

# Role of social spaces in Mixed use developments in optimizing Social sustainability at neighborhood level –Comparative study

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**Abstract - The current paper looks at exploring the need to identify “Social spaces” and “Social interactions” based on such social spaces in context to the changing urban scenarios at the scale of mixed use neighbourhoods today and the potential of these neighbourhoods in optimising the social sustainability for ‘spatially dependant user group’(group of people dependant on neighbourhood spaces for social exchanges).**

**Significance of research : In Context of changing Urban Scenarios ,the impacts of changes in the built-unbuilt relationships and changed formats in social exchanges ,will need redefining what is” Social space” and hence a need to identify typologies within neighbourhood spaces which will play key role in optimising social sustainability. The current research attempts towards understanding the factors shaping this socio-spatial dynamix, for functional, liveable and sustainable Social spaces for the spatially dependant user group through comparative mapping and analysis of three different mixed use neighbourhoods to arrive at measuring how sustainable the given neighbourhood is with the current status of how active and how much adequate the social spaces are are their impact in defining the overall social sustainability of the neighbourhood.**

**The literature review will investigate the concept of “Social sustainability”and be focused on how social spaces conducive to social interactions in a mixed use neighborhood can be crucial in shaping social sustainability.**

**Through social surveys and interviews qualitative –quantitative mixed methods to arrive at needs and typologies of different social spaces. The aim of this research will be to study how the built-unbuilt social infrastructure can be optimised to the changing societal needs of the “spatially dependant user group” ,enriched through new definitions of social connectivities , accessibilities and exchanges within the socio-spatial scale of mixed use neighborhoods.**

**Keywords - Social sustainability, mixed use neighbourhood , social spaces, spatially dependant user group**

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## INTRODUCTION

The globalization has set a generic tone to neighborhood planning due to which the social sustainability of the community is adversely affected. This is one of the main reasons why neighborhoods today have lost their identity and sense of place. The need for identifying this relevance of social sustainability in making neighborhoods vibrant with activity ,liveable and sustainable is crucial. The

current research paper is a part of the larger Research enquiry of what do we mean by Social sustainability and how can social spaces for the spatially dependant user group influence the Social sustainability of a neighbourhood.

The current study of Thane city, with selected neighborhoods shows how the old city area of organic neighborhood struggles to survive in the current times with the changing concepts of social

spaces in Thane. Neighbourhood models have changed over a period of time, however, the socio-cultural layers deeply embedded in the city of Thane helps the social spaces to regain their grounds in spite of physical planning deficiencies.

The current research paper looks into the deficiencies in the physical social infrastructure which is important for further study of patterns of change occurring in the process of Smart city development under retrofitting to understand the requirement of socially sustainable mixed neighborhoods.

The study of 3 different zones of Thane city gives a comparison point to measure and confirm with the status of social sustainability today. On one side Thane city has townships with a high valued physical infrastructure but low value on social sustainability due to disconnect and sometimes lost relative scale of social spaces. On the other hand we have the old core city with deficient physical as well as social infrastructure.

Hence with ongoing Smart city Area based developments with retrofitting and redevelopment policies, it's an opportune time to identify the factors for social sustainability for the old as well as the new developments to maintain the socio-cultural vibrancy with which the city of Thane has always been identified with.

The aim of the research is to understand social sustainability and how it can be achieved through inclusive social spaces at neighborhood level with the spatially dependant user group as the focus for the current research paper.

The 3 models of neighborhood characterised by varying degree of social sustainability, based on locality or place based social lifestyle of residents manifested essentially through the type and variety of social spaces they have an access to within their neighbourhood. These 3 mixed use studies will highlight the importance, the availability or deficit of appropriate social spaces. It will help arrive at the need for a socially sustainable neighborhood which gives the residents/users of social space a sense of belonging and ownership of their locality or neighborhood.

The study progresses with identification of social use type and pattern of common shared spaces in the selected neighborhoods and the contribution of its inclusiveness and multiplicity to the liveliness and social sustainability in urban neighborhoods with a strong dynamix displayed by social spaces, helps build social cohesion, trust, solidarity and sense of belonging.

