

Typology and Ergonomics of Rooms in Contemporary Hotel

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Abstract. Depending on the hotel's standard, a variety of room types can be distinguished: Single, Twin, Double, Apartments (Polish "Apartament"), suites: junior, business, senator, etc. What is more, these are often found in a variety of standards, i.e. Standard, Superior, Luxury, Deluxe, Queen, King, Royal or Executive, just to name a few. With such a range of possibilities, and even more diversification based on cultural and architectural customs in a particular country, it seems that a proper typology of hotel services should be based rather on the grounds of ergonomics and room comfort than marketing labels. This article presents a study aiming at properly formulating tools for standardization of contemporary hotel accommodation. Scope of the study includes a range of European examples.

Keywords: Hotel design · Hotel room typology · Hotel room ergonomics · Contemporary hotels

1 Introduction

Contemporary hotel industry is extremely competitive. Namely, hotel chains and private hotel owners compete in making their offers increasingly more attractive. Their aim is to continuously expand the number of customers, who, in the process, become a more diverse group than ever before. As a result, new types of hotel services and hotel rooms, including various types of suites (e.g. junior, VIP, studio, business, classic and budget suite), as well as budget accommodation rooms (standard, economy, classic, budget), are on the rise. However, it is not only the abundance of accommodation types that may confuse visitors, as the latter often need also to become acquainted with room furnishing options and available accessories. This is due to the fact that different options provide different standards. It seems that even the traditional typology based on the amount and size of beds (Single, Twin, Double, etc.) is no longer a valid reference point.

Accordingly, a need to examine hotel facilities based on room types arises, in order to establish an accurate typology corresponding with the modern reality. This is crucial not only for travelers, for their physical and psychophysical sense of comfort, but also for creators and implementers of building and administrative law, architects, ergonomists, and even interior designers.

1.1 Methodology and Research Aim

The starting point for the research discussed in this article was an analysis of existing typologies, both in Poland and abroad, available in literature (according to the reference list). In order to modernize the source data, results were updated based on information acquired from Internet websites for travelers. A very important document in gathering the data was a regulation included in the Polish construction law, namely, the Minister of Economy and Labor Regulation of August 19 2004 regarding hotels and other facilities providing hotel services (uniformed text, Journal of Law 2006, No. 22, Item 169) with subsequent amendments, legislation in force as of January 1 2015 [Regulation]; later in the text referred to as the *Regulation*.

Another step included an examination of hotel facilities, so as to determine the currently circulating hotel room terminology. This data is presented in Tables 2, 3, 4, and 5. The research scope comprised of chosen facilities in Poland and other European countries, while the study was based on information available from the booking.com website, selected due to its: precision, trustworthiness and an international character. Hotel facilities taken into account were located in the downtown area of the city and ranged from 3 to 5 star accommodation types. All chosen buildings were adapted to modern architectural standards and customer's comfort.

The research was restricted to European hotels, due to different traditions in managing space in the American, Arab and Asian cultures. For example, furniture sizes together with their descriptive terminology are not standardized worldwide (see: [Rutes W. A., Penner R. H., Adams L. 2001]). It needs to be noted that Polish hotel facilities as well as legislature were at the center of this study, while references to European and, in selected cases, American literature was used for comparative reasons. However, presented results may be of use in scientific studies related to tourism in the whole Europe.

The gathered and described material served to initiate a discussion and a case study analysis. Both were based on a graphic, comparative and critical analysis, and were focused on determining basic room types, verifying random terminology, and also defining minimal architectural parameters as well as adequate furnishing for each type of rooms. In the concluding part of the text, a synthesis of findings together with a suggested collective terminology is presented.

2 Discussion

2.1 Existing Typologies

The basic definition of a hotel room, i.e. a residential unit, taken from literature [Programowanie, 2010 – Błądek, p. 53], runs as follows: “a separate residential unit [...], usually consisting of a bedroom, hall, toilet and a bathing facility, as well as other adjoining facilities (e.g. bar, kitchenette, balcony, loggia, etc.)”. As the cited functional and spatial system is valid for the researched hotel standards of between 3 and 5 stars, the main factors taken into account in this study are the number of rooms and type of furnishing together with accessories.

