

# THE INFLUENCE OF CHURCHES OF THE CITIZENSHIP CATHOLIC PARISHES ON THE LAYOUT AND URBAN SPACE OF MEDIEVAL TOWNS IN THE 13<sup>TH</sup> AND 14<sup>TH</sup> CENTURIES

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**Abstract.** One of the most important types of cult buildings in medieval cities were churches for the citizenship Catholic parishes, which began to be built in Italy. In the 12<sup>th</sup> and 13<sup>th</sup> centuries on lands of the Baltic Seacoast, the construction of cult buildings expanded with the spread of the Catholic Faith, influencing the spatial organization of the urban environment, and developing church types. Churches for the citizenship Catholic parishes became architectural dominants in cities of the Hanseatic League. **Research problem:** the development of the planning and structure of churches for the citizenship Catholic parishes changed urban aesthetics; it is necessary to study churches for the citizenship Catholic parishes and layouts of medieval towns organized around the market to preserve historical identity during the development of the contemporary urban environment. **Research goal:** analysis of the impact of churches for the citizenship Catholic parishes on the layout, visual image and architecturally spatial development of the Hanseatic League cities. **Research novelty:** analysis of common and local features of churches for the citizenship Catholic parishes and their layout, as well as structural evolution in the Hanseatic League cities during the 13<sup>th</sup>–14<sup>th</sup> centuries. **Research methods:** analysis of archive documents, projects, cartographic materials and studies of published literature, an inspection of churches in nature, and photo fixation.

**Keywords:** church for the citizenship Catholic Parish, identity, medieval town, the Hanseatic League, urban environment.

## Introduction

The Teutonic Order founded the State of the Teutonic Order (1230–1525), where small settlements dominated urban landscapes. Several towns stood out in terms of not only their size but also their functions. The Teutonic Order's Master (German: *Deutschmeister des Deutschen Ordens*, 1219–1230, *Landmeister von Preußen des Deutschen Ordens* 1229–1239) Hermann Balk, Bishop of Breslau Thomas I and High Duke of Poland (1232–1238) Henry the Bearded signed an agreement for the establishment of new towns (Jasiński, 1993, p. 102–101) in the State of the Teutonic Order. Historians believe that a medieval town was a relatively small, densely populated place, whose inhabitants were merchants, craftsmen, and representatives of free professions, who made a living mainly by

occupations not related to farming. A village was a densely populated place whose inhabitants were mainly engaged in farming, and the fishery was considered a subsidiary industry. In the medieval town, craftsmen and merchants were also involved in farming: lots of householders made a garden at the house and kept livestock, poultry and a horse. Outside the town, the rural area contained arable land and meadows. In towns located by rivers and lakes, people were occupied with fishery (Šterns, 2002, p. 112–113).

Wooden fortresses and residential towers built by conquerors on the highest places of the relief strengthened the obtained properties. Following traditions of the Roman Empire, the Knights built monumental buildings – castles. Later, financially independent castles for Commandry and Vogtei centres started to build in the State of the Teutonic Order. The tower became the architectonic dominant of the castle. Near the fortress, a church was built for the congregation. The planning of the Commandry and Vogtei centres obtained the first outlines (Ozola, 2020a). In every subjugated Prussian-inhabited region, the main building in the administrative centre was a stone castle with a tower included in its structure. Larger or smaller settlements were formed in the protection of fortresses. In the Teutonic power centre, the ruler's residence with a high tower of stone for defence and manifestation of the ruler's power dominated over buildings placed at the foothill of the hillfort's surroundings. A large and medium-sized settlement was called a town, which gained not only town rights, defensive walls and a Town Hall, but also its own area and citizens, government and structure. The Town Hall with a tall tower manifested the power of the trading town. The Municipal Law was the most characteristic element of a medieval town. This was because the settlement could not otherwise be called a town; in this regard, medieval cities differ from huge prehistoric settlements. Written historical sources show that the settlement that gained town rights was sometimes called after a short time in the same way as a nearby village that did not have town rights; as a result, these settlement names were sometimes contradictory and the terminology becomes problematic. It is possible that names attributed to settlements should be perceived differently. Historical sources written in Latin or Middle German created a set of names of different status attributed to settlements as *dorp*, *wille*, *oppido*, *civitas*, *oppidum*, *oppidulum*, *vicus*, *viculus*, *villa*, and *locus*. In German, these were *Stadt*, *Städlein*, *Hakelwerk*, *Weichbild*, *Palte*, and *Fleck*.

The layout of the marketplace and the placement of the Town Hall were different. The function of the market was obtained both by an extended street that led from the settlement to the fortress and by a triangular or trapezoidal square at the junction of the roads that led to the settlement. Later, the Town Hall was built on a side of this square, and town halls were usually made from former marketplaces. Sometimes, several town halls were located in cities, which emerged from several independent settlements. In orthogonal planned towns, it was possible to meet two types of Town Hall placement: one on the side or corner

of the square, and the other one – in the centre of the square. In Riga, the Town Hall was situated on the corner of an irregular square, in Mitau (Latvian: *Jelgava*) and Windau (Latvian: *Ventspils*) – on one side of the rectangular square, in Wenden – on one of the streets.

After a heavy defeat in the Battle of Saule, the Livonian Branch of the Teutonic Order was established on 12 May 1237. A new autonomous structural unit for the subjugation of the lands was the Brotherhood of the German House of Saint Mary in Jerusalem in Livonia (Latin: *Fratres de Domo Sanctae Mariae Theutonicorum Jerusalemmitana per Livoniam*) (Šterns, 2002, p. 420). The State of Livonia (1237–1561) was founded by taking over tenures of the Livonian Brothers of the Sword, and it included the Selonian and Semigallian lands, most of the Estonian lands, the southwest part of Latgalia and two-thirds of Courland. In Livonia, the first towns for economic and religious function were established in geographically advantageous and well-protected areas along major waterways and roadways, using well-known linear urban planning solutions at traffic routes and centric plans at intersections. Settlements did not become towns due to their economic potential or spatial size but as a result of the political or other intentions of landlords (German: *Landesherrn*). The same names could be used for settlements of different topographical sizes and economic potential. Conversely, a name corresponding to a larger settlement could be used for settlements with seemingly insignificant economic potential. This means that the content of assigned names must be reviewed and the use of the Latvian words *ciems*, *miests*, *pilsmiests*, *pilsapmetne*, *mazpilsēta*, and *pilsēta* must also be evaluated. In Livonia, a hierarchy of populated sites existed, and the town was renamed differently to adapt to the local political and economic conditions. The content of the title was fulfilled only politically and legally but in other cases only economically. Criteria such as population, topographic space size, legal factors, economic potential, and link to international regional structures could define the boundary between large and small settlements. However, several settlements with significant economic potential did not have an international regional attachment. Factors contributing to the development of towns played an important role in terms of the dynamics and quality of the formation of populated sites. Professor Andris Caune pointed out that settlements were given different names in medieval written historical sources. In trading towns of the subjugated lands on the Baltic coast, wooden churches for the townspeople parish were first built. Later, cities joined the Hanseatic League, and stone buildings replaced wooden churches.

In the 14<sup>th</sup> century on the Baltic and North Sea coasts, the Hanseatic League took over trade, and cities obtained an opportunity to accumulate funds to build magnificent buildings – churches and guild houses. Refinement was expressed in town hall buildings. In Hamburg, Danzig (Polish: *Gdańsk*), Königsberg (Prussian: *Kunnegsgarbs*, Lithuanian: *Karaliaučius*, Polish: *Królewiec*, from 1946 in Russian: *Калининград*) and Riga fabric trade was not so common, but rather a

corn trading. The need for the Town Hall building here arose early. Town halls of the Baltic Seacoast port cities differed significantly from their prototypes in Italian cities. However, the traditional planning canons of the Town Hall were preserved – the two-nave City Council Hall as the main room on the second floor, and the tower as the symbol of independence. In Medieval Europe, the development of cities was a long, complex process associated with ancient culture.

**The topicality of the theme:** it is necessary to study churches for the citizenship Catholic parishes and layouts of medieval towns organized around the market to preserve historical identity during the development of the contemporary urban environment. **Research goal:** analysis of the impact of churches for the citizenship Catholic parishes on the layout, visual image and architecturally spatial development of the Hanseatic cities. **Research methods:** analysis of archive documents, projects, cartographic materials and studies of published literature, an inspection of churches in nature, and photo fixation.