## DESCRIPTIVE DEFINITIONS

**Social sustainability-** Polèse and Stren (2000, p. 15-16) provide a definition of social sustainability with a special focus on urban environments as

“development that is compatible with harmonious evolution of civil society, fostering an environment conducive to the compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population”. Their definition emphasises the physical environment (e.g. public spaces, urban design and housing) within the sustainability. It is the capacity of societies and social groups to inclusively navigate social change—while enhancing group and individual freedoms. As a process social sustainability is defined as ‘A process of urban development, supported by policies and institutions that ensure harmonious social relations, enhance social integration and improve living conditions for all groups.’ (Ghahramanpouri et al. 2013)

**Mixed use neighbourhood-** A neighbourhood with a proportionate distribution of variety of land uses and building uses layered to give a vibrant activity pattern which encourages potential and meaningful social exchanges. (source: Author)

**Social spaces-** It includes informal recreational spaces and green spaces in and around (mixed use) neighbourhood, with a primary purpose of providing opportunities for informal activities close to home or work. Space itself does not exist but objects in space create spatial relationships amongst themselves and these interactions and exchanges further identify and help define what can be called as social spaces which should be accessible, safe and functional

**Spatially dependant user age group-** The people belonging to age group wherein the routine social exchanges are majorly related to local social paces within their neighbourhood.

**Trans-spatial people-** People belonging to age group of High School and work related commuters, who have opportunity and exposure to social exchanges beyond their neighbourhood social spaces.

**Inclusivity :** the ability of the city to develop a sense of convergence between all the sections of the population, to evolve as a one community. Current research looks at Inclusivity considering “Spatially dependant user group”

## MATERIAL AND METHODS

A study conducted by Khemri, Caputo, and Melis (2020), unveiled the failures of applying a global concept of sustainable neighborhood design in developing countries. The study reveals how globalisation and determinism led to loss of locality and degradation of community, social and spatial segregation, and loss of local identity and sense of place. Jacobs (1961) argued that everyday life of residents creates lively and well-functioning neighborhoods through numerous and improvised activities, while Gehl (2010) considers social urban

practices a showcase of residents' lifestyle. Similarly, Lefebvre (1991, p. 26) argues that '(Social) space is a (social) product' and advocates for the association of space with everyday life and social practices. The consistent use of space not only enhances the quality of the built environment (Dempsey 2006), but also promotes sense of place or '*Genius Loci*' as Norberg-Schulz termed it. A term that refers to meaningful spaces that reflect the culture and history of an area and provide appropriate physical setting for a frequent and enduring human interaction (Norberg-Schulz, 1979) all of which foster a sense of community. The research methodology looks at identifying the factors responsible for socially sustainable mixed use neighborhoods through a pilot study of Thane city. The shortlisted 3 neighborhoods as case studies to identify and analyze the factors influencing social sustainability represent the 3 different planning models viz a viz original organic settlement, model neighborhood plan and township that shaped Thane city from pre independence to modern times. This research methods applied aim to investigate the relationship between urban forms and social use of urban spaces based on user typology, space usage typology and inclusivity.

#### **ABOUT THE STUDY AREAS OF THANECITY**

Thane is one of the historic and multi-layered cities, it presents an opportunity to study the liveability of neighborhoods to arrive at its value of social sustainability today in neighborhoods belonging to different parts and context of the socio-cultural timeline of Thane. Its strategic position as a crossroad of rich history and culture has granted it a diverse mix of cultures and social ideologies. We can see an adaptive concept of neighbourhood that has recreated itself in different urban forms in these 3 different localities; since it can be perceived and measured in various neighborhoods spread along different phases in the evolution timeline of Thane city. The mixed use developments of different time periods in Thane offer a varied play of dynamix of social sustainability factors with outcomes of varied degrees of placemaking, sometimes achieving and sometimes defeating the purpose of social sustainability.

"In the approach to the Smart Cities Mission, the focus is on sustainable and **inclusive development** and the idea is to look at compact areas, create a replicable model which will act like a light house to other aspiring cities." (source: Thane Smart city report –Ford foundation sponsored research(2016-18) by TISS. This current approach under "Smart city –Thane" with focus on the factor of "inclusivity" needs a check on the current status of "social sustainability" at neighbourhood level through its Social spaces.

The current research intends to identify role of Social Spaces in Social sustainability and to explore the parameters which impact social sustainability of neighbourhoods in Thane.

