

Danish Urban and 3D Property Design

Morten D. MADSEN, Jesper M. PAASCH and Esben M. SØRENSEN, Denmark

Key words: condominium, 3D property rights, organization, co-ownership share, mixed-use development.

SUMMARY

In recent years mixed-use developments in major Danish cities have become attractive among developers, municipalities and citizens. In mixed-use developments, a broad variety of land use and ownership situations is mixed in the same building. Land use include e.g. a mix of different types of housing (affordable housing and private owned apartments), offices, shops, retail, department stores, underground parking. There is no limit in terms of mixing different types of land use in mixed-use developments. However, the composition of different types of land use is important, and the right mix is context depended. Only the right mix creates a secondary functionality, that is desirable. In real life the strategy is determined by the developer and planning authorities (the municipality). Both parties have an interest in developing a sustainable solution that attracts people and businesses to invest.

The variety of different types of land use in mixed-use developments leads to fragmentation of property ownership rights in three dimensions (3D). Mixed-use developments often include high-rise buildings and the property boundaries are therefore both vertical and horizontal when a high-rise building is divided into individual property units. Condominiums holds the legal means of creating 3D property ownership rights in Denmark. The law of condominiums was introduced in Danish legislation in 1966 and despite recent development of more complex building structures the original draw is in large still untouched. Initially the purpose of implementing condominiums was to make it possible for renters to become owners of their apartment. Remarkably, not intended to comprise contemporary mixed-use developments of today the law of condominiums is sufficient supporting the creation and designing of complex 3D real property ownership rights. The interesting situation is, that in Denmark exist a functional 3D property formation and design institution supporting a sustainable development in terms of creating mixed cities, successfully operating in real life. Despite unadjusted legal tools professionals has found a way to support continuously developing demands for urban 3D property design. This paper presents initial results from a research project analyzing Danish 3D real property formation and design processes. The research is being carried out as cooperative research between academia and industry. Aalborg University and a Danish land surveying and land management company (LE34) have partnered up to analyze and improve the company's business area within land use consulting and other tasks in the real property formation process. The project provides research-based input to streamline the current process and legal basis used to develop 3D real properties in Denmark supporting a sustainable development towards mixed cities.

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1. INTRODUCTION

What is 3D property design? Today, the need for creating real property with three dimensional (3D) boundaries is increasing, this is to a large extent because of urbanism. Urban land is a scarce resource and building structures are therefore planned and built closer, higher (and lower, underground). This to optimize utilization of urban land use, e.g. in order to avoid urban sprawl, thus protecting agriculture land and nature. Moreover, in contemporary urban planning there is a discourse for mixed-use developments. (Shen, Q., & Sun, F., 2020) Ownership rights in mixed-use developments, and all (highly) dense building structures, are often designed and organized as *multi* ownership developments. Organization of multiple owner's real property rights, restrictions and responsibilities (RRR's) (ISO, 2012), in such developments is important in order to secure trust and make each individual property unit in a building attractive and functional. See e.g. Oosterom et al (2018) for an introduction to the concept of 3D real property. Contemporary *Danish urban design* is in these authors opinion to a large extent dependent on 3D property design. The difference between the concept of urban design and 3D property design is important to understand in context of this paper. Urban design is, in context of this paper, related to how building structures are designed and built to support a sustainable urban development. This includes optimal utilization of land use creating building structures that support both a massive need for accommodating an ever-growing population and at the same time making sure the development is sustainable. To support this development, vertically divided ownership is necessary. 3D Property design is in this context the legal design that organizes rights, restrictions and responsibilities established to manage conflicting interest between multiple owners of a development. The Danish condominium system facilitates vertically divided ownership. The core element of the research project on Danish 3D real property formation and design process presented here is related to the organization of rights and responsibilities to the common property of a condominium property such as stairways in the building. One might say that the common property is the Achilles heel of any condominium development. The value of the individual owned condominium unit depends on the organization of RRR's over the common property.

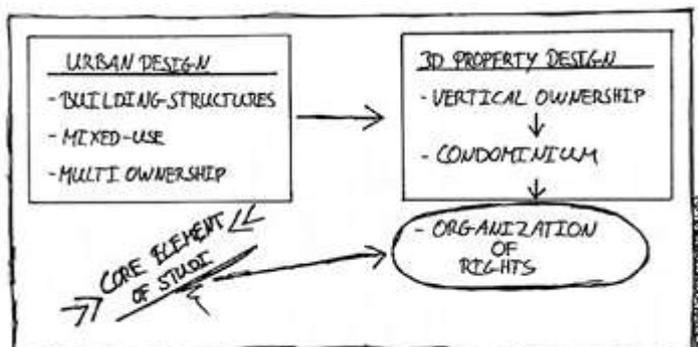


Figure 1. Presenting the core element of the study: The main purpose of the study is to analyze the organization of RRR's in condominium properties as illustrated in this figure. 3D Property design (condominiums) supports urban design because vertical property boundaries are necessary in contemporary urban planning.