### **Planning of construction at fortresses in early centres of the Teutonic Order**

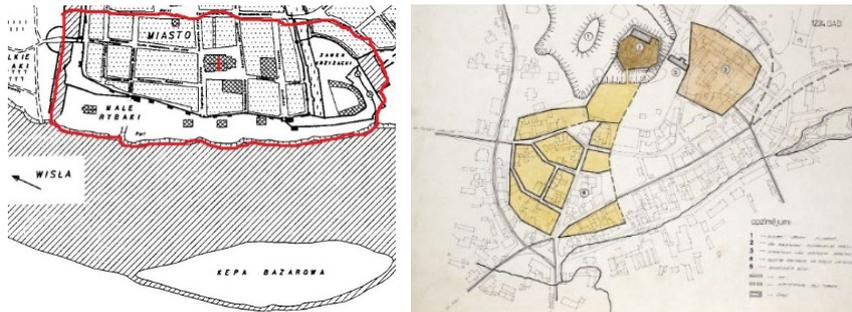
On the River Vistula's right bank at the estuary of the Drewenz River (Polish: *Drwęca*), Thorn (Polish: *Toruń*) Fortress of stone (Fig. 1) was erected around 1230. Buildings were added to the inside edge of a ringwall (German: *Ringmauern*) built for a strongly fortified horseshoe-type castle instead of the Prussian-inhabited settlement on the right bank of the Vistula Waterway. The Mokra (also Bache) River flowed on the eastern side of the properly fortified complex. The first urban planning decision after moving to the current site in 1236 was the creation of the original castle defences on a slight rise, where the citadel used to be (Fig. 2). In Polish revision materials, a house for a convent was called the citadel (Polish: *dzieciniec*), the first outer part of the castle – the castle (Polish: *zamek*), the second outer part (Polish: *przygorodek*). The bergfried or a freestanding square tower of stone for the convent was in the middle of the yard of a horseshoe fortress. The subsequent process of urban structures creating was inscribed in a permanent relation with the ruler's seat. On the stronghold's western side next to the river, the regularly planned Old Town of Thorn formed around a marketplace and became the capital of the State of the Teutonic Order during the construction of Marienburg Castle. The Old Town of Thorn obtained Magdeburg Rights in 1233.



**Figure 1** *The layout of Thorn Fortress: yard, free-standing tower, house with a chapel, dansker, defensive wall (Guerquin, 1984, p. 310)*

**Figure 2** *The model of the Thorn Fortress (online 25.05.2017, source: <http://www.rzeczpospolitaobojganarodow.pl/forum/wiewtopic.php?f=134&t=3032>)*

Local weather conditions and relationships with the ruler determined the building's development: an urban construction decision on the citadel's formation on the relief elevation was made in 1236. The space of the Old Town of Thorn formed in two phases, starting with the creation of a watershed in 1251. Initially, the town took the shape of an elongated rectangle (Fig. 3) whose longer northern side adjoined the Vistula, and the eastern one adjoined the castle. Inner divisions defined residential blocks and the grid of streets conditioned by the topography and evoked the comb-shape model. The pre-charter housing and run of roads did not fit into modular regularity. The east-west St. Anny Street (now Kopernika), as well as Żeglarska, Łazienna and Mostowa Streets, perpendicular to the river, were highlighted. Church Square at the centre of this arrangement corresponded to the traditional location of the main square. Both areas accumulated the main functions of public space, religious and commercial. The first fifteen-year period of rapid development of urban structures of the Old Town also witnessed the foundation of principal sacral buildings. Cathedral Basilica of St. John the Baptist and St. John the Evangelist (Polish: *Bazylika katedralna Świętych Jana Chrzciciela i Jana Ewangelisty w Toruniu*; 1236–15<sup>th</sup> century) for the townspeople Catholic Parish whose construction commenced in the first decades of the 14<sup>th</sup> century and the first Franciscan Convent (1239) became architectural symbols of the town in Kulmland. Both buildings were based on the simplest pattern of a rectangular hall structure. The land granted to monks was located outside the borders of the town, as it was commonly practised in that period, and the two buildings stood far from each other. The distance in space and differing functions did not translate into a marked disparity in external appearance. The Teutonic Knights supported both projects, also financially (Kranz, 2013).



**Figure 3 Plan of development of the Old Town of Thorn (Kranz 2013)**

**Figure 4 Architect Jānis Zlaugotnis. Reconstruction of Wenden planning: Riekstu Hill, Old-Wenden Castrum of brothers-knights, hypothetical German merchants' settlement, urban area with a marketplace, fortified building before a housing area of brothers-knights, roads and hypothetical road tracks in 1224. 1988 (Zlaugotnis, 1988)**

The Teutonic Order came to Livonia, where started territorial changes. The population of the German power centres developed under the cover of the fortress, creating an urban construction structure, included in the common defence system. The territorial division was gradually replaced by parishes. Its borders changed in compliance with the new administrative system. In the lands inhabited by the Balts, churches for the Catholic Parish were built (Šterns, 1997, p. 105).

In Livonia designated Master (German: *Landmeister in Livland des Deutschen Ordens*; 1237–1238) Hermann Balk who provided a close link with the State of the Teutonic Order chose for his residence Wenden *Castrum* (Neitmann, 1993) built by the Livonian Swordbrothers. In Wenden (Latvian: *Cēsis*), this first fortification outside Riga to control the Gauja Great Waterway and the transit road became the central headquarters of the Teutonic Order. The Knights levelled all fortifications on Riekstu Hill (Latvian: *Riekstukalns*, German: *Nusberg*) to use it as a relief elevation and preserved former defensive walls and moats in the north and northeast. Four blocks arranged around a large fortified inner courtyard made by the Livonian Swordbrothers replaced old buildings of the *castrum* and together with former defensive walls created a closed partly rectangle *castellum*-type structure for a convent. Wenden *Castellum* did not get a regular layout due to buildings of the previous period (Caune & Ose, 2004, p. 120, 123). A wooden bridge connected a settlement of the locals on Riekstu Hill with the *castellum*. Trade routes stimulated the development of a fortified building complex consisting of *castellum*, where the Knights, riflemen and members of service lived, and the settlement, where streets from the centre led to town gates and divided the fortified area into residential building blocks unconnected with *castellum* planning. Water obstacles separated the castle from the settlement whose independent layout obtained the centre formed by houses around a marketplace on present-day Mazā Katrīna /Small Catherine/ Street that became the longitudinal axis of the medieval fortified town inhabited by the Latgalians, Wends, Livs and Germans. A church for the Catholic Parish outside the castle was

located by the defensive wall of the south outer part of the castle and near the marketplace at the traffic road, along which locals and German merchants and craftsmen established a settlement (Ozola 2020b). The first Town Hall was built from the town's side next to the entrance gate built-in the defensive wall of the north outer part of the castle probably located near the marketplace (Fig. 4) at the intersection of present-day Rīga and Kalēju /Blacksmith/ streets. The entrance from the countryside led through the fortified gate. Due to the lack of written sources, historians have not described the further development of irregular mixed-type buildings in the 13<sup>th</sup> century.

The city of Lübeck located on the Baltic Coast and the city of Hamburg developed on the coast of the North Sea signed in 1241 a trade agreement that can be considered as the origin of the German Hansa. Visby, the capital of Gotland became the centre of Hansa. German merchants from Lübeck needed new support places near big waterways and river estuaries on the South Baltic Coast. In 1246, Elbing Castle (Fig. 5) was built on the side of the Vistula Lagoon, where navigable strait in the spit provided access to the sea.

The Great War Route from the Prussian lands to Courland and Riga led to many places alongside the navigable Winda River. During the military occupation, in order to increase the impact of the Teutonic Order in Courland, Livonian Master (1242–1245) Dietrich of Grüningen decided to build a *castrum* for the traffic surveillance of the Winda Waterway and the earth road from the State of the Teutonic Order to Riga, where an important trading centre in Eastern Europe was established. The Prussians started their first revolt in 1243 (Milicers, 2009, p. 98); and Vice-Master (1240–1241, 1248–1253) Andreas of Felben (Latin: *Andreas de Velven*) and bishops of Riga, Dorpat, and Ösel-Wiek signed an agreement on 1 October 1243 to establish the Confederation of Livonia (Latin: *Terra Mariana*; 1243–1561) (Šterns, 1997, p. 105). Dietrich of Grüningen built a wooden fortress (1242–1245) for the military and power centre on the strategically convenient place southwards of Old-Kuldīga Hillfort and asked Roman Pope (1243–1254) Innocentius IV to acknowledge Courland as part of Prussia. On 7 February 1245, Wilhelm of Modena admitted Courland on part of Prussia (*Curonia seu Curlandia, cum sit pars Pruscie*). Pope confirmed this decision on 9 February 1245 (Šterns, 2002, p. 367). In Goldingen (Latvian: *Kuldīga*), the first wooden St. Catherine's Church for the townspeople Catholic Parish was made in 1252. Historical sources in 1263 mentioned a fortified settlement /*oppidum*/.

Curonian-inhabited regions were added to the Confederation of Livonia. Master of Livonia and Prussia (1249–1254) Dietrich of Grüningen built Memell (Lithuanian: *Klaipėda*) wooden fortress (1252) instead of the ruined Curonian ancient town at the River Dange's mouth to monitor traffic on the waterway and earth road from the State of the Teutonic Order to Riga. Borders were clarified in April 1253. Authorised by the commissioner of the Teutonic Order's Grand

Master in Livonia (1251–1254) Eberhard von Sayn turned to the conquest of the lands that separated the State of the Teutonic Order from Livonia. During two months' time in 1253, Memelburg Castle of stone (*castrum Memele, castrum inter Mimelam et Dangam, Memelburg, castrum Mimelburch, borch to Mimelborgh*) was built on an island in the Dange River. This garrison placement furthest to the south on the borderland of *Terra Mariana* was used for subjugation of the lands inhabited by the Balts. In 1254, the Lübeck law (German: *Lübsches Recht*) was awarded to the newly founded merchants' settlement in order to promote trade (Caune, 2011, p. 56).

