mosaic tile and aluminium cladding up to a 1,500mm datum for easy cleaning and wash down. Lighting and mechanical services are all ceiling mounted and left exposed, allowing for easy serviceability and reflecting the functional requirements of the market.



**Above: Open portico and drinking fountain with castle hill beyond
Right: Outdoor dining and cafes along southern elevation of colonnade building**



Management

Since its establishment, the Central Market has been owned and operated by the City of Ljubljana. Over the last decade, the number of market vendors has been slowly declining due to the ageing of its vendors and difficulty in getting local and regional produce into the city. This has simultaneously resulted in the rise of imported produce from Italy and Spain via external vendors.⁴⁶

In May 2017 the city council revealed plans for the redevelopment of the site to incorporate a new market hall building adjacent Dragon Bridge and an underground carpark below Vodnik Square.⁴⁷ The proposal seeks to relocate the Pokrita Tržnica into a larger, purpose built space and combine it with the City's council administration offices. The arcade buildings by Plečnik would be maintained and preserved. The project has been criticised by locals for wasting tax payer money on the refurbishment of a well functioning building and commercialising the existing public square.

39. Vesel, I. (2020). *Plečnik's Market: The Treasure of Hidden Details*. Ljubljana: Museum and Galleries of Ljubljana, p4.

40. Calabi, D., p49

41. Vesel, I., p7

42. Ibid, I., p8

43. Guàrdia, M. & Oyón, J. L., p11

44. Calabi, D., p14

45. Vesel, I., p8

46. Zorec, M. Personal communication (dated February 19, 2024)

47. The City of Ljubljana. (3 May 2017). *Renovation of Ljubljana's Central Market*. Accessed 10 June 2024, <https://www.ljubljana.si/en/news/renovation-of-ljubljanas-central-market/>

5.6

Mercati di Rialto

Location: Venice, Italy

Architect: Domenico Rupolo

Completed: 1907; market on site since 1097

Typology: covered outdoor market, market square

Construction: concrete and timber structure, brick facade, tile roof

Site area: 1,300 sqm

Stalls: 80-100

Venice is a city of over one hundred islands situated within the Venetian Lagoon in northeast Italy. Formally established in the fifth century, Venice was first settled by refugees from the mainland seeking protection from barbarians and invading forces. The city's strategic location at the head of the Adriatic Sea protected it from naval and pirate attacks, allowing it to prosper as an international centre for commerce.

By the thirteenth century, the Republic of Venice was a medieval trading centre between Western Europe, North Africa and the Middle East. As the terminus of the Amber Road, Venetian merchants allowed goods from Northern Europe and the Baltics to be traded on to Asia via the Silk Road.

Urban and Historical Context

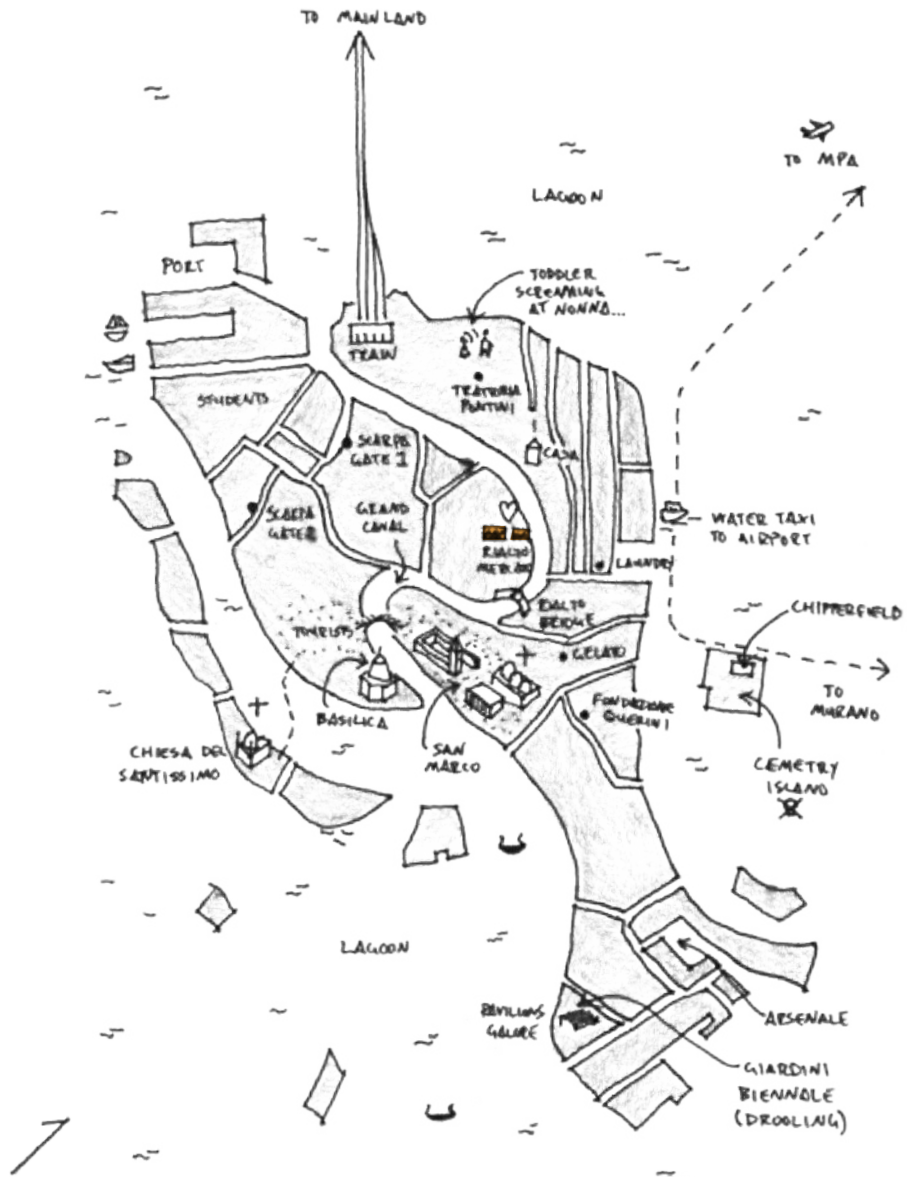
The urban structure of Venice is characterised by the city's relationship with water. Surrounded entirely by the Venetian Lagoon, the city is built on a number of small islands and sand banks, expanded by land reclamation and piling. A myriad of canals provides transportation corridors and access between the islands.

Venice is divided by the Grand Canal, with San Marco to the east acting as the administrative capital and Rialto to the west serving as the commercial centre. In the *Chronicon Venetum*, historian Giovanni Diacono first mentions the existence of a butcher shop and shamble on Rialto, at that time just a small island in the lagoon.⁴⁸ Situated away from the historic core of San Marco, its location was easily accessible from the mainland whilst

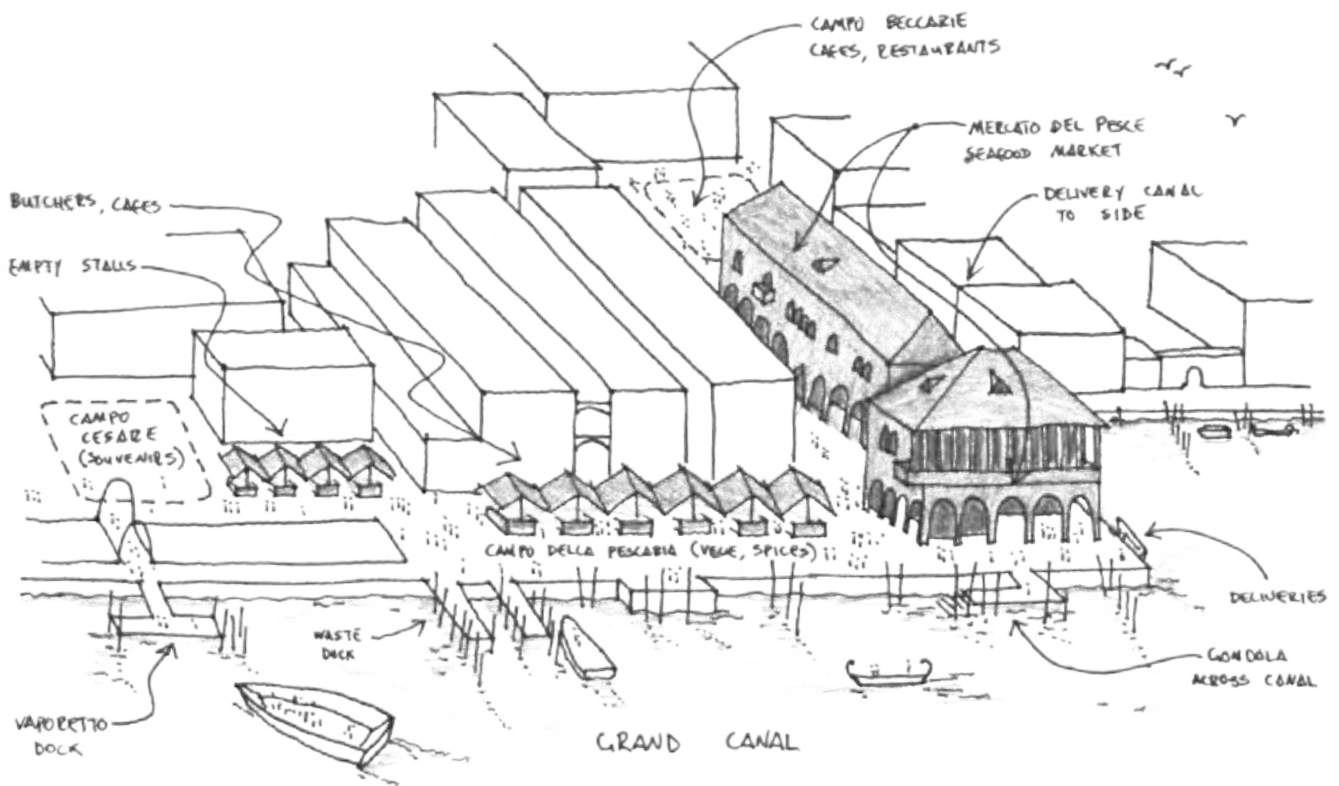
also providing a degree of separation between the butchers unsanitary activities and the city's residential neighbourhoods.