This paper provides an overview of three of the most influential planning models that have shaped Thane and contributed to its social sustainability; the Original settlement of Thane-Charai being under "Retrofitting", the current research is most relevant to explore implications of this study for reformulation and restructuring of future residential development or redevelopment in the old (core)city of Thane; which has lost its aesthetic and locational value due to the current deficiency of amenities, limitations of the street widths and dense congested morphology offering an extremely weak ratio of built to unbuilt (social spaces).

The study areas of the chosen neighbourhoods in Thane-Charai, Vasant Vihar and Hiranandani estate that represent the three mixed use neighbourhood models with different social space typologies which were giving the locality not only its social sustainability quotient but also the identity or sense of place.

#### **Type 1 Study area :Charai:original settlement with Organic pattern of development:**

Masunda lake-the center of social activities of this neighborhood, knows frequent social interaction and diverse activities, The neighborhood of Charai is very densely populated, so children used to occupy residential streets to play as a result of feeling safe in their locality. With growing traffic and increased car ownership, the inner roads of this dense locality are no more safe and available for the kids. A small public park and couple of private corner gardens exist inside residential areas away from the hustle of public areas and they are used by children to play but are clearly inadequate; yet these spaces contribute highly to promote social relations between children, which creates sense of belonging to their own locality.

The temporal pattern of activities in the neighborhood is constant throughout the day, except early morning where few activities are performed, such as cleaning and gardening. On the other hand, on the weekend, and particularly on Friday, the number of activities increases significantly to reach its peak; one can see a great number of street vendors and the overcrowded square on Masunda lake. In the evenings, Khaogalli near St. John School and a part of the Masunda lake square (chintamanijewellers corner to Thane market-kharkarali street corner) are most lively buzzing with commercial and recreational activity continued along the edge of the lake; thanks to the availability of lighting which sends signs of safety and security, unlike inner road spaces that are dark and empty. The Masunda lake is the epicenter of social activity of this neighbourhood; with boating club, Nana-nani park and the Gadkarikatta give the socio-cultural gravity to this neighbourhood and hence the residents grant themselves the right to occupy streets informally for informal vending, which not

only contributes to urban socio-cultural-economic lifestyle but also encourages social cohesion.

**Type 2 Study area :Vasantvihar,Pokhran 2 : built on neighbourhood planning principles :**

The Vasantviharneighb our hood is fuelled by strong sense of community, sense of belonging and solidarity that emerged from frequent long term enduring association and social use of space.It gets culturally ingrained and becomes the identity of the place.

The post TMC corporation led development in the 90s attempts at well planned neighbourhoods along the Pokhran road 2 area which further nestles in the microclimate of the Upvan lake and Yeour hills as the backdrop, displaying great urban form features that stimulate urban life through planted avenues and boulevards and many public spaces with vegetation and outdoor gyms and libraries ,art installations,sit outs and walking/jogging/tracks encouraging fitness and health by exercising outdoor rther than a AC gym, with host of various activities, making neighbourhoodssafe,lively and inclusive for varied age groups and sometimes even sensitive to women, elders, toddlers.Theneighbourhood selected as study area under this phase of Thane's time line is VasantVihar.

Vasantviharneighbourhood with its periphery thriving on the Pokhran road leading towards the Upvan lake, the pedestrian friendly walkways and open spaces connectivities and the popular Upvan lakeprecinct.Hence the residents of this locality feel greater sense of community ,.The scale of the urban forms provides shade and promotes walkability, which in turn, result in intense social interaction and social cohesion among community members.

**Type 3 Study area :Hiranandani Estate ,Ghodbunder road : built on township concept :**

The observations carried out in Hiranandaniestate , Ghodbunder road around the turn of the century entering Y2K showed low number of active zones inspite of planned amenities provided in a township setting. The landuse distribution and the zoning strategy defeats the purpose of spontaneous organic social spaces causing spaces to be lifeless and empty. This is due to lack of appropriate placement of spaces and their transitions for social interaction and forming social relations, which are the strengths of organic neighbourhoods. The gated community with podiums disconnected with Mother earth and hence the inactive edges of built form can be held responsible for causing place lessness.