A large crusader army of the King of Bohemia Ottokar destroyed the Sambian wooden fort of Twangste in a strategically and geographically convenient place in 1255. There, on a high hill, earth ramparts for the fortress on the left bank of the Pregola River at the estuary into the Baltic Sea were made, and the construction of a stronghold for the surveillance of the waterway began. Ottokar called it in honour of 'Königsberg' and drew a large army of Prussians to the obligation for the construction. The first *castrum antiquum* was located at the place, where later the outer part of the castle was created for cuirassier barracks. At the same time, the expansion of the principal castle began. On the northwest side of Königsberg, a stronghold mentioned in the records for the first time on 29 June 1256, merchants from Lübeck created a settlement of regular layout. Just a few years after the construction started, the Battle of Durbe happened on 13 July 1260, and the Cours, Semigalians, Latgalians, and Prussians began protests in 1260. The construction of the defensive wall and bergfried was started in Königsberg Fortress (1255–1325), and it was fortified in 1260. The construction of the wooden fortress for the surveillance of the Pregola Waterway was completed in 1261. The construction of durable fortresses became topical. First of all, defensive buildings, a residential tower for the convent and a toilet (German: *Dansker*, also *Danzker*) above the brook were built between 1260 and 1273. Pope (1261–1264) Urbanus IV proclaimed a crusade in Livonia and Courland and against the Prussians in 1263. Fire destroyed Königsberg Castle in 1262. Therefore, an external defensive wall surrounded the area provided for the fortification in 1263. Two strong square towers were obtained on the north side. The eastern wall was preserved only in its northern part, beyond the Castle Tower (German: *Schlosstor*) in its further course to the south, however, by drawings of the 18<sup>th</sup> century. It had no intermediate towers like the western wall. Boulders (German: *Feldsteinmauerwerk*) made the lower part of the south wall and ended up very irregularly on the top. The moat dug around the fortress was filled with water. Around 1263, a significant centre of Königsberg with a trade port was made in the Baltic Sea region. Nevertheless, the foundation of the town was unsuccessful. In 1264, the construction of St. Nikolay's Church (dedicated to Saint Nicholas, who was a patron saint of seafarers, merchants, and fishermen, destroyed in 1828) for the citizenship parish, the oldest church in Königsberg,

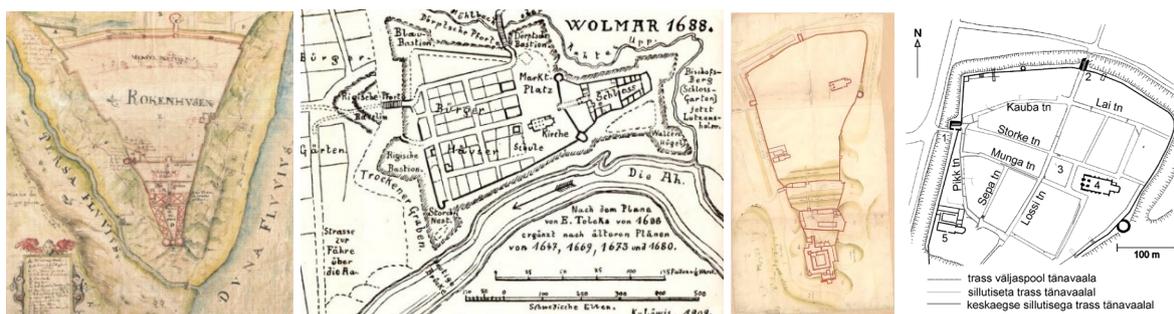
began on the southern side of the fortress. After the completion of Königsberg Castle, the establishment of new fortified support places was temporarily interrupted in the Prussian-inhabited lands. During the 13<sup>th</sup>–14<sup>th</sup> centuries, small settlements dominated the urban landscape of the State of the Teutonic Order. The dominant feature of administrative structures in the State of the Teutonic Order was castles followed by newly founded towns (Kranz, 2013).

### **Churches for the townspeople parishes in important trading centres developed instead of triple planning building complexes built by the Livonian Brothers of the Sword**

In Livonia, the inhabitants' living standard decreased in the 13<sup>th</sup> century due to the destruction of places populated by the Cours, Semigallians, Latgalians, Selonians and Livs. The Brothers of the Sword built fortifications for residences of rulers on steep banks protected by waters, and near it, an outer part of the castle and settlement created a triple-division building complex. The settlement, connected functionally with the residence, was included in the common defence system and became a separate structural unit. The German town laws were awarded to it. Towns of irregular layouts, surrounded by defensive walls beside castles, did not differ very much from the castle-like settlements. In medieval urban structures, a regular net of streets could be found. Both types of settlements – the town and settlement were formed alongside the residence-fortress, which took an important place in economic and political life and was a central part of the defence system. In manufacturing and trading areas, merchants and craftsmen's guilds were the uppermost, and in ideology – the church. Towns contributed to the formation of certain structures (Šterns, 2002, p. 176).

Kokenhusen (Latvian: *Koknese*) fortified building complex on the Latgalian-inhabited hillfort near the Daugava Waterway got a triangular outline, which had a former settlement of locals baptised in Orthodox. The castle settlement developed under the guise of two stone blocks mutually placed at a narrow angle built by the Swordbrothers subordinate to Bishop of Riga. Its 'line segment castle' building composition was determined by the linear arrangement of houses on both sides of the main street, which from Bishop's residence led to the main gate built-in the defensive wall. Pope (1254–1261) Alexander IV confirmed in 1255 that *castrum Kukonois* built by the Livonian Swordbrothers as the base for the conquest of the Daugava Waterway belonged to the Archbishop of Riga. Since 1256, the Cistercian monastery existed in the Kokenhusen castle settlement protected by a wall from three sides on the background of a two-storey building volume on the hilltop. Both residential blocks were included in the unified defence system created by defensive walls. On 13 July 1277, Archbishop of Riga (1273–1284) Johann I of Lune awarded the Riga law (German: *Rigisches (Stadt) Recht, Rigischen Statuten*) to the castle settlement. He determined the borders of the town

and mentioned that Kokenhusen Town Wall (destroyed in the 1680s to build new fortifications and an esplanade) had been built. The Water Gate facing the Daugava was made in the defensive wall adjoining the tower. Building of the settlement was arranged symmetrically on either side of the longitudinal axis orientated from the residence towards the Land or Town Gate with the zwinger in the north part of the Town Wall. Gutters from dolomite slabs for rainwater drainage were made on both sides of cobbled streets (Caune, 2014, p. 7). A pasture was behind the Town Wall. In the town of Kokenhusen (German: *Stadt Kokenhusen*) (Fig. 5), each of the three stone churches performed a specific function. The largest was St. Paul's Church (around 1225?) for the townspeople Catholic Parish at the market in front of the ruler's residence. The church with a tower of the Franciscan Monastery was on the east side at the defensive wall. Goods were stored in the Orthodox Church of the Russian merchants' yard. The Russians made merchants' yards with Orthodox churches also in Wenden and Gersika. In Visby, during the archaeological research of the Russian merchants' yard in 1971, the foundations of St. Nikolay's Church of rectangular layout and a semi-circular apse on the east side were uncovered.



**Figure 5** *Fecit Georgius Schwengell. Plan of Kukonois Castrum, its outer part and the site of a town: C – City Gate, E – town, F – church for the townspeople Catholic parish, H – tower, L – placement of the old wall, M – a tall tower, N – bridge over the moat, O – castle, P – towers, Q – Water Gate. Around 1630 (Stockholm, Kungl. Krigsarkivet)*

**Figure 6** *Fortress researcher Karl von Löwis of Menar. Plan of Wolmar Fortress, its outer parts and an orthogonal planned residential area of the town with the location of St. Simon and St. Jude Church for the townspeople Catholic Parish. 1688 (Löwis, 1922)*

**Figure 7** *Karl von Löwis of Menar. The layout of the Fellin Fortress and defensive wall trace in the 17<sup>th</sup> century. 1914 (Löwis, 1922, p. 146)*

**Figure 8** *Archaeologist at the University of Tallinn Institute of History Arvi Haak. Town Plan of medieval Fellin with the street network and location of St. John's Church for the townspeople Catholic Parish. and walls reconstruction plan on the basis of the plan of 1688: 1 – the Riga Gate, 2 – the Dorpat Gate, 3 – a marketplace, 4 – St. John's Church, 5 – Franciscan monastery and St. John and St. Clara's Church. Around 2002 (Haak, 2002)*

In Kokenhusen, members of the noble von Tiesenhausen family were administrators in the 13<sup>th</sup>–14<sup>th</sup> centuries. A tall square tower with a cellar built until 1382 emphasised the northeast end of the two-storey block facing the Pērse

River. Since 14 July 1397, the *castrum* was transformed into a residence. The yard on the north side was marked off by an open gallery in front of the old refectory. Buildings next to a deep moat separated the residence from its outer part surrounded by a defensive wall that included towers (Caune & Ose, 2004, p. 253). Archaeological research (1961–1966) of archaeologist Ādolfs Stubavs (1913–1986) provided news about the population, the Town Wall, the outer part of the *castrum*, and the Hanseatic city of Kokenhusen.