Understandably, the most common typology divides hotel rooms based on the type of bed they are equipped with [Rutes W. A., Penner R. H., Adams L. 2001]. This type of classification one can find, for example, on the “eSKY.pl” website [<http://www.esky.pl/porady-dla-podroznych/Hotele/Pobyt-w-hotelu/Typy-oferowanych-pokoi>, Accessed: 26.01.2015], as well as in literature [Programowanie, 2010 – Błądek]. It involves the following categories: single, double for one person, double, triple, and quad, also called quarter (in the Ticekts.pl typology [<http://tickets.pl/hotels/pub/hotels/faq-hotels/classification-of-hotels/types-of-hotel-rooms.html>, Accessed: 26.01.2015]), and, finally, a dormitory (multiple) room. The first room mentioned is considered to be of around 8–14 m² with a single bed, while the double for one person is equipped with 2 beds. According to the website, the double is defined as the so called “twin”, i.e. with two single beds, or “double”, i.e. with one double bed.

Moreover, the sources state that the term “twin” is also used for rooms with a multiple even number of beds. Triple and quarter rooms are intended for the according number of people. The last category, a “dormitory” room intended for a multiple number of people, is characteristic for hostels and therefore has not been included in the research. However, the mentioned typology must be supplemented by information from the source literature [Programowanie, 2010 – Błądek] with the following: “studio” – a room with a single bed and an extra bed in the standard of a double room, usually with an adjoining kitchenette or a bar; junior suite studio – with at least two rooms, and residential studio – with multiple rooms or adapted for guests with disabilities [<http://www.esky.pl/porady-dla-podroznych/Hotele/Pobyt-w-hotelu/Typy-oferowanych-pokoi>, Accessed: 26.01.2015] [Programowanie, 2010– Błądek].

A slightly different classification is suggested by the Tickets.pl website [<http://tickets.pl/hotels/pub/hotels/faq-hotels/classification-of-hotels/types-of-hotel-rooms.html>, Accessed: 26.01.2015], enlisting additional categories: Extra Bed, basic room with an extra bed (also mentioned in [Programowanie, 2010 – Błądek]), and run the house, an undefined room area adjusted according to the customer’s needs. Furthermore, the website presents an additional typology which includes: a Suite (Polish “Apartament”; equipped with a kitchenette), Balcony Room, Bedroom (with a separate bedroom), Business (furnished to provide working space), Connected Rooms, Corner room, Duplex (a bi-level suite), Family Room (for families with children, with one or multiple rooms), Honeymoon Room (for the newlyweds), Junior Suite (with adjoining day and night zones), President (luxurious, multiple rooms, with adequate zones for receiving guests and holding conferences), Standard Room (basic, with parameters adjusted to the functional-spatial structure of the building and available services), Suite (luxurious hotel accommodation type with at least 2 adjoining zones for night and day). Interestingly, the source also mentions a classification based on the available view, listing the following four types: Sea, Pool, Garden, Mountain [<http://tickets.pl/hotels/pub/hotels/faq-hotels/classification-of-hotels/types-of-hotel-rooms.html>, Accessed: 26.01.2015].

In order to present the discussed issue fully, it seems necessary to present one more typology, namely the classification of “suites” in American literature [Rutes W. A., Penner R. H., Adams L. 2001]. Accordingly, the mini suite (sitting room with an adjoining bedroom, classified as 1,5-unit area, situated in less attractive acoustically areas, close to the staircase or lifts), junior suite (2-unit with a sitting room and one

bedroom), VIP suite (3-unit, a sitting room and 2 bedrooms), Conference suite (4-unit, sitting room, 2 bedrooms, conference table and a visiting room), Hospitality suite (4-unit, 2 large sitting rooms, 2 bedrooms and a pantry), Executive suite (5-unit, dining room, sitting room, large bedrooms), and, finally, Presidential suite (6-unit, one large bedroom, 3-piece sitting room area).

As we can see, already in the cited sources there is a significant disparity in terminology. Among others, the suite is at times defined as a single – or, at least, 2-unit area. In Poland, the requirement of 2 separate units in a suite is stated in the Regulation (see point 3.2) and cited in other sources [Programowanie, 2010 – Błądek]. However, in the course of research the authors have found that reality is usually not adherent with regulations in this aspect. Moreover, in foreign hotels, including those in the US, the Polish term “apartament” is substituted by “suite” which stands for a hotel room with a sitting room and one or more bedrooms [Rutes et al. 2001]. Similarly, while in certain facilities the Business standard stands for a hotel room with a specially dedicated working space area, in others it is a room simply equipped with office furniture [<http://tickets.pl/hotels/pub/hotels/faq-hotels/classification-of-hotels/types-of-hotel-rooms.html>, Accessed: 26.01.2015], [<http://www.esky.pl/porady-dla-podroznych/Hotele/Pobyt-w-hotelu/Typy-oferowanych-pokoi>, Accessed: 26.01.2015], [Programowanie, 2010 – Błądek], [Regulation].