The zoning of Hiranandani township takes a heavy toll on place making by creating independent silos of built forms which stand tall over individual podium gardens with complete disconnect to each other and hence render the place lifeless.

The peak pedestrian movement is seen during early morning walks and evening walks and seasonal festive activities and events planned in the central open space of the Township(cultural events like Durga puja, NavratriGarbadandia nights etc)

**RESULTS**

the well-known 'Vauban' neighborhood (Freiburg, Germany) was founded in 1994 through a bottom-up planning process and is characterized by plenty of parks and public spaces, overall increased living density, as well as low car ownership (Field, 2011)

The historic 19th century organic neighborhoods of Thane although devoid of spacious parks and gardens, yet the scale of the smaller pocket spaces bind the dense low rise morphology of the place to impart the value of placemaking due to its organically established human scale and the humane interactions that it is capable of initiate and maintain social connect and rule out social isolation than the modern urban high rise forms which in the bargain to reach the skies get completely disconnected with the interactive ground where the spatial narratives and social give and take thrives the most.

Findings indicate that residents are grouped by local culture, common identity and shared values and rely on the quality of social exchanges that happen in a given typology of space.The typology of space is in turn further dependant on how the urban built form is allowing this exchange to happen and has major influence on social use of space, quality of social life and thus is the main driver for the sustainability of urban neighbourhoods. This research helps conclude that cities live in their neighborhoods since it is at the scale of the neighborhood that the actual dynamix of social use, interaction and exchanges are executed in urban space.

The built form decides the left over-the figure ground ratio defines the usability of the unbuilt .The unbuilt left overs either are capable of taking the onus of building social sustainability within the neighbourhood depending on the scale that has been established by the built form.

**DISCUSSION**

The strategy of builtform placement contributes whether the unbuilt will have its narrative of social spaces on the basis of how adaptable ,flexible, accommodative and permeable the social space is allowed to become by relative positioning of the built form and the place making strategy implemented, if any.

The landuse and building use also plays a crucial role in either building or breaking the synergy of the front open spaces or the spaces between two building blocks or between the street and the building line.

The neighborhood built form along with its mixed use typology creates an activity pattern which can further intensify the social exchanges meaningfully or can break the narrative creating a complete disconnect between the people and the so called potential social space comes in the making which plays the most crucial role in defining the social sustainability of the community and hence the city.

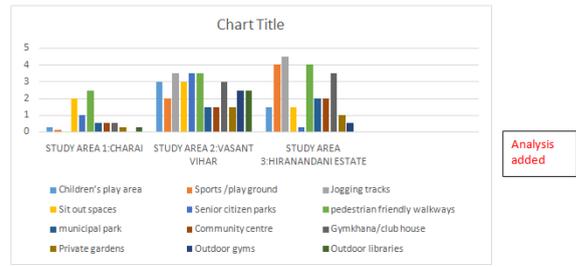


Figure 1: (Above) Empirical data analysis of Thane Neighbourhoods(source: Author; Primary data through activity mapping, on site observations and interviews of local users)

Table 2: (Below) Neighborhood level factors contributing to Social sustainability in 3 different Neighborhoods of Thane and Key observations of Primary Research

Table 1: Social Space typology factors contributing to Social sustainability in 3 different Neighborhoods of Thane city

| Space typology                         | Type 1 Study area : Cherai |                                | Type2 Study area : Vasant Vihar |                         | Type 3 Study area: Hiranandani estate |                         |
|--|----------------------------|--------------------------------|---------------------------------|-------------------------|---------------------------------------|-------------------------|
|  | Active/<br>Inactive/absent | Adequate/<br>Inadequate/absent | Active/<br>inactive             | Adequate/<br>inadequate | Active/<br>inactive                   | Adequate/<br>inadequate |
| Children's play area                   | Absent                     | inadequate                     | Active                          | adequate                | active                                | inadequate              |
| Sports /play ground                    | Absent                     | inadequate                     | Active                          | inadequate              | active                                | adequate                |
| Jogging tracks                         | Absent                     | absent                         | Active                          | adequate                | active                                | adequate                |
| Sit out spaces                         | active                     | inadequate                     | Active                          | adequate                | absent                                | NA                      |
| Senior citizen parks                   | active                     | inadequate                     | Active                          | adequate                | absent                                | NA                      |
| Promenade/pedestrian friendly walkways | Active                     | adequate                       | Active                          | adequate                | active                                | adequate                |