By the mid-sixteenth century, Rialto had grown to become the centre of Venice, taking on the characteristics of a port zone serving both locals and international traders. As the market grew, it became beneficial to co-locate warehouses, granaries, banks, insurance providers and city tax officials in the area to help service its merchants, further strengthening Rialto's commercial function.⁴⁹





Top: Venice mappings and journal sketch
Above: Unloading and loading from covered portico
Left: Campo della Pescaria fresh produce market



Site Analysis

The Mercati di Rialto is built around the Chiesa di San Giacomo, the oldest church in Venice. A small public square, or campo, to the west of the church served as the historic boundary of the market when it was first established in 1097. As pointed out by Seigel, the co-location of civic and religious functions was an ‘interplay of moral values and the law,’ with the market square benefiting from the churches ‘emanating ethos’ to help regulate trade and commerce.⁵⁰ As the market grew, it began to encompass adjacent buildings, loggia and docks linked by small campo (squares) and interconnecting calli (laneways). Situated on the Grand Canal, it was easily accessible from the lagoon and mainland, as well as the adjacent islands of San Marco by the Rialto Bridge. This location created opportunities for traffic and the easy loading and unloading of goods.

The Mercati di Rialto

The market has existed on its current site since the eleventh century and is divided into distinct precincts, defined by the type of produce that is traded there. Whilst the Rialto area has changed and evolved over time, the surrounding streets and squares still bear the names of the goods that they historically sold. The Ruga dei Spiceri specialised in spices from the East; Ruga dei Oresi for jewellery; the Campo Erbaria for fresh produce; the Campo Beccarie for meat (and consequently, the city’s abattoir); and the Casaria for cheese. This case study analysis focuses on the Mercato Pescaria, the Campo della Pescaria and Campo Cesare Battista già della Bella Vienna.

Top: Mercati di Rialto axonometric sketch



Construction

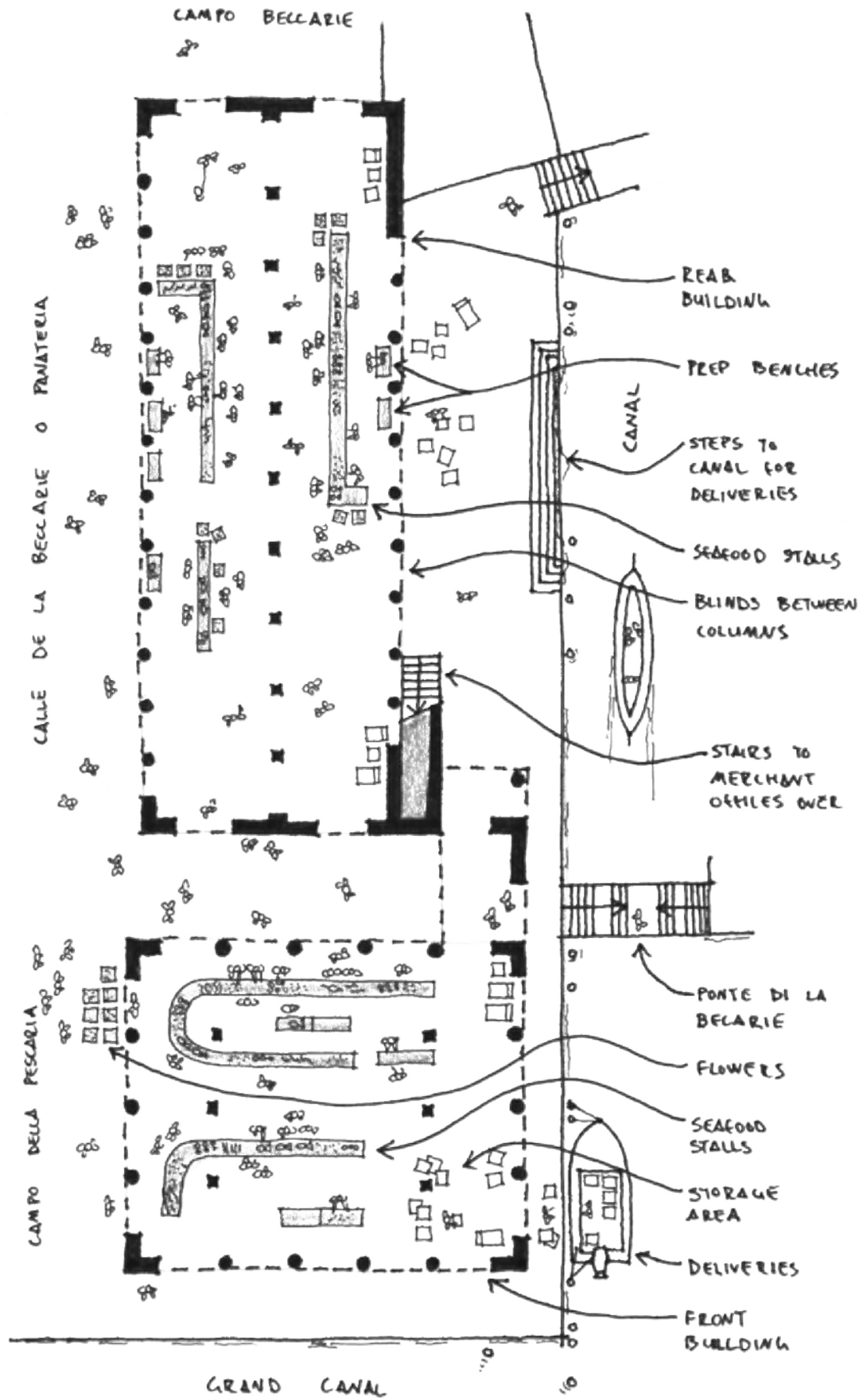
Unlike the uniform pavilions and ordered arrangement of the Naschmarkt, the Mercati di Rialto is an informal meander of interlocking calli, campos and covered markets. The markets current arrangement has existed since the sixteenth century, following the Rialto's reconstruction after a devastating fire in 1514. Whilst efforts were made to rebuild the market in a more unified and ordered fashion, the rebuilding followed the outlines of existing foundations, walls and property boundaries.⁵¹ The result is a 'restored' market rather than a 'new' market, bound to the former geometries, habits and land use patterns of the existing configuration.

The Mercato Pescaria is a relatively new building, completed in 1907 to replace a rusting iron structure from the 1890's. Designed by architect Domenico Rupolo and artist Cesare Laurenti, the new Pescaria is a two-storey masonry building constructed in red brick and barrel clay roof tiles to match the surrounding built environment. The ground floor loggia is a grid of doric stone columns topped with beautifully detailed timber capitals and beams, supporting the exposed timber joists of the floor above.