2. THE DANISH CONDOMINIUM SYSTEM

In 1966 the concept of condominium ownership was introduced into Danish legislation as an alternative type of real property (Danish Parliament, 1966). The main purpose was to enable converting apartment leasehold rights into condominium ownership rights, thus making it possible to purchase a condominium as an alternative to rent. Converting apartment buildings to condominiums meant that an individual real property was formed for each apartment unit and at the same time forming a common property for the remaining parts of the property, e.g., stairwells and the land on which the building is located. The former leaseholder was granted the possibility to obtain the same economic ownership benefits as purchasers of single-family housing which at that period of time was becoming increasingly widespread throughout Denmark (Blok, 1995). The legislation has continuously been revised during the following decades and a new and revised version of the legislation was implemented 2020 (Danish Parliament, 2020a).

Property formation, including the formation of condominiums, is legally exclusively done by licensed chartered surveyors. The formation process includes a full survey of the building(s) and preparing the necessary documents for registration. The documentation includes a map of each floor showing the relative location of each unit. A notification, listing each condominium-unit with a unique identification number, the address and location in the building, type of use, size and fraction share in the common property.

Undertegnede ejer af ejendommen matr. nr. 17 b af X-købing købstads markjorder, beliggende Høstvej 1-3, af grundareal ifølge matriklen 1200 m², erklærer herved, at ejendommen er en ejerlejligheds ejendom. På ejendommen er opført en to-etages bygning med kælder og uudnyttet tagetage, af samlet etageareal 963 m², som vist på vedhæftede, af landinspektør atteresterede kort. Ejendommen opdeles i 10 ejerlejligheder, angivet med numrene 1-10 på nedenstående fortegnelse og på vedlagte af landinspektør atteresterede kort over de enkelte ejerlejligheder.

De enkelte ejerlejligheder har følgende særskilte numre, beliggenhed, størrelse og andel i ejendommen:

Nr.	Beliggenhed	Benyttelse	Areal i m ²	Fordelingsdel
1	Høstvej 1, kld. tv.	Butik	69	69 18/120
2	Høstvej 1, st. tv.	Beboelse (a)	78	84 10/120
		Høstvej 1, kælder	Pulterrum (b)	
3	Høstvej 1, st. th.	Beboelse (a)	43	49 7/120
		Høstvej 1, kælder	Pulterrum (b)	
4	Høstvej 1, 1. tv.	Beboelse (a)	78	84 10/120
		Høstvej 1, kælder	Pulterrum (b)	
5	Høstvej 1, 1. th.	Beboelse (a)	43	49 7/120
		Høstvej 1, kælder	Pulterrum (b)	
6	Høstvej 3, kld. th.	Butik	86	86 22/120
7	Høstvej 3, st. tv.	Beboelse (a)	77	83 10/120
		Høstvej 3, kælder	Pulterrum (b)	

Anmeldelse og fortegnelse

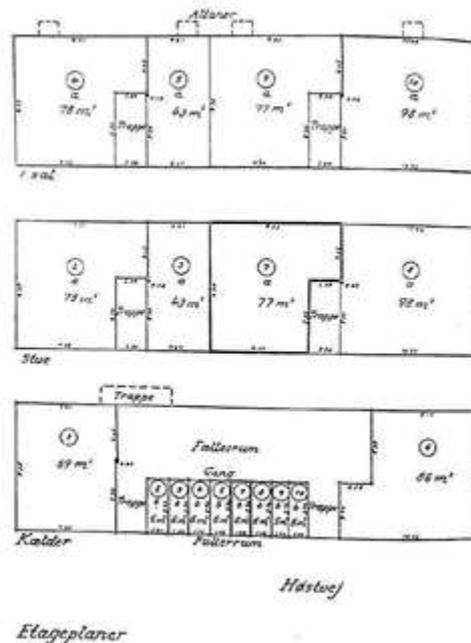


Figure 2. Example of a notification, listing (from left) id-number, address, use, size (one condominium unit can include more sub units (a) and (b) and so forth) and fraction share in the common property. To the right an example of a map showing floor level, boundaries and relative location in the building. (Source: Blok, P., 1995)

2.1. Individual and common owned property

The Danish condominium concept holds the benefits of ownership rights and at the same time the challenges of managing a common property. Danish condominium legislation dictates that only delimited space in a building can be converted into a condominium-unit. This means that a parking plot or an open balcony cannot be converted into a condominium-unit and will always be part of the common property. In principle the common property, consist of all parts of the mother parcel that is not converted into a condominium-unit. This also includes the open areas of the parcel and access halls in the building, stairwell, elevator shaft etc. The common property also includes the buildings climate screen (i.e., outside walls and roof) and the supporting elements of the construction and facilities that service the building with electricity, water, heating etc. Expenses beside those for maintaining and renewing the common parts of the building also include insurance, heating, water, city gas and electricity if not separately measured for each unit.

The common property is managed by an owner's association. The association is mandatory and automatically activated when the first condominium is sold. Membership is also mandatory for all condominium owners. To regulate the action of members of the association a standard bylaw is also activated parallel with the forming of the owner's association. The standard bylaw is possible to customize before the first sale of a condominium unit. Also, it is possible for the owner's association to change the bylaws at any time by request, if supported by a legal majority of the members and the mortgagees. Because the condominium scheme is automatically activated, the legal design of the condominium law holds a principle of passivity. Meaning that, a standard organization secures each owner's right to the common property and responsibility to contribute to any costs concerning the common property.

