

ΝΕΩΡΙΑ ΧΑΝΙΩΝ / THE VENETIAN SHIPYARDS OF CHANIA

Έκδοση στο πλαίσιο της Προγραμματικής Σύμβασης Πολιτισμικής Ανάπτυξης για την εκπόνηση του ερευνητικού προγράμματος με τίτλο:

ΕΡΓΑΣΙΕΣ ΓΙΑ ΤΗΝ ΙΣΤΟΡΙΚΗ ΚΑΙ ΤΕΧΝΟΛΟΓΙΚΗ ΤΕΚΜΗΡΙΩΣΗ ΤΗΣ ΜΕΛΕΤΗΣ ΩΡΙΜΑΝΣΗΣ ΤΩΝ ΕΡΓΩΝ ΑΠΟΚΑΤΑΣΤΑΣΗΣ - ΑΠΟΔΟΣΗΣ ΧΡΗΣΕΩΝ - ΑΝΑΔΕΙΞΗΣ ΤΩΝ ΝΕΩΡΙΩΝ ΣΤΑ ΧΑΝΙΑ

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Επιμέλεια έκδοσης: **Νίκος Σκουτέλης, Elisabetta Molteni**
Editors: Nikos Skoutelis, Elisabetta Molteni

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ΠΟΛΥΤΕΧΝΕΙΟ ΚΡΗΤΗΣ



THE VENETIAN SHIPYARDS
OF CHANIA

Historical documentation
consolidation / restoration / reuse

ΕΠΙΜΕΛΕΙΑ ΕΚΔΟΣΗΣ
ΝΙΚΟΣ ΣΚΟΥΤΕΛΗΣ
ELISABETTA MOLTENI

ΧΑΝΙΑ 2023 CHANIA

Ακρωνύμια και Συντομογραφίες / Acronyms and Abbreviations

ASTo:	Archivio di Stato di Torino
ASVe:	Archivio di Stato di Venezia
BMCVe:	Biblioteca del Museo Correr (Civici Musei Veneziani) Venezia
BNMVe:	Biblioteca Nazionale Marciana, Venezia
Gerola I.1; I.2; II; III; IV:	Giuseppe Gerola, <i>Monumenti veneti nell'isola di Creta</i> , Venezia 1905-1932, 4 voll.
Capi da guerra:	Archivio di Stato di Venezia, Senato, Dispacci, Dispacci, Dispacci dei capi da guerra [condottieri]
Collegio Relazioni:	Archivio di Stato di Venezia, Collegio, Relazioni di ambasciatori, rettori e altre cariche
Mar Filze:	Archivio di Stato di Venezia, Senato, Deliberazioni Mar, Filze
Mar Registri:	Archivio di Stato di Venezia, Senato, Deliberazioni Mar, Registri
m.v.:	Venetian calendar (the year begins the 1st of March)
PTM:	Archivio di Stato di Venezia, Senato, Dispacci, Proveditori da Terra e da Mar e altre cariche

ΕΡΓΑΣΙΕΣ ΓΙΑ ΤΗΝ ΙΣΤΟΡΙΚΗ ΚΑΙ ΤΕΧΝΟΛΟΓΙΚΗ ΤΕΚΜΗΡΙΩΣΗ ΤΗΣ ΜΕΛΕΤΗΣ ΩΡΙΜΑΝΣΗΣ ΤΩΝ ΕΡΓΩΝ ΑΠΟΚΑΤΑΣΤΑΣΗΣ - ΑΠΟΔΟΣΗΣ ΧΡΗΣΕΩΝ - ΑΝΑΔΕΙΞΗΣ ΤΩΝ ΝΕΩΡΙΩΝ ΣΤΑ ΧΑΝΙΑ

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ELISABETTA MOLTENI

"L'Arsenal è molto nobile con volti 17 tutti pieni".¹ The building of the Old Arsenals of Chania and their relationship with the city

If today the Arsenali Vecchi are a key location in the future of the city of Chania, it is largely because it is an architectural complex that embodies and reveals an important part of its history. Very many stories, indeed. Undoubtedly, the story of the Arsenali Vecchi begins in 1467 when the Senate, requesting dockyards to be constructed in various towns in the Levant, decreed that one should also be built in Chania to house two 'triremes' (i.e. two narrow galleys). Their completion can be dated to 1585 when the complex – albeit not yet entirely completed – reached its maximum extension of 17 *volti* (vaulted docks/shelters) as attested by the records of Alvise Grimani, *provveditore generale* in Candia from 1583 to 1585. The expansion of the Arsenal in this period played a pivotal role in the development of the port and the city. But these relationships run deeper and more broadly, as we shall see.

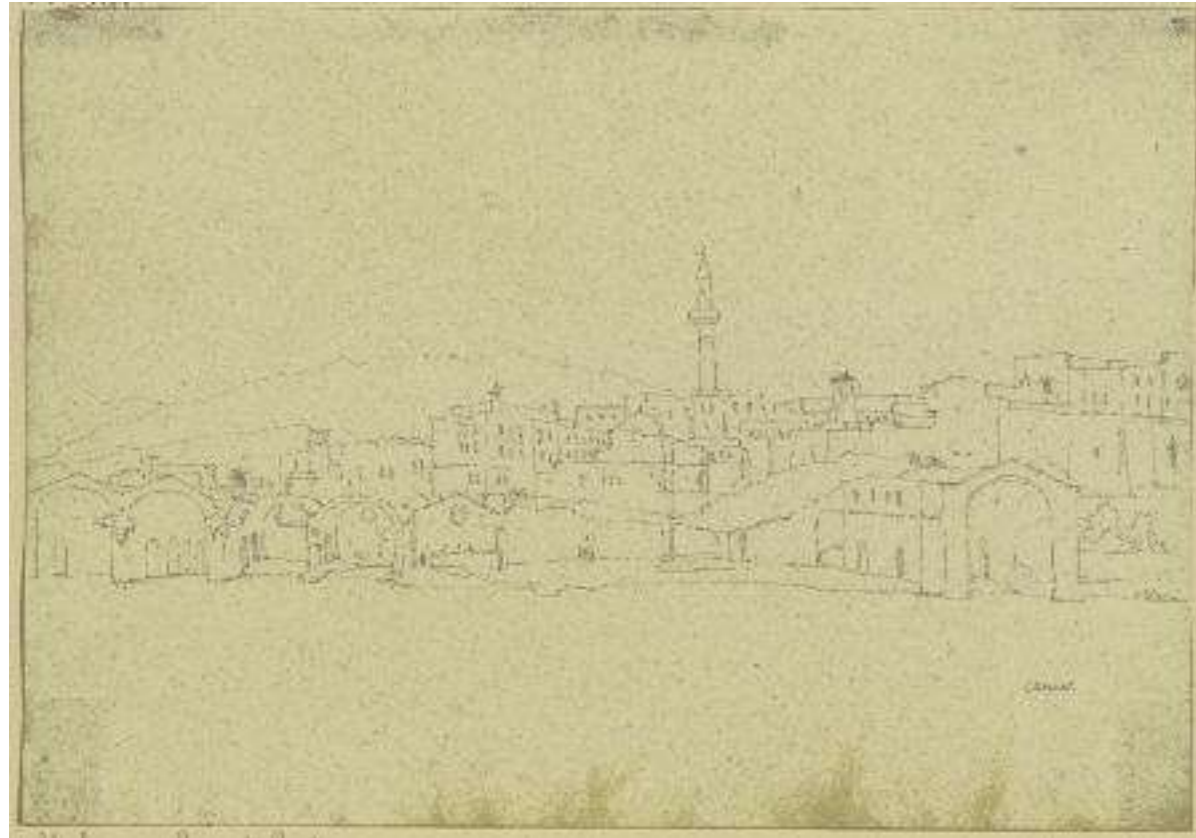
The seven existing *volti*, as is well known, are the remaining structures of a larger system that stretched along the entire southern front of the port. Collapse and demolition (a little-investigated aspect which would be very useful to reconstruct) had already taken place by the early 19th century, as Friedrich Maximilian Hessemer's drawings in 1829 testify.² His depiction of the Arsenali (fig. 1) shows partly collapsed and partly preserved buildings: the solid, vaulted building on the right is certainly the one that still exists today but has been entirely transformed, probably the last vaulted shelter to be built; five almost completely destroyed bays follow, the last of which shows the remains of a pitched roof; and finally another four vaulted shelters. A total of ten *volti* (and we cannot know how many others were alongside at the time), some of which probably collapsed shortly afterwards. One certainly collapsed in the earthquake of 19 September 1867.³

¹ "The shipyard is very noble and has 17 *volti*, all filled", Stefano Tiepolo, rector of Chania, 1614, report in Collegio Relazioni, b. 83, n. 9 (279), cc. nn. Arsenale/arsenali refers to the shipyard, including the series of *volti*, the vaulted docks/shelters.

I would like to thank Nikos Skoutelis for supporting the historical research on the Arsenals and my collaborators Silvia Peressutti and Alberto Pérez Negrete, who not only transcribed most of the documents but also contributed greatly to their understanding and the development of the research. The collocation of the archival documents, as well as some of the most frequently cited texts, is in abbreviated form; see Acronyms and Abbreviations. Dates are given following current usage, indicating the date *more veneto* – Venetian calendar – only in case of discrepancy.

² On Hessemer, see P. Vitolo, "Il Medioevo illustrato ne La Sicilia di Gustavo Chiesi (1892)", *Archistor*, Extra 5/2019, (Supplement to n. 11/2019), pp. 396-435 with preceding indications.

³ "Copy of a Despatch Addressed to Her Majesty's Secretary of State for Foreign Affairs by the British Consul at Canea, Crete, Giving an Account of an Earthquake Which Took Place in That Island", *Proceedings of the Royal Society of London*, 1 January 1867, Vol.16, pp.162-162.



1



2

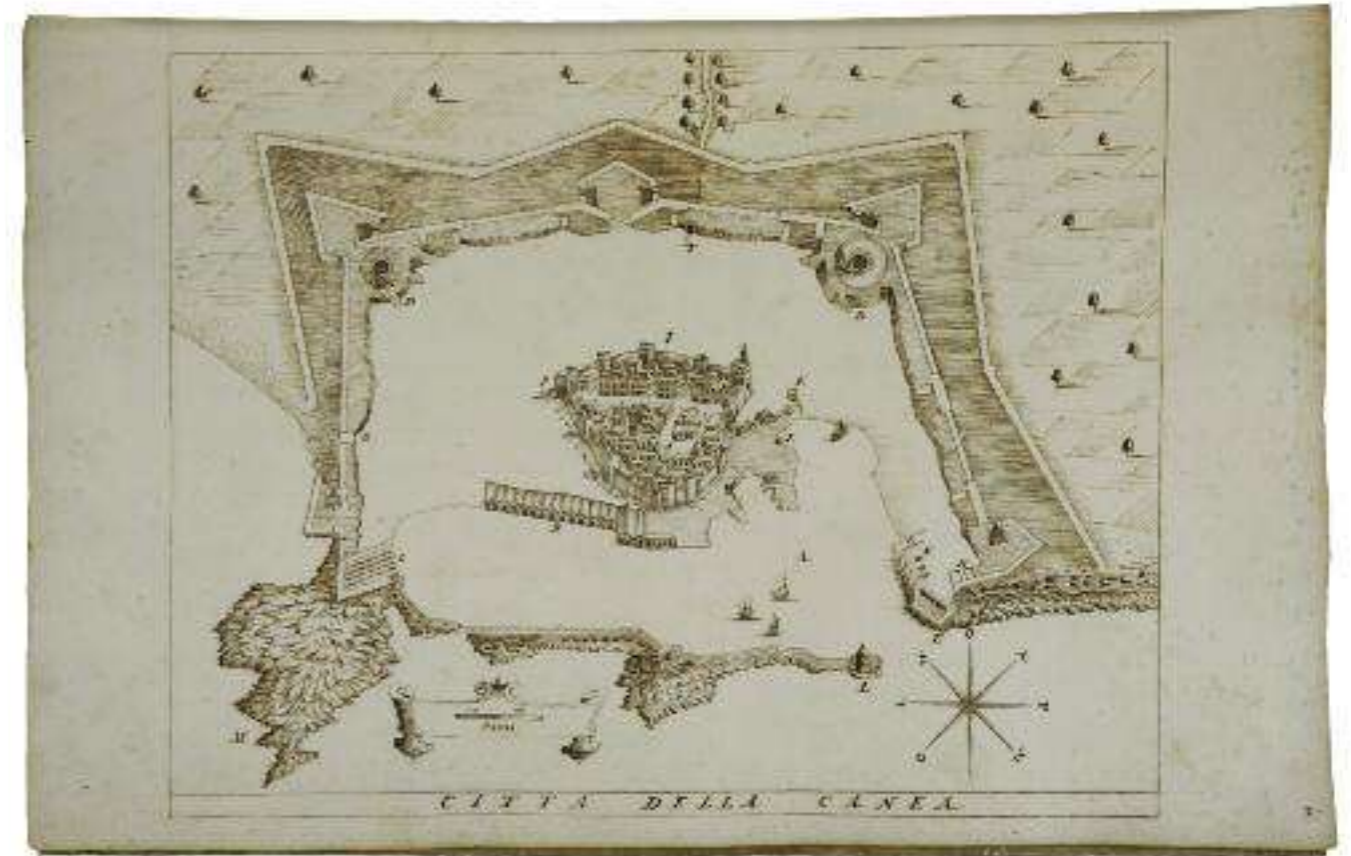


3

1. Friedrich Maximilian Hessemer, Canea, the Arsenali Vecchi, Frankfurt am Main, Städel Museum Graphische Sammlung, Nachlass Hessemer, n. 5041.

2. Chania, Exterior of the *Arsenali Vecchi*, photo Giuseppe Gerola 1902 ca., Venezia, Istituto Veneto di Scienze, Lettere ed Arti, Fondo Giuseppe Gerola, inv. 1137. ©Istituto Veneto di Scienze, Lettere ed Arti

3. Chania, Exterior of the *Arsenali Vecchi*, photo Giuseppe Gerola 1902 ca., Venezia, Istituto Veneto di Scienze, Lettere ed Arti, Fondo Giuseppe Gerola, inv. 1136. ©Istituto Veneto di Scienze, Lettere ed Arti



4

4. Ercole Nani, *Città della Canea*, in Id. *Fortezze, spiagge e porti del Regno di Candia*, BNMVe, Ms. It. Cl. IV, 17 (=5064), 1613 ca.

Clearly, and at least until the 1920s, (figs. 2-3) the Arsenali had openings onto the water of the eastern basin, a basin built from the fourteenth century onwards following a line of natural reefs (unlike the western basin, which used the inlet of the coastline⁴) and which, at least for a good part of the sixteenth century, had another opening to the sea besides the present one. In fact, there was also an opening to the east, near the Lagonissi rock, which was closed off in the 1590s with the expansion of the Mocenigo bastion and then the building of the Arsenali Nuovi. Today, the warehouses necessary for the Arsenal's main activities have also disappeared: storage places for timber, sails, rigging and artillery, materials needed for the completion and maintenance of the hulls.⁵ It is important to highlight these connections, which the changes in the city have at least partly erased, because the vaulted docks are only the remaining part of a system linking the Arsenal to the eastern districts of the city, to the Castle, to the western basin of the port, and through this, to the *Piazza*, the main square of the city. The Arsenali Vecchi had very close linkage not only to the development of the port, of which they are a fundamental part, but of the entire city, from the Middle Ages up to the 20th century. This is also highlighted by all the historical maps of Chania, which always depict the Arsenali in a prominent position together with the Castle and to the *Piazza*, the main square of the city, overlooking the port. In this sense, the fine drawing by Ercole Nani, updating on the previous one by Angelo degli Oddi, is particularly effective. It is also one of the few that, albeit in a rudimentary fashion, also delineates the Castle settlement along the main street (fig. 4).