The covered markets of the Campo della Pescaria and Campo Cesare Battista già della Bella Vienna are much more rudimentary, consisting of lightweight steel frames covered with a canvas of fibre cement roof. As a result, by keeping the structure of these stalls to a minimum they are much more flexible and moveable, allowing each vendor to customise their own stall according to the needs of their produce.⁵²

Top: Side elevation of Mercato Pescaria
Left: Long view through Mercato Pescaria





Above: Pescaria ground floor plan sketch



Programme

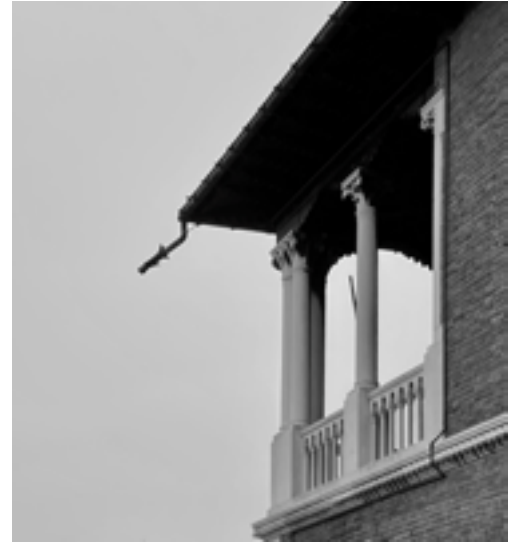
To the west of Rialto is the Mercato Pescaria, or the covered fish market. The Mercato Pescaria is spread across two two-storey loggia buildings; a small rectangular pavilion facing the Grand Canal and a long rectangular building behind it. The Rio delle Beccarie canal runs along the western edge of both buildings, providing access for deliveries and waste collection, whilst allowing easy wash down to minimise foul odours.⁵³ The ground floor is open on all four sides and contains the seafood stalls, which are assembled and packed down daily. Retractable canvas blinds provide some enclosure and are used to prevent birds entering the market and deflect sunlight from spoiling the produce. The first floor is currently vacant, however it was historically occupied by city officials to weigh, tax and regulate the produce sold below.

To the east of the Mercato Pescaria and running parallel to the Grand Canal is the Campo della Pescaria. The square hosts the city's largest fruit and vegetable market, consisting of twenty-eight vendors across twelve semi-enclosed pavilions. The campo itself is

framed by residential buildings with butchers, seafood vendors, a bakery and warehouse space at ground level to support and activate the adjacent market. To the south east of the Campo della Pescaria is the Campo Cesare Battista già della Bella Vienna, a market square currently occupied by demountable souvenir stalls and surrounded by restaurants, cafes and bars.

The markets hours of operation vary depending on the produce. The Mercato Pescaria is open Tuesday to Saturday from 7:30am to noon, whilst the Campo della Pescaria fresh produce market is open Monday to Saturday, 7:30am to 3pm. Friday and Saturdays were by far the busiest market days for both tourists and locals, in part due to the cultural and religious practice of eating fish on these days. Friday and Saturday also enjoyed the greatest diversity of vendors and produce, with more vacant stalls occurring earlier in the week.

Top left: Typical fresh produce stall with canvas awnings
Top right: Seafood stalls in the Mercato Pescaria



Interior

In contrast to other markets visited, the Mercati di Rialto is a blend of utilitarian and decorative features depending on the surrounding urban context. The most adorned building is the north loggia of the Mercato Pescaria, in part due to its commanding position on the Grand Canal and relationship with the neighbouring palazzos and villas. Here, Rupolo and Laurenti used the markets ornamentation to 'offer a lesson in civic and moral virtue' through associations with the Venetian lagoon and the municipal identity of Venice.⁵ This is most visible in the decoration of the loggia's stone capitals and columns, incorporating produce such as fish, eels, sea horses, crabs and lobsters as well as gondolas and fishing baskets. This theme is continued throughout the market in elements such as the fish shaped copper rain spitters and bronze statue of 'Pescatore' or St. Peter - the patron saint of shipbuilders and fisherman.

Whilst the front building of the Pescaria highlights the fish markets importance through ornamentation, the rear building is a lesson in functionality and restraint. Here, the loggia's facade is left unadorned and its tuscan columns feature simple geometric stone capitals. Between the perimeter columns, a single stone step separates the stalls from the street and helps define the markets edge. A uniform floor of grey stone

is broken by linear drainage grates and a white stone inlay, linking the internal columns and reinforcing the buildings structural grid. Daylight is filtered red canvas blinds, whilst adjustable artificial lighting is provided by cast iron lanterns hanging from the exposed ceiling rafters.

Management

The multiple buildings, squares and markets that make up the Mercati di Rialto are owned and operated by many separate entities. The Venice City Council currently owns and operates markets on the Campo della Pescaria and Campo Cesare Battista gia della Bella Vienna. Situated in busy streets and squares, these are the property of the city and their municipal ownership maintains public access and regulation of produce. As recently as 2022, a motion by Council saw the banning of all cooked and prepared food from the Campo della Pescaria to encourage more fresh produce vendors at the market.⁵⁵

The adjacent Mercato Pescaria buildings are owned and operated by DFS Group, a Hong Kong based luxury retailer who also controls the nearby Fondaco dei Tedeschi, a luxury shopping centre on the opposite side of the Rialto Bridge.

Top left: Seahorse column capital detail

Top right: Fish shaped rain spitter



48. Calabi, D., p40

49. Ibid, p56

50. Siegel, A., p364

51. Calabi, D., p38

52. Alexander, C., Ihikawa, C. & Silverstein, M., p250

53. Schmiechen, J. & Carls, K., p5

54. Dobraszczyk, P., p175

55. Pendolini, E. (15 April 2022). *Twelve stalls removed and a ban on food sales: reorganization of the Rialto Market passes in Council*. Accessed 14 June 2024, <https://campaignforlivingvenice.org/2022/04/15/twelve-stalls-removed-and-a-ban-on-food-sales-reorganization-of-the-rialto-market-passes-in-council/>

Top left: Meractio Pescaria fronting the Grand Canal

Left: Filtered view to the Grand Canal through canvas blinds

Above: Meractio Pescaria behind canvas market stalls

6 Supporting Markets

‘Human beings are social creatures. They enjoy leaving home and benefitting from the social contact shopping offers and they like to browse, graze, touch, feel and test what they are going to buy.’

Neil Tomlinson and Valenti Alvarez Planas

6.1

Hala Mirowska and Hala Gwardii

Location: Warsaw, Poland

Architect: Ludwik Panczakiewicz, Apoloniusz Nieniewski and Władysław Kozłowski

Completed: 1901

Typology: enclosed market hall, covered outdoor

Construction: iron and steel frame structure, brick facade, metal sheet roof

Building area: 11,100 sqm

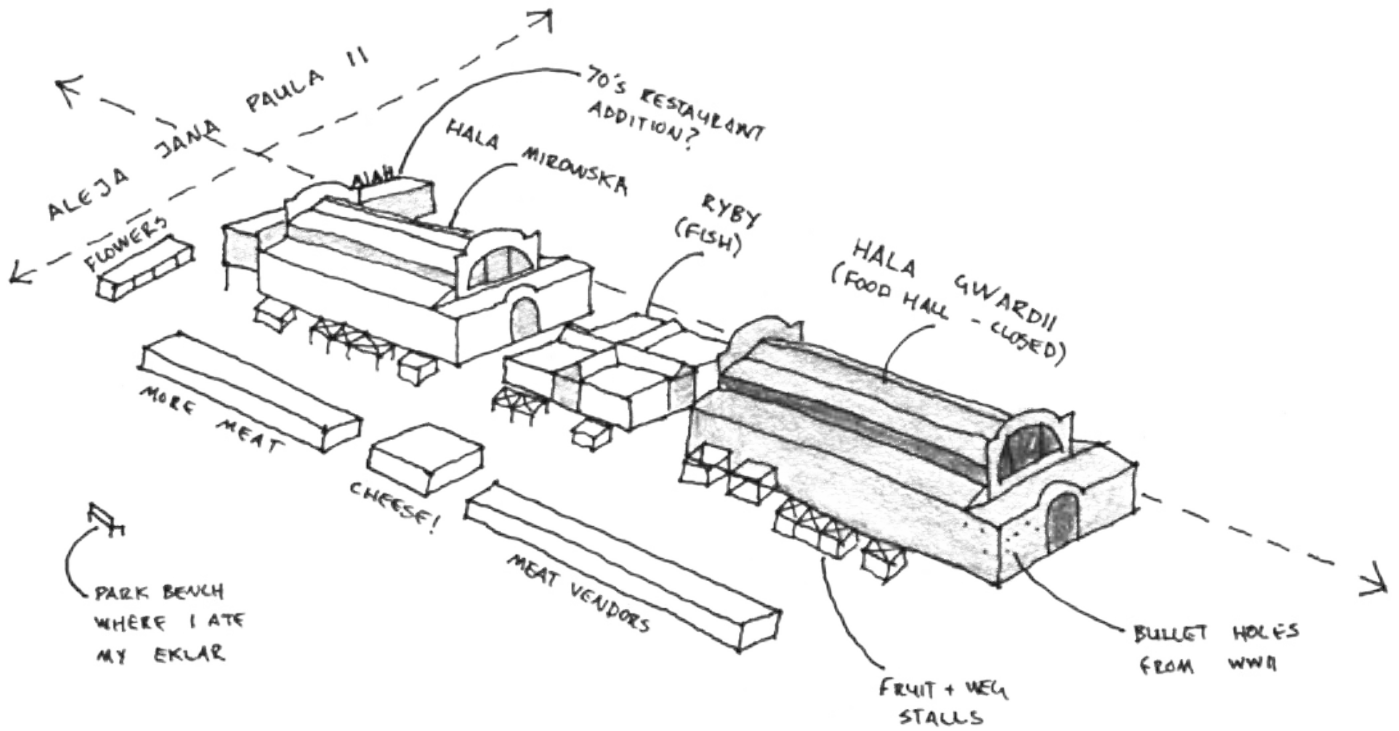
The twin market halls of Hala Mirowska and Hala Gwardii are located in central Warszawa and were built in 1899 by the city to replace its unhygienic open air markets. The western building (Mirowska) is a supermarket today, with smaller retailers such as bakeries, locksmiths and a restaurant on the upper floor whilst the eastern building (Gwardii) is a food hall which has been closed since the pandemic in 2020.

