Introduction

Although the city is located 19 miles inland, Ghent can rightfully call itself a sea port. The digging of the Ghent-Terneuzen canal (1823–1827) to link the city to the North Sea, and the construction of enormous textile factories around the mediaeval city centre, turned Ghent into the most important industrial city in Flanders in the 2nd half of the 19th century: the Manchester of the continent (Fig. 1).

The economic crisis in the 1970s put a swift end to that. Textile manufacturers shifted production to low-wage countries, factories were demolished and the port businesses abandoned the old docks and moved north of the city. This was the setting in which the first Museum of Industrial Archaeology and Textile (MIAT), the forerunner to today’s Museum of Industry, was founded in Ghent. Concerned about the possible loss of important industrial heritage, the small museum incorporated large steam engines and even a port crane into its collection. It gradually became clear, however, that integrating such large industrial objects into a museum setting would not be without its problems.

Like many cities in Western Europe, Ghent has been in a constant state of change over the last few decades. The population is growing and becoming more diverse. Above all, there is a need for space. The Urban Development Department has seen an opportunity here to restore the value of the area of Ghent that includes the 19th century industrial belt and the port. It is being turned into a new urban neighbourhood where homes, workplaces and leisure facilities are intermingled. Attention is being paid to the environment, greenery, the water, cycling and

Fig. 1. Sailing ships in the port of Ghent, circa 1880. The opening of the Ghent–Terneuzen canal in 1827, made Ghent directly accessible to sea-going vessels (source: Archief Gent, SCMS_F0_2114)

Il. 1. Żaglowce w porcie w Gandawie, około 1880 r. Otwarcie kanału Gandawa–Terneuzen w 1827 r. sprawiło, że miasto stało się dostępne dla statków morskich (źródło: Archief Gent, SCMS_F0_2114)
the distinctive character of the surroundings. The historic port heritage will have a place in this concept, shaping the face and identity of the neighbourhood, with a particular focus on the port cranes. The cranes will dominate the skyline of this redeveloped area of the city as witnesses to its maritime past. What is more, they can be admired in their original urban context. That will allow residents and visitors to sample this heritage and evoke the industrial past in the place where it once unfolded. In this partnership with the Urban Development Department, the Museum of Industry has been given the opportunity to move beyond its four walls and bring back the “big stuff” to the port of Ghent.

Industry in Ghent and the port

In 1796, the Ghent native Lieven Bauwens (1769–1822) successfully smugled the parts and technology needed for mechanical spinning from Great Britain to the continent. The founding of the first mechanised cotton spinning mills symbolically heralded the first industrial revolution on the European continent, and with it Bauwens laid the foundations of a booming textile industry in Ghent. In 1803 he declared: “J’ai créé un second Manchester”. The writer Alexandre Dumas had his doubts when he visited the city and found that even the mediaeval Castle of the Counts of Flanders in the centre of Ghent had been turned into a factory.

The opening of the Ghent–Terneuzen canal in 1827 created a direct link to the North Sea. Both the port activities and the city’s emerging industry gradually moved from the old city centre to the new Handelsdok, or “merchant docks”. In mere decades, a concentration of large textile factories and heavy industry grew up around the port area and the north of the city, such as Charles-Louis Carels’ “Constructiewerkhuizen”, later to become the ACEC. In 1857, that company was the first to erect an iron hand crane for loads of up to 15 tonnes.

At the end of the 19th century, the port was clearly booming. Increasing traffic and the transition from sail to steam meant that a series of extensions were required between 1880 and 1900 (Fig. 2). The excavation of the Houtdok (1881) and Voorhaven (1886) and the widening of the existing Handelsdok (1893–1894) increased the port’s capacity. Obviously, the docks and quay walls were given the superstructure they required as well. Furthermore, the city authorities placed their trust in the latest technologies. From 1904 onwards, virtually every quay was fitted with electric cranes. This contributed to Ghent’s reputation as a port where goods were processed quickly and cheaply, an important asset, because every hour at the quay costs the ship-owners money. Tests conducted in 1929 at the most important ports for iron export clearly made the point: 1000 tonnes were loaded in five days in Ghent, eight days in Rotterdam and thirteen days in Antwerp! [1].