⁴ R. Gertwagen, "The concept of ports in the medieval eastern Mediterranean: construction and maintenance on Crete to the end of the fifteenth century", *International journal of maritime history*, 12, 2000, p. 177-241: 196-197; 204-209.

⁵ Certainly, depots have always existed: for example, Daniele Venier, rector of Canea, 1559: "sono in questo loco, come vede la Serenità Vostra, tre volti di galee con li soi magazeni per li soi fornimenti" (there are here, as Your Serenity can see, three volti with their stores for supplies) *Collegio Relazioni*, b. 62, to. 1, cc. 80-85: 80.

Both the shipbuilding activity taking place in the Arsenale and the construction of the building depended directly on decisions and materials from Venice. The material history of the complex can thus shed light on various aspects: on the articulate administrative system presiding over relations between the capital and the territories subject to it; on building and shipbuilding techniques; and finally, on how the Venetian fleet was managed over the course of time. If one considers the Arsenale with its primary function as a shelter for Venetian galleys, i.e. as a place of military interest, one can see how its development over time is a matter that decisively transcends local issues and is interwoven not only with the defence strategies of the island of Crete but, more generally, of the entire Levant. In brief, it may be said that in the second half of the 16th century, and even more so after Lepanto and the loss of Cyprus (in order to adapt to the territorial losses but also to the gradual strengthening of the Ottoman fleet), the Republic pushed for interventions linked to the control of the territory and the efficiency of the naval fleet, simply by considering that preventing landings was the safest and easiest way to defend the population and the entire island.⁶ Maintaining an equipped fleet on site therefore became a decisive factor. These aspects are specifically addressed in the texts by Silvia Peressutti and Alberto Pérez Negrete in this volume.

For these reasons, along with others we hope to briefly illustrate in these pages, the history of the construction of the *volti* of the Arsenale is not only the history of a building site spanning almost two centuries, but the intersection of many paths of history.

Reconstructing the history of the shipyards: difficulties and research method

Reconstructing the history of the Arsenali Vecchi is an obstacle course. The first and chief complication is clearly the lack of buildings as mentioned above, these have collapsed over time, or were demolished with the major transformations of the city between the 19th and 20th centuries. The second is the nature and volume of documents produced by the administration of the Venetian Republic, as sizeable (communications to and from Crete were daily) as it is fragmentary and incomplete. The order to build new *volti* came from the Senate, but recognising the need for expansion and the material construction of the new buildings involved the rector and governor of Chania, the captain of the island, the superintendents general of Candia, the superintendents in the army, as well as the soldiers and engineers in their retinue. Giuseppe Gerola is surely the choice of guides to the research,⁷ but even just verifying the documents that the scholar consulted is not easy: partly because they are lost or no longer consultable, partly because the location indicated at the time no longer corresponds to the current one, as is the case with the *Dispacci da Candia* of which Gerola only indicates the date.⁸

However incomplete the resulting picture, it is evident that there is a hiatus between the decisions of the political apparatus and the material construction of buildings. At times, the Senate muses on constructing new vaulted shelters, expresses good intentions that either do not come to fruition, or are only realised many years later, with considerable tardiness. In addition, the various *parti* [resolutions] of the Senate always refer to the situation that existed at the time they were issued, i.e. a situation that almost never corresponds to what was set out in previous resolutions.

⁶ Cfr. also K. G. Tsiknakis, "La guerra non dichiarata. L'inimicizia tra Veneziani e Turchi nelle regioni greche alla fine del Cinquecento", *I Greci durante la venetocrazia. Uomini, spazio, idee (XIII-XVIII sec.)*, (a cura di C. Maltezou, A. Tzavara, D. Vlassi), Venezia 2009, pp. 54-64.

⁷ Gerola IV, pp. 137-146. Gerola is aware of discrepancies in the documents (ibid. p. 141, footnote 9) but does not always take them into account.

⁸ The PTM series is neither chronologically nor topographically ordered. The more than one thousand despatch are identified by the institutional position of the person sending the document, with a chronological indication of the beginning and end of the documents contained (not always precise).



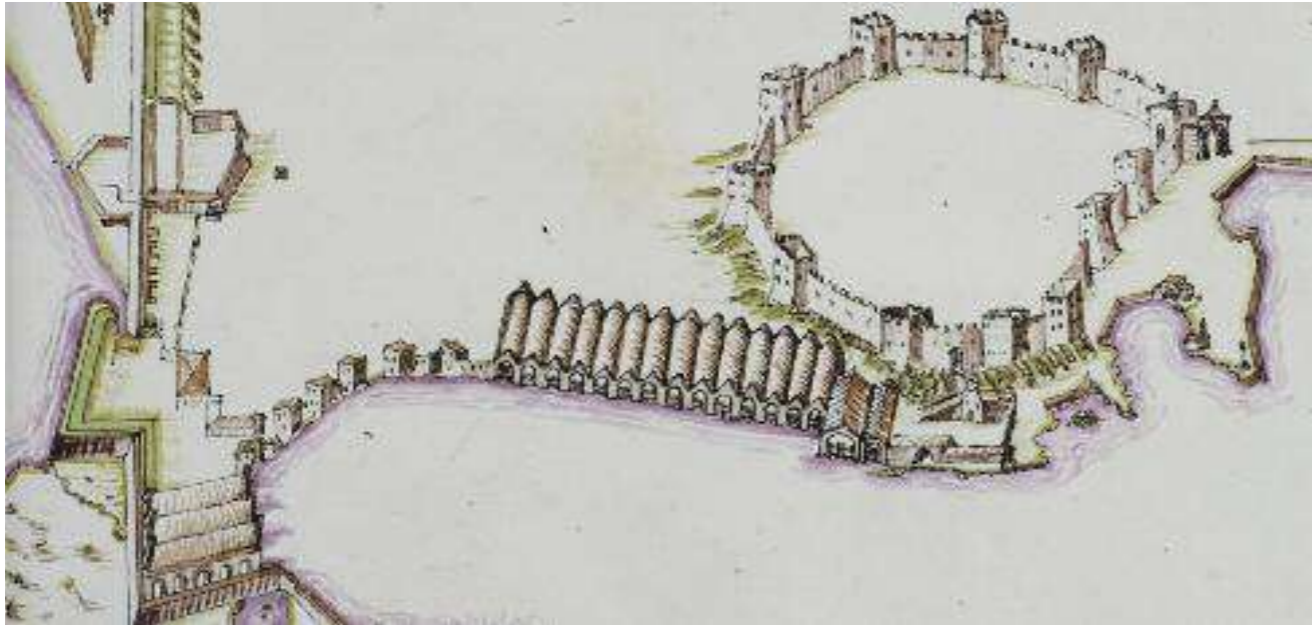
5
Giorgio Corner, *Città della Canea*, in *Id. Il Regno di Candia*, BNMVe, Ms. it. VI. 75 (=8303), fol. 4v, XVII (ante 1625).

It therefore requires proceeding with caution, constantly comparing the resolutions and the real situation of the construction work, and taking into account the progress of the building site as described in the despatches of the representatives sent to the doge and the Senate: in short, it is necessary to reconstruct a mosaic of information produced by different subjects for different purposes and on diverse occasions. But even the most detailed descriptions in the despatches are not always explicit as they are addressed to an interlocutor who is very familiar with the situation. In passing at least, it should be noted that unfortunately the historical cartography helps little in resolving these doubts, notwithstanding that it was largely produced by technicians working alongside Venetian governors on the island. Map plans and views of the city, rarely an objective transcription of reality and often the reworking of earlier ones, should be placed in their production context as precisely as possible in order to assess their contents and meaning – a far from easy operation and rarely practised.⁹

For all these reasons, and except for a few essential moments, it seems necessary to review Giuseppe Gerola's reconstruction, generally accepted even by the most recent studies.¹⁰

⁹ Very useful are H. Porfyriou, "La cartografia veneziana dell'isola di Creta", Venice and Crete, Venice 1998, pp. 375-413; *Navigare e Descrivere. Isolari e portolani del Museo Correr di Venezia XV-XVIII secolo*, exhibition catalogue edited by C. Tonini, P. Lucchi, Venice 2011.

¹⁰ Cfr. M. Andrianakis, "Gli arsenali veneziani a Creta", *Gli arsenali oltremarini della Serenissima: approvvigionamenti e strutture cantieristiche per la flotta veneziana (secoli 16.-17.)*, edited by M. Ferrari Bravo and S. Tosato, Milano 2010, pp. 191-199 and K. Giapitsoglou, "Les arsenaux Vénitiens de Crètes", *Ricoveri per navi militari nei porti del Mediterraneo antico e medievale*, Proceedings of the Workshop, Ravello, 4-5 November 2005, Bari 2010, pp. 141-152.



6

The Arsenali Vecchi until 1570. The Castle

We know little about the urban structure of Chania in the Venetian period, which was radically altered following the bombing in 1941. For instance, the magistrates' palaces are of uncertain location, almost nothing is known about the hospitals and hospices or of the town's churches, little too about the large convent complexes.¹¹ The historical maps in which the city's residential area and a few distinct buildings, both religious and civil, are at least indicated appear to be those by Giorgio Corner (1625) (fig. 5) and those, again of the 17th century but later, by Marco Boschini and Vincenzo Coronelli. It seems certain, however, that even in the modern era the high hill of the Castle was still the centre of Venetian administration.¹² The works carried out in Chania in the first half of the 14th century transformed the ancient *castrum* into a genuine city with a square, fortress, new walls, a port and a new shipyard, all of which appear to have been undertaken as early as 1318-1325.¹³

Whether it is true or not that a fourth gate existed on the northern front of the mediaeval walls of the Castle, as Gerola suggests on the basis of Raffaele Monanni's drawing (fig. 6),¹⁴ it is still plausible to imagine a direct connection between the Castle hill and the port, perhaps not a monumental access, similar to the gateway photographed by Gerola at the beginning of the 20th century (fig. 7). The position of the oldest shelters of the Arsenali Vecchi at the foot of the Castle, right near that spot, and at the junction with the main basin of the port, might support such hypothesis. It is not known whether these *volti* were built in exactly the same place as the medieval shipyards, which should not necessarily be imagined as buildings but more probably as uncovered working spaces, albeit equipped. This was also the case for

6
Raffaele Monanni,
Descrizione topografica di Candia,
plan of Chania, detail, BNMVe,
Ms. It. VII, 889 (=7798).

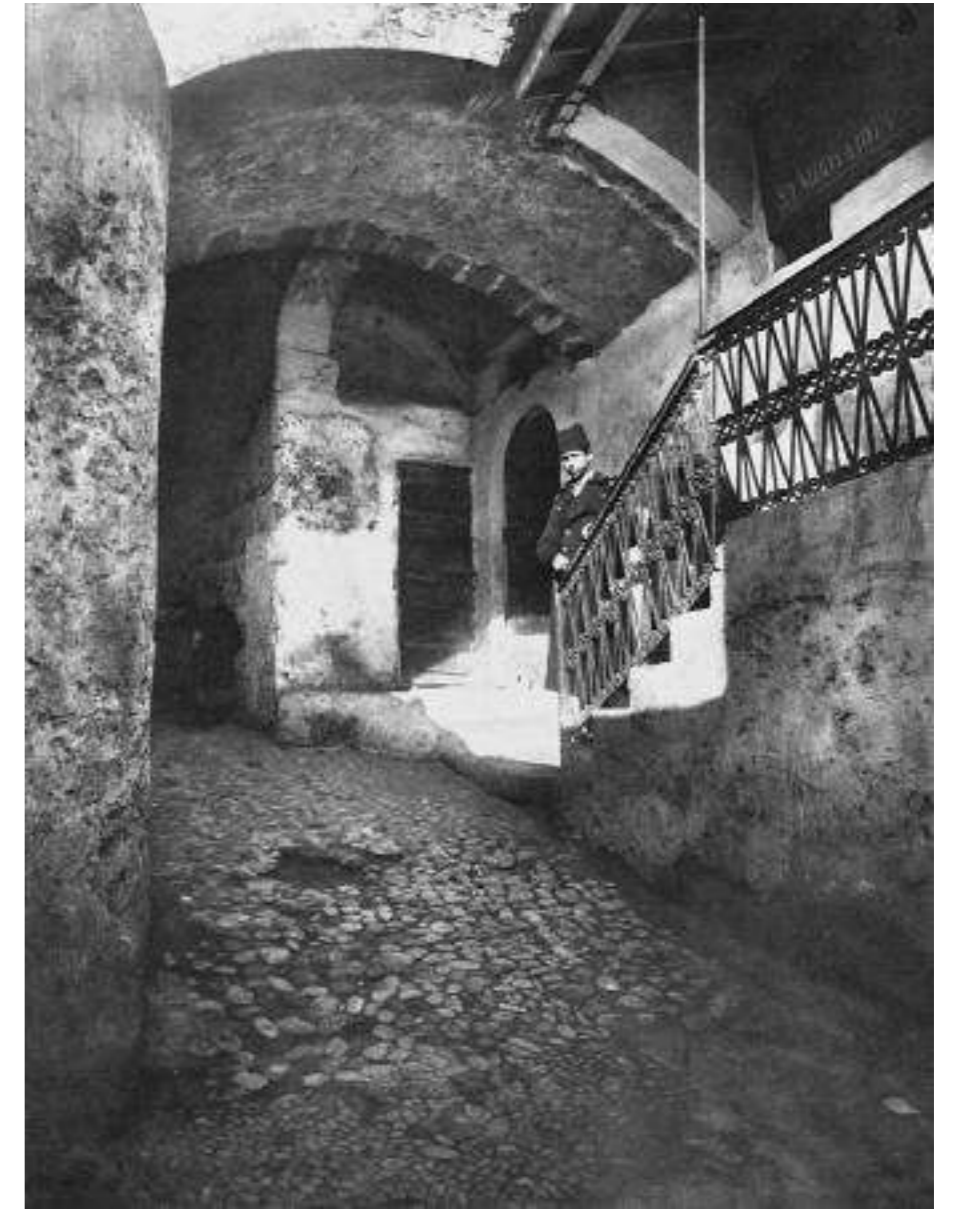
¹¹ Respectively: Gerola III, pp. 26-28; ibidem, pp. 80-81; Gerola II, pp. 159-162; ibidem, pp. 131-141. Cfr. M. Georgopoulou, *Venice's Mediterranean colonies: architecture and urbanism*, Cambridge 2001. Cfr. also E. Molteni, "Candia and Canea: the walls, the churches, the outer burghs", *The Greek World under Ottoman and Western domination, XV-XIX centuries*, New York-Athens, 2008, pp. 25-39.

¹² On the *Castello*, Gerola I.1, pp. 154-169.

¹³ R. Gertwagen, "The Venetian Port of Candia, Crete (1299-1363): Construction and Maintenance", *Mediterranean Cities: Historical Perspectives*, ed. by I. Malkin and R. L. Hohlfelder, London 1988, pp. 141-158: 147; 154 and note 62: there was an arsenal in the port of Chania since 1325; Gerola IV, p. 163: there was an arsenal in 1255.