The two halls are constructed of wrought iron to provide the largest open span for the retail space below, whilst blonde brick facades tie the buildings in with their surrounding context. Bullet holes from World War II are still present across much of the eastern elevation, a sign of the city's harrowing history. The Ryby (or fish market) is situated in a low steel and glass pavilion between the two market halls. Individual meat and dairy shops run along the southern edge of the site, framing a street of open air fruit and vegetable stalls between the market hall.



Top right: Hala Mirowska central hall

Right: Hala Mirowska front elevation with modern addition



Above: Hala Mirowska and Hala Gwardii mappings and journal
Right: Outdoor fresh produce market
Below: Supermarket interior



6.2

Targ Blonie

Location: Blonie, Poland

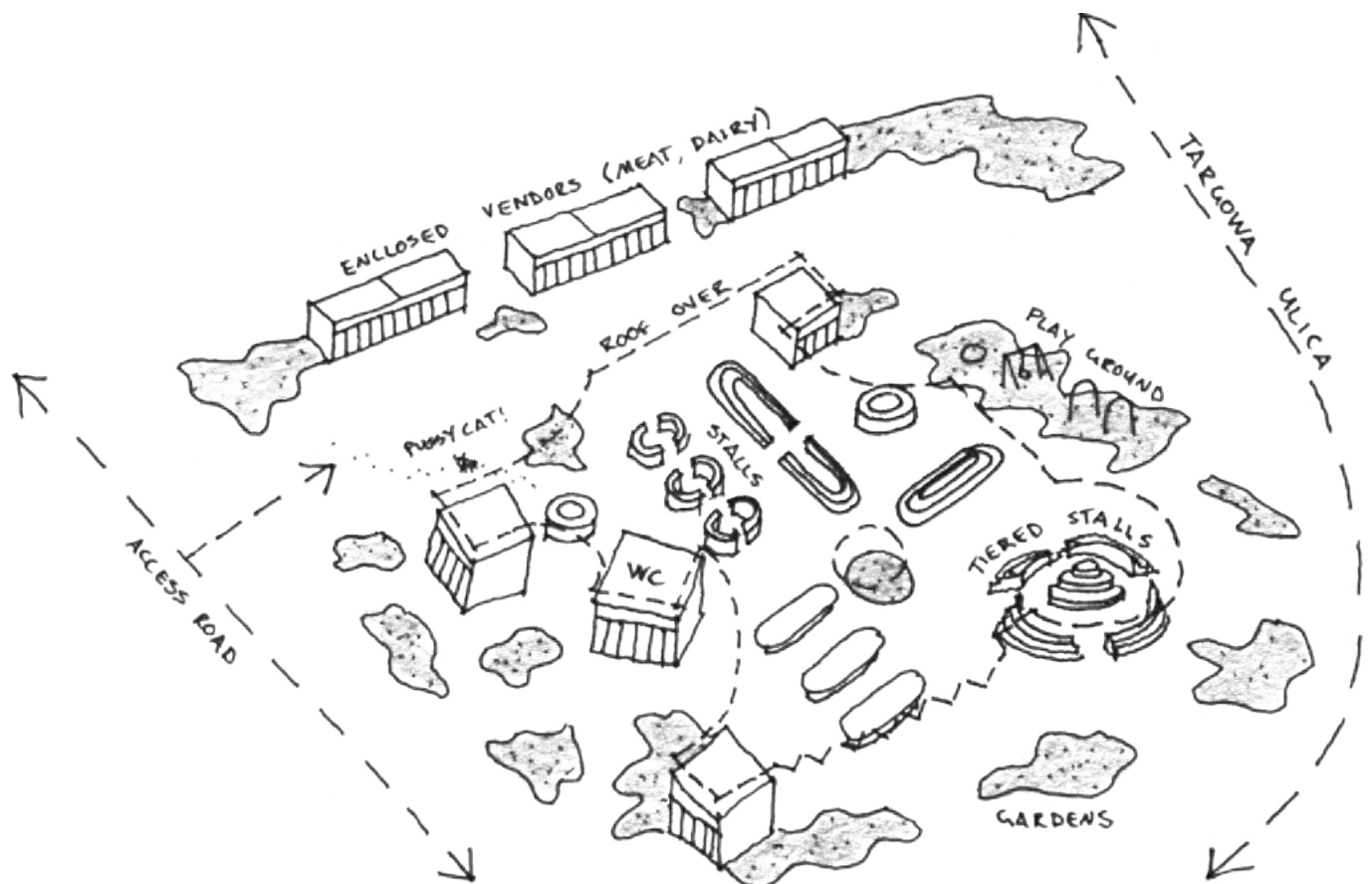
Architect: Aleksandra Wasilkowska Architectural Studio

Completed: 2022

Typology: covered outdoor market, detached market pavilions

Construction: steel frame, metal sheet facade, metal sheet roof

Building area: 1,450 sqm



Above: Targ Blonie perspective plan sketch



Tara Blonie is an open air market in the small town of Blonie, just outside Warsaw. Recently completed in 2022, it was designed by Aleksandra Wasilkowska to create a neighbourhood place that shortens supply chains, provides healthier food for all, and supports local business.

Closed during winter (a drawback for any open air market in Poland), the market is part playground, part park and part bazaar under a large canopy roof. Small metal clad pavilions are located under the canopy roof and the western boundary of the site, housing meat, dairy and bakery vendors. Landscaped gardens weave through the market and mirror the organic shaped roof above, with large steel bowls capturing rain water and snow melt. The completely white structure blends into the winter snow and is designed to reflect the heat of the summer sun.



Top left: Jagged roof edge and outdoor seating
Top right: Snow covered outdoor market
Bottom right: Rain garden and roof spitter

6.3

Hale Targowe Gdynia

Location: Gdynia, Poland

Architect: Jerzego Müllera and Stefana Reychmana

Completed: 1938

Typology: enclosed market halls, covered outdoor market

Construction: reinforced concrete and steel frame structure, glass facade, metal sheet roof

Building area: 10,600 sqm



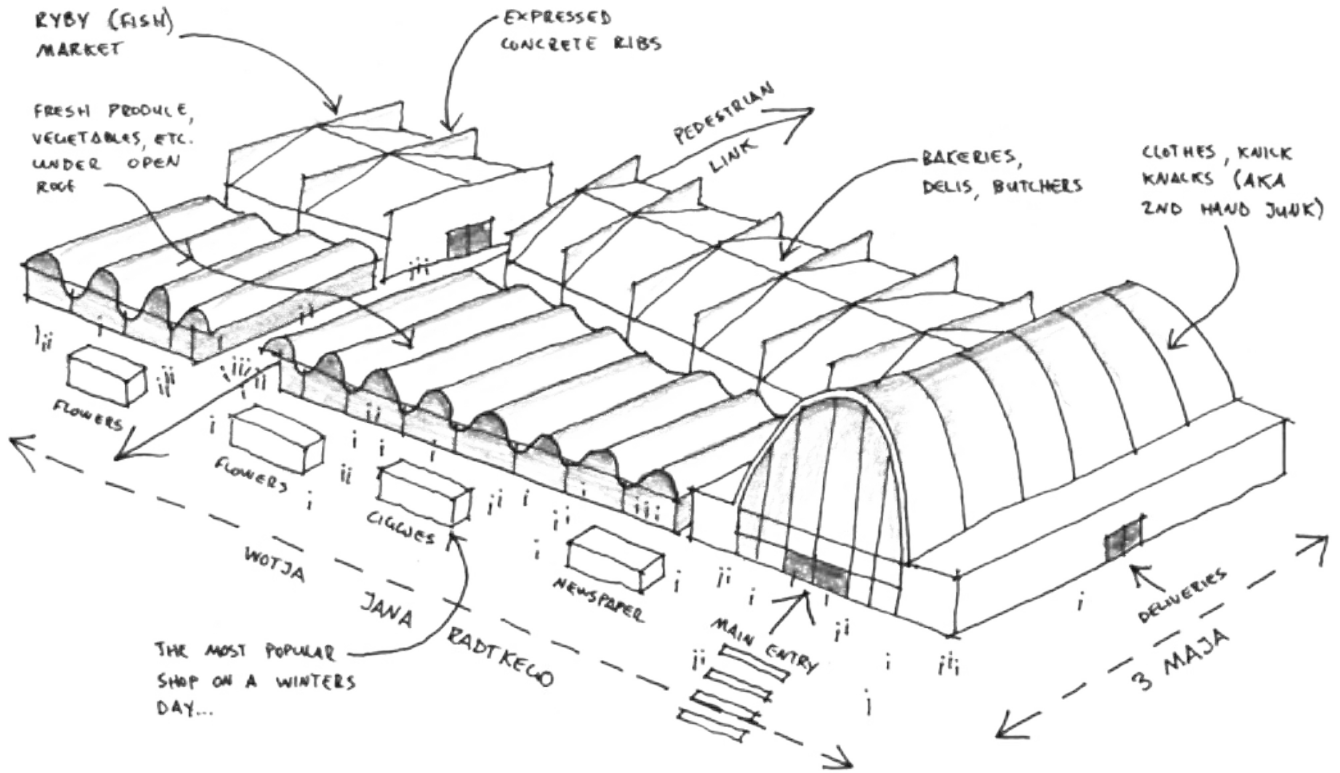
Gdynia is a sea port located half an hour north of Gdansk. Founded on Modernist principles, the city centre has a clear urban layout and number of well preserved interwar buildings, including Hale Targowe. Designed by Jerzego Müllera and Stefana Reychmana, the main market hall features a striking parabolic arched roof. Primarily occupied by clothing vendors, the interior of the hall is completely column free, with the operable glazed roof providing beautiful opalescent light to the stalls below.