The economic crisis of the 1930s and the violence of the World War II were followed by an arduous period of recovery. Moreover, both ships and goods processing changed beyond recognition in the second half of the 20th century. Unit loads, containers and roll-on roll-off replaced the traditional break bulk cargo. Newer, bigger and more powerful port facilities could only be installed along the largest and northernmost docks at the seaport.

In 1975 there were still dozens of cranes along the old docks on the Schipperskaai. Even the very first electric gantry crane was there, dating from 1904. But maintaining them was a sore point. Soaring costs, the oil crisis, the recession and changes in handling led to them falling into disuse. Most of the cranes were dismantled. When the port activities also left for good, what remained was a somewhat bare and desolate landscape.

The pioneer of industrial heritage

The discipline of industrial archaeology has its origins in Great Britain, in the mid-1950s. In Ghent, it would be another twenty years before the city and the university undertook initiatives in this area. The economic crisis of the 1970s was a catalyst for this change. It hit the Ghent

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1 Charles-Louis Carels established an iron and copper foundry and a workshop for steam engines and mechanical tools in 1838. Between 1874 and the World War I, the company on the Handelsdok produced 712 steam engines for customers in Europe and beyond. It even supplied them to Argentina and China. Thanks to an exclusive licensing contract with Rudolf Diesel, the company also started making diesel engines in 1902. Belgian and foreign investors, including Thompson-Houston, converted the company into the “Société d’Electricité et de Mécanique”, or S.E.M., in 1920. A mere fourteen years later, the other major steam engine manufacturer in Ghent, Van Den Kerchove, joined the group that would be completely absorbed into the “Ateliers de Constructions Électriques de Charleroi”, or ACEC, in 1961. The latter ceased its activities at the Handelsdok in 2005.

2 Superstructure is the collective term for the cranes, warehouses, railway tracks and other infrastructure that support the loading and unloading of the ships.
textile sector hardest, with a lot of manual work being moved to low-wage countries. Even the UCO (Union Cotonnière), once a flourishing textiles group, fell on hard times. The decline in transit traffic, in the wake of the oil crisis, also dealt severe blows to the port in Ghent. All at once, Ghent found itself with a surplus of industrial equipment. A museum was founded in 1978 at the city archive to collect relics of Ghent's industrial past.

It was some time before the Museum of Industrial Archaeology and Textile (MIAT), the forerunner to today’s Museum of Industry, found a home of its own. What does a collection of this kind entail? And where should it be housed? Before an answer was found to these questions, temporary exhibitions were held in various cultural and historic buildings in the city. A home was finally found for the museum in 1991, in the former Desmet-Guequier cotton spinning mill on the Minnemeers in Ghent, where it is still located today. The building is on the border between the mediaeval city centre and the 19th century suburbs, in the area that forms the transition between the city and the port area.

Given the importance of the textile industry for Ghent and the surrounding region, the museum concentrated on that branch of industry when it built up its collection between 1978 and 1989. In the 1990s, however, its focus widened to encompass the material culture of industrial society in broader terms. The expansion of the collection was focused more on the acquisition of objects than on the development of themes. Most of these objects were acquired passively as donations, rather than by actively purchasing missing links. Forty years of collecting has resulted in a rich and diverse group of sub-collections, covering the history of textile production as well as areas such as printing, energy services, the metal industry and machine construction.

Who takes care of the big stuff?

There are two separate Flemish ministries with the authority to protect heritage. The Ministry of Environment and Planning has the authority to protect monuments and buildings (immovable heritage). The Ministry of Culture has the authority to protect movable and intangible heritage. When it comes to preserving industrial heritage, this artificial division often provokes challenging disputes. Is a stationary steam engine movable or immovable? Is a gantry crane on tracks in the docks movable or immovable? Are massive fermentation tanks at a brewery movable by application? In short, who takes care of “the big stuff”?

In Belgium and Flanders, besides private collectors and enthusiasts, it is mainly small, local organisations that take care of the preservation and maintenance of large-scale industrial and technical heritage. The permanent staff who look after the collections are often supported by dedicated volunteers, many of whom are retired. The latter bring their lifetime of accumulated knowledge from an active career related to the subject of their current passion. They are connected to a specific museum, location, installation or type of heritage that they know through and through. The commercial pool of restorers interested in large technology heritage is small. Commercial restoration of large, working industrial heritage, such as stationary steam engines, is almost non-existent. The lack of a commercial option forms an obstacle to the further preservation, or sustainable preservation of knowledge about the preservation – and ideally the restoration – of large technology heritage. This lack also complicates the redevelopment of de-industrialized sites that have been abandoned for some time. Private owners and project developers hesitate to get involved, although they do react positively to the idea of keeping the machines or installations on site. They encounter difficulties in finding the right expertise, whether in terms of project and financial planning or appropriately skilled manpower.