Orthogonal town planning applied in the State of the Teutonic Order promoted the introduction of rational elements of urban structure and was employed in the fortified building complex of Wolmar (Latvian: *Valmiera*) whose orthogonal geometric grid layout obtained a symmetrical composition (Fig. 6). The longitudinal axis was determined by the road from the Riga Gate through the settlement and over the moat along the bridge up to the western wall gate of the *castrum*. Livonian Master (1282–1287) Willekîn of Endorp started to build triple-nave St. Simon and St. Jude Church for the townspeople Catholic Parish. A square meant for trading was created in front of the entrance of the stone church. A heavy, square-plan tower was added to the west wall of the basilica. As founding documents have not been preserved, the year 1283 was assumed to be the year of construction. The oldest mention of the church in Wolmar can be found in '*Hermann de Wartberge Chronicon Livoniae*' /Livonian Chronicle of Hermann of Wartberge/. Churches for the townspeople Catholic Parish further influenced the urban space of fortified towns established in German traditions. A special vacant interzone for trade and public activities in front of the ruler's residence and at St. Simon and St. Jude Church separated six symmetrically arranged residential apartment blocks to the west. Foundations of buildings and cellars uncovered during the excavations during 2006–2008 gave evidence about seven stone buildings (14<sup>th</sup>–17<sup>th</sup> centuries) (Caune & Ose, 2004, p. 533–534). However, due to economic stagnation, frequent wards, and fires, several pieces of land in small towns remained vacant; thus, a regular layout was quite often relative. Local features of nature, such as terrain, location of water reservoirs, road tracks, and greeneries also had an impact. Wolmar environment differed from the urban environment in Western Europe, where the architectural emphasis was placed on isolated squares in a residential area. In the northern part of the settlement, a gutter of flat surface stones for rainwater drainage was placed on both sides of the 5.5 metres wide cobbled street next to the defensive wall (partly knocked down in 1681, starting construction of new fortifications, and disappeared completely in the 18<sup>th</sup> century) (Caune, 2014, p. 8–9). A paved road to Riga started from the 3.3 metres wide Riga Gate. Wolmar townships adopted the Riga law in 1323 and joined the Hanseatic League in 1365.

In Fellin (from 1919 Estonian: *Viljandi*), the Teutonic Knights built a closed rectangle *castellum*-type structure for a convent, and the Tall Hermann Tower (Estonian: *Pikk Hermann*) was included in its northwest corner (Fig. 7). The

settlement behind the castle developed, and together with several outer parts of the castle for servants' homes and outbuildings, formed the fortified building complex of an orthogonal geometric grid layout adapted to the hillfort's relief and included in the common defensive system. Settlement's planning was not related to the placement of the *castellum* structure, from which the road led through the gate tower and took over the moat to the outer part and along the bridge to a fortified settlement and the defensive wall gate, marking the main axis of a symmetrical urban planning composition. After the fortress formation, the building initially developed at the defensive wall gate, but later, around the marketplace in the settlement centre (Fig. 8). The older population has not been recorded in this particular place (Haak & Russow, 2013, p. 77). Livonian Master Willekîn of Endorp awarded the Riga law to the settlement in 1283. The small town of Fellin became a member of the Hanseatic League at the beginning of the 14<sup>th</sup> century. Its layout consisted of three functionally different parts. Even after the construction of Fellin Town Wall, the area had undeveloped and uninhabited places bounded by the wall. However, a medieval street network has survived this period. St. John and St. Clara's Church (Estonian: *Johannesele ja Klaarale linnakirik*; 1466–1472, closed in 1560) for the townspeople parish was built eastwards from a market in the centre of Fellin, and it showed the trading town's independence from the ruler, which could not be noticed in Kokenhusen and Wolmar. There, the market was located in front of the ruler's residence.

Konrektor (1768–1804) at the Riga Imperial Lyceum, German pedagogue, ethnographer, and painter Johann Christoph Brotze (1742–1823) made the oldest Fellin plan with the street net. A librarian from Riga, the most famous fortress researcher in the Baltics until the 1930s Dr Phil. Dr Phil. Karl von Löwis of Menar (1855–1930), applied plans, drawn by Brotze and a Swedish topographer in 1650, and developed the first reconstruction picture (1914) with the placement of streets and church. History researcher and priest August Oswald Westrén-Doll (1882–1961) created a detailed medieval Fellin reconstruction drawing in 1929 according to inventory documents, compiled by the Polish. On the base of the map of 1650 and Brotze's drawing, American geographer John Leighly (1895–1986) made the medieval Fellin reconstruction picture. It was published in 1939. John Leighly, who was a graduate student at the University of Michigan and received the first PhD in geography to be granted by this university in 1927, with a dissertation on 'The Towns of Mälardalen in Sweden: A Study in Urban Morphology', became an Assistant Professor (Haak & Russow, 2013, p. 60). Analysing the archaeological research materials and plans, the structure of medieval Fellin was reconstructed.

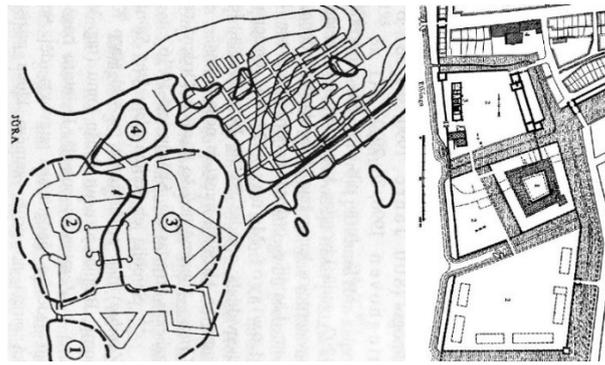
In the Confederation of Livonia, the defensive wall of fortified Wolmar, Kokenhusen and Fellin building complexes on steep-sided promontories built by the Livonian Swordbrothers was part of the common defence system. Under the guise of Fellin and Wolmar castles built by the Teutonic Order, fortified towns

were founded on sites of settlements created by the Swordbrothers. The layout for these fortified building complexes of the 'line segment castle' consisted of the residence, and the outer parts of the castle and town determined by the road, which led from the castle to the main gate built-in the town wall, and the church for the townspeople parish near a marketplace. Residential houses were built in quarters symmetrically arranged along the compositional longitudinal axis.

### **Development of planning of the Teutonic Order power centres behind the early regular layout castles**

The construction of the massive single-unit Thorn Castle of stone began around 1255, and the chapel mentioned already in 1263 was included. Walls, which followed the irregular outline of former protective structures, were enclosed from the side of the Vistula by a wing of a convent, a rectangular house with a narrow communications passage adjoining the courtyard. All principal elements of the Old Town architectural landscape had been put in place. Their form was to evolve, and their place in the topography of the town remained unaltered. In the second stage of development, there was a change in the spatial relations between the oldest religious buildings. The distance between them of course remained the same, the Franciscan Convent gained in status as located in the corner of the central square, while the church for the townspeople parish 'moved away' from the new compositional and functional centre of the town. The Merchant's House (1259) supplemented buildings, which organized inhabitants' public life. Defensive walls replaced the older fortifications of timber and clay, which originally protected the town. Fortifying them improved the shape of the early medieval town. In the same period, the new monumental structure underlined the strategic and symbolic location of the fortress in place of the citadel and the sign of power (Kranz, 2013). Perceiving the potential of the new urban centre and wanting to introduce some corrections in the original Kulm law (German: *Kulmer Recht*, Latin: *Jus Culmense vetus*, Polish: *Prawo chełmińskie*), the Knights granted a new one, which extended the patrimony of the Old Town. The Kulm law also Culm or Chełmno law named after the town, where it was signed, was a modification of Magdeburg Rights and expanded, independently from the Knights to a larger set of laws called *Alter Kulm*. The area of the town increased twofold, and this indicated a growth period. The northward expansion resulted in a more classic pattern with a central square surrounded by houses of irregular shape.

Elbing became a significant port in the State of Teutonic Order and obtained extra privileges in trade. Elbing Castle was rebuilt into a square-plan structure (Fig. 10), and a residential tower was included in the southeast corner of its construction volume. St. Nikolay's Cathedral up to the 14<sup>th</sup> century was used for religious and social activities.



**Figure 9 Archaeologist Vladas Žulkus. Plan of the River Dange estuary: 1 – the place of Memel Wooden Castle (until 1253), 2 – Memelburg Castle – the settlement, obtained an unofficial name Neu Dortmund /New Dortmund/, 4 – the island. The 16<sup>th</sup> – 17<sup>th</sup>-century fortifications were marked with fine lines. 1994 (Atskaņu hronika, 1998, p. 329)**

**Figure 10 Christian Probst. Plan of Elbing Castle with a tower at the southeastern corner: 1 – castle, 2 – outer parts of the castle with farm buildings, 3 – Landmarschall Castle, 4 – the Holy Spirit Hospital (online 03.07.2017, source: [https://img-fotki.yandex.ru/get/4113/13719937.1cc/0\\_1164b6\\_cd42c320\\_XL.jpg](https://img-fotki.yandex.ru/get/4113/13719937.1cc/0_1164b6_cd42c320_XL.jpg))**

The Teutonic Order did not keep a big navy, but it required free access to the Baltic Sea and unimpeded shipping to transfer the Knights to Livonia. In Memell, five parallel streets oriented perpendicularly to the Dange River flow and perpendicular side streets divided the town's area into regular residential building blocks (Fig. 9). Water obstacles separated Memelburg Castle at the River Dange's mouth from the town of an orthogonal geometric grid layout on the left riverbank, where craftsmen's workshops and the marketplace were located. St. John the Evangelist's Church for the townspeople Catholic Parish was built next to St. Nikolay and St. Mary's Churches.