2.2. Co-ownership share – standard organization

Each condominium owner holds an equal right to use the common property. Moreover, each condominium owner holds an equal sized share in the common property (co-ownership share), if not specified otherwise in the notification. However, it is standard procedure that a co-ownership share is calculated. We consider this adjustment of the co-ownership share the first step in customizing the standard organization (we consider this a *limited use* of allocating rights and responsibilities).

Real property formation in Demark is executed by licensed, privately employed chartered surveyors. Registration of real property is done by the Danish Geodata Agency (Geodatastyrelsen), being responsible for the real property register / cadaster. A chartered surveyor usually advises the original owner or developer that the co-ownership share is calculated using the relative floor size of the condominium as a factor. The co-ownership fraction denotes 1) each condominium owner's share in the common property's value and 2) distribution of votes at the owner association general assembly and 3) the relative contribution to common expenses. The size and value of each condominium often vary, making it necessary to specify the share. Imagine a situation where one condominium is twice the size and twice as expensive as the next-door condominium. If the condominium property is to be terminated, e.g., in case of a fire they would both have an equal share in the remaining property. This is not

optimal for the owner of the most expensive condominium and the shares are therefore normally strictly specified. There is an incentive for each owner to have a low share in the contribution to common expenses and at the same time incentive to secure a high share in the common property's value. This contradictory situation establishes some form of assurances that a fair allocation of the co-ownership share is allocated. Future owners, therefore, to a lesser degree, do not need to fear that the original owner/developer will use the opportunity to favor some condominium units above others.

2.3. Mutated use of condominiums

In specific developments, the practical use of condominiums has in recent years mutated from being passive in the formation process, relying on standard bylaw regulation to a more active process meaning a more specific design in each development case. Passivity in the formation process is dangerous and can potentially lead to unwanted transformation of property rights and responsibilities. This can end up in conflicts in-between owners and between owners and the developer/original owner. Being active include extended use of easement and specific bylaws to allocate ownership rights and responsibilities regarding the use of the common property. This is especially the case in mixed-use developments that are multi owned. Also, the functions in condominiums have mutated in relation to mixed-use developments. For example, one condominium can include n number of social housing apartments. Also, in many mixed-use developments, you find e.g., underground parking facilities being constructed as a condominium. This is difficult for non-professionals to understand because a condominium traditionally is related to an apartment used for housing. To understand this mutation of use you need to understand the importance of property rights per se in relation to the evolution of vertical multi owned mixed-use developments. Condominiums are used because there is no other means of organizing RRR's in 3D developments. By studying cases of such developments, we will try to shed light on this aspect.

MUTATION OF CONDOMINIUMS IN DENMARK

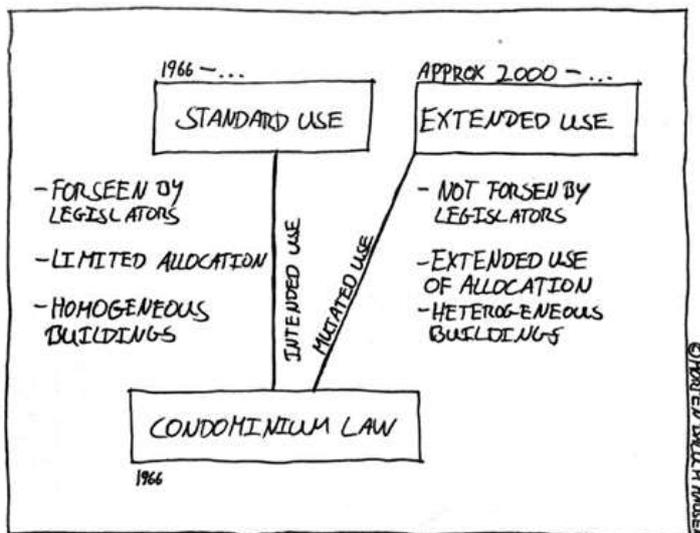


Figure 3. Concept model illustrating the dichotomy of organizing RRR's, 1.) intended (standard) use and 2.) mutated (extended) use of condominiums. Since 1966, standard use has been working to organize RRR's in simple homogeneous building structures. The extended use has been working from approximately the year 2000 when building structures became more complex and heterogeneous, this in large because of the rise of mixed-use developments.

The use of condominiums has developed during the years. Or, in other words to be more precise, the use of condominiums has *evolved*. In 1966 when the condominium institution was introduced into Danish property law the use was mainly for housing purpose - to give tenants the opportunity to own their own apartment. Although the primarily housing use was for the purpose of stimulating the housing market and the economy the use of condominiums also include other types of use. In fact, a condominium property can be used for any purpose. One might say that the word “condominium” is somewhat misleading because of its close relation to the use for housing. It might be argued that the *condominium institution* in Denmark has mutated into a legal *3D real property institution* because the use today is much more than just housing policy.

These authors claim that the success of the condominium system in Denmark in terms of successfully being able to support contemporary urban development has to do with the flexibility and possibility to re-organize rights and responsibilities related to the common property. Analyzing the historic evolution of the Danish real property development, it is in these author’s opinion obvious that condominiums (apartments for dwelling) are closely connected to housing, whereas *3D real property* (for other purposes) is also connected to a combination of different types of land use other than housing and the building process per se where it is important to secure the developers’ property rights if the development is to be sold in different stages.