¹⁴ Gerola I.1, pp. 163; 165-166, la quarta porta "chiaramente rappresentata nel disegno del Monanni ed in altri ancora, doveva essere presso le carceri in cima alla gradinata che da queste scende agli arsenali [vale a dire a ridosso del volto 17] ma non ne rimane ora più traccia" (clearly represented in Monanni's drawing and in others as well, it must have been near the prisons at the top of the steps that descend to the arsenals [that is, close to volto 17] though no trace of it now remains).

7.
The southern gateway
of the Castle seen from outside;
photo by Giuseppe Gerola,
private collection, Chania.
©Manolis Manoussakas collection



7

the Venetian Arsenal until the major renovation of the 14th century, by which it became the exclusive location for the *Stato da Màr's* shipbuilding.¹⁵

We do not know whether the resolution of 1467, which initiated the construction of the first *volti* at Chania, was carried out "celerrime" – as soon as possible –, as was its intention.¹⁶ The document does not even establish the number of shelters to be built but instead the number of boats to be housed; and the two do not necessarily coincide since, as we shall see, it is certain that there were *volti* under which two boats were kept. The vaulted shelters of 1467 could be the two that Domenico Cappello, the *provveditore in armata*, indicates as existing in his end-of-term report of 1521.¹⁷ But perhaps, as things often go, it is unlikely that the second of these two

¹⁵ E. Concina, "Venezia: arsenale, spazio urbano, spazio marittimo. Letà del primato e letà del confronto", *Arsenali e città nell'Occidente europeo*, edited by E. Concina, Firenze 1987, pp. 11-32: 16, but see also, E. Concina, *L'arsenale della Repubblica di Venezia*, Milano 2006 (2nd ed.) pp. 14-15; 30-33.

¹⁶ "fieri et fabricari faciunt quam celerrime locos et arsenatus in quibus tuto et secure conservari possint triremes illese: [...] Chanee pro duabus" cit. in H. Noiret, *Documents inédits pour servir à l'histoire de la domination vénitienne en Crète de 1380 à 1485, tirés des archives de Venise*, Paris 1892, p. 504; cfr. Gerola IV, p. 139, and note 1.

¹⁷ Reported in M. Sanudo, *Diarii*, vol. 29, col. 623, 1521, February "Etiam a la Cania è do volte".



8

8
Canea, plan of the town, ASVe,
Atlante Mormori, c. 66.

volti was not completed until around 1526, as Gerola believes.¹⁸

In 1526, the Senate passed a resolution regarding the three shipyards of Crete, deciding on the enlargement of the one at Candia (Heraklion) and the completion of work at Rethymon and Chania.¹⁹ The assignment states that in the Chania shipyard ‘the other [*volto*] that has already been started²⁰ should be higher than the existing one, an indication presupposing direct knowledge of the structures and therefore, even if it cannot be documented at the moment, derives from observations made on the spot by local magistrates or those with wider jurisdiction over the problems of the fleet and armaments. But the documents also testify to both *volti* being worked on at the time.

Those urging the Senate’s decision were the *savi agli ordini*, an office with an important role in decisions concerning the security and military management of the state, and one of them was Domenico Cappello, almost certainly the same author of the 1521 report.²¹ The exchanges of missives between the Senate, the duke of Candia – the first recipient of the government’s decisions²² – and the local regiments of Chania seem to indicate that an ancient edifice was being rebuilt at the time. The

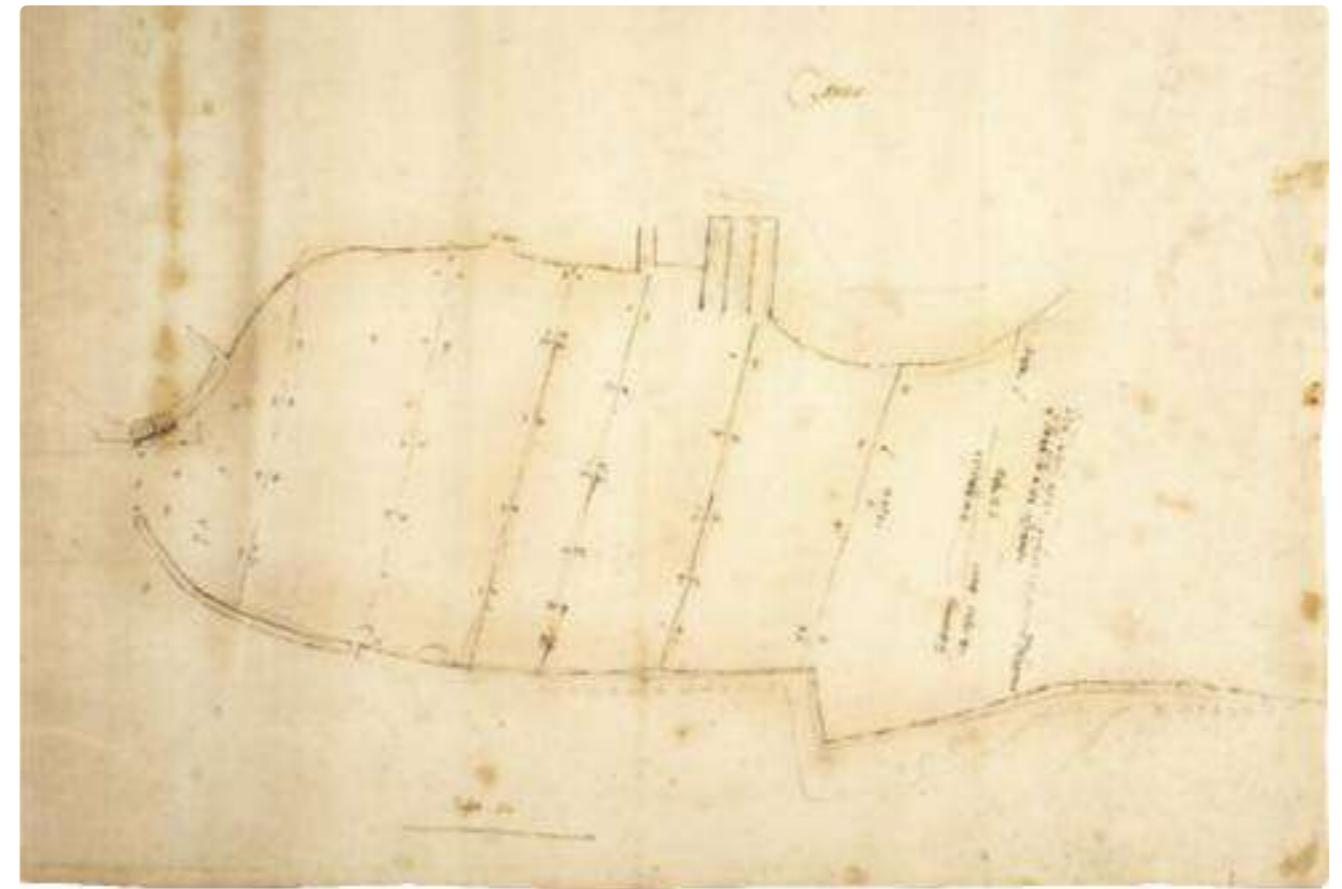
¹⁸ Gerola IV, p. 139 and note 4.

¹⁹ Mar Registri, reg. 21, c. 5v, 25.04.1526 “Volemo insuper che scriver debiate [voi duca di Candia] al Reziamento nostro della Canea che ultra il volto che de li è fatto [cioè finito] debbi immediate far compir l’altro che è già principiato facendolo far un poco più alto acciò che più securamente sotto quello di possino bruscar (sic) le galie et possiamo tenir de li due galie secure et ben conditionate.” (We urge you [Duke of Candia] to write to our Court of Chania so that, in addition to the finished one, the other must immediately be completed but making it a little higher so the galleys can shelter under it more securely and we can keep the two galleys safe and in good condition).

²⁰ “l’altro [volto] che è già principiato”.

²¹ M. Sanudo, Diarii, vol. 41, col. 226 (cfr. Gerola IV, p. 124) Savi agli ordini Domenico Cappello e Leonardo Emo.

²² ASVe, Duca di Candia b. 8, n. 3 c. 211v, 22.06.1526 (cfr. Gerola IV, p. 124) notification received of the Senate’s decisions.



9

9.
Depth measurements of Chania’s
port with annotations in Greek,
BNMVe, Carte topografiche e piante
di città e fortezze, lt. VI, 188
(=10039), tav. 13.

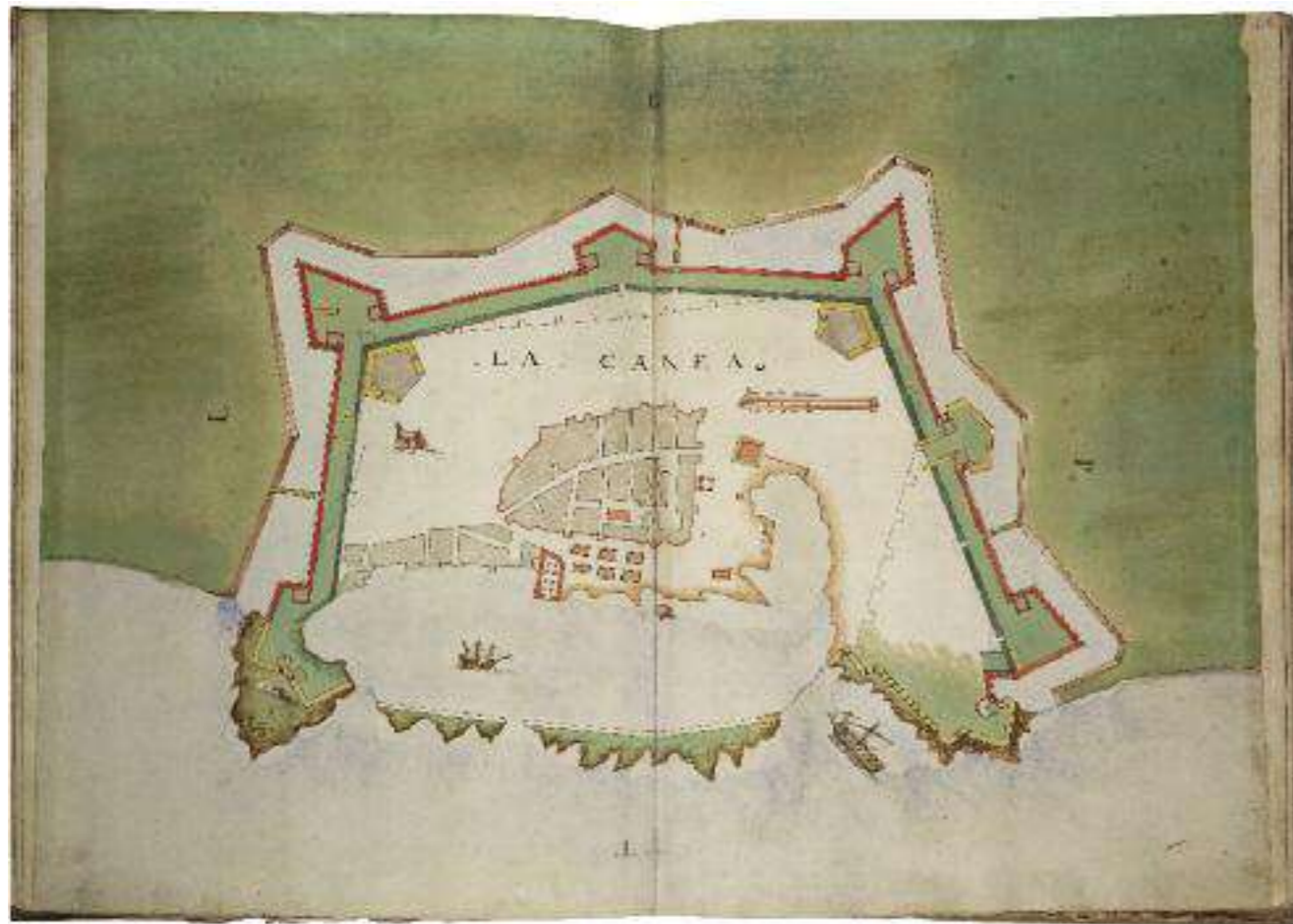
duke of Candia, who was coordinating the operations, conveyed the work estimate of the “*primi maistri di mureri et marangoni de la Cania*” (first masons and carpenters of Chania) who indicated, among the planned expenses, those “to raise the old arsenal”, “to cover the unroofed vault” and finally to “raise the columns of all the *volti*”.²³ Imagining possible delays and problems in the supply of the necessary timber (also a recurring difficulty), the duke of Candia suggested to the rector of Chania that the *volto* be covered in stone and offered to send the Admiral of Candia (Heraklion) together with drawings and measurements so that he could undertake the estimate for the new building on the model of the shipyards in the capital of the Kingdom of Crete.²⁴ The offer was probably not followed up, and in 1528 the work was still in progress.²⁵ Both *volti* were therefore affected by the work, and parts that had already been replaced several times over time were probably being rebuilt, since the shipyard depots, which were built of masonry but with a wooden roof, deteriorate rapidly. Even during the 16th century, documents indicate that shelters without roofs were being used and that it was necessary to restructure buildings that had been completed even just a few years before, especially the roofs, which were the central problem of the Arsenal throughout their history. It is not possible to establish whether the decision was made at this time to place the two *volti* under a single roof as appears in all the documents from the end of the 16th century and beyond (e.g. in the Mormori Atlas, fig. 8), since the roof was reconstructed several times over the course of the century.

We have little information on the decisions made between 1528 and 1568, but

²³ “per alzar l’arsenal vecchio”, “per coverzer el [volto] scoperto”, “alzare li pilastri de tutti do i volti” ASVe, Duca di Candia, b. 8, n. 3, c. 114, 29.06.1526, duca di Candia al Senato.

²⁴ ASVe, Duca di Candia, b. 8, n. 3, c. 114v, 03.07.1526, Duke of Candia to the regiment of Canea.

²⁵ Mar Registri 21, c. 119 (c. 138v), 18.12.1528 cfr. Gerola IV, p. 139.



10

a number of sources reiterate that only three *volti* existed in the Arsenale di Canea up to that date. It is difficult to establish whether the third dock was built from scratch or whether it was the result of the remodelling of the two older ones. The reports of the rectors Marcantonio Bernardo in 1536,²⁶ Leonardo Loredan in 1554,²⁷ and Daniele Venier in 1559²⁸ speak of three existing *volti*, and these three are also referred to in the proposal made in 1568 by Luca Michiel (1519-1596)²⁹ to realise other expansion projects presented in the past (but to no avail). The layout of the Arsenale in these years probably resembled that shown in the drawing of the sounding of the harbour of Chania, with the profile of three vaulted shelters extending far out over the waters of the harbour (fig. 9). The same position is recorded in one of the maps in the State Archives of Turin (fig. 10), while most of the others indicate itwo or three *volti* in a position further out, but – it would seem – including the last shelter built.³⁰ The sheet, undated, is preserved among the papers of Jacopo Contarini and was certainly made by local technicians (since it contains some annotations in Greek³¹) probably during excavation work on the port. Because of its precise

10.
La Canea, plan, ASTo, Architettura
Militare, vol. 5, fol. 145v-146.

²⁶ Collegio Relazioni b. 61, to. 2, cc. 166-167v, report presented 21.12.1536. Bernardo had rebuilt one of the three existing, not attached new *volti* as in Giapitsoglou, "Les arsenaux Vénitiens...", cit., p. 146.