2.2 Basic Features

In the majority of analyzed cases the basis for defining a standard for a residential unit was the floor surface. According to the Regulation [Regulation, Annex I Chapter IV], the standard room sizes for 3 to 5 star hotels are the following: (Table 1).

The floor surface is not determined for rooms for over 4 people and hotels above the 3 star standard. However, for 4 and 5-star hotels a “suite” is defined as follows: “encompassing at least a sitting room of 25 m² in the slightest, a bedroom with a bathroom and a hallway with an adjoining lavatory”.

According to research results, as well as regulations, [Regulation, Annex I] the standard furniture includes a bed, a place to work, lavatory, bathtub or shower, closet and equipment, i.e. TV, hairdryer, phone, towels, bed linen, minibar, heating. Nowadays also Wi-Fi becomes a standard. It is worth noting that the Regulation mentions Internet accessibility in dedicated areas [Regulation I, Annex I, Chap. 2]. Also, the possibility to prepare coffee or tea in the room is becoming more and more popular, yet it is still optional. In regard to air conditioning the Regulation [Regulation, Annex I Chap. 2] requires maintaining room temperature at around 24°C in Summer and over 20°C in Winter, while keeping the humidity level between 45-60 % for the 4 and 5 star hotels. At the same time, heating is required for all standards.

The last feature is natural, mechanical or mechanical exhaust ventilation for bathroom facilities (3 star hotels). Additionally, as research has shown, sound insulation is considered to be an additional standard, similarly to a bar and kitchen facilities usually restricted to suites or studios [Programowanie, 2010 – Błądek], [Rozporządzenie], [booking.com]. As all the above mentioned features were present in the studied facilities they will not be discussed in the later part of the article.

Table 1. Floor surface according to the hotel room type (as established by the author based on [Programowanie, 2010 – Błądek]).

Category	5 star	4 star	3 star
Floor surface (without adjoining areas, i.e. bathroom, hall, alcove, loggia, etc.) in [m ²]			
1-person	14	12	10
2-person	18	16	14
3-person	undetermined	undetermined	16

3 Case Studies

3.1 Types

In order to formulate the current typology it was necessary to determine actual type of accommodation in modern day hotels. Selected findings are presented in Tables 2, 3, and 4. Information in each table consists of data from 2 facilities of the 3, 4 and 5 star standard. An emphasis was put on selecting hotel chains as well as boutique hotels.

3.2 Floor Surface and Additional Equipment

Double rooms. For Double Standard (without additional names) rooms, with double or twin beds, present in all of the researched hotels, significant differences in floor surfaces have been established. For 5 star hotels floor surface ranges from 13 m² in the 5 star boutique Gródek hotel in Cracow, 20 m² in the majority of cases, and 34 m² in the 5 star Intercontinental hotel in Warsaw. Interestingly, the previously mentioned boutique hotel has not met the minimum floor surface regulation. However, as in Poland facilities are often located in the existing building stock they may fall under certain exemptions according to Sect. 3.1. of the Regulation [Regulation]. The referenced paragraph indicates that in the aspect of facilities on the national monument list certain exceptions from the building regulations are acceptable. For the 4 star Standard the floor surface ranges between 20 and 22 m², while for the 3 star one 16 to 17 m², thus exceeding the legal requirements. Usual width for single beds is set between 90 and 130 cm and 131–150 cm for double beds with furnishing equipment rarely deriving from the standard. Only in 4 and 5 star facilities other features were present, i.e. ergonomic chairs, beds over 2 m long, air conditioning, safe, ironing set, or, indicating a high standard, wooden furniture [booking.com].

Hoteliers refer to double rooms in many terms which are not mentioned in the cited typologies. For example, the 3 star Hotel Royal in Cracow offers the Twin Economy Room with standard equipment and a floor surface of 17 m². Based on interior solutions and floor surface, it is difficult to differentiate the mentioned room category from the standard one. One may assume that, perhaps, the equipment is slightly more modest than in the other Hotel Royal rooms [booking.com].

Superior stands for a higher standard, very popular among double rooms. The floor surface of this unit is similar to the standard one and ranges from 14 m² (PURO**** in

Table 2. Accommodation types – hotels in Wrocław (comparative data retrieved from the Booking.com website, Accessed: 29.11.2014).