Adaptive reuse, or the appreciation of large technology heritage in public space, changes over time. It tends to be sensitive to trends, and if it is not thought through, it may be poorly received by the public. This specifically applies to large machines that were not initially designed for outdoor use. Erected at important road intersections, they are intended as monuments or landmarks, promoting an active industry by creating a link with a nearby city or a long and glorious industrial history. Unfortunately this “roundabout heritage” quickly deteriorates, due to an under-estimation of the costs of periodic and long-term maintenance, or because of vandalism.

Large technology heritage can also prove challenging for museums. The mere size of some of these pieces means that they may literally weigh on the storage facilities. Stripped of their context or taken out of their original environment, they tend to be difficult to integrate into museum exhibitions or projects. This was the case for a crane donated to the young MIAT during the period when industry started moving away from the 19th century port. At that time, in contrast to cities like London and Antwerp, Ghent lacked a vision for port or maritime heritage. Moreover, the outside world experienced the sea port of Ghent as a remote closed-off area with no real link to the popular, mediaeval city centre. People only went there if they needed to. Concerned about the possible loss of important heritage, the museum accepted the gift of a crane from La Floridienne, a company trading in fertilizers. It was beyond restoration or repair, and scrapped for safety reasons. A lack of funding and changes in policy meant that the original plans to erect the crane in the museum garden, as an eye-catcher and a reference to

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3 The museum houses the oldest spinning mule still in working order. This semi-automated cotton spinning machine has been on the list of Flemish Community Masterpieces since 2010.
the 19th century industrial belt and the port. This includes to restore the value of the part of the city that includes Urban Development Department sees an opportunity here people by 2030. Above all, there is a need for space. The ing. It is expected to have a population of at least 269,000 people with a disability.

Fortunately, the narrow doorway still makes access difficult for people with a disability.

The old docks and the cranes

Like many cities in Western Europe, Ghent is growing. It is expected to have a population of at least 269,000 people by 2030. Above all, there is a need for space. The Urban Development Department sees an opportunity here to restore the value of the part of the city that includes the 19th century industrial belt and the port. This includes the transformation of the three oldest docks in the port into an attractive new urban neighbourhood. The total surface area is approximately 414,000 m² (41.4 ha). Water alone covers 13.6 ha. Up to 1500 new housing units should help to remediate the city’s growing housing shortage. Offices, recreation, shops and additional public services (an elementary school, day care centre, local library and community sports hall), the extension of the public transport network, bicycle and pedestrian bridges and high-quality public spaces are required to give a strong boost to the surrounding neighbourhoods and the entire city [4]. In addition to issues such as living, working, recreation, mobility and nature, the necessary attention was paid to the theme of heritage when the first sketches were developed in 2010. The plans included the preservation of many of the typical port elements remaining, such as the tracks for the goods trains and cranes, the bollards where the boats were moored, a small submersible dock and two cranes that are still in good condition.

The latter inspired the Museum of Industry to suggest that the 1925 Titan gantry crane be integrated into the site. This proposal was accepted, and in fact extended, by the city’s Urban Development Department. Ghent is currently building up a unique array of port cranes. The collection spans more than a century of crane technology, offering an overview of this industrial heritage that is both chronological and wide-ranging in terms of technology. The collection brings together cranes from Ghent and other types that once stood in the Handelsdok area. They will play a leading part in the “Old Dockyards” urban development project along the old docks. They dominate the skyline as witnesses to the area’s maritime past, and in doing so they restore a distinct identity and public interest to a part of the city that had once lost its most distinctive features [5]. What is more, they can be admired in their original urban context. The location of the cranes has been formally included in all kinds of planning processes, forming the basis for many urban planning decisions. The design, which is sometimes referred to as the “kebab”, has been developed around the stretch of water along the Handelsdok. Built-up areas and green zones alternate like meat and vegetables on a kebab stick. The cranes mark the transitions between different zones. They also span the cycle paths and footpaths.