²⁷ Collegio Relazioni b. 62, to. 1, cc. 41-46v, presented 25.09.1554, c. 45-45v "non essendo in quella città se non tre volti de galee sottili, uno delli quali ho fabbricato in mio tempo" – (there being in that city only three *volti* for narrow galleys, one of which I built in my time, that is, one of which I worked on during my mandate).

²⁸ Collegio Relazioni b. 62, to. 1, cc. 80-85.

²⁹ Mar Filze, f. 39, s.d. ma 1568 ca. memoir by Luca Michiel; ibidem, 19.03.1568: cfr. Appendix doc. 1 e doc. 2. Michiel was the son of Salvatore q. Luca of the San Gimignano family tree: ASVe, Miscellanea codici, Storia veneta, b. 21, Genealogie Barbaro, vol. 5, M-O, c. 99, but not all the information is correct. He will be *procuratore di San Marco*.

³⁰ Cfr. for example, the maps by Gonzaga 1599; Mormori; Oddi; Nani.

³¹ "Όλα τα νούμερα τ' απάνο ύνε βάθος της θάλασας και τα κάτω ήνε τζι άμος" (all numbers written above refer to the sea depth, the numbers beneath refer to the sand).

purpose, the drawing renders the outline of the eastern basin much clearer than the best-known maps of the 16th century, with a very jagged shoreline and perhaps even a drainage canal located slightly east of the *volti* of the shipyards.

In 1568, Luca Michiel, who had recently completed his term as rector of Chania,³² suggested building two and six new shelters respectively "on the left [West] side and part of the right [East] side of the three *volti* of that Arsenale"³³ with the favourable opinion of Giulio Savorgnan, who was in Crete at the time to survey the state of the island's defences, having had similar appointments in Dalmatia and Corfu.³⁴ It is possible that the military chief's opinion had some weight in the Senate's decision to approve and start building the extension, but the resolution to add eight new *volti* to the three existing ones, thus bringing the complex to a total number of eleven shelters, was not realised until many years later and amid many difficulties. In any case, 4,000 ducats were allocated for this purpose in 1568: the funds were assigned and managed by the *Provveditori alle Fortezze*, who were therefore responsible for the expenses and the sending of materials to Chania.³⁵ Michiel specifies that while new constructions on the western side required only the demolition of a public warehouse "di poco momento" (of little import), those on the eastern side involved demolishing private houses worth five thousand ducats, a respectable sum. Following the thread of these indications, it can be assumed that a new vaulted dock would be built to the east, since in 1570 Lorenzo da Mula, *provveditore generale* and *procuratore di San Marco*, stated that he had added a new *volto* "by knocking down those houses that prevented it"³⁶ and at the same time cavalier Marco Durento, in one of his petitions, stated that "in the next few months all the houses that I owned and was living in were knocked down and ruined for the construction of the arsenal".³⁷

1571-1577: new bays and delimiting the shipyard area. The Piazza

The construction of the new *volti* during the 1570s is certainly supported by two informed and influential individuals. The first was Luca Michiel himself, who returned to the Kingdom of Crete several times (between 1570-1572, and in 1575 and 1577 as *provveditore generale*), so much so that in 1580 he claimed to have spent almost twelve continuous years in Candia.³⁸ The other was Giacomo Foscarini (1523-1606) who arrived in Crete in 1574 with three appointments at the same time: *provveditore generale*, *inquisitore* and *sindico* (therefore with competence on war, economy and justice), positions he held until 1578.³⁹ His assignment was to put in place an ambitious general reform plan for the Kingdom undoubtedly also linked to the new political scenario in the Levant following the loss of Cyprus. Notwithstanding that Foscarini was not a man of war (even though he had replaced Sebastiano Venier as *capitano generale da Mar* in 1572 and negotiated a separate peace with the Ottoman Empire after Lepanto) and was a rather complex figure, mediating between innovation and loyalty to tradition (his involvement in Venice's most important public building sites in the 1580s is proof of such),⁴⁰ the defence of the Kingdom was one of the main objectives of the reform project. Foscarini radically reorganised the administration and management of the Arsenale⁴¹ and considered that for the control of the territory and possible relief to the armada it was necessary

³² ASVe, Segretario alle voci, Maggior Consiglio, registro 4, cc. 174v-175r.

³³ "dalla banda sinistra et parte dalla destra delli tre volti di quel Arsenal" (see Appendix, doc. 1).

³⁴ Mar Filze, f. 39, 19.03.1568, also Gerola IV, p. 140 note 3: (see Appendix, doc. 1).

³⁵ Mar Filze, f. 39, 19.03.1568: (see Appendix doc. 2).

³⁶ "con far butar giù quelle case che lo impedivano" PTM, b. 501, f. 729, 25.07.1570; cfr. BNMVe, Ms. It. VI. 156 (=6005), c. 212/130r *Spese per gli Arsenali di Canea* and c. 229/138v in 1570, 775 gold coins were sent).

³⁷ "li mesi prossimi passati mi furono gettate a terra et rovinate tutte le case ch'io mi attrovava possedere et habitare per la fabrica dell'arsenale" PTM, b. 501, f. 729, attached to the despatch of 25.07.1570.

³⁸ Collegio Relazioni, b. 78, Luca Michiel, *provveditore generale in Regno di Candia*, 1580, cc. 308-360: c310r-v.

³⁹ R. Zago, "Foscarini Giacomo", *Dizionario Biografico degli Italiani*, vol. 49, Roma 1997.

⁴⁰ M. Tafuri, *Venezia e il Rinascimento*, Torino 1985, pp. 250-278 e ad vocem.

⁴¹ See the despatches of Giacomo Foscarini 18.01.1577 (m.v. 1576), PTM, b. 505, f. 738; of Luca Michiel 05.11.1577 and of Giacomo Foscarini 08.10.1577, both in PTM, b. 507, f. 741; cfr. despatch of Angelo Barozzi, 21.01.1576 (m.v. =1578), PTM, b. 505, f. 738. On the administrative reorganisation, see also the report of Giandomenico Cicogna, read in the Senate 26.11.1586, ASVe, Collegio Relazioni, b. 83, n. 274, cc. nn. [c. 2].

to guarantee the presence of at least thirty galleys in Crete, a far greater number than in the past.⁴²

The history of the Arsenali Vecchi in these years is intricate: partly because gaps in the documents make it impossible to follow the actions of Michiel and Foscarini with precision,⁴³ but also because it was a period of considerable commitment in the building site and the rectors who succeeded one another in Chania carried on and completed works begun by their predecessors. We have sought to follow the events as they emerge from the documents in our possession so far, which will certainly be better specified when others are available that are not currently accessible or have yet to be identified.

In 1572, there were five *volti* (testified by the rector Bernardino Lippomano),⁴⁴ which were not new constructions, i.e. a part of the eight planned in 1568 but, following the thread of later documentation, they are still the three old ones and only two new ones, positioned, more likely, to the east of the older ones. At the end of 1573, there were seven *volti* described by the rector Piero Calbo, i.e. three old *arsenali* (those existing before 1568) each containing one galley, and another four each containing two; thus, the shipyards could accommodate a total of 11 galleys. The situation of the four dual shelters was as follows: of the two older ones (existing in 1572) one was covered with tiles, the other only with timber, i.e. simple planks; the two newer ones were only started by Calbo – one was uncovered and the other was not only open but not even the walling was entirely completed.⁴⁵ The number of bays was the same in 1576, as evidenced by the documents of the rector Angelo Barozzi, who repaired the beams and covered five *volti* with tiles, while two were still uncovered but already contained four galleys.⁴⁶ The new *volti* were 28 paces long and 10 wide, and were larger than the old ones.⁴⁷ The administrative reorganisation of the late 1570s established that the direction of the Arsenale was no longer the responsibility of the Admiral of the port but of a *patron all'arsenale*, as in Candia (Heraklion), and outlined a more precise system for expenses and supplies managed by ministers in charge of supervising and reporting on expenses and the use of materials in writing.

The construction of new warehouses to support the work was one of the consequences of this new organisation. It is possible to suppose that a few small warehouses were located south of the *volti*, right against the slopes of the Castle hill, or a little further east, beyond the road that, running down from the eastern side of the Castle today, turns along the surviving *volti* that follow its winding course. But it seems that in the 16th century the Arsenale was more closely connected to the Castle and the *Molo* (wharf). Most of the shipyard warehouses were in fact located to the west, towards the *Molo*, and rector Barozzi, again in this area, built several new warehouses: a total of five two-storey buildings all “longhi passa quindici et larghi tre e mezzo” (fifteen paces long and three and a half wide), built near two already existing ones and all of them joined to the arsenal. Two of the new warehouses contained materials mainly for the Arsenale; two were grain warehouses; the last one

⁴² For example, despatches in PTM b. 505, f. 738: 18.01.1577 (m.v. 1576) e 10.02.1577 (m.v. 1576). On the number of galleys: in 1532 it was considered necessary to have 10 (Alessandro Contarini, Collegio Relazioni b. 61, to. 2, cc. 134v-136) in 1581, the plan was to have 20 galleys in each shipyard at Candia and at Canea (29.04.1581, PTM, b. 509, f. 745). On strategic considerations on the connections between Candia, Cipro and Corfù cfr. also Girolamo Tagliapietra, Duke of Candia 1561, Collegio Relazioni, b. 62, to. 1, c. 119.

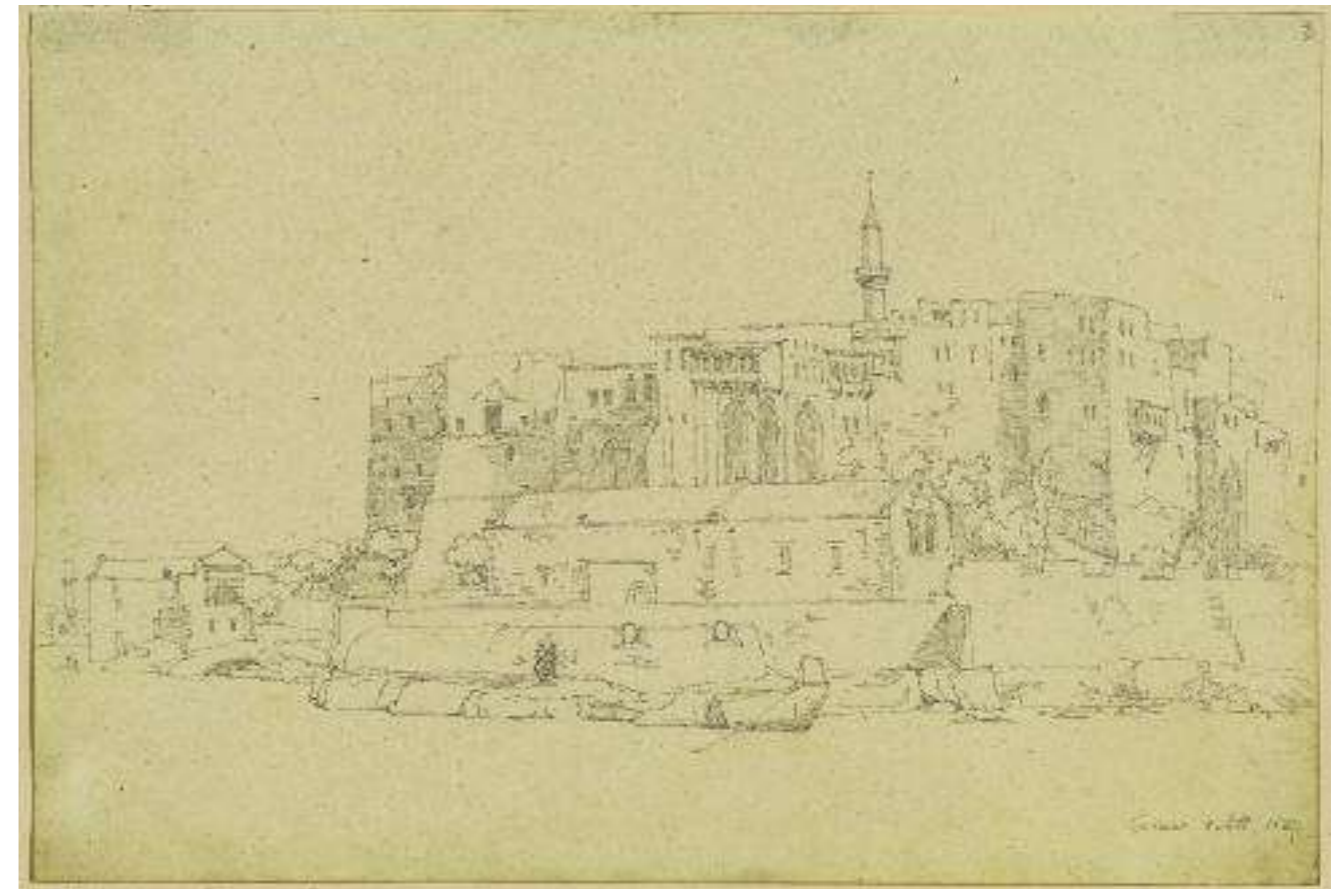
⁴³ The despatches of Michiel between 1573-1575 (PTM, bb. 502, 503) and those of Foscarini between 1575-1577 (in PTM, bb. 503, 504, 505, 506) are unavailable.

⁴⁴ “vi sono de fabricati fin'hora se non cinque” (only five *volti* have been built so far) Lippomano, Collegio Relazioni, b. 83, n. 273, cc. nn., 1572 (cfr. Gerola IV, p. 140 e n. 4; Andrianakis, “Gli arsenali veneziani...”, cit., p. 194).

⁴⁵ Despatch of Piero Calbo, rector of Canea, 23.01.1573 (=1574), PTM b. 502, f. 732.

⁴⁶ Despatch of Angelo Barozzi, 14.10.1576: “Li cinque volti dell'arsenale sono del tutto riparati et coperti [...] Restano g'altri due volti scoperti” (The five *volti* of the arsenal are completely repaired and covered [...] The other two *volti* remain uncovered), PTM, b. 505, f. 738. Relazione Barozzi, 1577 “nell'arsenal della Canea sono in esser sette volti, capaci per undeci galee” (in the Arsenale of Chania there are seven *volti*, suitable for eleven galleys), Collegio Relazioni, b. 62, to. 2, cc. 51v-61: 53v. Barozzi was appointed rector of Canea on 10.14.1574; he held the position from 18 April 1575 to 4 September 1577. Gerola IV, p. 140 believes that Barozzi had completed two of the five new bays started by Lippomano on the basis of the resolution of 1568.

⁴⁷ Cfr. Gerola IV, p. 140, but, better again, see to the article by Silvia Peressutti in this volume.