Livonian Master (1263–1266) Konrad of Mandern began to build fortresses of regular layout on islands and promontories. He built a solid octagonal six-storey bergfried called the Tall Hermann Tower (1265–1266) also *Vallitorn*, one of the first stone fortresses for the Teutonic Knights. On a hill of the marshy River Paide's bank by the road to Reval, this central tower has been the core of the castle complex on the Pernau River's (Estonian: *Pärnu jõgi*) right bank. A wooden staircase led to the only entrance at a height of ten metres. Buildings added to the inner side of a thick defensive wall made a rectangular yard (Fig. 11). The monumental building *castellum* was introduced in Livonia, and peculiarities of relief were not any more important. A wooden church existed as early as the 13<sup>th</sup> century on the castle mound, and around it, the settlement with a marketplace formed. It gained the Riga law on 30 September 1291 and became the town of Weissenstein (*Wizenstein*, *Wittenstein*, also Low German: *Wittensten*, Estonian and Latvian: *Paide*, Latin: *Albus Lapis*), which means 'white stone' derived from the light limestone used for the construction of Weissenstein Castle, and a member of the Hanseatic League. A church for the townspeople Catholic Parish was built

in the town (Fig. 12) developed at the intersection of highways from New-Pernau (German: *Neu-Pernau*, Estonian: *Uus-Pärnu*, Latvian: *Pērnava*) or Embeck (German: *Embeck*) and Reval, and from Wenden, which was the most important fortress in Livonia. The centric layout city of Weissenstein, where the church for the townspeople Catholic Parish was included in the residential building, developed close to the fortress. In the 14<sup>th</sup> century, construction work was carried out at the fortress on a well-fortified island in the middle of a bog, and a chapel was built. In 1564, the Estonian name *Paide* was first recorded as *Paيدا*, which derived from the word *paas*, *pae* /limestone/.

In Livonia, the Teutonic Order started to build a square-plan Embeck Castle (Fig. 13) for the waterway's control. Water obstacles and a two-fold defensive wall surrounded a castle and its outer part on the left bank of the Pärnu River. A regularly planned castle settlement, not related to the residence planning, surrounded by the defensive wall and water obstacles, developed behind it. Instead of that, New-Pernau Town was founded, separated from the fortress by a water-filled moat. St. Nicholas Church (the late 13<sup>th</sup> century) on the corner of present-day Pika and Nikolai streets was built in the east of a square marketplace in the town centre, and the Town Hall was built in the north. The Town Hall was located in the north. The castle and town founded by the Teutonic Order on the coastal plain of the Baltic Sea were first mentioned in documents in 1265. Livonian Master (1309–1328) Gerhard of Jorke built in 1311 the four-block Embeck Castle and a two-fold defensive wall for the surveillance of waterways, leading to Novgorod. Streets of one of the first orthogonal planned settlements surrounded by water moved mainly towards the river, but others moved parallel to the river. The settlement gained the Riga law in 1318 and became a walled commercial town of New-Pernau with an ice-free port, and also became a member of the Hanseatic League. A water-filled moat separated the town of New-Pernau behind the castle, so it developed unrelated to the castle (Fig. 13). The construction of the New-Pernau Town Wall can be dated to the second half of the 14<sup>th</sup> century (Bernotas, 2012).

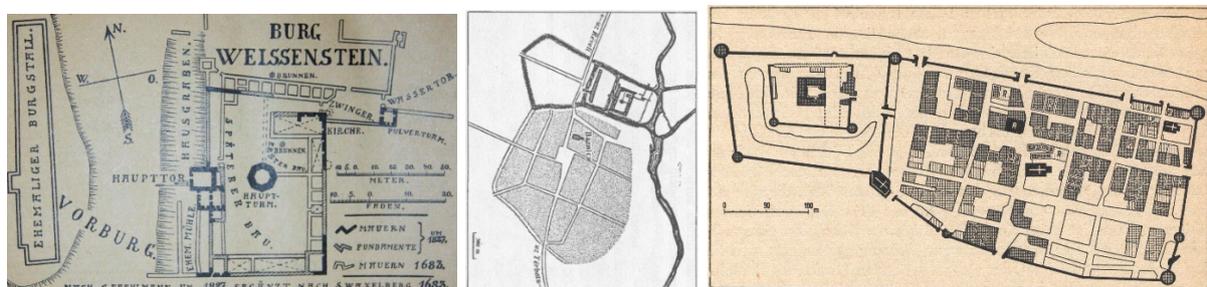


Figure 11 Karl von Löwis of Menar. Plan of the Weissenstein Fortress with the tower of an octagonal layout (Vartberges hronika, 2005, p. 183)

Figure 12 The site of the town of Weissenstein (Atskaņu hronika, 1998, p. 342)

Figure 13 Karl von Löwis of Menar. Plan of Embeck Castle and the town of New-Pernau in the 14<sup>th</sup> century on the basis of plans of 1640, 1688 and 1696. 1914. (Tuulse, 1942, p. 138)

In the Confederation of Livonia, the foundation of New-Pernau, Fellin, Weissenstein and Wolmar were closely related to the land conquest, formation of new power relations, military strategy, administration and Christian belief interest dissemination. New-Pernau and Memell towns of an orthogonal geometric grid layout and Marienburg, the capital city of the State of Teutonic Order, developed independently from the fortress. A church for the townspeople parish was built near a marketplace in the town centre (Ozola, 2020a).

### ***Castellum*-type structures in fortified building complexes of the Teutonic Order power centres**

The Teutonic Order suppressed the uprising in Livonia and Prussian-inhabited lands in 1273 (Milicers 2009: 42). Vogt of Samland (1278–1292) Dietrich of Liedelau built the north part of Königsberg Fortress of stone and octagonal Haber Tower (German: *Haberturm*, destroyed in the war during 1941–1945) in its northeast corner. In January 1286, the Old Town was founded. High and thick defensive walls and six towers were built, and a room for receptions was made in 1312. On its south side was a single-nave Castle Chapel that had four bays. The bell was installed in the tower with a tent-like roof. Later, the Castle Church was created (Fig. 14). Apart from the four corner towers, two more towers were built in the north and three in the south, therefore in total there were nine towers for defence. The remaining buildings, farm buildings, stables, etc., leaned against the ring wall from the inside of the courtyard. The convent house with the church, dining room and chapter house joined to the west. In 1387, a free-standing tower was built next to the external wall at the southwest corner of the convent house, and it was the architectonic dominant was in a rectangular yard, surrounded by functionally different buildings (Fig. 15). In 1387, a free-standing tower was built in the southwest corner of the monastery house next to the outer wall, and it was the architectural dominant in a rectangular courtyard surrounded by functionally different buildings. With the completion of this castle tower, the construction of Königsberg Castle was over. A regular-plan four-unit building with a courtyard formed a ‘fortress in a fortress’, which was not connected with the extensive yard of the fortified building complex. During the 14<sup>th</sup> century, colonization of the Prussian lands came to an end. Livonian economics stabilized in the second half of the 14<sup>th</sup> century.

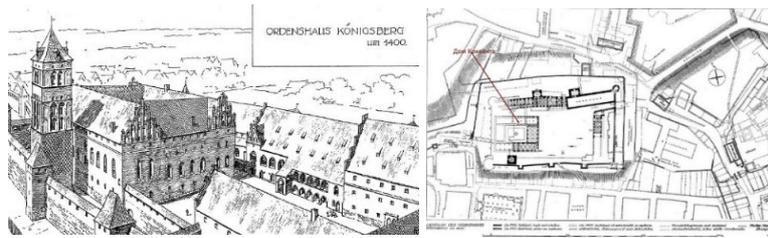


Figure 14 **Historian, Professor Dr hab. Tomasz Torbus. The view of Königsberg Fortress and the free-standing tower. 1998** (*Vartberges hronika*, 2005, p. 227)

Figure 15 **Architect, Professor Friedrich Lahrs (1880–1964). Plan of Königsberg Fortress and a site of church for the townspeople parish on its south side** (online 08.07.2017, source: <http://popadin39.blogspot.com/2016/01/4.html>)

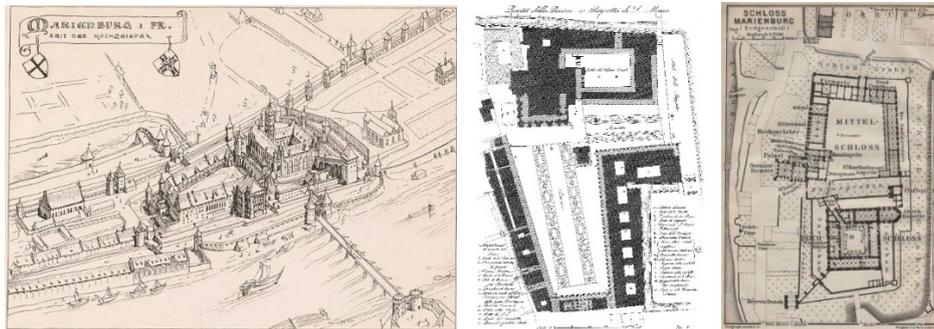


Figure 16 **Architect Conrad Emanuel Steinbrecht (1849–1923). The reconstruction drawing of the 15<sup>th</sup>-century Marienburg Castle** (Steinbrecht, 1885)

Figure 17 **Italian printmaker Moretti Dionisio (1790–1834). Plan of San Marco Square in Venice, in XVI. tables. 1831** (Moretti, 1987)

Figure 18 **Marienburg Upper Castle with a tower on the eastern side of Anna's Chapel** (online 26.06.2017, <https://hannselspipigeschichten.files.wordpress.com/2010/08/mariebgkartel.jpg>)

The Teutonic Order made a decision in 1271 to build the capital city (1308–1454) of the State of Teutonic Order on the right bank of the Nogat River by the Danzig–Truso Road (Guerquin, 1984, p. 209) in order to place the Grandmaster (German: *Großkomtur*) residence there. Defensive walls for the fortress were built, and the moat was dug (1274–1275). A triple layout Marienburg fortified building complex (Fig. 16) created in several stages consisted of the Meeting or Upper Castle (German: *Vorschloss*; 1276) or a monastery of a square layout. It also was the administrative and cult centre. A sacral building was included in the volume of the square Upper Castle (Fig. 17), to which a courtyard clung, and a solution was found in compliance with the idea incorporated in the Cistercian monastery's functional scheme. The courtyard was surrounded either with one or two-storey cloisters, creating an artistically rich wall plane. On 27 April 1276, Grandmaster (1273–1276) Konrad of Thierberg named the fortress (*Sencte Marie Burch*) after the Teutonic Order's patroness St. Mary as Marienburg and awarded the Kulm Law for the settlement.