The oldest crane in the collection is the hand-operated crane made by the Belgian firm Nicaise & Delcuve in La Louvière (Fig. 3). It is a manual pivot crane on rails, dating from 1871, which was used to hoist loads of up to three tonnes. The city purchased it in 2017. It is a reference to the first hand-operated iron crane at the Handelsdok. The hollow, cast-iron jib is made of rolled and riveted plates. A decorative cast-iron ball acts as a moveable counterweight.

The oldest electric cranes in the collection are located in the Voorhaven area of the port. These two two-and-a-half tonne electric Titan cranes, dating from 1905, are the first cranes that have been preserved in their original location (Fig. 4). As rolling semi-gantry cranes, they are attached to the front of two port warehouses dating from 1885–1886. Since 1996, they have formed part of the protected cityscape “Tolhuis en Voorhaven”. Along with the dry dock nearby, they constitute one of the most attractive and homogeneous 19th century port landscapes in Europe.

Only one Ghent city crane from the interwar period has been preserved. It is the 1925 electric Titan gantry crane, from the Museum of Industry’s collection. Besides the crane itself, the museum will also supply the support required for on-site restoration. It is intended to preserve as much of the original material as possible from the roof and wooden exterior facing. A study is underway to reconstruct the missing gantry section. The plan is to opt

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6 The basic vision for the “Old Dockyards” project was developed by the Dutch firm OMA (Office for Metropolitan Architecture), https://sogent.be/projecten/oude-dokken [accessed: 14.03.2020].
for a modern interpretation, with a recognisable new component. The crane will also act as an ambassador for the nearby museum, which has put great effort into saving it from certain death.

A second interwar crane, dating from 1928, is the Stork Nivelle gantry crane with an electric ACEC design. It was bought from the Maritime Museum in Rotterdam (the Netherlands) in 2018. The crane has been restored to working order by volunteers at the museum in Rotterdam, who have also given demonstrations of it working. Nevertheless, the museum was ready to dispose of it following a collection valuation process. Given the appropriate knowledge and vision, this crane might provide the impetus for volunteer activities in Ghent focusing on the city’s own crane collection. Direct involvement of volunteers in this way may enable new generations to create their own personal bonds with this heritage, thus safeguarding the long-term future of the Ghent crane collection [6].

The cranes from the 1960s push back the limits of technology. Entirely in keeping with the spirit of the age, they also have an aesthetic dimension. At first glance, the cranes appear to be purely functional, but details reveal that attention was also paid to their design. The three...
Peiner cranes on the Schipperskaai are good examples from this period (Fig. 5). A counterweight to the jib, which moves along with the load to be hoisted, and an integrated counterpart to the operator’s cab create a lovely, slender outline. The Peiners were popular after the World War II. They were known for their simple, reliable mechanism which is why they were also the most prevalent type.

The blue Titan crane made by the Boomse Metaalwerken in 1973 stands on the quay at Dok Noord (Fig. 6). It was owned by the Velghe company, and was the first landmark in the Handelsdok area to be saved in the nick of time by the private project development at the adjacent ACEC site in 2001. The crane was repurposed for use as an office and meeting space, and as such has almost subconsciously shaped the identity of the urban neighbourhood being developed here. Its position above the gravel bunkers also provides a strong link to its past as a tool for loading and unloading sand and gravel. This crane and the private project have made the City of Ghent aware of the port cranes’ significance in the area to be developed.

The 60-metre high ST1 crane made by the Boomse Metaalwerken, a gantry crane for break bulk cargo dating from 1983, is the tallest in the landscape (Fig. 7). It weighs 370 tonnes on its own, can hoist up to 35 tonnes and has 30 years of service at Euroports behind it. Its size and position at the head of the area to be developed give it a considerable power of attraction. It is being fitted with a viewing platform to give visitors a panoramic view of the surroundings (Fig. 8). A similar context has been created in Bingen in Germany.

Last but not least is the impressive Sobemai crane, dating from 1988, on the Kleindokkaai (Fig. 9). It is currently the youngest member of the Ghent crane collection. This hydraulic equilibrium crane with a fixed arm was constructed under a Belgian patent. The load is not raised using cables, but transferred on a rigid arm, which means it requires less energy. The 150-tonne crane will serve as a 3D graffiti artwork [7].

The entire project comes at a steep cost. The City of Ghent is eligible for subsidies from the European ERDF project for the purchase, transportation and installation of the Sobemai and ST1 cranes, as well as restoration, the construction of the viewing platform on the ST1 crane and communication about the project5.