11.
Friedrich Maximilian Hessemer,
Canea, Frankfurt am Main, Städel
Museum Graphische Sammlung,
Nachlass Hessemer, n. 5043.

contained timber and artillery, materials that were also valuable for the city's entire defence system.⁴⁸ These warehouses were also close to the few other public warehouses known to exist in Canea,⁴⁹ so the main storage places for state resources also seem to have been arranged around the Arsenale: spaces that were in any case lacking because, in certain special circumstances, the cloisters of some of the city's churches, were closed off with wooden boards, for grain and wheat storage.⁵⁰

Another important aspect related to the administrative reform and expansion of the complex was the need for tighter surveillance and a clearer delimitation of the spaces pertaining to the Arsenal: “until now, everyone has been free to pass around the Arsenal and the galleys, and vassals have been free to climb inside it by day and night, with much danger and damage”.⁵¹ In the area of the warehouses towards the wharf and the *Piazza*, shortly before 1577, Barozzi built an entrance portal: “from the side towards the west, at the head of the warehouses, I had made a gateway above the street, and it would be good, if not before, at least when the two new *volti* are made, to make another one towards the east, and to open it with rakes on the side of the Castle”.⁵² The west portal is perhaps the one designed in 1829 by

⁴⁸ Angelo Barozzi, Collegio Relazioni, b. 62, to. 2, c. 53v. Benedetto Dolfin, rector, also describes outbuildings and warehouses, 1598, Collegio Relazioni, b. 83, n. 6 (275), cc. nn.

⁴⁹ In general, on the public warehouses of Canea, Gerola III, pp. 111-112.

⁵⁰ PTM, b. 501, f. 730, 12 May 1571: “non havendo commodità de logar tanta quantità di formenti habbiamo per necessità serrati li in claustris de due chiese con le tavole venute di ordine di Vostra Serenità li giorni passati et habbiamo scaricato detti formenti in tal luochò” (not having a place to store such a large quantity of supplies we have, out of necessity, closed off the cloisters of two churches with the boards coming by order of Your Serenity the past few days and have unloaded the grain there).

⁵¹ “fin'hora è stato in libertà ad ogn'uno il passar intorno all'arsenal et alle galie, et vasselli li metter scala in esso di giorno et di notte, con molto pericolo et danno”, Angelo Barozzi, Collegio Relazioni, b. 62, to. 2, c. 53.

⁵² “dalla banda verso ponente, in testa alli magazeni, havevo fatto un porton sopra la strada, che saria ben se non prima, almeno quando saranno fatti li doi volti nuovi, farne un altro di ver levante, et stropar con rastrelli dalla parte del Castello”, *Ibidem* c. 54r/v.

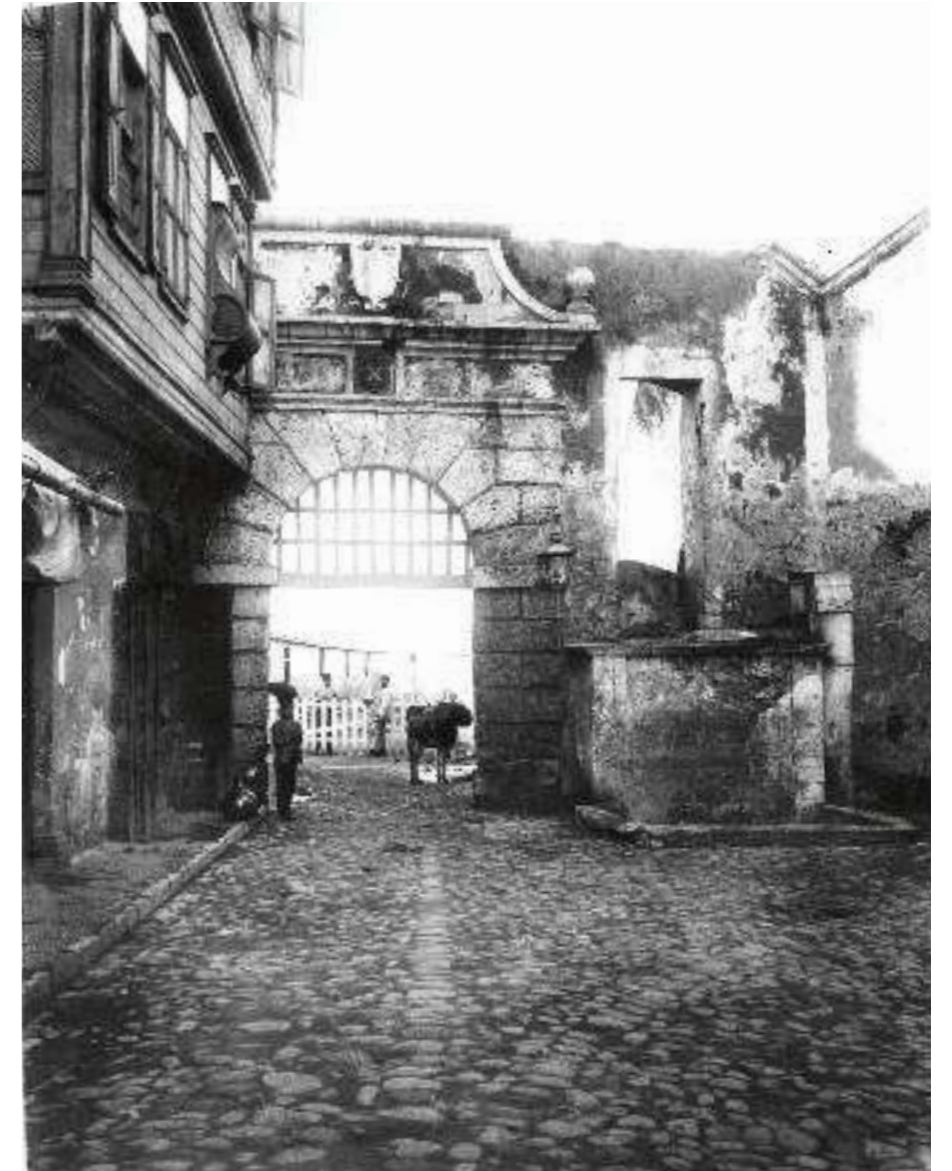


12

12.
Aymar de La Baume Pluvinel,
*La Canée, le port, côté des voûtes
véniennes*, detail, photo album gift
of the author in 1890, Paris, BnF,
Société de Géographié.

13.
Friedrich Maximilian Hessemer,
Canea, Frankfurt am Main, Städel
Museum Graphische Sammlung,
Nachlass Hessemer, n. 5042.

14.
Inshore portal of the *Arsenali Vecchi*,
photo Giuseppe Gerola, Venezia,
Istituto Veneto di Scienze, Lettere
ed Arti, Fondo Giuseppe Gerola,
inv. 292. ©Istituto Veneto
di Scienze, Lettere ed Arti.



14

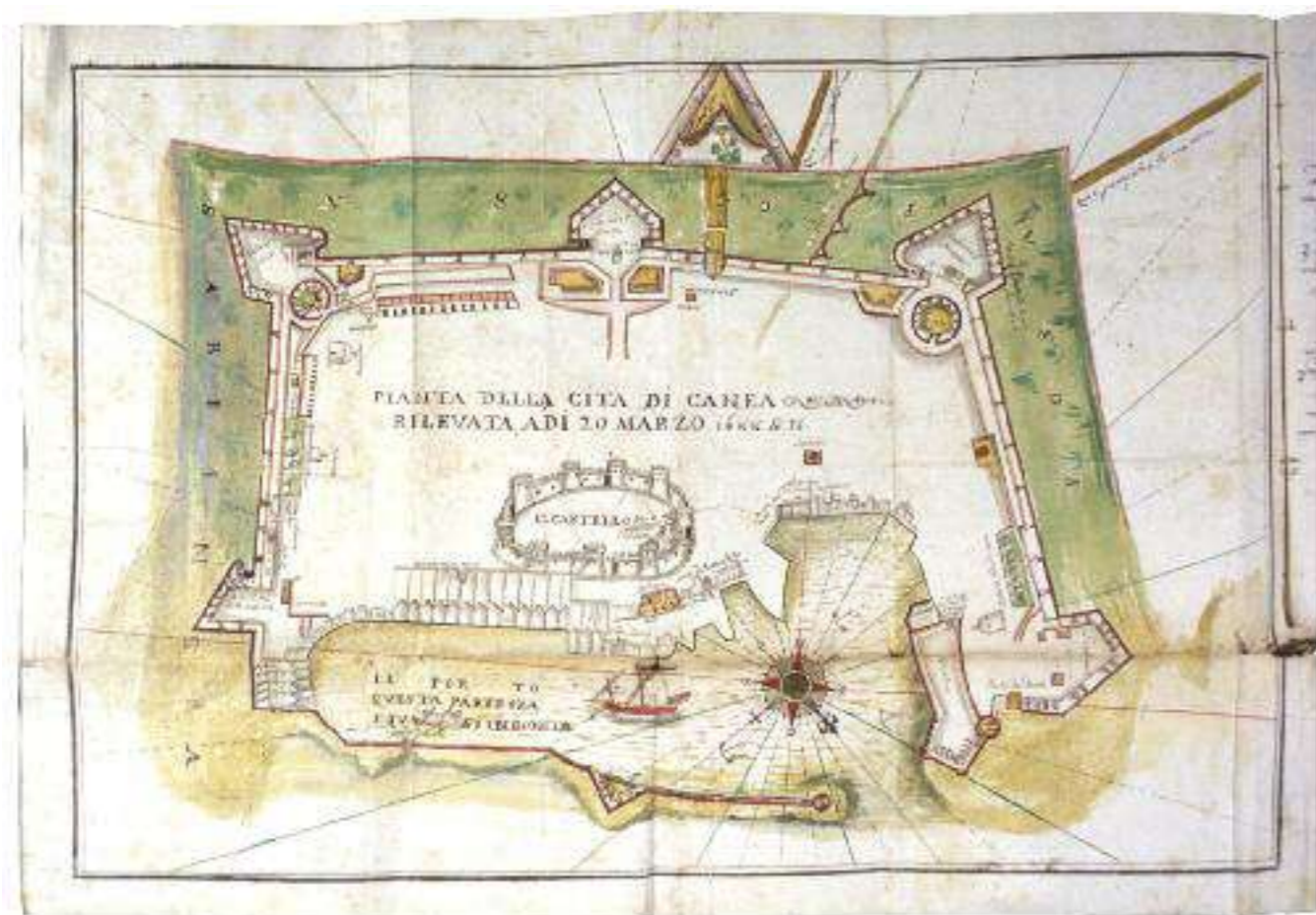


13

Friedrich Maximilian Hessemer, on the street next to the large building with an attractive mullioned window on the upper floor just below the roof (but on which there is no precise information, except that it probably still existed at the end of the 19th century (figs. 11-13).⁵³ On the other hand, it is not possible to know whether the entrance to the east that Barozzi mentions is the one whose traces remain on the road descending to the east from the Castle and which still existed at the time of Gerola's surveys in the very early 20th century (fig. 14). The portal, which had certainly been altered over the centuries, was already damaged at that time, and the coats of arms of the superintendents who had overseen its construction were illegible.⁵⁴ Due to

⁵³ Gerola refers to this building on several occasions: Trento, Fondazione Biblioteca San Bernardino, Archivio Gerola, 3.1.3.2 "l'avvolto in direzione da E ad O sotto al Konak [the palace of Venetian and then Ottoman administration, located in the Castle] con porta da Est recante il leone con stemma del doge Gritti [corrected to Grimani] conservato tutt'ora, gli stemmi abrasi dei magistrati in numero di quattro (perduti) e al di sotto l'epigrafe di Nicolò Donato del 1597 (pure conservata). Che se questo era un edificio annesso forse agli arsenali (recentemente prigione) altri saranno certo stati dei depositi e magazzini, altri delle prigioni realmente"; Gerola III, p. 112: "tra il palazzo [i.e. the Konak in the Castle] e gli arsenali [was] un avvolto che fu demolito pochi anni orsono mentre serviva allora di prigione: sopra la porta che era a oriente trovavasi un leone di S. Marco (tutt'ora conservato al Museo) e quattro stemmi scalpellati andati perduti nonché l'epigrafe ricordante come quel magazzino fosse stato eretto nel 1597 per le munizioni dell'Arsenale". Inoltre Gerola IV, *Iscrizioni e stemmi*, p. 228, nn. 190-194; p. 343 n. 12; p. 178 n. 29.

⁵⁴ Gerola IV, p. 231, nn. 214-215.



15

its architectural structure and dimensions, however, this could well have been an entrance to the entire complex, though it seems difficult to believe that it was built before being incorporated into the *volto* already in that position, built, as we shall see, by Lando and Cicogna between 1581-1583. In any case, it seems that the main entrance to the shipyards is the one oriented towards the commercial heart of the city. The *Molo*, in fact, is not only a harbour square for loading and unloading, but also the first section of a continuous landing system that, skirting the southern basin of the port, passing by the church of San Nicolò, arrives at the main square located west of the Castle, just outside its medieval walls. A layout that can also be very clearly read in later maps of the city (fig. 15). It would therefore be very important to better define the transformations of the workshops in the area along the harbour, between the Arsenali Vecchi and the present-day Hasan Pasha (Küçük Hasan) Mosque, which is particularly relevant for the connections to the liveliest part of the city from an economic and social point of view.

1577-1593: projects and reality. The eastern suburbs

"It would be good if, as was approved in 1581, in the city of Chania, in addition to the eight *volti* that were in existence there, another seven should be built, which are currently being worked on".⁵⁵ This *parte* of the Senate, intending to increase the number of *volti* to 15, is a crucial step in understanding how new buildings were added and in what order, although the exact date is unknown and the original

15.
Pianta della città di Canea rilevata a di 20 marzo 1688, Plan of the city of Chania surveyed on 20 March 1688 ASVe, Senato, Provv. da terra e da mar (P.T.M.), b. 592, f. 889.

⁵⁵ "Saria bene che, si come è sta deliberato del 1581, che nella città della Canea oltre li otto volti che vi s'attrovavano in essere, se ne dovessero fabricar altri sette, nelli quali al presente si lavora": despatch of Alvise Grimani nominated for Superintendent General, 31.03.1583, PTM, b. 510, f. 748. According to Andrianakis, "Gli arsenali veneziani...", cit., p. 194 in 1580 there were 16 finished *volti* of the 17 planned. According to Gerola IV, p. 140, in 1580 there were 11 *volti* and a further eight new bays were planned (ibidem pp. 140-141).

document has not yet been traced. The provision had been pondered over for some time. It seems to have been solicited in the autumn of 1580 by Giovanni Mocenigo (captain of Candia between 1580-1582 and then twice *provveditore generale* in the Kingdom, the second time as inquisitor)⁵⁶ and is based on a request for detailed information sent from Venice in April 1581 and arriving in Candia at the end of June.⁵⁷ Of the two replies we know, the first, from Giovanni Mocenigo himself, is actually rather vague;⁵⁸ the other, much more articulate, was sent on 8 August 1581 by Pietro Lando, rector of Chania, who was in the city from at least 1579 until the beginning of 1582.⁵⁹ Lando's proposal was accompanied by a drawing, now lost, but which must have been very precise, showing exactly where the existing buildings stood, how the eight new *volti* towards the east would be inserted – as a continuation of the buildings recently ordered by Giacomo Foscarini – as well as where another four or five bays would be built on the opposite side.⁶⁰ But evidently the Senate decided otherwise, i.e. to build only seven new *volti*, all most likely to the east.