In the late 13<sup>th</sup> century, in Venice, the number of people involved in justice affairs increased, and St. Mark's Square was transformed. In compliance with the

economic, political and social requirements, the complex was extended, making it open towards the city. In 1292, Christians lost their Holy Land, and the Teutonic Order's Grandmaster from Akko escaped to Venice, where he built (1291–1309) residence. On a flat relief, the castle of rectangular layout with a yard protected by a ringwall was made for the convent of the Knights. The garrison, household and warehouse buildings were arranged along the perimeter. In Venice, extending St. Mark's Square and the surrounding buildings, the fortified building complex of the Doge's Castle with St. Mark's Cathedral, included in its perimeter construction, became part of the city centre composition (Fig. 18). In 1309, Grandmaster (1303–1311) Siegfried or Zygfryd of Feuchtwangen moved his residence to Marienburg, the capital city of the State of the Teutonic Order. The sample of Venice was used as a solution. The Middle Castle (German: *Mittel-Schloss*; after 1310) (Fig. 16, 17) for the administrative centre was built in the middle part, to which the Lower Castle (German: *Hochschloss*) or the outer part for the economic base adjoined the riverbank. Under the cover of the outer part of the castle, the Middle Castle plan reminded of a spacious trapezoidal yard, surrounded by the perimeter building, which was joined to the regular planning monastery's courtyard. The perimeter building of the Middle Castle surrounded the Upper Castle, and a spacious yard was created (Fig. 19). The Middle Castle planning on the background of the outer part of the castle reminded of a spacious Order's *castellum*, where the trapezoid yard surrounded by buildings around the perimeter was linked with the courtyard of the monastery's regular building. The Juranda Canal (also *Młynówka*) joined with the Nogat River was dug (the turn of the 13<sup>th</sup>/14<sup>th</sup> century) for the improvement of the defence system of Marienburg and surrounded the fortified building complex. Each part of the Marienburg building complex had an autonomous layout. The administrative centre complex of brothers-knights' convent and a square-plan building with the central heating on the floor (German: *Luft- (Fußboden-) heizung*) was made. The construction of the principal tower was started under the guidance of Grandmaster Dietrich of Altenburg in Marienburg. Southwards from the Upper Castle, a church for the townspeople Catholic Parish was built at the marketplace in the central part of fortified buildings. The bergfriede and a chapel with corner towers orientated in the east-west direction clung to the square. St. Mary's Church (*Sankt Marien-Kirche*, 1344) was reconstructed and St. Anna's Chapel (German: *Sankt Annenkapelle*, 1331–1344) got under its auspices (Ozola, 2018, p. 192).

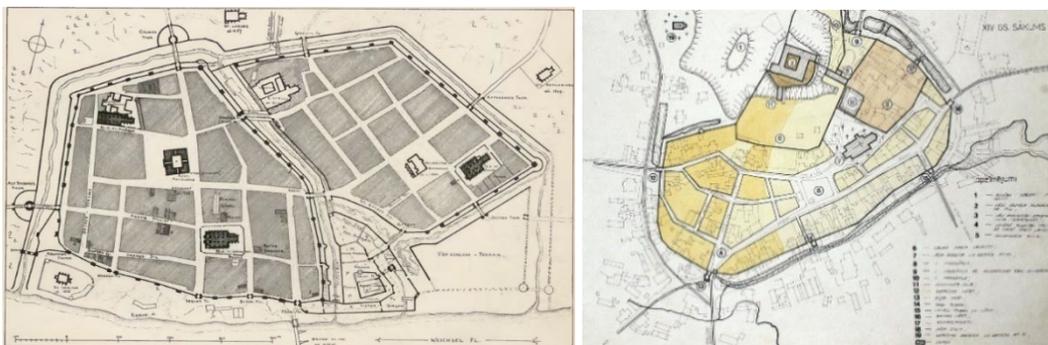
Grandmaster (1382–1390) Conrad Zöllner of Rothenstein started to build a four-storey castle (1382–1399). An autonomous plan was developed for each part of the Marienburg fortified building complex. In general, a united urban ensemble with a regularly planned four-block monastery building or the Upper Castle and administrative centre and also the Middle Castle in the middle part of the three-part planning was created. The Bridge Gate and a bridge (around 1450) over the Nogat were built opposite the Upper Castle. The defensive wall surrounded the

town in 1480. Complicated ensembles of medieval fortresses and monasteries were built gradually, and they acquired artistic harmony. The initial idea developed in a creative way. Elbing, Königsberg and Marienburg castles were early regular-layout fortifications.

### **Churches for the citizenship Catholic Parish in double cities of the State of Teutonic Order and medieval agglomeration of Livonia**

The idea of creating the New Town of Thorn and bringing Dominicans (Polish: *Ojców Kaznodziejów św. Dominika*) in were maturing side by side at a certain stage of development. Bishop of Kułm, a Dominican Heidenryk wanted to invite predicants to Thorn. In the second half of the 13<sup>th</sup> century, the Teutonic Knights clearly distanced themselves from this order, opposing the election of their representatives for Bishoprics in the Prussian-inhabited lands and promoting the incorporation of cathedral chapters that aimed to weaken their competitors. On 2 April 1263, Dominicans arrived in the New Town of Thorn and built a monastery, financially supported by Bishop of Kulm. The church of the Dominican monastery was built in the northwest corner of the border territory of both towns. The number of inhabitants and economic potential increased in Thorn. Separate privileges were awarded to the Old and New Towns of Thorn. Both communities obtained complete independence, and each of them created its own legal, individual urban constructional formation. In exchange for letting Dominicans settle in Thorn, Bishop had to agree to the incorporation of the Kulm law into the Teutonic Order, and the Incorporation Act was signed. The New Town of Thorn was founded on 13 August 1264, according to the Kulm law. At the same time, the presence of another mendicant convent perfectly harmonised with the project of founding the New Town and was probably taken into consideration by both negotiating parties. The New Town had a lower economic potential. It was a result of spatial and demographic constraints. All components of the new town as the location northeast of the castle, preserving the central position of the ruler's seat relative to both towns and expanding the defence zone of the castle and the town followed the vision of the founder. It was important to a legal status identical to that of the Old Town of Thorn. A regular arrangement with the main square and a modular pattern of streets and blocks might be enriched by pointing to spreading out of important structures on the town plan – moving the main square closer to the castle, locating the Dominican triple-nave St. Nikolay's Church (Polish: *kościół św. Mikołaja i klasztor dominikanów*; 1334, destroyed in the middle of the 19<sup>th</sup> century) in the northeastern corner of the town and St. James's Church in the south-eastern corner, that was mirroring spatial relations between the main churches of the Old Town. The difference was that the church for the townspeople parish in the New Town was traditionally placed by the main square. The biggest church supplemented the complex in the New Town

of Thorn. The church and monastery were extended from 1350 to 1370. The Most Holy Virgin Mary's Church (Polish: *kościół Wniebowzięcia Najświętszej Marii Panny*, 1270–1300) was made with a nave covered with a ridged roof and without the main tower, whereas with asymmetric hall and narrow windows. Three octagonal towers, out of which the middle one was bigger, supplemented the construction volume of the chancel (Nawrocki, 1966). In 1351, fire partly destroyed the cathedral, and it was renewed during the third stage of construction. The lack of direct access to the Vistula River, usually perceived as a constraint in the development of trade imposed by the Teutonic Order, also meant a north-side extension of the border with the castle compound and hence the deepening of spatial relations with Komtur's seat. The Teutonic Order was the founder of both communities of Thorn. Since the structure of the New Town was established, it identified more with it. The Old Town was not involved in the process of creating a new urban centre. Disagreements between the two communities appeared soon (Kranz, 2013). Thorn was composed of three parts: the Old Town of a regular layout created in two stages of construction (Jasiński, 2008, p. 97) in the west, the New Town in the east and the castle in the southeast (Fig. 19). The broadcloth trading hall built according to the Flemish sample was the main building on the marketplace in Thorn. Later it was rebuilt for the needs of the Town Hall, whose monumental construction volume had a high prismatic tower. At the end of the Middle Ages, the broadcloth halls were knocked down, leaving only the Town Hall in the marketplace.