5 The European ERDF project (European Regional Development Fund) aims to strengthen economic and social cohesion in the European Union by ensuring balance between the regions. The ERDF’s activities have been developed to limit economic, environmental and social problems in urban areas, with a special focus on sustainable urban development. A minimum of 50% of ERDF’s funds are reserved for “integrated actions” managed by cities.
Conclusion

Development of the area is currently in full swing and the cranes are already doing their work, attracting attention from far and wide. They evoke curiosity, admiration and a sense of connection. They encourage people to explore the entire area. They are meeting places where people arrange to meet up or bump into each other, forming the ideal backdrop for pop-up summer bars and other cultural activities. They represent a city with an industrial past, a city of entrepreneurs and a pleasant place to live. It is also thanks to the cranes that a new partnership has been set up between the Urban Development Department and the Museum of Industry.

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The subject of the article is the process of establishing, and the role of an industrial museum in the former port areas of Ghent. Although Ghent is located about 32 km from the coast, the city is a real sea port. The construction of the Ghent–Terneuzen Canal in 1823–1827 created a direct corridor to the North Sea. From the 19th century, large textile factories began to arise in and around the medieval city center, so that at the end of the 2nd half of the 19th century, Ghent became the most important industrial city of Flanders. This continued until the 1970 crisis. At that time, textile production was moved to countries with lower labor costs and factory buildings were demolished, but the old port basins remained. Port activities were moved north of the city to areas along the canal. The first Museum for Industrial Archaeology was founded in this area. Fearful of potential loss of important industrial heritage, the small museum took over large steam engines and even port cranes. It gradually became understood that the collection of these large industrial objects in museum conditions is not easy. The Department for Urban Planning began the re-evaluation of the 19th-century industrial belt and the area of the old port. Currently, there is the integration of large technology objects (big stuff) with urban tissue and social life. The port’s heritage is raised to act as a visual and identity carrier, with a particular focus on port cranes. The cooperation between the Department of Urban Planning and the Museum of Industry offers the Museum the opportunity to go outside the walls of the museum to restore big industrial facilities (big stuff) to the old port of the city.

Key words: urban redevelopment, industrial heritage, movable cultural heritage, heritage conservation

Streszczenie

Tematem artykułu jest proces powstawania i roli postindustrialnego muzeum na dawnych terenach portowych Gandawy. Mimo że Gandawa leży około 32 km od wybrzeża, miasto jest prawdziwym morskim portem. Wybudowanie w latach 1823–1827 kanału Ghent–Terneuzen stworzyło bezpośredni korytarz do Morza Północnego. Od XIX w. w śródmieściu miasta i wokół niego zaczęły powstawać wielkie fabryki tekstylne, tak że pod koniec 2. połowy XIX w. Gandawa stała się najważniejszym miastem przemysłowym Flandrii. Trwało to do kryzysu z roku 1970. Wówczas produkcja tekstylna została przeniesiona do krajów o niższych kosztach siły roboczej, budynki fabryk zostały zburzone, pozostały stare baseny portowe. Działalność „portową” przeniesiono na północ od miasta, na tereny wzdłuż kanału. Na opuszczonem terenie założono pierwsze Muzeum Archeologii Industrialnej. Obawiając się potencjalnej utraty ważnego dziedzictwa przemysłowego, niewielkie muzeum prężyło duże maszyny portowe, a nawet portowe dźwigi. Stopniowo zrozumię, że gromadzenie tych wielkich obiektów przemysłowych w warunkach muzealnych nie jest łatwe. Departament Planowania Miejskiego rozpoczął rewalioryzację XIX-wiecznego pasa przemysłowego i terenu starego portu. Obecnie zachodzi tu integracja dużych obiektów techniki (big stuff) z tkaną miejską i życiem społecznym. Dziedzictwo portu jest podniesione do pełnienia funkcji nośnika wizualnego i tożsamościowego, że szczególnego skupieniem uwagi na dźwigach portowych. Współpraca między Departamentem Rozwoju Miejskiego a Muzeum Przemysłu ofiarowuje temu drugiemu możliwość wyjścia poza mury muzeum, by przywrócić duże obiekty przemysłowe staremu portowi miasta.

Słowa kluczowe: przebudowa miast, dziedzictwo przemysłowe, ruchome dziedzictwo kulturowe, konserwacja dziedzictwa