Intersecting the main hall is a lower reinforced concrete wing for butchers, bakeries and a pierogi restaurant. A separate fish hall (Ryby) is located off this wing to the north. Together, the main hall and meat halls form an L-shape and frame a covered outdoor 'green' market to the street. The roof of the green market is a series of barrel vaults and curved gutters, mimicking the language of the main market hall and helping deflect snow.

Top left: Hale Targowe front elevation

Bottom left: Street context



Top: Hale Targowe axonometric sketch
 Above: Fresh produce market with vaulted roof over
 Left: Steel structure for parabolic arch roof

6.4

Neustadter Markthalle

Location: Dresden, Germany

Architect: Edmund Bräter and Wilhelm Rettig

Completed: 1899

Typology: enclosed market hall

Construction: concrete frame structure, stone facade, tile and metal sheet roof

Building area: 4,750 sqm

The Markthalle is one of Dresden's three purpose built halls constructed in the late 19th century to replace the city's weekly outdoor markets. The building is split over four floors including a basement, and features ornately detailed concrete columns, iron balustrades and lamps under a white vaulted ceiling. In 1999, the building underwent a major refurbishment: the basement floor (previously a WW2 air raid shelter) was opened up for retail and restaurants; the ground floor stalls were reduced from 43 to 16 to accommodate a grocery store; and the upper floors were converted to commercial space.



Above: Central atrium and high level windows

Left: Side elevation

6.5

Holešovice Market

Location: Prague, Czechia
Architect: Antonín Wiehl and Josef Srdínko
Completed: 1895, refurbished 1983

Typology: enclosed market halls, market square
Construction: iron frame structure, brick and stone facade, metal sheet roof
Site area: 110,000 sqm



Holešovice Market is the largest market in Prague and sits just north of the old town on the banks of the Vltava River. Previously an abattoir, the site's old sheds and halls have now been transformed into galleries, a theatre, restaurants and markets.

Hala 22 is the fresh produce market hall and stocks everything from crates of apples to French cheeses and cured Nordic fish. Fruit and vegetable stalls run down the centre of the hall with clerestory windows providing ventilation and daylight to inspect the produce below. Dairy, meat and fish vendors are located on the perimeter walls to avoid the high level lighting and allow for easier servicing.

Top left: Hala 29 second hand stores
Left: Fresh produce market within Hala 22

6.6

Nová Tržnica

Location: Bratislava, Slovakia

Architect: Ivan Matušík

Completed: 1983

Typology: enclosed market hall

Construction: reinforced concrete structure, glass facade, metal sheet roof

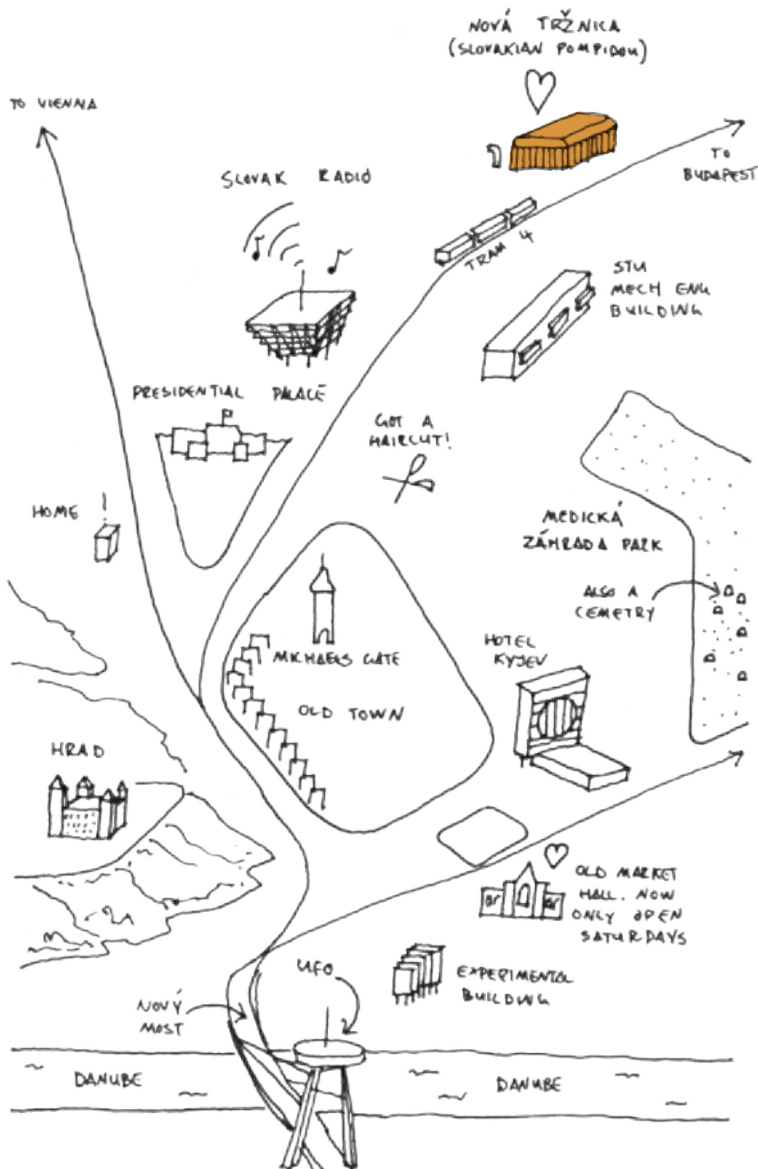
Building area: 6,000 sqm



Top left: Central atrium with circular skylights and exposed mechanical services

Left: Front entry

Above: Side elevation with mechanical exhausts



The Nová Tržnica (or new market) is one of three market halls in Bratislava. Built in 1983 to replace the Stará Tržnica (or old market) in the historic town centre, the Nová Tržnica has itself now been replaced by a newer wholesale market on the outskirts of the city. The market hall was designed by Ivan Matušík as a giant 'container for shopping,' with a reflective glass veil wrapped over its skeleton of concrete ribs. Inside, there are two two-storey blocks of vendors separated by a central light well. Fresh produce and restaurants dominate the ground floor whilst the first floor has been largely vacated due to a declining number of shoppers. True to its high-tech style, all the ductwork and services have been articulated as design features, a reference to the Pompidou Centre which was completed five years earlier.

Above: Bratislava mappings and journal sketch

Top right: Perimeter aisle between shops and curtain wall

Right: Mezzanine level



6.7

Rákóczi Market Hall

Location: District VIII, Budapest, Hungary
Architect: István Rozinay and Pál Klunzinger
Completed: 1897

Typology: enclosed market hall
Construction: iron frame structure, brick and stone facade, metal sheet roof
Building area: 7,400 sqm

Rákóczi is one of five original market halls built in the late 1890's to secure Budapest's food supply. With a unique cruciform plan, beautiful yellow ceilings and contrasting blue steel structure, the hall is a stunning example of the city's grand public architecture. Today, however, the hall is a shadow of its former self and is home to a supermarket and just four vendors: a butcher, baker, fresh produce and pickled goods. Like many market halls, Rákóczi has been hit hard by greater retail competition and closures of the Covid-19 pandemic. Located on a public plaza opposite a metro station, tram stop and busy street, the hall has all the ingredients necessary to be a bustling local market.



Above: Hall interior and exposed iron truss structure
Left: Front entry opposite public square and metro station

6.8

Lehel Csarnok

Location: District XIII, Budapest, Hungary

Architect: László Rajk Jr.

Completed: 2002

Typology: enclosed market hall

Construction: concrete and steel frame, brick and glass facade, concrete and metal sheet roof

Site area: 11,500 sqm



Lehel is an explosion of primary colours and Postmodern forms. Located in District XIII, the hall was built in 2002 to replace an open air market that occupied the site since 1890. The building was designed by Hungarian architect László Rajk Jr. and is referred to as the Kofahajó or 'bucket boat' by locals for its hull-like shape, porthole windows and assemblage of masts.