3. CUSTOMIZED ORGANIZATION/SPECIFIED ALLOCATION OF RRR’S

The mutated use of condominiums is closely related to customized organization. The possibility to customize rights and responsibilities has always been possible in the Danish condominium legislation. The mutation, in relation to organization, simply implies that the use of customizing the condominium scheme has change/evolved from little/limited use to extended use. This has occurred in connection with development of more dense and homogeneous building structures (urban design). The standard organization is automatic activated by the law when the first condominium is sold. If any customization of the organization is necessary before the first sale the owner/developer must make sure this is done before they begin to sell the condominium units. When the standard organization is activated, the frames for managing the common property are set by the condominium law and standard by-law (Danish Parliament, 2020b) and can only be change by the co-owner's association. The power needed for the co-owner's association to change the organization depends on the situation. Any change in the organization must be decided at the co-owner's general Assembly. The general assembly is the co-owner's association highest authority. In some cases, a reorganization can be decided at the general assembly by 2/3 majority of votes by attendance of members and co-ownership share. In other more extensive cases regarding sale of significant parts of the common property 9/10 majority of votes by attendance of members and co-ownership share are necessary. In addition, any change in the organization that displaces the interrelationship between owners, then the decision is only valid if the owner to whom this displacement affect negatively can accept. This is not explored further in this paper, but we mention it to stress out the importance of organizing rights and restrictions before the development is ready for sale, because afterwards, it is very costly to change an existing organization.

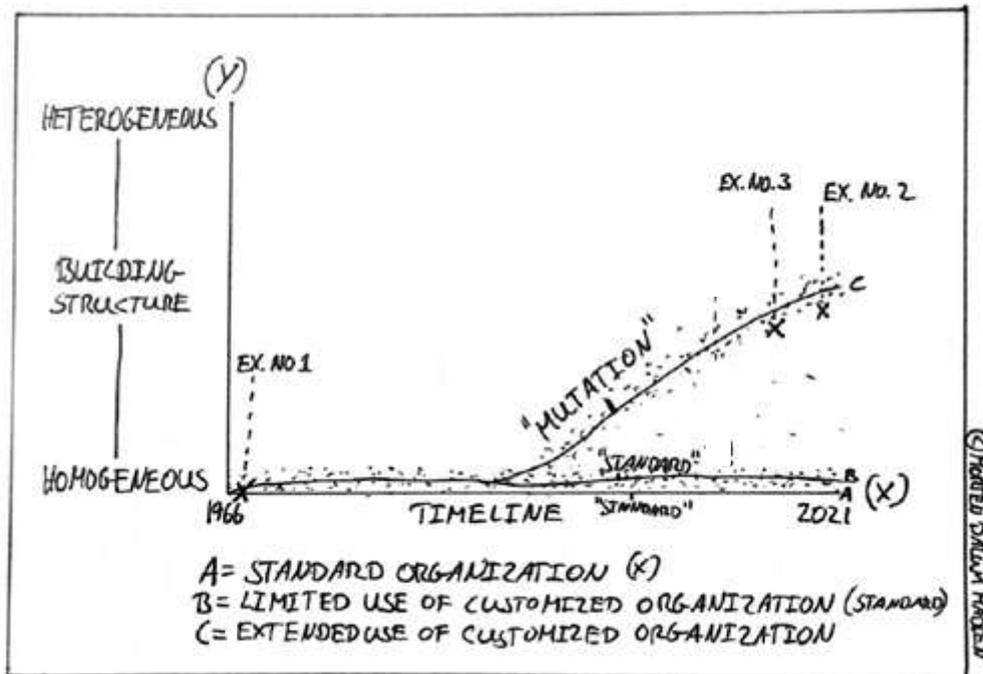


Figure 4. Concept model: Each dot represents a condominium development. Example no. 1-4 analyzed and presented below are represented in the model. Curve B and C illustrates two different levels of customized organization of RRR's (B= limited and C=extended). A is linear and static, illustrating the automatically activated standard organization where no active measures have been taken to allocate RRR's - not even a specified co-ownership share/fraction. Moreover, the model illustrates the relation between different types of building structures and the need for customized organization. Notice the mutation of use starting approx. about year 2000.

Allocation of RRR's in order to customize the organization can occur in different forms. For example, one form is to arrange a secondary co-ownership association to administrate a specific part of the common property. An example of this is seen when a condominium property includes two otherwise independent buildings. In this case it could be optimal if they were split up in two secondary associations independent of each other in terms of managing the common parts of each building. There is no reason for owners in one building to have a vote when to renew the stairwell of the other building or take part in the expenses. Another form occurs if only a part of the condominium units has an interest in a certain part of the building. In this case, you might see that those condominiums not having an interest in the specified part of common property are freed from contributing to the common expenses.