|                        |          |            |        |            |        |            |
|------------------------|----------|------------|--------|------------|--------|------------|
| Public /municipal park | Active   | inadequate | Active | inadequate | active | inadequate |
| Community centre       | Absent   | inadequate | Active | adequate   | active | inadequate |
| Gymkhana/club house    | Active   | inadequate | Active | adequate   | active | adequate   |
| Private gardens        | Inactive | inadequate | Active | adequate   | absent | NA         |
| Outdoor gyms           | absent   | NA         | Active | adequate   | absent | NA         |
| Outdoor libraries      | absent   | NA         | Active | adequate   | absent | NA         |

| PARAMETER OF STUDY | Neighborhood model                           | Type 1 Study area :Cherai  | Type2 study area :VasantVihar  | Type 3 Study area: Hiranandani estate  |
|--------------------|--|--|--|--|
| 1.                 | Type of development                          | Organic  | Planned  | Township   |
| 2.                 | Phase of development in timeline of the city | Origin of Residential settlements-19 <sup>th</sup> century development-pre independence      | Post Thane Corporation TMC approved-Pokhran road development 1990s onwards | Post 2000-Ghodbunder road development, as township gated community                   |
| 3                  | Built form typology                          | High Density ,lowrise, mixed building use  | High density ,Mid and High Rise, mixed neighbourhood                       | High density,Tall buildings, mixed landuse   |
| 4                  | Space(unbuilt) typology                      | Open space deficit, unbuilt 20 percent   | Open space adequate ,unbuilt 30-35 percent                                 | Open space adequate, unbuilt 40-45percent  |
| 5                  | Affordability                                | Affordable (since congested areas with difficulty in redevelopment and deficit of amenities) | Moderately affordable(well planned with amenities and recreation)          | Mix of Moderately affordable and high end(well planned streets with gated community) |
| 6                  | Social space Availability                    | Low to moderate  | Moderate to high   | Moderate to high   |
| 7                  | Social space accessibility to locals         | Low in private residential,high in public areas  | High in Private as well as Public areas                                    | Moderate in Private as well as in Public areas                                       |
| 8                  | Sense of ownership                           | High   | Moderate   | Extremely low  |

|    |                                   |   |  |  |
|----|-----------------------------------|---|--|--|
| 9  | Socio-cultural exchanges          | Moderate to High (visible drop seen)  | High(visible rise seen)  | Low to moderate  |
| 10 | Socio-political value             | High  | Moderate   | Low  |
| 11 | Commercial activity               | High  | Moderate   | Moderate   |
| 12 | Recreational value of open spaces | Low-Centralized and limited at lakefront  | High-Decentralized and well distributed at neighbourhood level | Moderate-Centralized to central open ground                            |
| 13 | Quality of social spaces          | Moderate-limited to lake front  | High- Private as well as public open spaces                    | Moderate   |
| 14 | Aesthetic value of social spaces  | Low   | Moderate to High   | High   |
| 15 | Community network                 | High since routine social exchanges and interactions being oldest neighbourhood | High since good social mix of people and events                | Low since rigid division in land use and separate plots of residential |
| 16 | Social cohesion                   | High since oldest neighbourhood   | High since good social mix of people and events                | Low since rigid division in land use and separate plots of residential |

(Source: Parameter 1,2,5,10,11-Thane Municipal Corporation Environment status report 2007-2008;Thane Smart city report 2016-18;Parameter3,4,5,6,7,8,9,12,13,14,16-primary data(mapping,survey and interviews);Parameter 15-Author’s observations as primary user of the city and its community network for 4 decades.)