In plan, the Lehel Csarnok is V-shaped around a large triple height atrium which contains one of the original open air market stalls. This space is topped by an array of skewed skylights, metal roof sheeting and bright blue trusses - a Constructivist nod to the city's Soviet past. The bustling local market uses colour to playfully highlight different functions of the architecture: blue signifies structure; red for vertical circulation (lifts and stairs); yellow for handrails and green for furniture (seats and lighting). Externally, the building is covered in cornice shaped planter boxes, fire escape stairs and ramps leading up to the rooftop carpark.



Top left: Hall interior with fresh produce market on ground

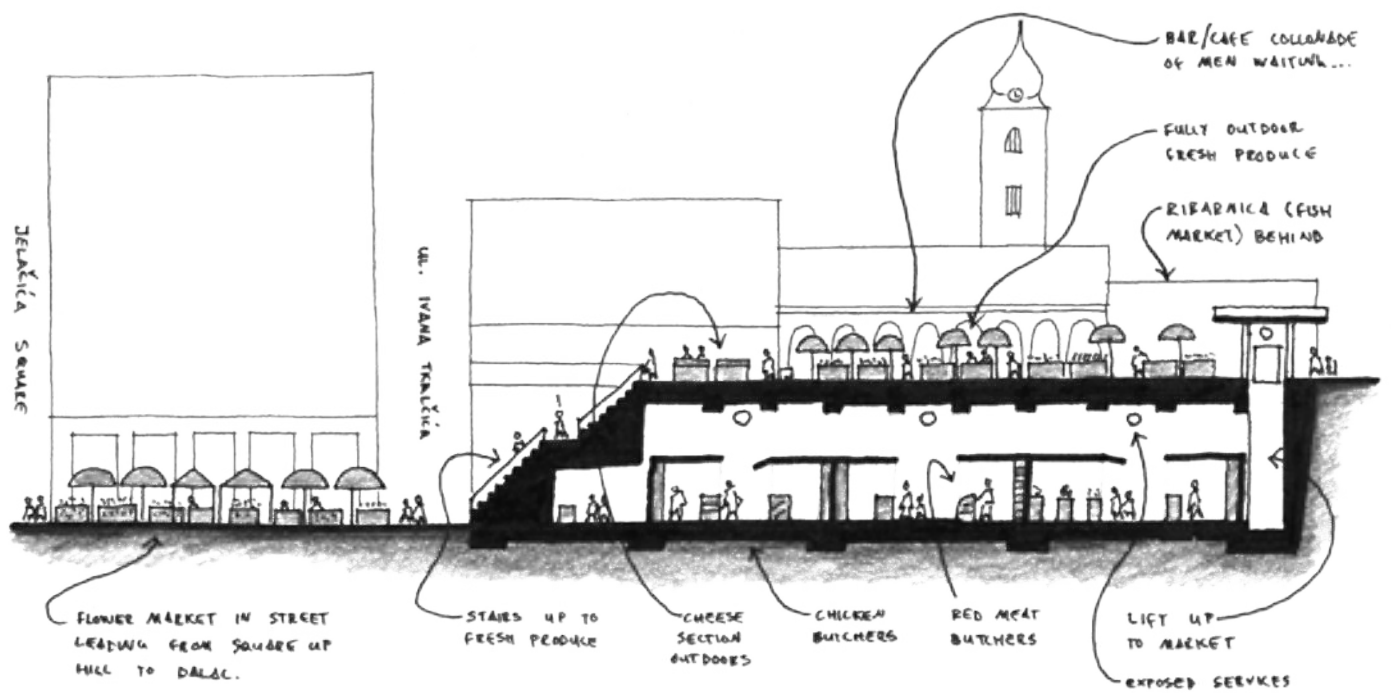
Left: Exposed roof structure and colourful glass block facade

6.9

Tržnica Dolac

Location: Zagreb, Croatia
Architect: Vjekoslav Bastl
Completed: 1930

Typology: enclosed market hall, market square
Construction: concrete frame structure, stone facade, concrete and paved deck roof
Site area: 5,200 sqm



Above: Short section sketch through market hall and square over



The Tržnica Dolac was first opened in 1930 to provide Zagreb with a modern European market hall for its growing population. Designed by Vjekoslav Bastl, the market traverses a difficult sloping site between the Upper Town and Jelačić Square in the Lower Town. To overcome the level change, the market is split into an enclosed hall for butchers, fresh pasta and cheese vendors with an open-air market square situated on the roof over, selling fresh produce, honey and nuts.

To the south, a flower market connects Dolac to the bustling Jelačić Square and its tram station. A small Ribarnica or fish market is located to the north west in a separate building, stocking fresh seafood from the Adriatic Sea. The upper market square is dotted by red parasols and surrounded by a colonnade of cafes - full of coffee (or wine) drinkers waiting for their partners to finish the weekend shop.

Above: Loading and unloading in covered portico

Top right: Dolac fresh produce market

Middle right: Flower market between Dolac and Jelačić Square

Bottom right: Basement level market

6.10

Mestna Tržnica

Location: Celje, Slovenia
Architect: Arhitektura Krušec
Completed: 2009

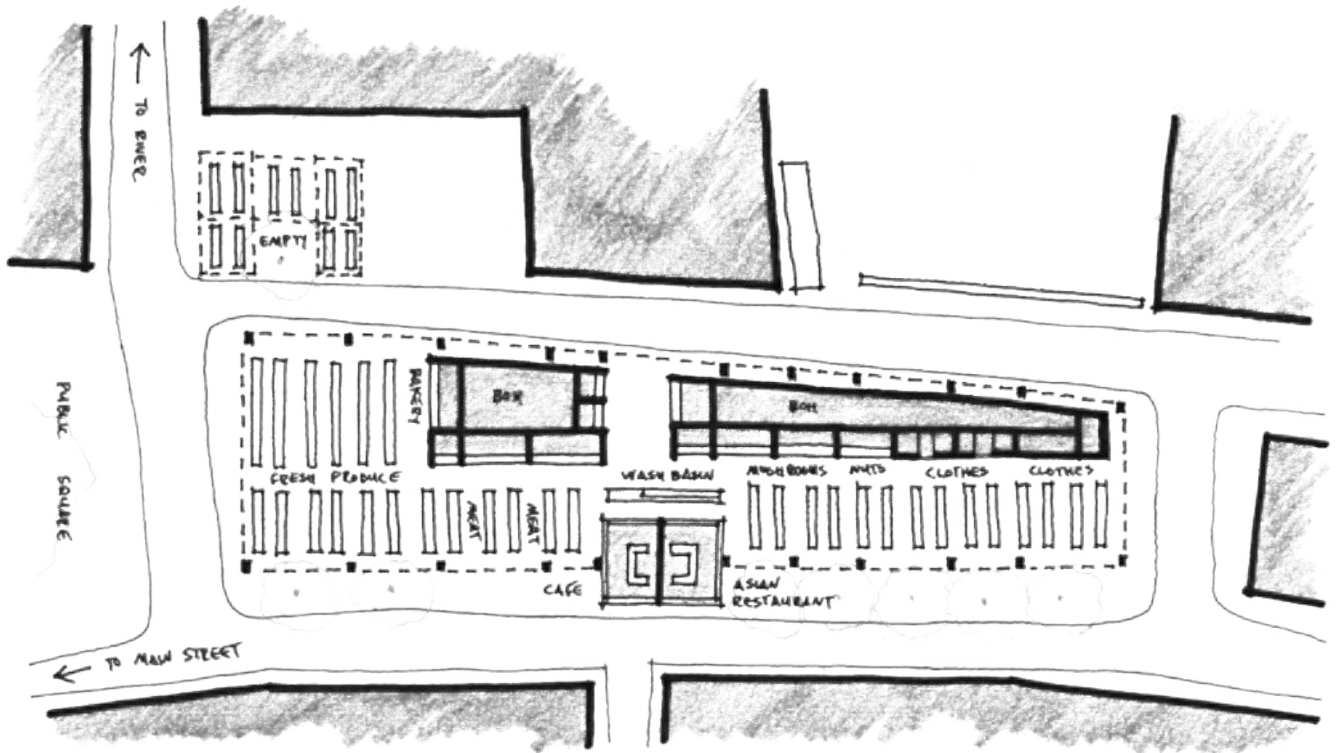
Typology: covered outdoor market
Construction: steel frame structure, fibre cement and metal facade, metal sheet roof
Building area: 410 sqm



Mestna Tržnica, or City Market, is a small local market in the village of Celje, one hour north of Ljubljana. Completed in 2009 by Arhitektura Krušec, the new market was designed as a covered urban square rather than a traditional, introverted market hall.