Different means of customizing the standard organization in the condominium scheme:

- Secondary co-owner's association
- Co-owners share specified
- Secondary co-ownership share in by-laws
- Right of way (easement)
- Exclusive right to use part of the common property
- Exclusive responsibilities to part of the common property
- Power relations

4. CASE STUDIES

In the following, cases of customized organizations are presented. But first, we present a classical type of case to outline the difference between standard use and mutated use of condominiums. In all cases analyzed we only present a small fraction of the written customized organization. The main point of the paper is presenting only the main principles and not a full survey. All examples are located in the city of Aalborg located in Northern Jutland, Denmark and, except example no. 1, in close vicinity of Aalborg University City Campus located at the harbor.

4.1. Example no. 1 - the classic case of standard use (limited customization)

This building was constructed in 1938. It includes housing and a shop, located on street level. The building was divided into condominiums in 1968. This is a classic example of a building that the law of condominiums was intended to split up in condominiums. It shows a very limited use of allocation, and thereby it rests almost entirely on the legislation (standard by-law) to organize RRR's.

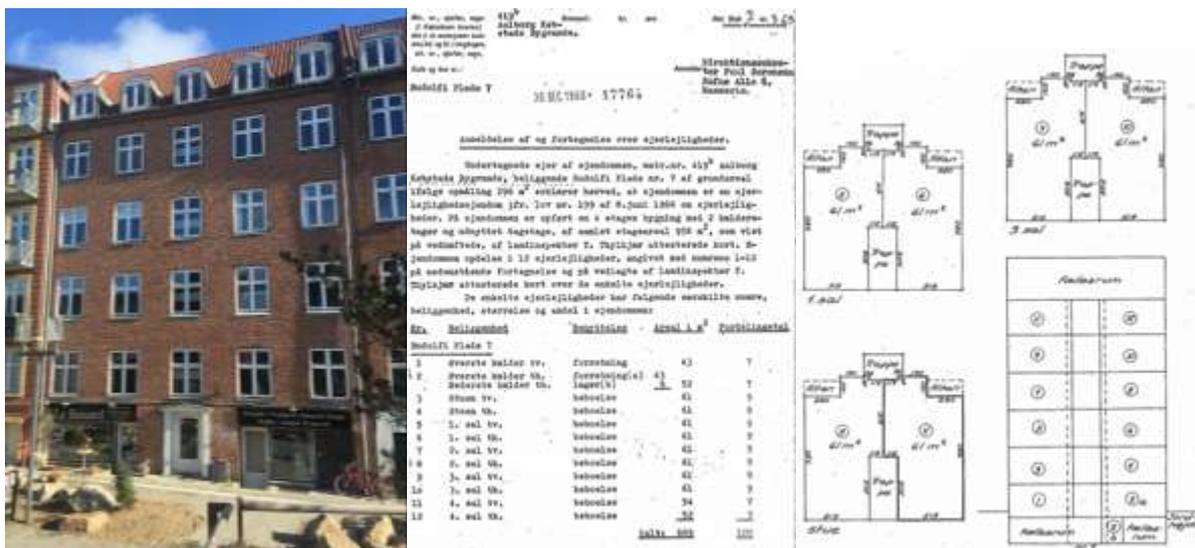


Figure 5. Example of building structure that existed at the time when the condominium law was implemented. In the middle, the notification listing and to the right a map showing floor level. Today this is still the required documentation. (Source: Tinglysning.dk)

In relation to figure 4, this is an example of homogeneous development with very limited use of customized organization. In fact, the only active measure taken to allocate RRR's is that the co-ownership fraction is calculated relative by size for each condominium unit. Condominium unit 1, 2, 11 and 12, they all have a smaller share in the value of the common property and a smaller share in contribution to common expenses (fraction 7/100 oppose to 9/100). It is obvious that there is no need for allocating of common expenses otherwise in this case because all condominium units have an equal interest in the common property. However, this not entirely the case. The commonly owned rooms in the building include a stairwell, cellar and attic. Condominium unit 1 and 2 has no direct access to the stairwell and therefore no interest.

They both have their own entrance directly from the street. So perhaps it would have been the right solution to allocate the responsibility (common expenses) to maintain the stairwell only to the condominiums using the stairwell.

This is a mixed-use development in small scale. But, however small in scale this case indicates that things quickly become complicated in terms of allocate RRR's. It would have been appropriate to allocate the responsibility only to condominium unit 3-12, in terms of contributing to common expenses maintaining the stairwell, as they alone have an interest in the stairwell. The actual situation means that condominium unit 1 and 2 are obligated to contribute to expenses related to the stairwell even though they newer use this facility.

4.2 Example no. 2 - social and private housing (extended use of allocating RRR's)

Different types of allocation used in this case: *Secondary co-owner's association, Co-owners share specified, Exclusive right to use part of the common property, Exclusive responsibilities to part of the common property.*

This building was completed in 2018 and includes a mix of social housing and privately owned condominium units. The building includes 34 privately owned condominiums used for housing and one condominium owned by a public housing organization. This one condominium unit is located on floor 1-7 and includes 81 social housing apartments.