No.	Hotel name/location	Room type					
1	Europeum Hotel ***	Double Deluxe	Twin Deluxe (1 or 2 beds)	Triple Deluxe	Suite	Family Deluxe Single	Single Deluxe
2	Centrum Dikul***	Twin	Double	–	Suite	Single Deluxe	Single Deluxe
3	Best Western Hotel Prima Wrocław *****	Double	–				Single
4	PURO Hotel Wrocław	Deluxe with king size bed	Double Superior	Twin Superior	–		Single Superior
5	Sofitel Wrocław Old Town*****	Double Classic	Double Superior	Luxurious Double with panoramic city view	Apartment typu Junior Suite	–	
6	The Granary - La Suite Hotel ***** (boutique hotel)	Executive	Garden view	–	Premium Suite	Deluxe Suite	–

Table 3. Accommodation types – hotels in Warsaw (comparative data retrieved from the Booking.com website, Accessed: 02.12.2014).

No.	Hotel name/location	Room type					
		Standard Double	Standard Twin	Double/Twin Executive	Family Room (2 2 or 1 +2)	Single Standard	Single Executive
1	Hotel Metropol***						
2	Hotel „MDM City Centre***	Double/Twin Standard	Twin Deluxe	–			
3	Novotel Warszawa Centrum****	Standard Double	Twin Standard	Standard with one double bed and a sofa	Double Superior	Double Executive	
4	Polonia Palace Hotel*****	Double/Twin Standard	Double/Twin Superior	Double Deluxe	Single Standard	Single Superior	Family Room (2 + 2)
5	Radison Blu Centrum Hotel*****	Standard single or twin bed	Business Class		Executive Suite	–	
6	Hotel Intercontinental*****	with king size port win bed	Deluxe with king size bed	Double Twin Club	Junior Suite	–	

Table 4. Accommodation types – hotels in Cracow (comparative data retrieved from the Booking.com website, Accessed: 02.12.2014)

No.	Hotel name/location	Room type							
1	Askot Hotel****	Double/Twin	Triple	Family	Single	–	–	–	–
2	Hotel Royal****	Twin Economy	Twin Standard	Double/Twin Deluxe	Triple Deluxe	Suite	Single Deluxe	Single Economy	Single Standard
3	Hotel PURO*****	Twin Superior	Double Superior	Corner Double Room	Suite	Single Superior	–	–	–
4	Holiday Inn Krakow City Centre*****	Double/Twin Standard	Deluxe with king size bed for nonsmokers	–	–	–	–	–	–
5	Hotel Gródek *****	Double Standard	Double Deluxe	–	Suite	–	–	Standard	–
6	Sheraton Kraków Hotel*****	Double/Twin Classic	Double/Twin Deluxe	Double/Twin Club	Junior Suite	–	–	–	–

Wrocław), 18–20 m² (most common solution), to 26 m² in Aquila Atlantis Hotel, 5 star facility in Heraklion's city center in Crete (Greece). This type of room is characterized by interesting views on the city, harbor, or garden. Due to a relatively small cubature, comfort manifests itself mainly through interesting interior design and additional technical equipment, not furnishing. This includes: air conditioning, sound insulation, two safes (one for a laptop), tablet (PURO hotel in Cracow), touch panels for hotel staff ("PURO" in Cracow and Wrocław), comfortable and ergonomic chairs, coffee makers, fast wireless Internet, as well as additional services. Interestingly, in one of the facilities (Aquila Atlantis Hotel) the Comfort standard is almost identical to the Superior [booking.com].

Often, for double rooms in standards higher than basic the "Deluxe" term is used. It is characterized by an increased floor surface unit in respect to other double rooms on the premises ranging from 18 m² and an adjacent closet in Europeum*** in Wrocław, 30 m² in the Polonia Palace Hotel**** in Warsaw, to 34 m² in the InterContinental in Warsaw. Moreover, an increased bed standard is provided, with single beds ranging from 90 to 130 cm and double beds between 181 and 210 cm (the so called king-size) or length of over 2 m. Also in the aspect of equipment, Deluxe is enriched with an interesting view from the window, a balcony, safe, ironing unit, flat screen TV, air conditioning and other technological enhancements, e.g. controlling light temperature with a touch panel (PURO hotel in Wrocław), or services not covered by the architectural design. For example, hotel guests may have access to a fitness or business center, clubs, coffee maker, or may be provided with newspapers or luxurious toiletry brands [booking.com].