The Senate's decision, however, also seems to be linked to another decisive factor in the history of the Arsenali Vecchi that is in any case linked to Lando's work, a turning point whose definition as 'historic' would be no exaggeration. Indeed, the Senate had learned before April 1581 that Lando, on his own initiative, and apparently without giving notice to Venice, had begun to radically modify the structure of the buildings by replacing the truss roofs with a masonry barrel vault.⁶¹ Lando, in short, had employed the same system used in the shipyards of Heraklion which – for reasons that escape us – was not used in Chania until that time. The Senate seemed to willingly accept this novelty (which had also been proposed in the past, in 1526 and 1559⁶²) and therefore, perhaps reassured by the many advantages it presented, embarked on a fairly major new building campaign. The vaulted stone roof with a *cocciopesto* plaster finish, i.e. in "terrazzo" or "lastricato"⁶³ did in fact resolve quite a few problems. First of all, it ensured an unmatched durability compared to the previous solution; moreover, materials were easily available on site (the need to send them from Venice hence reduced) and indeed materials from other sites in the city could be used, for example those of the fortifications. Production costs dropped; this was assured by the local workers consulted by Lando (and perhaps it was also a more familiar technique for Cretan workers) and finally, taken altogether, the construction times of the vaults could also be much faster.⁶⁴

In order to understand the impact of the 1581 measure on existing and future buildings, however, we need to take a step back, to the years between 1577 and 1579, a period in which the situation was particularly intricate: Giacomo Foscarini did in fact make some important decisions, but which are not clearly expressed in the documentation and are difficult to relate to the material situation of the buildings.

⁵⁶ The despatch of 26.09.1580 of Nicolò Salomono and Giovanni Mocenigo, undelivered, is cited in 29.04.1581, ducale al duca, Capitano e consiglieri di Candia, PTM, b. 509, f. 745. For the appointments, see the Mocenigo reports in Collegio Relazioni, b. 79, fasc. cc. 1-100 presented 27.04.1589 (cfr. S. G. Spanakes, *Μνημεία κρητικής ιστορίας*, Ηράκλειο 1940-1976, 4. voll., to I) and that of 1593 *ibidem*, fasc. cc. 1-73.

⁵⁷ The ducale with the date 29.04.1581, in PTM, b. 509, f. 745 arrived in Crete on 27 June. cfr. Appendix, doc. 4.

⁵⁸ 23.07.1581 PTM, b. 509, f. 746.

⁵⁹ It is difficult to verify the details of Lando's role, the register of the Segretario alle voci for the years 1578-1586 is missing *ab antiquo*. His first known despatch is from 15.09.1579, PTM, b. 508, f. 743.

⁶⁰ 08.08.1581, PTM, b. 509, f. 746, cfr. Appendix, doc. 5.

⁶¹ 22.04.1581 in Senato Mar Registri, reg. 45, c. 34r-v: Appendix doc. 3. The Senate also imposed more restrictive rules for the use of the allocated funds (no longer in the hands of the *provveditori alle fortezze*): Giovanni Mocenigo would have to account for the funds used directly at the end of his term of office.

⁶² Cfr. above, and note 24; Daniele Venier, rector of Canea, 1559 Collegio Relazioni, b. 62, to. 1, cc. 80-85: 80 "La spesa saria, come più volte mi ho informato, et anco di ordine di Vostra Serenità, intorno cecchini 150 per volto facendoli in volto [e] fabricando, come fa la Serenità Vostra la fortezza, per angaria".

⁶³ "vi sono sedeci volti undeci coperti di terrazzo, et li cinque di coppi" (Benedetto Dolfin, report 1598, Collegio Relazioni, b. 83, n. 275, c. 3v); "lastricati tutti gli volti cioè sei et tre quarti fatti al mio tempo" relazione Cicogna, 1586, Collegio Relazioni, b. 83, n. 274, cc. nn. (cfr. infra). 'Terrazzo' and 'lastricato' are probably used as synonyms for paving, commonly obtained in Venice with a mixture of lime, fine fragments of bricks or tiles and possibly tiny stones, used both indoors and outside: V. Cacciatori, "I pavimenti alla veneziana. Storia ed evoluzione artistica", in *I pavimenti alla veneziana*, edited by L. Lazzarini, Venezia 2009, pp. 11-51: 25-26.

⁶⁴ See the article by Emmanuil Manoutsoglou in this volume for the identification of the building materials, their provenance from the ancient quarries around Chania and their spatial distribution within the masonry of the Arsenals.

Between the end of 1576 and the early months of the following year, various sources state that Foscarini decreed the construction of two dual-vaulted docks (for four galleys).⁶⁵ However, in February 1577, Foscarini also spoke of the possibility of adding four more (“here I have repeatedly spoken with the presence and advice of these most distinguished rectors of the place where in this arsenal four more *volti* could be added, and if, due to the difficulty of doing so, there are many difficulties, I shall endeavour to do so...”).⁶⁶ It is nonetheless a hypothesis, which could either include the two already decreed or indicate four more, in addition to the two already in place. The first solution seems more realistic as a few years later, in May 1580, Pietro Lando declared that he had to build four *volti* ordered by Foscarini (“make four large *volti* in the shipyard, or eight small ones, following the order of the most excellent Foscarini, to accommodate eight galleys in addition to those that are already there”).⁶⁷ The same situation is also reported in Luca Michiel’s report read at the Senate on 13 August 1580.⁶⁸ Michiel speaks of 11 *volti* as existing, which was not the case, as contemporary documents show: they are therefore, more likely, the seven *volti* attested in 1577 (by Barozzi) plus the four ordered by Foscarini. In other words, Michiel means by ‘existing’ *volti* both those materially constructed and those only deliberated but already considered as completed.

From the work Lando undertook, it appears that the Arsenale in 1581 had a total of eight vaulted shelters, three of which were in the process of being built: “I have completed five of them [...] the other three that remain, which were for the galleys [three dual-vaulted docks], that is, the *volto* that was found to be rotten, and another two that were barely begun, which only had the pillars made, two and three feet high from the ground”.⁶⁹ The older ones, which are only “accomodati”, or repaired, are probably the five already attested in 1572 by Lippomano, and those in progress are the two begun by his predecessors (Calbo, 1573; Barozzi 1576), plus a third that may have been started by him, and which would also be the first of the first segment of the Foscarini *volti*: eight *volti* in all. In this document, Lando states that Foscarini also decreed two further new *volti* that he himself had only begun a few days before and therefore does not include in the number of existing docks.⁷⁰

But, at the same time, Lando makes another statement that is apparently disconcerting: “et finiti che siano questi saranno in tutto quindese per quindese galie”, namely, when the work is finished there will be 15 *volti* for 15 galleys in the Arsenal. The same statement can also be found in a communication by Giovan Maria Martingengo shortly afterwards (December 1581): the shipyards “they will be fifteen in all including the already existing old ones”.⁷¹ This leap forward can be interpreted in at least two ways. Lando perhaps intends to say that, once the first two Foscarini *volti* were finished, there would be a total of three one-galley docks and six double ones

⁶⁵ Giacomo Foscarini “vado dissegnando che se ne possano anco far doi altri di più qua” (I’m working on the plan that two other *volti* can be built further along), 18.01.1577 (m.v. 1576) PTM, b. 505, f. 738; Angelo Barozzi “Sua Signoria Illustrissima ha terminato [stabilito, ordinato] di aggiunger altri dui *volti* per quatro galee a quest’arsenale dalla parte verso levante” (has ordered the building of another two *volti* for four galleys in this shipyard on the eastern side), 21.01.1577 (m.v. 1576) PTM, b. 505, f. 738. Foscarini’s report at the end of his term instead states: “L’Arsenale ha fra coperti et discoperti *volti* per tenir galere undeci, ho ordinato che ne siano fatti per altre quattro galere” BNM, (The Arsenale has both covered and uncovered *volti* to house eleven galleys, I have ordered them to be made for another four galleys), Ms. It. VII, 631 a (=7476), c. 3r.

⁶⁶ “qua ho più volte discorso con la presentia et consiglio di questi Clarissimi rettori del loco dove in quest’arsenale si potessero aggiunger altri quattro *volti* et se ben per la strettizza vi si trovano molte difficoltà con tutto cio mi sforzierò...” 10.02.1577 (m.v. 1576), PTM b. 505, f. 738 despatch of Giacomo Foscarini. Later, 05.11.1577, the despatch of Luca Michiel “si posson attaccare ai *volti* esistenti altri due” PTM, b. 507, f. 741.

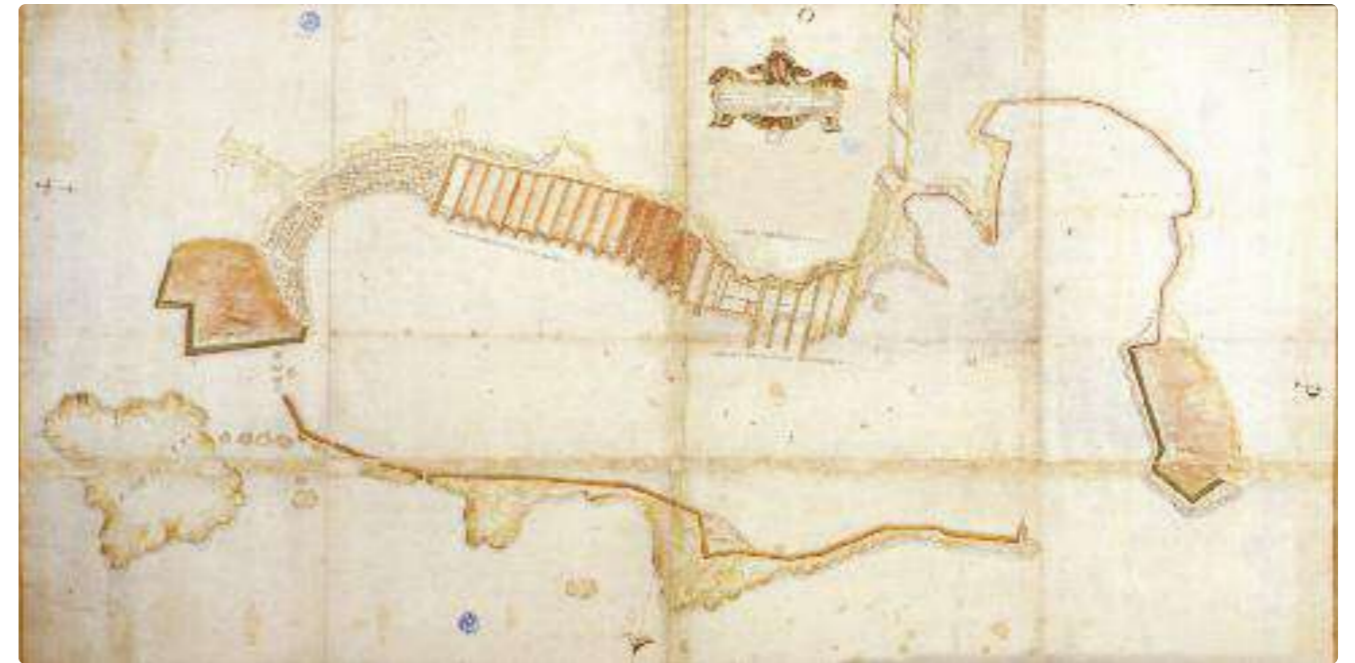
⁶⁷ “far quattro *volti* grandi nell’arsenal, ovvero otto piccoli [our italics] secondo l’ordine dell’eccellentissimo Foscarini, per accomodar otto galee oltra quelli che vi sono fatti” 23.05.1580, PTM, b. 508, f. 744, despatch of Piero Lando.

⁶⁸ Collegio Relazioni, b. 78, report by Luca Michiel, c. 333v. “Alla Canea si farebbero anche tre et quattro più *volti* degli undeci che sono in quello Arsenale con gran facilità et poca spesa” (At Chania, another three or four *volti* to add to the eleven already in the Arsenale could also be made with great ease and little expense).

⁶⁹ “ne ho accomodati cinque [...] li altri tre che restano, che erano per sie galie [tre *volti* doppi], cioè il *volto* che havea discoperto per esser marzido, et altri doi che a pena erano incominciati a li quali erano fatti solamente i pilastri alti da terra doi e tre piedi” 08.08.1581 cfr. Appendix doc. 5.

⁷⁰ Ibidem “li altri, che sono quelli che ordinato l’eccellentissimo Proveditor general Foscarini, che sono altri due *volti* per quattro galie, li quali ho incominciati ancora essi non sono molti giorni”.

⁷¹ “saranno al numero di quindici in tutto compresi li vecchi che ne sono in essere”, Giovan Maria Martingengo, 24.12.1581, PTM, b. 509, f. 746.



16. Plan of the port and arsenals of Chania ('Grimani project'), BMCVe, Cl. XLIV n. 480 (formerly Cartografia, cartella 28, dis. 4).

in which precisely 15 galleys could be housed. But Lando – it is not clear for what reason – explicitly speaks of *volti* for a single galley, which implies that Lando then had in mind to build single docks instead of double ones, as he had mentioned in the despatch of May 1580.⁷²

This hypothesis could be supported by the fact that at some time later, Foscarini accused Lando of having “greatly altered the shape [of the existing buildings] and that since the old ones were capable of holding XII galleys he had reduced them in size, making them house XI”.⁷³

The accusation is rather unclear, given that Lando cannot have altered all the existing *volti*, and it certainly comes after Foscarini’s return to Venice. What is certain is that the vertical walls would have to be able to support the vaults, so would probably have to be more solid and deeper than those built previously. It was surely because of this that it was not decided to replace the tile roofs of the five ‘old’ *volti*, and perhaps the thickness of the walls would also have created problems in managing the space available for the new buildings, if calculated according to previous measurements. However, it is certain that Lando, even if he had had these changes in mind, would not have implemented them, at least not in such a radical way. The fact remains that on his return from Canea, Lando would be put on trial and his accounts very carefully scrutinised between 1584-1585. The documentation of the trial seems incomplete at the moment, but it contains many attestations in his defence.⁷⁴

Returning to the question of the 15 *volti*, there is another possible interpretation: namely that Lando means the 15 *volti* simply by counting the existing eight and the new seven just approved by the Senate. It is very likely that his August despatch arrived in Venice too late to be considered for the new building campaign. In fact, only a month later, in September 1581, Lando declared that he had 10 *volti* to build, which can only be the three already underway and the seven new ones ordered by the Senate, since at that time only five *volti* could be used, i.e. the oldest ones restored to good order.⁷⁵

⁷² Cfr. supra nota 60.

⁷³ “grandemente alterato la forma [degli edifici esistenti] et che si come li vecchi erano capaci di XII galere così egli li habbi ristretti per farli in volto al n° di XI”, BMCVe Wcovic Lazzari 26, c. 11. Cfr. Gerola IV, p. 140 nota 11: according to Gerola datable to 1580.

⁷⁴ ASVe, Cariche da Mar, Processi, b. 5.

⁷⁵ 23.09.1581, PTM, b. 509, f. 746 “li *volti* di questo arsenal che sono cinque solamente buoni [...] e havendo daffar diece *volti* non posso spender manco de mille ducatj per uno” (only five *volti* of this arsenal are any good...and having to build ten *volti* I cannot spend a thousand ducats on just one).