Figure 6. This development includes a mix of social housing and privately owned condominium units. The framed part of the building is one condominium located on 7 floors and includes 81 social housing apartments. (Source: CF Møller Architects and Tinglysning.dk)

In relation to figure 4, you can argue that this is a heterogeneous building structure because it includes different types of housing private/social. Extensive customization has been necessary

in this case. The law on social housing (Danish Parliament, 2020c) has very strict economic rules. In case of a development with a mix of social housing and privately owned condominiums there is a need to isolate the social housing as much as possible economically. Among other things, this means that the social housing organization under no circumstances is allowed to contribute to common expenses that does not benefit the social housing part of the building. This means that a customized organization and allocation of RRR's over the common property is necessary to respect the rules set by the law on social housing.

As illustrated on the condominium map (figure 6) condominium no. 1 has been subdivided into 3 condominiums on each floor (red outlined framing). The space separating the 3 sub condominiums include common access hall, elevator and staircase. In fact, this space is exclusively to be used by the social housing apartments and could therefore, in theory, be one sub condominium on each floor. In this case all 4 sub condominiums could be merged into 1 condominium. The reason this has not been done may relate to circumstance of legally securing escape routes for those privately owned condominiums located above the social condominiums. Figure 7 shows a map made to support an easement that grants exclusive rights to use the common access hall, elevator and staircase. The magenta marking indicates exclusive right to use for condominium no. 1 and thereby all social housing apartments. The yellow marking indicates exclusive right for condominium 2-35 (all privately owned condominiums). The red diagonal line includes all condominiums and specify a restriction in the exclusive use rights to every condominium to use the common access hall, elevator and staircase as an escape route in case of a fire etc. (right of way easement).

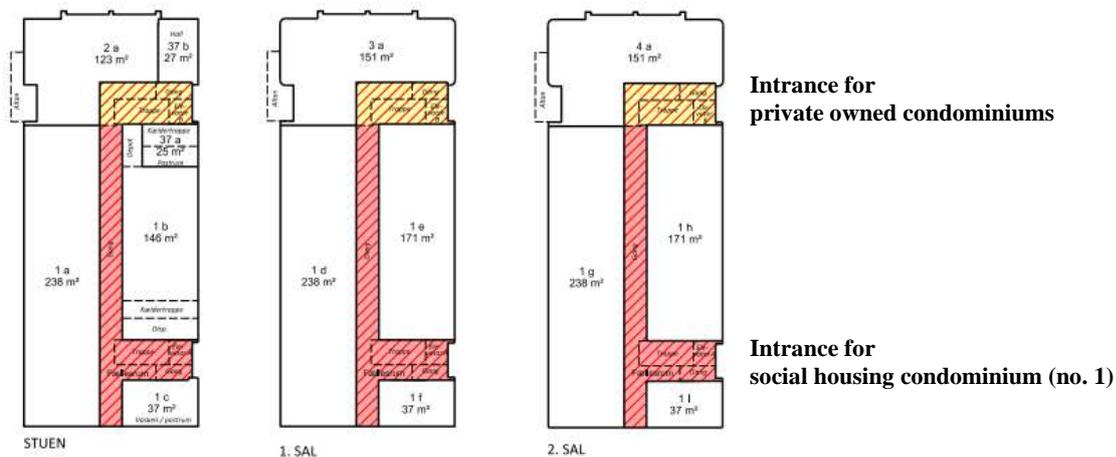


Figure 7. Map made to support an easement granting exclusive rights to elevator, staircase and access hall. (Source: Tinglysning.dk)

Condominium no. 1 has its own entrance from the street and vice versa the privately owned condominium has an exclusive entrance. The two types of housing are separated both physically and economically. This separation is part of the urban design strategy and also incorporated in the property design organizing by allocating RRR's. The 34 privately owned condominiums are managed by a secondary owner's association. In the parts of the common property, where the right to use is exclusively granted the privately owned condominiums (members of the secondary association), they also exclusively hold responsibility for any common expenses

related to those locations. In relation to customized organization of power relations a secondary co-owner association allocate and specifies the power to a group of co-owners to make decisions in relation to a specified part of the common property securing a more effective decision-making body.

The board of the secondary owner's association represent the private owners in the primary association. Without going into details, this case includes a bundle of RRR's designed and organized to secure different interest in relation to private owners, the social housing organization and fire authorities, just to mention a few. the complete situation is much more complex. The purpose is not to give a full description of the case, but simply to illustrate some examples of re-organization that support the concept model presented in FIG4 – that the use of condominiums has mutated. Designing condominium property RRR's is one great puzzle that is individual complicated in each development. There are no rules or no guidance to navigate by and only the experienced professional actor can manage such cases.

4.3 Example no. 3 – Heterogeneous building structure (extended allocation of RRR's)

This development was completed in 2014 and includes 2 buildings (A and B) and an underground construction for public parking. The development is divided into 4 condominiums. Condominium no. 1 is located on the ground floor in building A and contains a restaurant. Condominium no. 2 is owned by a social housing organization. It is located in both building A and B (red framing figure 8) and includes 33 sub-condominiums containing a total of 254 social housing apartments/student apartments. Condominium no. 3 is located on the ground floor in building B and contains office spaces. Condominium no. 4 is located in an underground construction and contains public parking space.