The room type termed "Classic" also belongs to the higher standard class and was present in all of the researched hotels. Characteristic for a "Classic" is a larger floor surface of 24 m² (Sofitel Wrocław Old Town*****) and 28 m² (Sheraton Kraków Hotel*****), as well as a sitting room area and equipment of a higher than in the "Deluxe" type standard, e.g. additional furniture, sound systems or iPod charging spots. The "Club" type rooms are more or less similar (in two of the researched hotels), however the guests are additionally offered an entrance card to the hotel club. A similar class of comfort is provided in the Double Executive room type, which floor surface ranges from 20 to 35 m². For example in The Granary – La Suite Hotel interiors are divided into a bedroom and sitting room zone (in one room) with an interesting décor (exposed brick walls, glass ceiling) and a panoramic view of the city. Additional (other than the already mentioned) equipment consists of a closet-wardrobe and a laptop safe. Double beds are of a 181-210 cm width and there is a sofa bed in the sitting room. Having said that, in other facilities it is difficult to clearly define what is the difference between an Executive and a Deluxe room type. The case is similar with the Exclusive room type, provided, e.g., in the Warsaw Metropol*** hotel. The room has an area of 20 m², a separate sitting room area, with additional features: a great panoramic view of the city and air conditioning. Depending on individual requirements, the room may hold two single or double beds, with width dimensions of 131–150 cm and 90–130 cm respectively [booking.com].

One of the last categories is the Business Class hotel room, available, among others, in the 5 star Radison Blu Centrum Hotel. The room is 28 m² large and the nonstandard equipment includes an office desk with an ergonomic chair, fast and wireless Internet, air conditioning, coffee maker and services, i.e. press delivery and room preparation for

a comfortable sleep in the evening. Depending on the selected option the hotel has units equipped with: 1 large double bed (151–180 cm wide), or 2 single beds (90–130 cm wide). A Business room with a panoramic view of the city is available also in the Aquila Atlantis Hotel in Heraklion in Crete. The room is 24 m² large and includes a large desk, 42-inch flat screen TV, air conditioning, safe, bed (1 double bed 151–180 cm wide or 2 single beds 90–130 cm wide) with a spring mattress, rainshower system in the shower and a separate lavatory [booking.com], [<http://www.radissonblu.com/hotel-warsaw/rooms>], [<http://www.theatlantishotel.gr/?accommodation=business&lang=en>].

Among the researched hotels the Double Corner Room was available in only one hotel, namely the 4 star PURO hotel in Cracow. Here, the floor surfaces equaled 27 m², the room had a modern design including windows of the interior's light height. The guests could dispose of a 40-inch TV, tablet, air conditioning, safe and one double bed.

Suites. Junior Suite is the most modest unit in the suite category. In researched facilities its size ranges from 37 m² (Sofitel Wrocław Old Town*****) up to 68 m² (InterContinental***** in Warsaw). A junior suite is characterized by a large sitting room connected with a bedroom (one room) with additional high standard equipment (similar to the one mentioned above), as well as interesting décor.

An example of a Classic Suite can be found in the 3 star Hotel Royal in Cracow. It is 80 m² large, has a balcony, wardrobe, flat screen TV, one single and one large double bed, as well as a bath tub. Despite a higher standard, air conditioning is not available. In the 5 star Hotel Gródek also in Cracow, the suite is 27 m² large and has a luxurious character. As other rooms in this facility, it is safe for people with allergies. Among the equipment one will find the following: bath tub, underfloor heating, ironing unit, air conditioning, very large double bed. Additionally, a press delivery service is offered. Also, in this room layout the bedroom and sitting room were not separate, while possibly the most surprising feature is the discrepancy in the floor surface among various described units.

A Suite is the first hotel unit discussed in the article, which consists of a division between a sitting room and a bedroom. The smallest suite among the researched hotels was located in the 4 star PURO hotel in Cracow (29 m²) and the largest in the Centrum Gikuł*** hotel in Wrocław (45 m²). Alongside the additional equipment, these units usually include larger beds and, sometimes, kitchenettes.

In the boutique The Granary – La Suite Hotel **** in Wrocław two suite types, with different names than in any other facility, can be found. The first one, the Premium Suite with a separate bedroom and sitting room is 40 m² large. The room is equipped with specially dedicated furniture, while the guests additionally have access to a fitness center. The second unit, the Deluxe Suite, is a bi-level unit with a bathroom and bedroom on the lower level and a dining room, kitchenette and an additional bathroom upstairs. Again, the suite is equipped with dedicated furniture and a bed 181–210 cm wide. The total suite size is 70 m². Finally, the Radisson Blu Centrum Hotel in Warsaw offers an Executive Suite with the floor surface of 53 m². A bedroom is divided from a sitting room and working space area with sliding doors. The Suite features also a wardrobe.