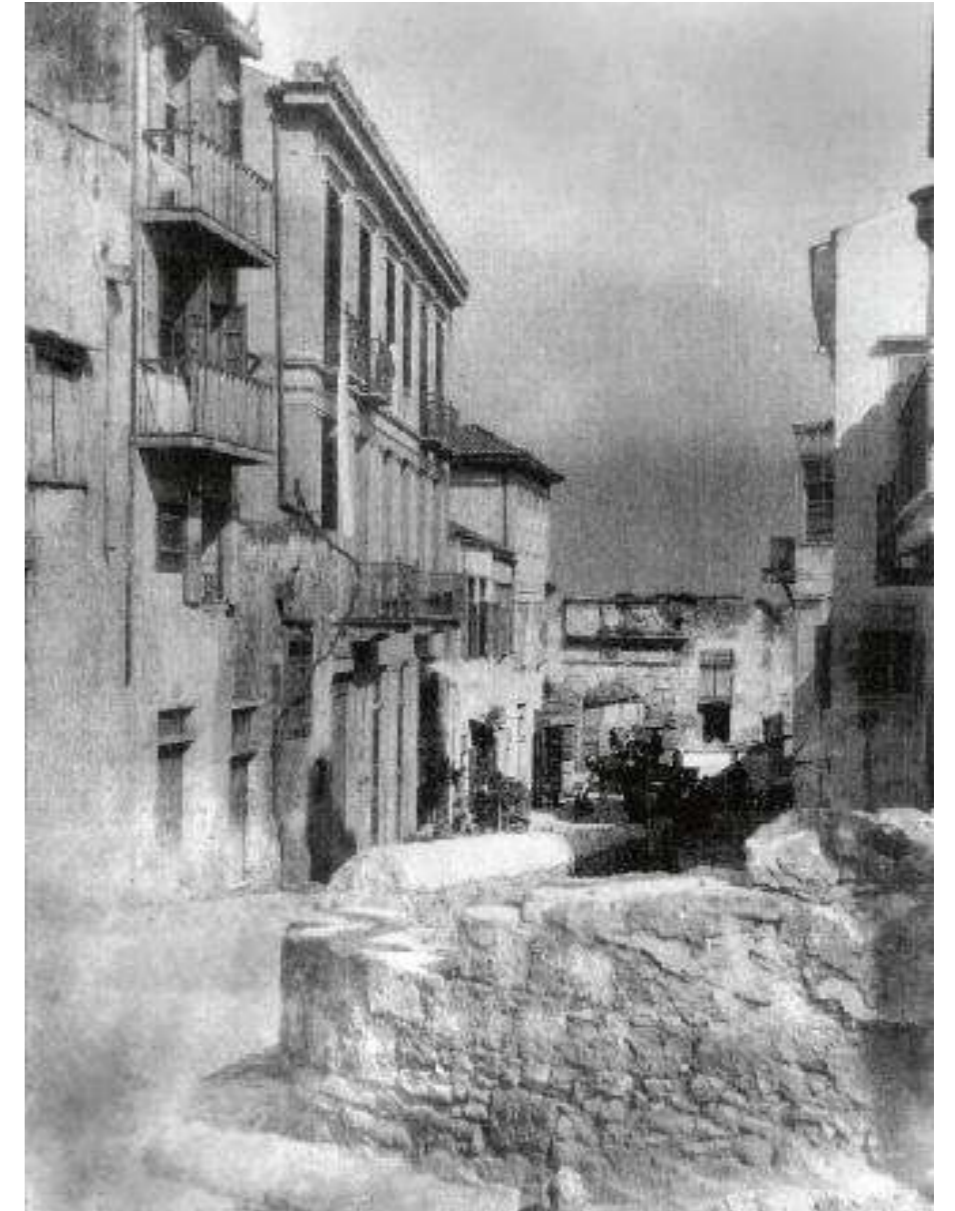
17.
Chania, East gate of the Castle,
photo Giuseppe Gerola c. 1902,
Venice, Istituto Veneto di Scienze,
Lettere ed Arti Fondo Giuseppe
Gerola, INV, 201. ©Istituto Veneto di
Scienze, Lettere ed Arti

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Are we all clear, then? No, because another problem immediately arises: the fact that a month later, in November 1581, the Senate ordered Lando to “complete the three that are presently in your hands and, once you have done them, to immediately start making the other four that follow, ordered by our most beloved nobleman Giacomo Foscarini Kavalier procurator”.⁷⁶ In other words, not only was the Senate silent on the resolution for the new vaulted docks, but they intended the four Foscarini *volti* as additional buildings to the existing eight, while at least the first Foscarini *volto* was part of it and had already been started by Lando. It may seem a slight discrepancy but one that well represents the misunderstandings that were wont to arise in the toing and froing of information and documents between Crete and Venice. On the basis of all these considerations, and of the documents we know so far, we can in any case be fairly certain that at the end of 1581 there were only eight *volti*, the last of which within an extension plan by Foscarini that envisaged

⁷⁶ “compir con ridur in perfetto termine li tre, che vi sono al presente per le mani, et speditovi de quelli metervi poi subito a fabricar li altri quattro confinanti che seguono, ordinati già dal diletissimo nobil nostro Giacomo Foscarini Kavalier procurator” 03.11.1581 Mar Registri, reg. 45, c. 83r.

18.
The ramp conducting from
the eastern gate of the Castle,
to the gate of the Arsenal,
early XIX century (?).
©Manolis Manossakas collection



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four *volti* planned in two stages (2 + 2) to reach a total of 11, and that the Senate – with reference to the existing situation and not to the deliberations made in the past – included this extension in the *parte* of 1581 that brought the shipyard to 15 bays.

By the end of his term of office, Lando had completed the three most recent *volti*, which had been practically dismantled and rebuilt with the new technique of a masonry barrel-vaulted roof,⁷⁷ and prepared for the fourth, to be completed by Giandomenico Cicogna, the new rector who arrived in Canea between the summer and autumn of 1582 and who would oversee the construction until 1585/6.⁷⁸

At this point, the work seemed to be proceeding much more rapidly, thanks to locally available materials and a better engagement of local labourers. Not entirely, however, because wooden structures were still needed to reinforce the *volti* and

⁷⁷ 04.01.1582 (m.v. 1581), despatch of Lando, PTM, b. 509, f. 746 “sono andati tutti ne la fabrica di questo arsenal fra il reparar et acconciar i cinque volti vecchi et il fabricar i diece novi che si fanno in volto di muro” (the money received has all gone into the building of this arsenal between repair and fixing the five old *volti* and building the ten new ones with masonry roofs).

⁷⁸ His despatches of 1582-1583 are in PTM, b. 510, ff. 747-748. Cfr. 30.07.1583 PTM, b. 510, f. 748, “in tempo mio sono stati fatti sette volti et sei spalle” (during my time, seven *volti* and six abutments were made).

therefore Cicogna recalls “the major need that was felt for beams to make the relieving arches [i.e. not fully-centred arches] of the shelters of this shipyard”.⁷⁹ However, between 1582-1583, Cicogna was able to complete at least two more bays and hence optimism prevailed. The captain of Canea wrote in the spring of 1583 that “ten of them are in the process of being completely covered, and in four months’ time, with the help of our Lord, all the others will be finished so that the *volti* will be covered for fifteen galleys”.⁸⁰ This was reaffirmed by the new *provveditore* Alvise Grimani, who arrived in Canea on 21 April 1583⁸¹ (“I certainly hope that by the month of August all 15 *volti* will be covered”⁸²), even if the deadline for completion was then postponed from month to month. In August 1583, Cicogna stated that during his term of office he had completed seven *volti* and six abutments, more precisely “sei et tre quarti [six and three quarters] fatti al mio tempo, et tre e un quarto sotto il reggimento del Chiarissimo Signor Pietro Lando”⁸³: in all, then, ten *volti*, bringing the shipyard to the 15 stipulated in the 1581 resolution.

The situation of the existing buildings did not change until the end of the 1580s,⁸⁴ but already in 1585, the *provveditore generale* Alvise Grimani stated in his final report that, in addition to the 15 finished vaulted docks, there were two that lacked only the roofing (“there are fifteen completed *volti* at Canea, and two with the abutments, and all that is missing is to construct the vaults”) and “there is also room to make another five”.⁸⁵ The superintendent Grimani, among his various tasks, in fact also had the task of planning new *volti* in Candia, Canea and Retimo. His proposal for Canea is also documented by a drawing, identified with the family coat-of-arms, which we could call the ‘Grimani project’ (fig. 16) and that represents the most accomplished ‘graphic text’ on the construction site of the Arsenali Vecchi to date.⁸⁶ Existing and “finished” *volti* are indicated in red, while those in yellow are indicated as “to be done”. The situation outlined seems to take up ideas already put forward by Pietro Lando in 1581, and envisages emplacing new *volti* both to the east and west of the existing ones. In particular, to the west, towards the *Molo*, he proposed inserting not only a *volto* connected to the oldest ones (*volto* 17, which would later be realised), but also a series of five new vaulted docks situated towards the *Piazza* beyond the warehouses built by Barozzi. The limited space at the foot of the Castle hill would have required laying part of the structures in the water, but this would probably not have been a serious problem considering that even those already built in the past could depend on a rocky and not overly deep seabed.⁸⁷ Although this project was therefore not fully carried out, it was nevertheless the one determining the final layout of the Old Arsenal with the addition of a *volto* to the west and one

to the east. These two, however, were only begun by Grimani and would be finished many years later.⁸⁸ In particular, the most westerly bay, completed between 1599-1602 by Benedetto Moro,⁸⁹ required a great deal of work as it was partly dug into the rock.

The ‘Grimani project’ highlights the proximity of the shipyards to the hamlet overlooking the waters of the port. We know almost nothing about the layout of this hamlet, however, other than what can be deduced from cartography (e.g. from the map in the Mormori Atlas, fig. 8) and from some plausible hypotheses on the development of the urban layout of the city. We can in fact imagine – without straying too far from reality – that the present-day street running down from the eastern side of the Castle towards the port also existed in ancient times, certainly in a different form than today, as the maps by Corner and Boschini as well as Gerola’s descriptions seem to suggest. This street is the continuation of the Corso – the main street of the Castle, which constitutes the principal framework of the ancient city’s buildings – beyond the eastern (or south-eastern as Gerola describes it) gate (figs. 17-18).⁹⁰ The east gate probably connected the ancient town with the eastern suburbs, which already existed in antiquity and were later partly included within the 14th-century walls. With all the approximations and due caution, the map in the Turin State Archives (fig. 10) is very clear in this respect, i.e. in connecting the boroughs to the main street of the Castle and indicating the path of the oldest walls. Among these boroughs is also the one facing the end of the eastern basin of the port and which, although little or nothing is known of it, is most likely closely linked to the history of Canea’s maritime activities; in his report, Benedetto Moro states that poor sailors live here, who he considers worthy of support, namely of “every satisfaction and contentment for the hardship suffered by these people, so necessary to the public service”.⁹¹ However, several houses and land in this suburb had to be sacrificed to extend the shipyard, perhaps to a greater extent than the known documents indicate, since it appears that even the oldest *volti* were very close to the dwellings. Some documents from 1554 refer to the need to demolish houses owned by Vizzamano and a Greek church, but it is not certain that they were located to the east of the vaulted docks.⁹² Certainly, to the east of the *volti* were the houses that needed to be demolished to carry out what was decided in 1568 and the Durente houses, already mentioned, demolished in 1570. We have no information for a lengthy period, but other houses must have been knocked down before Alvise Grimani, in 1583, proposed extending the bays to the east, pointing out that “there is a place and a port very suited to build not just X *volti* [those under construction at the time] but also XV, all joined and connected with the dockyard, as well as above the port, but certain houses of little importance are an obstacle, among which I have heard of one of Monoiani, which need removing”.⁹³ The new constructions, as we have seen, came to an end following the addition of the last *volto* on the eastern side, for which, in any case, in 1599 “certain houses belonging to a citizen of this city should be demolished”.⁹⁴

⁷⁹ “il grande bisogno che si havea di tavoli per far li remenati delli volti di questo arsenale” 06.03.1583, PTM, b. 510, f. 748 despatch of Giovanni Domenico Cicogna; for the “rementati” cfr. E. Concina, *Pietre parole e storia*, Venezia 1988, *ad vocem*.

⁸⁰ “ne sono in esser coperti del tutto dieci et fra quattro mesi con l’aiuto di nostro Signore saranno finiti tutti li altri in modo che le sarà volti coperti per XV galee” 04.04.1583, PTM, b. 510, f. 748, despatch of Girolamo Barbarigo, captain. According to the calculations by Gerola IV, p. 141 in 1582 the shipyard had 13 *volti*.

⁸¹ 22.04.1583, despatch of Alvise Grimani, PTM, b. 510, f. 748.

⁸² “io spero certo che per il mese di agosto saranno compiti tutti coperti 15 volti” 30.04.1583, despatch di Alvise Grimani, PTM, b. 510, f. 748.

⁸³ 28.08.1583, despatch of Giovanni Domenico Cicogna, rector of Canea, PTM, b. 510, f. 748; Cicogna report, read at the Senate 26.11.1586, Collegio Relazioni, b. 83, n. 274, cc. nn. “Si sono fatti sei Arsenali e tre quarti di un altro et una spala in tempo mio [...] cioè sei et tre quarti fatti al mio tempo, et tre e un quarto sotto il reggimento del Chiarissimo Signor Pietro Lando mio precessor”.

⁸⁴ Mocenigo, report 1589 (see note 50) “ha volti 15 tutti coperti per la diligenza massimamente del Clarissimo Signor Giovan Domenico Cicogna”.

⁸⁵ “vi sono alla Canea quindici volti tutti compiti, et dui con le spale che non vi manca altro se non buttar li volti”, “et vi è anco loco da poter gliene far altri cinque”: report Alvise Grimani, ASVe, Archivio privato Correr da Santa Fosca, b. 14, reg. 263 c. 51 According to Gerola IV, pp. 141-142 Grimani began the construction on two *volti* on the western side, one of which was built and covered in 1587 and the other abandoned.

⁸⁶ Published in N. Skoutelis, *Ο πόλεμος χωροτάκτης. Το δίκτυο των πόλεων-οχυρών στο κάτω θάλασσαν κράτος της βενετίας 16ος -17ος αιωνας*, Athens 2013, p. 117.

⁸⁷ On the foundation of the shipyards on the bedrock, see: “non si ha da far fundamenta per esservi al sasso vivo” (foundations do not need doing as there is bare stone), memoriale Michiel, Appendix doc. 1; report Daniele Venier, 1559, the port is “parte manco profondo passa 3.4 et 5 per il più rocha over sasso non atta esser cavata et in parte si potrà qualche piè cavar” (in part not very deep, 3.4 and 5 paces, mostly rock or stone not suited to excavation and in part can be dug a few feet), Collegio Relazioni, b. 62, c. 80.

⁸⁸ According to Giovanni Mocenigo’s report of 1589, there are still 15 covered *volti* and a *volto* is being built that proves too short to house a galley (Collegio Relazioni, b. 79, fasc. cc. 100 ca). Between 1593 (Mocenigo report) and 1598 (Benedetto Dolfin report, b. 83, cc. nn.) there are 16 *volti*.

⁸⁹ On the work of Benedetto Moro, 02.02.1598(=1599), his despatch from Canea, PTM, b. 525, f. 767 and his end of term report, 1602 in S. Spanakes, *Μνημεία κρητικής ιστορίας*, (IV), Ηράκλειο 1958, p. 30.

⁹⁰ Gerola I.1, p. 165, south-east gate of the Castle: “all’opposta estremità del corso [...] Vi si sale dai borghi per mezzo di un cavalcavia (in continuazione della strada che viene da San Nicolò) sotto al quale passa invece il vicolo a livello dei borghi che svolta per gli arsenali.”