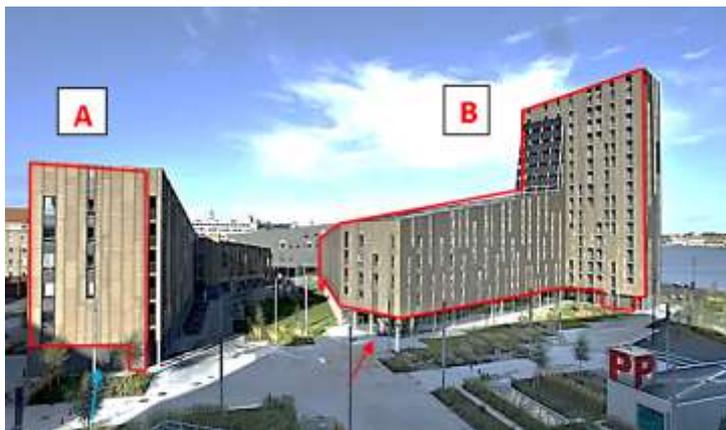


Figure 8. This development includes social housing, a restaurant, offices, and a public underground parking condominium. (Source: Himmerland Boligforening.dk)

Different means of allocating RRR's are used in this case to customize the organization: *Co-owners share specified, Exclusive right to use part of the common property, Exclusive responsibilities to part of the common property.* The co-ownership share is specified in relation to the relative size of each condominium. However, the parking basement is only weighted 25 % of its size. Condominium no. 2 is located on all floor levels in both buildings. Ground floor of condominium no. 2 only includes access facilities, stairwells and elevators (se figure 9 below). In contrast of the previously case (see figure 6) this case of social/private mixed-use

development has no need for common access because only the social housing organization occupies the floors above ground level. So, all access halls, stairwells and elevators in the buildings belongs to condominium no. 2. There are no common locations in the building that need allocations of RRR's. In spite of that, all access facilities, halls, stairwells and elevators could have been left out of condominium no.2 and thus be common facilities/locations. But, because condominium no. 2 alone will be using the facilities the property designers must have decided that including them was the right solution. Leaving them as common property, would have meant more work customizing the organization and allocation rights and responsibilities to condominium no. 2 in terms of use rights and maintaining responsibility. It might not seem as a customized organization, because no active measures have been taken in terms of allocation RRR's in by-laws and/or easements, but in fact, including the access facilities, so they belong to condominium no. 2 can be considered a customized organization.

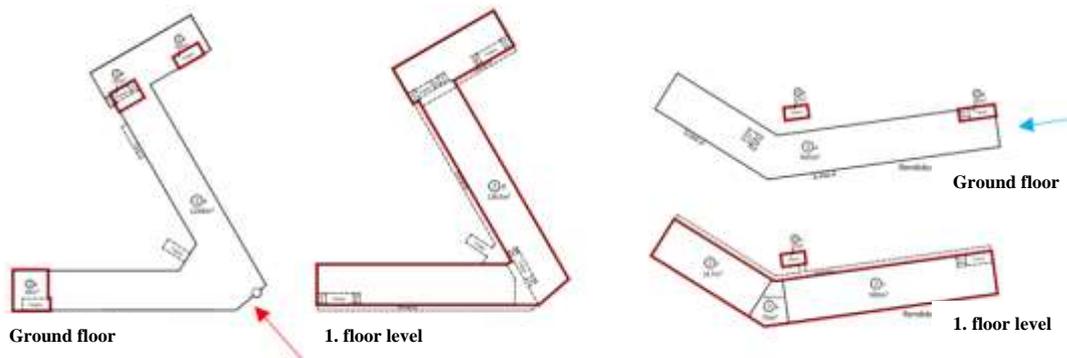


Figure 9. Section from the condominium map (ground and 1. floor). Outlined in red color is condominium no. 2 that includes 62 social housing apartments in building A and 192 in building B. Take notices of the elevator and stairwells on ground floor also included as sub-unit to condominium no.2. (Source: Tinglysning.dk)

This case is an example of a heterogeneous building structure. Even though there is no need for written customized organization of RRR's as mentioned above, there is a bundle of them in relation to the outdoor space and part of the underground parking facility. Imagen, that no action was taken to allocate the responsibility to maintain and renew the buildings climate screen. Then condominium no.4 (the underground parking) was to contribute to the common expenses when the building's roof or walls, windows and doors was to be maintained, this because its common property. That's why the responsibility to contribute to the common expenses to some parts of the building has been customized in the by-law. Moreover, the responsibility to maintain the unbuilt areas of the parcel has been allocated to condominium no. 2 and 3.

The responsibility to maintain certain parts of the common property is allocated in the by-law. Common roofs and climate screen is allocated to each building. So, condominium no. 1 (ground floor restaurant building A) is not responsible for any cost in relation to the maintenance of common roof or climate screen in building B. Moreover, the main principle of the condominium scheme is that each member (condominium owner) is responsible for the maintenance of the outer parts of the building e.g., windows and doors. Even though it is common property, condominium no. 1 (ground floor restaurant building A) should not contribute to maintenance expenses regarding windows and doors only used by condominium no. 2 (social housing part of building). To service the underground parking basement (condominium no. 4) public access

goes through a stairwell. Because this is common property, but only services condominium no.4 the responsibility to maintain the stairwell is alone allocated to condominium no 4. Also, condominium no. 4 is granted exclusive right to the stairwell(s) and some ventilations shafts situated on ground level above the parking cellar. Exclusive use right is granted to the owners of condominium 1 and 2 over the common ground related to building B. And Exclusive use right is granted to the owners of condominium 2 and 3 over the common ground related to building A. This also comes with exclusive responsibility to maintain and in addition hold all expenses in relation to street lighting including the electricity bill.