A large steel canopy covers the entire site and operates as a series of alternating pitched roofs to bring natural light deep into the market. Under this roof, two fibre cement clad 'pods' contain vendors, amenities and storage space whilst a third glass pod to the north contains a restaurant and cafe. The entire Mestna Tržnica is painted a uniform grey, creating a neutral backdrop for the vibrant colours of the fresh produce, flowers and goods for sale.

Top left: Typical open market stall under canopy roof
Left: Street elevation showing stepped roof profile



Top: Ground floor plan sketch

Above: Roof and column junction

Left: Fresh produce stalls down central aisle

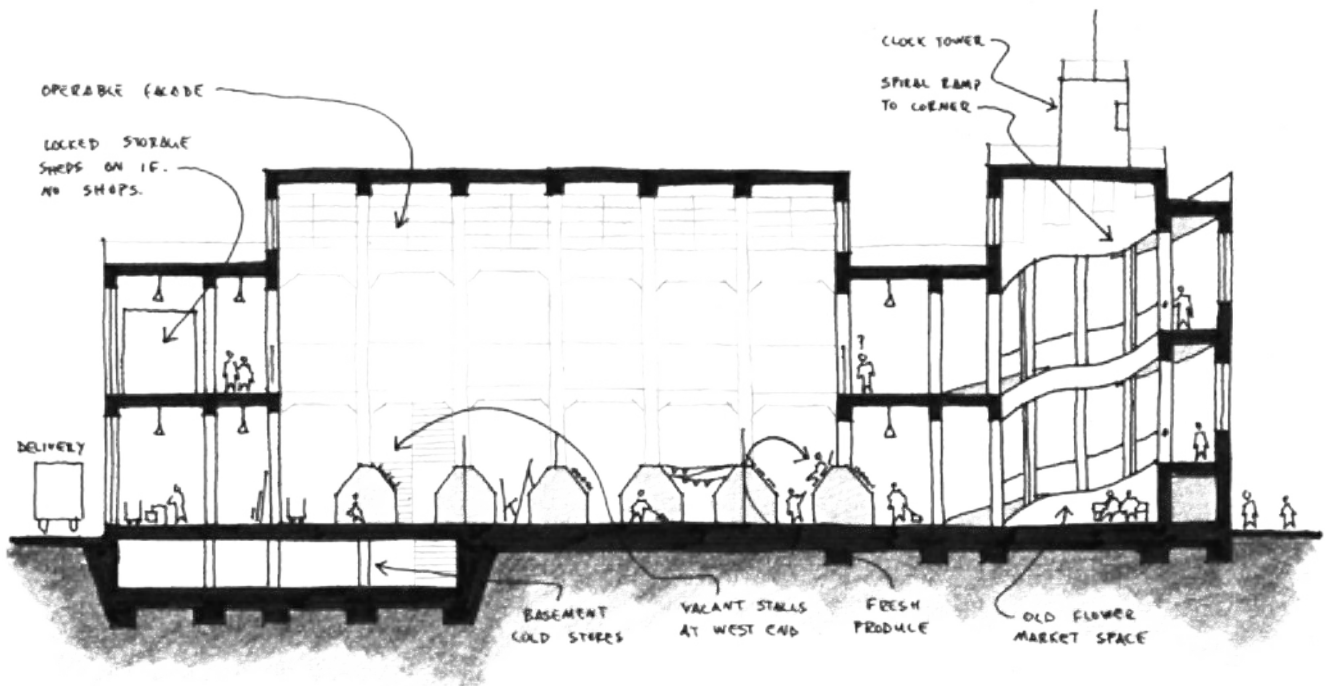
6.11

Mercato Coperto

Location: Trieste, Italy
Architect: Camillo Iona
Completed: 1936

Typology: enclosed market hall

Construction: concrete frame structure, rendered masonry and glass facade, concrete and metal sheet roof
Site area: 2,300 sqm



Above: Long section through main hall and spiral circulation ramp



The Mercato Coperto, or covered market, is a modernist market hall just outside the historic city centre of Trieste. Unlike other markets visited, the Trieste Mercato wasn't specifically designed for improved sanitation but rather climate control and year round use. Wind and rain made the previous open air market on Piazza Goldini unusable during the winter months, limiting the city's food supply.

The Mercato was designed by Camillo Iona in the functionalist style and opened in 1936. A key architectural feature of the buildings is its steep helical ramp, connecting the two floors and allowing goods to be transported vertically. The ramp wraps around a light filled gallery which was originally used for the sale of flowers. The main hall is lit by high level louvres and a fully operable glass curtain wall on two sides, providing cross ventilation and filtered daylight. The interior is almost entirely white to reflect the light, whilst a ribbon of blue tiles protects the base of the walls from food residue and grime. Unfortunately, the market has fallen out of use with only a handful of fresh produce vendors, a butcher and cafe remaining.

Top left: Spiral circulation ramp around old flower market space
Top right: Exterior corner highlighting spiral ramp
Bottom right: Central atrium with empty and unused stalls



6.12

Palazzo della Regionale

Location: Padua, Italy
Architect: unknown
Completed: 1219

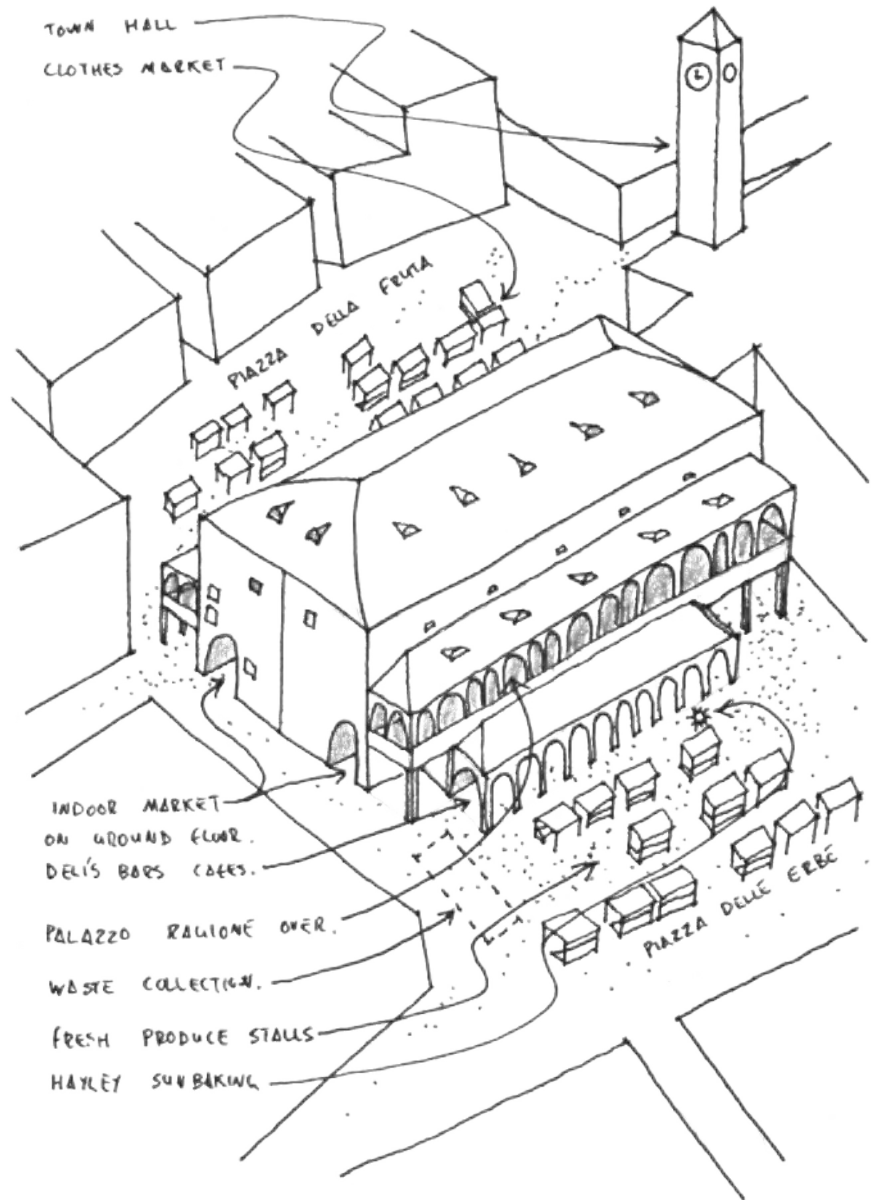
Typology: semi-enclosed market hall, market square
Construction: stone structure, stone facade
Site area: 8,100 sqm

The Padua market is one of the oldest in Europe - operating for over 800 years. The market is centred around the Palazzo della Regionale, a two-storey town hall or 'Palace of Justice' from the 12th century. The first floor of the Palazzo is a large medieval hall, whilst the ground floor is occupied by the indoor market. It consists of two vaulted aisles connected by a link to form a H-shaped plan, with vendors including deli's, butchers, bars and trattoria.