⁹¹ “ogni soddisfazione e contento per la mancanza che vi è di queste persone, tanto necessarie al pubblico servizio”, Benedetto Moro in Spanakes, *Μνημεία κρητικής ... op. cit.* p. 35.

⁹² Dealing with this, the reports of Loredan (1554) Collegio Relazioni, b. 62, cc. 45-45v (cfr. Gerola IV, p. 139) and Venier (1559) *ibidem*, c. 80.

⁹³ “vi è luogo et porto capacissimo di poter sicuramente far non solo X volti ma anco XV tutti congiunti et uniti con l’arsenali che si lavora, et sopra il porto, ma vi è [di] impedimento certe casete di non molta importanza, tra quali ho sentito nominar una de Monoiani, che queste bisogneriano levar” 30.04.1583, despatch of Alvise Grimani, PTM, b. 510, f. 748; cfr. Gerola IV, p. 141 and note 13.

⁹⁴ “va gettata a terra certa casa di uno cittadino di questa città”, Benedetto Moro, despatch of 02.02.1599 (m.v. 1598), PTM b. 525, f. 767.

Appendix

document 1

Memoriale di Luca Michiel s.d. (ma 1568), ASVe, Senato, Deliberazioni Mar, Filze, f. 39.

[...] et rivedendo io il sito di questo bisogno hora con l'illustre Signor Giulio Savorgnano, et hora con quel magnifico governor et altri inzegneri, il quale è parte dalla banda sinistra et parte dalla destra delli tre volti di quel Arsenal, si ha ritrovato che in quello dalla parte sinistra [Ovest] vi si faranno due volti, et in quello della destra [Est] vi se ne potranno far sei, si che in tutto seranno otto. L'interesse che Sua Serenità haverà per questo effetto serà dalla sinistra gettar a terra un publico magazzino di poco momento, del quale quell'armiraglio si serve per comodità delli armizi di quelle galie, et dalla parte destra farà bisogno di ruinar alcune case de particolari, li fondi delle quali furono stimati valere intorno ducati cinquemille di quella moneda che due di quelli ducato fanno un cechino. Appresso questa spesa, farà bisogno di mandarmi quelli legnami et ferramenta che qui sotto seranno notati, non se ritrovando de li cose simile, percioche se ben vi sono in quel territorio infinito numero di cipressi essi non di manco per la curtezza loro non seranno bastanti per questo effetto. Et essendo mandati delle sopradette cose seranno essi volti presto, et con molta facilità forniti di fare, essendo che in quel luogo vi sono molti boni murari quantità grande di pietre, le quali si cavano in quelle fosse, et le calcine si fanno con poca spesa, si come si faranno anco li coppi, et si puol dire che la maistranza che serà la summa di questa spesa non habbi da esser molta percioche non si ha da far fundamenta per esservi al sasso vivo, né altro si habbi da fabricare salvo che li pillastri et il colmo. Et perché in quella città il signor Giulio Savorgnano in tempo mio ha compartito quali luoghi che si habbino da lasciare per il comodo di quella fortezza, et quali che si debbino fabricare per uso de' particolari parendo così a vostra signoria illustrissima le potranno commetter a quel magnifico reggimento, che vendi tanto del terreno destinato per il fabricare che possi bastar per la suddetta spesa percioche a questo muodo quelle galie seranno commode senza molto interesse di sua serenità et in buona gratia di VV. SS. Illustrissime et Eccellentissime humilmente mi raccomando

Un volto longo passa 30 largo passa 5 in luce, vole li qui sotto scritti legnami, et ferramenta.

Bordonali dell'arese - n° 56

Scalloni di Zapin - n° 30

Tolle dell'arese sorte di candia - n° 1000

Agui da 30 - n° 10000

Agui de mezo pe' - n° 600

Agui de palmo - n° 1200

Arpesi de mezo - n° 25

Arpesi dalle bande - n° 50

document 2

Delibera del Senato, 19.03.1568, ASVe, Senato, Deliberazioni Mar Filze, f. 39.

È a proposito delle cose nostre, acrescer il numero delli volti nell'arsenal nostro della Canea, acciò che li arsili che seranno mandati di tempo in tempo in quell'isola nostra habbino luogo dove si possino ben conservar. Però. L'anderà parte, che delli denari della Signoria Nostra siano posti in cassa delle fortezze da mar ducati 4000, li quali per li provveditori sopra esse fortezze siano mandati al regimento nostro della Canea per acrescer otto volti in quell'arsenal et sia anco[ra] dato ad essi provveditori l'amontar delli sotto scritti legnami da esser per loro similmente mandati al sopradetto regimento per tal effetto al qual sia scritto che secondo l'aricordo del diletto nobile nostro Luca Michiel, ritornato ultimamente da esso regimento hora letto, debba dar principio a quest'opera con quella diligentia che si conviene.

document 3

Ducale al Reggimento della Canea, 22.04.1581, ASVe, Senato, Deliberazioni Mar Registri, reg. 45, c. 34r.

Quando havemo in pensiero di scrivervi acioché con ogni diligentia possibile attendeste à ridur à perfettione li volti da galee che sono in quell'arsenale [...] ne è stato riferito da un ministro della camera fiscal, nominato Giacomo Gavano et dal Capsali che fu armiraglio di quel porto, che essi volti si vanno fabricando di pietra et in volto con molta diligentia si che l'opera riuscirà durabile et di nostra satisfattione come vederete dalla copia della loro depositione che sara in queste. Onde non havendo noi intorno ciò lettere vostre et perciò non potendoci compiutamente assicurar che così sia, vi dicemo col Senato che quando con la diligenza et virtù vostra gli habbate ridotti in quel stato che questi ne saranno riferito, dobbiate usarvi ogni studio et industria possibile acioché il lavoro sia ridotto a perfettione in volto et di pietra si come è stato dato principio con quell'avantaggio et beneficio pubblico, che si potrà maggiore, continuando parimente nel medesimo modo nelli altri volti che restano a farsi con la stessa sollecitudine et diligenza usata sin hora. [...] tuttavia, per farvi conoscere quanto questa opera ne sta a cuore, habbiamo voluto con presente passaggio mandarvi ducati tremille quali volemo che siano spesi in questa fabbrica et reparation de volti solamente et non in altro, sotto pena di non esser lassati andar a capello al vostro ritorno se non porterete fede autentica, sottoscritta dalli vostri successori. al Sig. Segretario deputato alle Voci et li conti all'ufficio sopra le fortezze dalli quali appari che così habbate essequito [...]

document 4

Ducale ai rettori e provveditori in Candia, 29.04.1581, PTM, b. 509, f. 745, cc. 12v-13.

Nicolò De Ponte nostri Nobiles et Sapientes Duchae, capitano et consiliarii nostri. Oltre quanto vi scrivemo per le alligate in materia del'acconciar et finir quelli volti, vi commettiamo che dobbiate prender diligente informatione et darci aviso con prime vostre de tutti quelli luoghi et siti che giudicaste atti et sicuri a potervi fare qualche volto da novo, et quanti se ne potessero fare et in qual parte et se uno di essi potesse servir per due galee o pur solamente per una. Et poiche vedemo di haver tanta difficoltà et longhezza di viaggio nel mandar legnami et altri apprestamenti de li voressimo anco saper se quelli volti che si potesse[ro] disegnar di fare si facessero tutti in volto di pietra, come sono quelli fabricati nel porto, con tutti quelli maggiori particolari che intorno ciò potrete avisarci. Non volendo restar di dirvi che voi capitano poiche con le vostre di 26 settembre passato ne havete ricordato che si potriano accomodar li Arsenali di Candia et Canea con tanti volti che havessero a capir venti galee per cadaun arsenale si che fossero quaranta in tutto et tener sempre questo nostro ad ordine et ben fornite il che si faria con spesa di non molta importanza et con ruinar solamente qualche casa, debbate però con prossime vostre dicchiarirci particolarmente in qual luoco et sito si potesse far questo effetto et quanta spesa ci anderà per rispetto del ruinar delle case con tutto quel di più che vi parerà a proposito esprimendone ogni luoco habile et comodo per questo servitio; con mandarci anco un disegno di cadaun luoco a parte per nostra maggior informatione. [...]

Datum die 29 aprilis 1581; Ricevute a 27 zugno 1581 con la nave Boscaina

document 5

Dispaccio del rettore Pietro Lando, 08.08.1581, PTM, b. 509, f. 746

Serenissimo Principe

Ho visto da le lettere de la Serenità Vostra di 22 et 29 aprile il desiderio ch'ella ha acciò che siano riddotti a perfettione li volti da galee che sono in questo arsenal, si come havea inteso da la depositione de Giacomo Gavan et dal Capsali che fu Armiraio de qui ch'io havea incominciato et che si fabbrichavano; commettendomi, che habbia ad usar ogni diligenza et industria possibile per finirli et che habbia parimente nel medesimo modo a continuar ne li altri volti che restano a farsi. Et ho ricevuto li ducati tre mille che la Serenità Vostra mi manda per questo conto con la nave Boscaina e Tressa. Et ho visto ancora quanto mi commette per esser informata se de qui s'attrova altro luoco atto et sicuro da potersi far altri volti da novo con tutto quel di più che in tal materia stimavo a proposito. Et che, medesimamente, intendendo come questo porto s'ammunisse ogni di più, debba avisarla che sorte di provisione si potesse fare per cavarlo et reddurlo in buon esser.

In risposta de le qual cose dico à la Serenità Vostra che quanto a reddur a perfettion i volti de le galie ch'io così come ho incominciato così continuerò per finirli, nel che mi sono stati di grande aiuto li tre mille ducati mandatimi da lei, et spero fra tre o quattro mesi poter finirli tutti, cioè li vecchi che li altri, che sono quelli che ha ordinato l'eccellentissimo Proveditor general Foscarini che sono altri due volti per quattro galie, li quali ho incominciati ancora essi non sono molti giorni non credo poterli finire mancandomi pochi mesi a finir il mio Reggimento ma farò ancora in essi quel più che potrò. Li quali volti cioè quelli che erano coperti ritrovai quando venni a questo reggimento in tanto mal essere, che più non potria dire; perciòche li coperti che erano di legnami, erano la più parte senza coppi, et con taole solamente al scoperto et quasi ogni cosa marza et guasta. Et i bordonali da le teste molti di essi che erano imarzidi a pena si tenevano nei muri. Et uno volto, che era fatto per doi galie era del tutto marzido et non vi era altro rimedio che saria cascato del tutto con ruina de le galie che vi erano sotto, se non levarli via il coperto come feci. Et vedendo quanto era necessario reparar et accommodar i detti volti, havendone dato aviso a la Serenità Vostra, con i coppi ch'ella mi mandò et alcuni bordonali ne ho accommodati cinque havendo fatto levar via i bordonali et altri legnami marzi et remetierne de novi, et così le taole et coprirli de coppi li quali hora sono reddutti in buonissimo esser. Et de li altri tre che restano, che erano per sie galie, cioè il volto che havea scoperto per esser marzido, come di sopra ho detto et altri doi che a pena erano incominciati a li quali erano fatti solamente i pillastri alti da terra doi e tre piedi, vedendo la difficoltà che si ha in far i coppi de qui, che non i fanno buoni, et in haverli da Venetia, che vengono quasi tutti rotti, et quelli mandatimi da la Serenità Vostra vennero rotti quasi la mittà. Et medesimamente in haver i bordonali che, come intendo si trovano con gran fatticha di quella longhezza che fa di bisogno, et con gran fatticha le nave i lievano, mi messi in animo di dover fare i detti coperti di pietra in volto. Et havendo fatto il conto de la spesa con questi maestri et prothi, et trovato ch'era manco spesa assai per causa de le calcine, che si fanno de qui ad assai buon mercato, et per le pietre ancora, che essendo tagliate di alcune grote non costano molto, mi rissolsi di farli a questo modo, massimamente considerando che sono più durabili et più sicuri da fuoco et che non bisogna star ogni anno su concieri per causa de le piogge. Et finiti che siano questi saranno in tutto quindese per quindese galie. Et quanto ad altri volti di novo che si potessero far, come mi scrive la Serenità Vostra che la debba informare, v'è tutta quella riva seguitando i volti del Eccellentissimo Proveditor general Foscarini fin in capo del porto ove si cavariano altri otto volti: ma bisogneria gettar giù alcune case come si ha fatto et bisogna fare in quelli del detto eccellentissimo Foscarini. Le quali però non sono di molta importantia et staria bene che particolari non havessero da far su quella riva ch'atterrano il porto da quella parte con le scovazze et altri immonditie che vi gettano dentro. V'è un'altro luoco ove si potriano far altri quattro volti appresso il molo: et chi volesse seguitar

con non haver rispetto a un poco di piazza che è li appresso, che è commoda per il cargar et descargar, et per altri conti à la città se ne fariano altri quattro. V'è ancora il Revellin in bocca del porto, ove se ne potriano far cinque con ruinar solamente un magazen d'artellarie et munition et tre cisterne da acqua. Et con la presente mando a la Serenità Vostra il dessegno del porto in carta et dei detti luoghi ove si potriano far li detti volti, i quali sono fatti postizzi, secondo che si potriano fare sul dessegno su alcune carte taccate con cera che levando via le dette carte la Serenità Vostra vederà il sito come s'attrovano li detti luochi. Et chi non havesse rispetto a ruinar molte case non mancano altri luoghi et quasi in ogni luoco attorno il porto da la parte de la città si potriano far dei detti volti. Non ho havuto in considerazione i luoghi fuori della fortezza che non credo sia intentione de la Serenità Vostra far i detti volti fuori de la detta fortezza.

Et quanto al cavar del porto la Serenità vostra vederà sul dessegno ove sono i numeri 3, 5, 6, 7 etc tanti piedi di fondi e in quel luoco quanto è il numero che li è sopra. Il qual porto si ha atterrato molto da la parte del'Arsenal per l'immonditie de la città che vi correno quasi tutte dentro, et non havendosi fatto niuna provisione già 40 e 50 anni fin hora, quell'è ridotto nel termine che s'attrova che secondo che per inanzi quell'era capace per nave in ogni luoco, hora è atterrato che a pena il terzo di esso è buono per esse nave, et si va atterrando ogni di più al qual porto li faccio far un certo condotto per divertir che l'immonditie de la città non vi corrino dentro: ma non vi vedo miglior rimedio che farlo cavar con i badili et con le zattere come si suol far ne l'Arsenal in Venetia. Et rechiesi a la Serenità Vostra per mie di 16 febbraio 1579 che mi fussero mandati legnami et ferramenti per far due zattere per poter far cavar il detto porto, per conto de le qual zattere mi fu mandato solamente alcuni legnami, ma non ogni cosa. Non di meno ho potuto far una zattera et già sono molti mesi che incominciai a cavarlo, et ho visto che a cavarlo a questo modo se li fa grande beneficio. Ma ciò ch'importa più è che li voleno denari: che havendo incominciato a cavarlo sto molte settimane che non faccio niente, et che non si lavora per mancamento di quelli. Onde è necessario che la Serenità Vostra vogli mandar un poco de denari per questo conto. Et dovendosi cavar con i detti badili che questa, per opinion mia, è la miglior provisione, far che si habbia ancora il legname et ferramenta per poter far doi zattere et quanto a badili se ne ha de qui. Et in buona gratia de la Serenità Vostra humilmente mi raccomando.

Da la Canea a 8 d'Agosto 1581, Piero Lando rettor.