5. CONCLUSION

This paper presents initial results from a research project analyzing Danish 3D real property formation and design processes. The main goal of this paper has been to propose a first version of a typology of different means of customizing the standard organization in a condominium scheme. The typology is subject to further research in the project. The examples presented in this paper represent only a small geographical space (all within a radius of 150 m) relative to the total metropolitan urban space in Denmark (except the 1st example showing traditional use). Although quantitative analyses has not been a part of this study this concentration of cases on a relatively limited urban space indicates the extend of mixed-used developments organized through condominiums. The authors claim that these developments exist in large scale in other parts of Danish urban metropolitan space, which will be investigated further.

Danish condominium legislation has existed since 1966 largely untouched. In the light of contemporary urban development these authors claim that it is quit remarkably that the law of condominiums originally intended to be used on simple homgeneous building structures with very limited or no need at all for allocation RRR's to customize the standard organization automatically activated by law.

These authors claims that the process of condominium formation has mutated. This mutation has occurred in relation to a need for more specified allocation of RRR's in heterogeneous building structures. By using the term mutation, we imply that at some point of time the traditional standard organization was not sufficient in all cases of mixed-use developments leading to unique customization fit for each development. It is not a total change in the process of condominium formation. The standard organization is still sufficient in many homogenous building structures. The mutated use only implies that in some cases there is need for intensive customized organization of RRR's.

The study showed that it is quite difficult to obtain a clear and complete picture on the customized organization, due to the fact that each allocation is in written form, either in the by-law(s) or a multitude of easements. Sometimes they are specified on a map and sometimes just exist in written form embedded in the textual documents. In addition, the written form can be subject for misinterpretation, but when added by a map the written text is supported with accurate geographical boundaries. Moreover, sometimes a bundle of by-laws exists if secondary co-owner's association(s) has been established as part of the customized organization. Making things even more complicated the owners 'association can be co-owner of a common parcel managed by a landowner's association. This shows that even though the organization is working there is a need for making it more transparent.

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BIOGRAPHICAL NOTES

Morten D. Madsen is a *business* PhD candidate at Aalborg University, the Department of Planning, Land Management and Geoinformatics. The research topic is “3D real property design” e.g. *contemporary building structures challenges traditional real property registration systems*. The business PhD (2020-2022) is financed by www.innovationsfonden.dk and Danish land surveying and land management company (www.LE34.dk). Morten is working at the company as a chartered surveyor. He holds a master in land management from Aalborg University (2018).

Jesper M. Paasch is professor in land management and cadastral systems at Aalborg university, Denmark, associate professor in land management at the University of Gävle, Sweden, and coordinator of research in geographic information at Lantmäteriet, the Swedish mapping, cadastral and land registration authority. He holds a doctoral degree in Real Estate Planning from KTH Royal Institute of Technology, Stockholm, Sweden; a MSc degree in Surveying, planning and land management, and a Master of Technology Management degree

in Geoinformatics, both from Aalborg University, Denmark. He is a national delegate to FIG Commission 3 and member of the FIG Joint Commission 3 and 7 Working Group on '3D Cadastres'

Esben M. Sørensen is part-time Associate Professor in land management and cadastral systems at Aalborg University, Denmark. He is former Research Professor at Research Institute for Forest and Landscape, University of Copenhagen and Professor at Aalborg University. He holds a PhD from Aalborg University in Rural Development and Spatial Planning (landconsolidation). He is actual member of Governmental Advisory Board within a) Geoinformation (INSPIRE) and b) Governmental Partnership for Environmental regulation and former Governmental Advisory Boards for c) Rethinking Property Formation, d) Landconsolidation and c) Better and More Nature ("Wilhelm-udvalget"/WG Agriculture). He is a delegate to FIG Commission 7 and member of the FIG Joint Commission 3 and 7 Working Group on 3D Cadastres'.

CONTACTS

Morten Dalum Madsen
Aalborg University, Department of Planning, Land Management and Geoinformatics
Rendsburggade, 14
Aalborg
DENMARK
Tel. + 45 8140 3205
Email: mortendm@plan.aau.dk
Web site: <https://vbn.aau.dk/en/persons/147721>

Jesper Mayntz Paaasch
Aalborg University, Department of Planning, Land Management and Geoinformatics
A.C. Meyers Vænge 15, A
2450 Copenhagen SV
DENMARK
Tel. + 45 9940 2483
Email: jmp@plan.aau.dk
Web site: <https://vbn.aau.dk/en/persons/144980>

Esben Munk Sørensen
Aalborg University, Department of Planning, Land Management and Geoinformatics
Rendsburggade 14
DK-9000 Aalborg
DENMARK
Tel. + 45 9940 8405 / +45 4086 1322
Email: ems@land.aau.dk
Web site: <https://vbn.aau.dk/en/persons/102948>