The building is flanked by open colonnades, full of cafes and gift shops fronting the piazzas. The Palazzo separates two public squares: Piazza della Fruta to the north (the historic fruit market) and Piazza della Erbe to the south (the historic vegetable market). The Piazza della Erbe retains its function as the city's fresh produce and vegetable market, whilst the Piazza della Fruta is now a clothing and flea market.

Top right: Market stalls in Piazza della Fruta
Right: Spices, grains and pasta being sold in Piazza della Erbe





Top right: Padua axonometric sketch

Top left: Palazzo della Regionale rear elevation

Left: Palazzo della Regionale behind Piazza della Erbe

7 Observations and Findings



Above: Rákóczi Market Hall, Budapest
Right: Mercati di Rialto, Venice

Over the course of three months, six case study markets along the Amber Road were investigated to better understand how rituals around food, trade, production and consumption are embedded in our cities. Each case study was analysed in terms of urban and historical context, siting, construction, programme, interior and management to determine the social and spatial characteristics of the European market typology as a public space for trade. Twelve supporting markets were also observed in less detail, providing a greater context and diversity of markets for analysis.

The following observations and findings have been made.



Urban and Historical Context

- The vast majority of market halls visited were built by local authorities in the late nineteenth century as a means of improving urban sanitation and resident nutrition, regulating the supply of goods, and removing unhygienic open air markets.
- Some markets were built later in the twentieth century to replace small or ageing facilities in the historic city centres (Nová tržnica, Mercato Coperto).
- Whilst others were built even later in the twenty first century to provide new public market spaces for growing communities (Lehel, Celje).
- All markets visited (excluding Hala 22) were purpose built as market halls or squares.
- Enclosed market halls were the dominant typology, often located adjacent existing market squares, open air markets or on the site of historic trading places.
- Only one market did not have a single enclosed market hall (Naschmarkt), instead consisting of a number of smaller, detached market pavilions to navigate its difficult site constraints.



Top right: Palazzo della Regionale, Padua

Bottom right: Hala Targowa, Wroclaw



Left: Nagycsarnok, Budapest
Above: Mercati di Rialto, Venice

Site Analysis

- Successful markets are typically located on the edge of the town centre and within close proximity to key public transport for easy access and pedestrian activation (Gdynia, Wroclaw, Hala 22, Nagycsarnok, Lehel).
- Some markets were not standalone buildings, but rather fully integrated in the city fabric acting as public lanes, streets and squares (Naschmarkt, Ljubljana, Tržnica Dolac).
- Market halls that act as a public thoroughfare provide a covered path of travel in wet or cold weather and attract more pedestrian activity (Wroclaw, park through to tram stop; Gdynia, Main Street through to bus station; Naschmarkt, shopping lanes, Tržnica Dolac, market square linking upper and lower towns; Ljubljana, colonnade along two market squares).
- Open air markets were more prevalent in the south due to milder weather (Venice, Padua, Ljubljana, Tržnica Dolac, Naschmarkt). However, there was a surprising number of covered 'green' markets attached to enclosed market halls in the north (Gdansk, Gdynia, Hala Mirowska and Hala Gwardii), albeit operating at a reduced capacity.
- All markets were situated close to major roads or transport corridors for easy delivery of goods. Some were purposefully located adjacent rivers, ports or railways for access to more diverse or regional goods (Naschmarkt, Nagycsarnok, Venice).



Above: Hale Targowe, Gdynia
Right: Mercati di Rialto, Venice



Construction

- The vast majority of market halls utilised a 'basilican' or linear plan for maximum column-free spans, control of lettable area, easy way finding and circulation between vendors. Variations of this layout, including a cruciform plan (Rákóczi Market Hall) and parallel curves (Lehel) functioned in a similar way.
- One covered market used an organic, naturalised layout with small pavilions of enclosed vendors (Targ Blonie). This prescribed a circular stall configuration on vendors and reduced the amount of lettable space.
- Early market halls utilised a hybrid masonry exterior and technologically advanced internal structure (Gdansk, Wroclaw, Hala Mirowska and Hala Gwardii).
- More modern market halls, constructed in the twentieth and twenty first centuries, continued to explore innovative and experimental construction methodologies (Gdynia, parabolic arched roof; Nová Trznica, glass curtain wall; Lehel, deconstructivist portal frame).
- Concrete served as popular construction material for market halls built across Germany and its former territories (Gdynia, Wroclaw, Dresden), whilst iron and steel were more prevalent in Eastern Europe.
- Roof structure and materials were determined in part by climate, with curved roof forms (Gdansk, Gdynia, Hala Mirowska and Hala Gwardii) and concrete tiles or slabs (Gdynia, Ljubljana) used to manage excessive snow fall.

Programme

- Successful, busy markets have a diverse mix of shops and a variety of goods for sale.
- Less successful markets do not have food or fresh produce for sale at ground level (Gdańsk), only have one type of retailer (Mercato Coperto; fresh produce) or have a limited number of retailers (Nová Tržnica, Rákóczi Market Hall).
- The more levels in a market hall, the harder it is to equally activate the stalls (Gdańsk, Wrocław) or vertically connect the floors (Nagycsarnok, isolated basement; Mercato Coperto, steep ramp)
- Overwhelmingly, ground floors receive the most foot traffic and are the most active. First floors were typically quieter, have more empty stalls and provide more service based retailers or office space. Basements were also quieter and predominantly used for storage (excluding Gdańsk).
- Markets that were entirely enclosed (no outdoor or 'green' market) had all vendors and produce condensed in one space, generating greater activity and bustle (Wrocław, Nagycsarnok, Lehel).
- Completely open air or outdoor markets typically had less vendors, operated less frequently or fully closed over the winter months (Targ Blonie, Gdańsk, Celje, Ljubljana). These were quieter during the week but surprisingly busy on Saturday or market days (Ljubljana, Naschmarkt).
- A number of markets combined public squares selling fresh produce with enclosed market halls selling perishable goods such as meat and dairy (Ljubljana, Targ Blonie, Tržnica Dolac, Venice).
- Market halls that have been refurbished displayed fewer vendors but offer larger leasable spaces and often include a supermarket (Gdansk, Mirowska and Hala Gwardii, Dresden, Nagycsarnok).
- Concentrated markets were much busier and full of people. Too much circulation space makes it difficult to activate and in turn leads to empty stalls (Gdańsk, Hala 22).

Top right: Tržnica Dolac, Zagreb

Bottom right: Palazzo della Regionale, Padua





Interior

- Enclosed market halls provided more interior flexibility and comfort for year round use, maintaining more vendors and a greater variety of different produce (Gdynia, Wroclaw, Mirowska and Hala Gwardii, Lehel).
- Stalls that are independent of the main building structure provide maximum flexibility and adaptability to each vendors goods (Wroclaw, Gdynia, Nová Tržnica, Nagycsarnok, Naschmarkt). Stalls were typically constructed of timber, glass and steel or even a series of umbrellas - whatever their goods require.
- Decorative elements such as fretwork, corbeling or turrets were often used to reflect the civic importance of the market hall (Gdansk, Mirowska and Hala Gwardii, Venice) whilst others were designed more as religious temples or forts to display their status (Wroclaw, Ljubljana).
- Interior materials often included ceramic tile, concrete and rendered masonry for easy maintenance, cleaning and hygiene.
- White interiors were used to reflect natural daylight light and reduce the need for artificial lighting (Wroclaw, Targ Blonie, Gdynia, Mercato Coperto, Dresden).
- High level clerestory windows were frequently used for both natural lighting and ventilation (Gdańsk, Wroclaw, Mercato Coperto).
- Perishable produce was often located below ground or under mezzanine levels to protect it from direct daylight.

Management

- Successful markets maintained a sense of public ownership and governance.
- Less successful markets were typically privately owned (Gdansk).
- A number of markets had very low occupation and have an uncertain future (Mercato Coperto, Rákóczi Market Hall) with two currently at risk of redevelopment (Gdansk, Ljubljana).



Top: Neustadter Markthalle, Dresden

Above: Lehel, Budapest

8

Appendices

‘It is natural and convenient to want a market where all the different foods and goods you need can be bought under a single roof.

But when the market has a single management, like a supermarket, the foods are bland, and there is no joy in going there.’

Christopher Alexander

8.1

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8.2

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8.3

About the Author

Jake is a practising architect and designer working on Gadigal land. Growing up in rural New South Wales, he spent his childhood exploring farm sheds, abandoned buildings and construction sites with his father. These experiences provided an appreciation of spatiality, light and structure, leading to his pursuit of a career in architecture.

Jake graduated with a Masters of Architecture from the University of Newcastle in 2018. His major project, titled 'The Stock Market' was an integration of urban food systems to reestablish the connection between producers and consumers. During this time, he developed a keen interest in the architecture of trade and market places, specifically the civic role that they play within our cities.

Outside of practice, he has tutored at the University of Newcastle and volunteered his time at HealthHabitat, the Paul Pholeros Foundation and Museums of History NSW.

Jake seeks to continue this research in the hope of developing a framework for public market places in an Australian context.

For more information and updates please refer to [@the.amber.road](https://www.instagram.com/the.amber.road)



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