*Figure 19 Conrad Emanuel Steinbrecht. Plan of the Old Town of Thorn and the New Town of Thorn. 1885 (Steinbrecht, 1885)*

*Figure 20 Jānis Zlaugotnis. Reconstruction of the early 14<sup>th</sup>-century Wenden planning: the hypothetical Wends' housing place on Riekstu Hill, Wenden Castellum, the hypothetical location of German craftsmen settlement, the oldest part of the town with a small, oldest market square, a large market square, St. John the Baptist's Church and cemetery around it, outer parts of the castle, fortified bridge, and Wenden Town Wall with built-in towers and gates (Zlaugotnis 1988)*

In Wenden, Livonian Master Wilken of Endorp built St. John the Baptist's Church (German: *St. Johannis-Kirche*) for the townspeople Catholic Parish

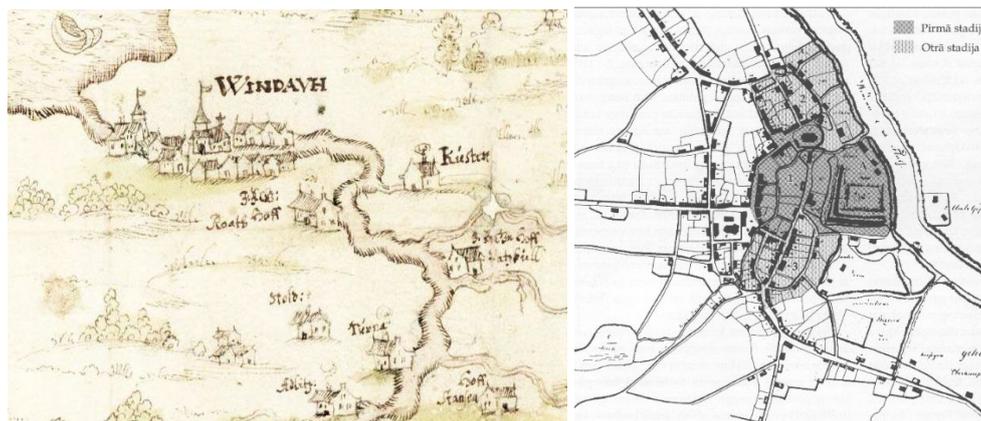
(Fig. 20) probably instead of the first wooden church for the Wends' Parish. The main entrance of the church to the west wall was made through the perspective portal. On 24 June 1284, Archbishop of Riga Johann I consecrated this church. Buildings near St. John the Baptist's Church formed an urban centre around the marketplace (Fig. 20) at the intersection of present-day Rīga and Kalēju streets. It is possible that a market was moved by St. John the Baptist's Church; a well for drinking water was installed in the second half of the 14<sup>th</sup> century. Springwater stored in underground storage facilities was taken through wooden pipes from the side of Ronneburg to both the market wells. German immigrants built a warehouse or a barn with a sunken lower part for a semi-basement in the 1280s, and structures occupied the area of the present Old Town. It flourished and became an important political centre with a marketplace. Structures under the marketplace have not been found, and buildings without basements as in Riga and Lübeck were built on the edge of the square until the 17<sup>th</sup> century. A building for a convent was also a production centre, to which outer parts of the castle were made in the second half of the 13<sup>th</sup> century. Stables, buildings for vehicles and besiege machines, cannons, smithies for horseshoes and weapons, breweries, harness makers' and other workshops were built in outer parts of the castle, one from the other separated by moats and walls (Milicers, 2009, p. 158). Plan of oval configuration drawn by Johann Brotze shows Wenden *castellum* with several towers, three outer parts set up for the economic activity of the castle, and an improved town wall connected to fortifications next to the gate. On the east side of the plan, the Castle (Latvian: *Pils*) Gate near Pils /Castle/ Street was marked, and there was a tower called Wolmar Tower according to writer and historian Jānis Juškevičs (*Juszkiewicz*; 1886–1961). The Powder (Latvian: *Pulvera*) or Watch (Latvian: *Sardzes*) Tower was referred in documents of the 17<sup>th</sup> and 18<sup>th</sup> centuries. The Rauna Gate Tower (German: *Torturm*) was at the end of Rīga Street. The Water Gate Tower and the Tortue (Latvian: *Moku*) Tower without gate were at the end of modern Vaļņu /dam/ Street. On the west side of the plan, the strong Riga Gate Tower with a zwinger was marked near the oldest marketplace with a well (abolished in the 20<sup>th</sup> century) at the end of Rīga Street. Katrina Gate was at the end of Lielā Katrīna /Great Catherine/ Street; the semi-cylindrical Casting (Latvian: *Lējēju*) Tower without a gate located a little further. John's Pond (unpreserved today), which may have been saved from an older defensive system, was marked near the south outer part. The medieval agglomeration of the town was formed by building on present-day Mazā Katrīna Street, and around Liv Square (Latvian: *Līvu laukums*, the former marketplace) and the marketplace in front of the triple-nave basilica of St. John the Baptist's Church, now Rose Square (Latvian: *Rožu laukums*). The agglomeration consisted of craftsmen' and merchants' houses at the walls of the outer part of the castle in the eastern part of the settlement and the Liv houses arranged by Riga and Lemsal roads in the southern part. The Latgalian suburb was on Rauna Street. A medieval agglomeration of oval configurations included

also canons' houses and the Russian merchants' yard. In the inspection (1582) of Wenden Castle, it was mentioned that in the town, merchants from Kievan Rus' visited the Orthodox Church of a rectangular layout. In the original plan (1693) of Wenden Castle and the town drawn by Swedish surveyor Johan Abram Ulrich, the church with a semi-circular apse and entrance from the west was shown (Caune & Ose, 2010, p. 132). Artist Johann Brotze wrote in the explanation of a copy of the Wenden Castle plan that the Russians had churches and merchants' yards in other towns. The settlement that consisted of Liv Square and Rožu Square together with three single fortified extensive outer parts of the castle had the common defence system created by the town wall of dolomite with towers, gates and built-in three main exits. The border of the town went about along Riga Street, Kalēju Street, past the church for the rural Catholic Parish replaced by St. Catherine's Church of stone built outside Wenden Town Wall under the direction of Livonian Master (1494–1535) Wolter or Walter of Plettenberg. Then it led along the West Tower, walls of the south outer part and Mazā Līvu /Small Liv/ Street (Juškevics, 1934, p. 163–164). Around 1296, the Russian Gate built-in a defensive wall located near the marketplace, now Liv Square. Wooden buildings adjoined the fortress. Wenden acquired the Riga law in 1323. Wenden became the Hanseatic city in 1367. In the 14<sup>th</sup> and 15<sup>th</sup> centuries, Wenden was mentioned in the Hanseatic documents (Misāns, 2007). Historian Wilhelm Theodor Georg Lenz (1906–1976), born in Wenden, wrote about the relations between Lübeck and Wenden in the 14<sup>th</sup> century (Lenz, 1971). City walls with three towers, four gates, and three main exits were first mentioned in 1383.

Around the 13<sup>th</sup> century, river banks were used for berths in a suitable place, taking into account the small size of ships at that time. Goods transported by ships were loaded directly on the banks of rivers or seas. Finnish historian, Professor of General History (since 1955) at the University of Turku Teodor Vilhelm (Vilho) Niitemaa (until 1942 Nyman, 1917–1991), whose dissertation from 1949 deals with the medieval history of the Baltics, and Emeritus Professor of general history at the University of Turku Dr Phil. Kalervo Hovi (b. 1942) wrote a popular masterpiece '*Baltian historia*' /Baltic History/ (1959). Niitemaa studied early medieval seaports and identified hillforts (German: *Wallburgen*) and fishing tool sheds (German: *Fischermaien*) as the most important structures (Niitemaa, 1952), which were also useful as short-term stays. During the development, fishing villages could grow from fishing toolsheds.

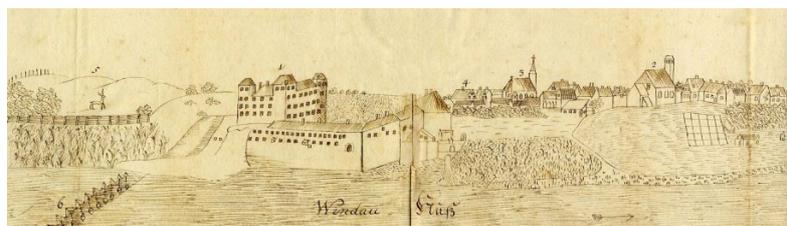
In 1263, Livonian Master Konrad of Mandern and Bishop Heinrich signed the agreement about the Cours and Semigallians' port ownership (Malvess, 1937, p. 22). In the Early Middle Ages, the lower reaches of all rivers were called ports. Since it was difficult for foreign seafarers to distinguish many berths on riverbanks, they were interested in the shipping route of the whole river. Unlike many and varied berths on riverbanks, its lower part was designated as seaport *portus maris*, and called by the name of that river. The lower end of the Winda