Other. Single, triple and family hotel rooms are not very common. If so, they are usually available in the following categories: Standard, Deluxe, and Superior, and their

level of comfort corresponds to the described above. However, it is worth to examine the functional-spatial layout of such interiors.

Deluxe family room in the Europeum hotel, 39 m² large, is created from two adjoining Twin rooms with one bathroom adapted to the needs of people with disabilities. In comparison, the Family room in the Metropol hotel in Warsaw is dedicated for 2 adults and 2 kids. It is 30 m² large and room features include two single beds or one double with a sofa bed. The room is also available in the one adult and two kids option and joined with a sitting room. At the same, a family unit in the Askot Hotel*** in Cracow, has standard parameters and equipment, is 30 m² large and is equipped with 4 single beds. Lastly, the Family Superior in the Aquila Atlantis Hotel in Heraklion in Crete in Greece is 36 m² large and includes a sitting room, a balcony, a rainshower system shower, 42-inch flat screen TV, coffee maker, safe, air conditioning and two double beds.

A Triple room (3 single beds) can be found in the Askot Hotel*** in Cracow. It is available in the standard option, larger than the double room by 2 m² (18 m² in total) and including 3 single beds. Hotel Royal*** in Cracow offers a Triple Deluxe room which is 28 m² large (a double room is 24 m² large). It has two single beds and a sofa bed or one single bed and one large double bed. Interestingly, as research has shown, single rooms were mostly doubles for one person with equipment and name matching the standards available in a given facility. Hotels rarely have actual single rooms characterized by a corresponding floor surface. One example is a Single Economy room in Hotel Royal*** in Cracow which is 11 m² large and is equipped with one single bed.

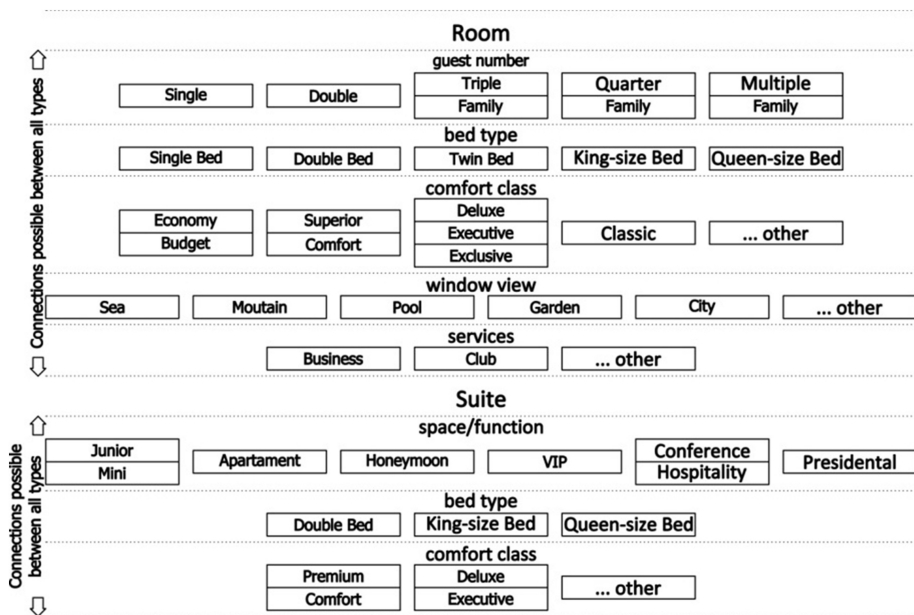


Fig. 1. Typology of hotel rooms

4 Conclusion

In the course of research an original typology dividing rooms based on the number of guests, type of beds, comfort level, view out of the window and additional services was formulated. Moreover, “suites”, due to their specific character, were grouped according to separate classification standards. Additionally, the authors have adopted the European and not local definition of a suite, as a one chamber interior. (Figure 1).

The presented typology is intended for European facilities. There is no doubt that together with the development of the hotel industry, room types will be evolving, hence the given terminology may expand. Furthermore, in some cases, hotels may add up on or simply change the terminology, for example, due to the nonexistence of legislative regulations. For that reason, the “other” category has been included.

The authors hope that the presented typology together with the undertaken systematization of terms regarding hotel terminology, will inspire other research in the area, as well as prove useful to those involved in the travel industry.

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