**Table 3: Identification of social spaces status for Spatially dependant people – need for Social inclusivity to achieve Social sustainability in 3 different Neighbourhoods of Thane city**

|   | Neighbourhood Social space USER type | Type 1 Study area :Charai | Score as per Likert scale | Type2 study area :VasantVihar     | Score as per Likert scale | Type 3 Study area: Hiranandani estate | Score as per Likert scale |
|---|--------------------------------------|---------------------------|---------------------------|-----------------------------------|---------------------------|---------------------------------------|---------------------------|
| SPATIALLY DEPENDANT PEOPLE  | Under 5 years(toddler)               | absent                    | 0                         | Present,Adequate, safe,functional | 4                         | absent                                | 0                         |
|   | Under 10 years                       | absent                    | 0                         | Inadequate                        | 1                         | inadequate                            | 1                         |
| TRANS SPATIAL PEOPLE( High School,College going and employed age group) | 11-20 years                          | inadequate                | 1                         | Adequate,safe, functional         | 4                         | Adequate,safe, functional             | 4                         |
|   | 20 to 40 years                       | Present and adequate      | 2                         | Adequate                          |                           | Adequate,safe, functional             | 4                         |
|   | 40-60 years                          | inadequate                | 1                         | Adequate,safe, functional         | 4                         | Adequate,safe, functional             | 4                         |
| SPATIALLY DEPENDANT PEOPLE  | Above 60 years /retired              | absent                    | 0                         | Adequate,safe, functional         | 4                         | absent                                | 0                         |
|   | Disable/univers al design category   | absent                    | 0                         | Inadequate                        | 1                         | absent                                | 0                         |
|   | Women - homemaker caregivers         | absent                    | 0                         | Inadequate                        | 1                         | inadequate                            | 1                         |
|   | Economically weak                    | absent                    | 0                         | Inadequate                        | 1                         | absent                                | 0                         |
| Social sustainability   | TOTAL SCORE                          |                           | 4                         |                                   | 20                        |                                       | 14                        |

**LIKERT SCALE:** Absent=0 ;present but inadequate=1; present and adequate =2;present,adequate and safe=3;Present,adequate,safe and functional=4;Present ,adequate ,safe,functional and equipped with universal design=5 (Likert, 1932)

**Inferences:** The Social sustainability score for Study area type 1: Charai is 4;Study area type2: VasantVihar is 20;Study area type 3 :Hiranandani Estate is 14 The spatially dependant user category score being Charai-0;Vasant Vihar-12;Hiranandani estate-2 Thus,VasantVihar mixed use Neighbourhood performs the best as Social Sustainability overall score as well as score specific to the Spatially dependant user groups and Charai performs most poor and lacks the aspect of minimum standards of social spaces to achieve Social sustainability. Similarly Hiranandaniestate,inspite of the amenities and recreational facilities and 25percent RG (inclusive of ground layout RGs,podiums and public spaces)it lacks the Social inclusiveness in terms of quantity and hence is on low to moderate scale of sustainability.

**CONCLUSION**

This paper helps understand the current status of social spacesin the shortlisted Neighbourhood case studies of Thane city ,such that the relationship

between user groups and spaces having potential of contributing to social sustainabilityfor given neighbourhood, can be understood.The failed dynamix within the social typology of people as well as spaces is visible and creates total disconnect between the user and the social spaces.Such social spaces further get identified as deficit, defunct, non-eligible , unutilized spaces which lack the capacity to build meaningful social interaction and hence low on performance as a social space.

Further research will investigate how the present social spaces (VasantViharneighbourhood)which are performing better than others can be a learning model to propose the retrofitting in the Area based developments of old core city and also inspire planning strategies for upcoming new townships along Ghodbunder road in Thane such as to keep the social sustainability maintained.

The study and comparative analysis of these neighborhoods in different zones of the city has helped understand whether the social use of space by spatially dependant user group promotes solidarity, trust, social cohesion and sense of belonging which are fundamental drivers for social sustainability.Thus, the current study analysis concludes thatalongwith built form attributes of scale,relativeplacement of the social space with corresponding social infrastructure ; and establishment of inclusivity in socialspace will play a crucial role in building well connected and seamless networks of social exchanges through well placed social spaces and hence this will lead to a high value of placemaking.The local inhabitants need to have a decent lifestyle and have adequate and safe access to resources and opportunities to social spaces or social infrastructure.The need to develop self-sufficient and walkable mixed-use neighborhoods, revival of the core area -retrofitting with planned social spaces and upgradation of public places to overcome the deficit as well as address social exclusion is needed. The integration or social inclusivity of the spatially dependant user group of the neighbourhood for positive social relationships is identified and further research can look at factors which will help maintain the social sustaianability by bridging this gap through policis of retrofitting in core area addressing this concern.

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