River was called the Port of Winda mentioned for the first time in this document of 1263. On the Baltic Seacoast around 1270, a square-plan residential tower of stone on the hill was built for the surveillance of the economically important estuary of the Winda River by the road, which took to the Port of Winda and marketplace, and the construction of Windau Castle (around 1270–1280) begun. After the construction of the free-standing, four-storey tower, a defensive wall and the formation of the four-unit *castellum* followed. Palisades may have included wooden housing in the adjacent area between modern Jāņa /John/, Pils /Castle/, and Peldu /Bathing/ streets (Dirveiks, 2004). Documents do not show the time when a town was founded near the fortress. It is possible that not only the fortress but also the town already existed in the 1290s. The old road did not start from the gates of the medieval town (Fig. 21) but passed by, and only its branch was connected. From the ferry, which was probably connected to the town, the road may have gone to the Winda's mouth. The oldest layout of Windau was probably formed by building in present-day Užavas, Skroderu /Dressmakers/, Lielā /Great/, and Peldu streets. Fragments of original seven log buildings and stand-construction wooden residential houses were uncovered during archaeological excavations (2000–2001) carried out between Ostas /Harbour/, Kuģinieku /Sailors/, Nabagu /Paupers/, and Jāņa streets in the coastal quarter of a settlement. Dimensions and constructive solutions were identical to wooden structures with basements in Riga built by German townspeople in the 13<sup>th</sup> century. When the wooden buildings burned down, houses were restored several times in this quarter of the town (Caune, 2014, p. 19). The settlement of craftsmen and fishermen by the moat near the castle was densely built-up at the end of the 13<sup>th</sup> century. Urban planning in Courland developed, taking into account local peculiarities. Livonian Master (1298–1307) Gotfried of Rogge (Latin: *Gottfridus*) handed over the wooden church for the townspeople Catholic Parish in Windau to the Bishopric of Courland on 16 August 1298. Livonian Master (1340–1345) Burchard of Dreileben offered land to their countrymen for free and called them to promote the growth of Windau, which gained political independence and administration. The founding document of the town of Hasenpoth (Latvian: *Aizpute*) in 1378 mentioned the town of Windau, which already had the Riga law at that time. However, there is no direct documentary evidence of the time of the acquisition of town rights. The housing of German immigrants and local Curonians living in the neighbourhood formed a medieval settlement agglomeration (Caune, 2014, p. 16). Windau joined the Hanseatic League. Until the second half of the 15<sup>th</sup> century, the embankment of the Winda between a castle and a new defensive wall was not economically used.



**Figure 21** *Fragment of Courland map with Windau Castle near the Winda River and town buildings around the church for the townspeople Catholic Parish. 1640 (the National Archives of Latvia, Fund 1100, Description 1, Case 70, Page 15)*

**Figure 22** *Architect Irēna Bākule (1945–2013). Development of medieval agglomeration in Goldingen (on the basis of the Goldingen 1813 plan). The first stage (dark grey): A – castle; 1 – The Old Town of Goldingen with the church for the townspeople parish. The second stage (light grey): A – castle; 1 – the Old Town of Goldingen with the church for the townspeople parish, 2 – Curonian Hamlet, 3 – Hill Hamlet. 2001 (Bākule 2001: 129)*



**Figure 23** *Artist Johann Georg Weygandt (1680–1740). The view from the Winda Riverside to Goldingen Castle and buildings of the Old Town of Goldingen around St. Catherine's Church for the townspeople's Catholic parish. 1729. (Weygandt 1729)*

At least fifty years before the construction of the German fortress in Courland, the Curonian settlement existed on the River Winda's left bank. In the 13<sup>th</sup> century, the four-unit regular Goldingen Castle of stone replaced the wooden fortifications of the Commandry's Centre in Goldingen. In the late 13<sup>th</sup> century, *castrum Goldinghen* was replaced by square-plan Goldingen Castle of stone. As early as 1290, the Commander of Goldingen was appointed deputy to Livonian Master in Courland (Ligers, 1948, p. 115). One of the copies from 'Chronicon Lyvoniae' written by a merchant Jürgen or Georg Helmes showed a drawing with a four-unit regular Goldingen Castle and the Old Town of Goldingen with a wooden church for the townspeople Catholic Parish at the foot of the castle mound. In Livonia, the experience in the fortified yard building became useful for erecting rectangular castles of stone, for which location sites were chosen on the highest point of the relief. Later, the building type was improved, and stone castles were also built on plains, using the tower for defence. One or several outer parts

were developed at the castle. Towers were erected for their protection. The layout of an outer part near the fortress was affected by the peculiarity of local relief (Ozola 2018).

An area between the Winda River and St. Catherine's Church was given to Curonian inhabitants from Old Kuldiga Hillfort, and they moved to Curonian-inhabited Castle Hamlet (Latvian: *Pilsmiests*) to the northwest of St. Catherine's Church. The hamlet near the castle was formed over a long time; at the same time, there was the Curonian settlement at Old Kuldiga Hillfort. Ancient transit routes influenced the layout composition of the medieval settlement agglomeration (Fig. 22) created by Hill Hamlet and Castle Hamlet called the town. In the medieval agglomeration of Windau and Goldingen towns, each of the unrelated building units had its own layout—on both sides of the traffic road and around Market Square. Hill Hamlet developed on both sides of a road (now *Kalna* Street) paved with a small burial of pebbles on a clay base, which led from the castle along the left bank of the Winda to Mitau (now Jelgava Street). A settlement called 'the town behind the hill' (Latvian: *pilsēta aiz kalna*, German: *Stadt up dem Berge*) formed by structures of wooden pole construction was in the jurisdiction of the castle. There were half-basement rooms on the ground floor of these wooden buildings sunk into the ground. Thus, buildings near castles were built in settlements where German immigrants came to life in the 13<sup>th</sup> century (Caune, 2014, p. 17).

Livonian Master (1345–1359) Goswin of Herike (Latin: *Gosvinus von Ercke*) was granted the privilege in 1355. Ernst Hennig (1771–1815), the author of the edition '*Geschichte der Stadt Goldingen in Kurland*' /History of the town of Goldingen in Courland/, (Hennig, 1809) considered that Castle Hamlet was founded this year and already existed here as a town in the legal sense, characterised by the constitution, and was first mentioned in written sources of 1355. The defensive wall (possible palisades) was also mentioned in the same document. The Old Town of Goldingen as 'the town behind the hill' gained new lands. There were talks regarding Castle Hamlet within the Old Town of Goldingen, taking almost a quarter of the town and compensating for the recently allocated land, and also talks regarding the freedom of the town or townspeople (Ligers, 1948, p. 114). Six years since the privileges were granted to Castle Hamlet, Livonian Master (1360–1364) Arnold of Vietinghoff (Latin: *Arnoldus de Vitinghove*) granted to Hill Hamlet a privilege on 30 April 1361 declaring that the New Town of Goldingen 'up to the Mill River' (Latvian: '*līdz Dzirnau upei*') was granted all the rights and freedoms enjoyed by the Old Town of Goldingen (Asaris & Co, 2013, p. 15–16). In 1361, the municipality was granted a privilege in which the New Town was mentioned in addition to the Old Town of Goldingen. Settlements of local people and traders were not structurally and functionally connected in the urban space of the pyramidal power centre. Compact buildings were created and natural elements were involved for protection to create the

shortest possible palisade lanes. Not far from the fortress surrounded on the west side by a circular street (now Baznīca /Church/ Street), there was a customs and an irregularly planned marketplace with St. Catherine's Church of wood and the Town Hall in the point of contact of populated areas at the crossing of a roadway and waterway. Initially, buildings were built around the oldest market square on road's both sides and river banks. The planning of the town of Goldingen was determined by the environment and historical conditions, and not by the planning schemes. Goldingen (Fig. 23) won the privileges in 1378. When Hasenpoth got the same town charter as Goldingen and Windau in 1378, it was expressly pointed out that it was the Riga law (Ligers, 1948, p. 114–115). Livonian Master (1385–1389) Robin of Eltz expanded the area of the town of Goldingen in 1386. Goldingen became the Hanseatic city in 1398, although some scholars date this event back to 1277.

### **Conclusions**

1. Thorn, an early town founded in the State of the Teutonic Order, was granted Magdeburg Rights, while in Livonia, early power and trade centres were founded under the influence of Lübeck determined the creation of planning and spatial environment. The construction was mainly arranged on both sides of the main street, to which attached the location of the church, Town Hall and market place.
2. The Teutonic Order initially used fortifications created by the Livonian Brothers of the Sword on promontories of riverbanks to establish power centres in Livonia. In fortified building complexes of Kokenhusen, Wolmar and Fellin, settlements developed behind the cover of fortresses and acquired the Riga law. In the residential area surrounded by defensive walls, dwellings were arranged on both sides of the main street, which led from the ruler's residence to the main gate built-in the town wall. The Knights employed an orthogonal geometric grid layout widely used for the creation of cities in the State of the Teutonic Order and established residential building blocks for dwellings in Wolmar and Fellin. A market square with a church for the townspeople Catholic Parish was near them.
3. In Memell and Goldingen, the newly founded power centres of the Teutonic Knights on Curonian-inhabited lands, the residential building developed near the fortress, and the layout was not directly related to the location of the castle, but rather to a waterway and the network of earth roads. A church for the townspeople Catholic Parish was built near the marketplace in the town.
4. In Livonia, the layout on a flat terrain of the towns of Weissenstein and New-Pernau developed independently of the position of the fortress, and it was influenced by the location of the marketplace in the town centre connected

with the creation of the street network and the choice of the construction site of the church for the townspeople Catholic Parish.

5. In Königsberg and Marienburg, dwellings were created close to fortified building complexes formed by *castellum*-type structures. The town behind the fortresses developed around the marketplace. Near, the church for the townspeople Catholic Parish was built.
6. A double city of Thorn was created in the State of the Teutonic Order, and each of the urban structures had its own centre, where the church was located. In Livonia, medieval settlement agglomerations developed in Goldingen and Windau. Their layouts linked to marketplaces, next to which a church for the townspeople Catholic Parish was built.

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