



URBAN MOBILITY POLICIES, AND EXTRA-SMALL AND LOW COST INTERVENTIONS FOR PROMOTING QUALITY OF URBAN LIFE OF PEOPLE WITH AUTISM SPECTRUM DISORDER

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HEALTHY CITY DESIGN 2018, 15-16 October 2018, London, UK

Focusing on the rarely discussed topic of the relationship between the city and people with Autism Spectrum Disorder

Defining a set of **integrated mobility policies and XS urban design projects** (flexible, replicable, scalable and low cost) to provide the opportunity for people with autism of "using" their everyday city

Promoting their individual "**urban capabilities**" by increasing the autonomy and safety of **walking** across the city at the neighborhood scale in order to facilitate the access to relevant public urban spaces and facilities. Four distinct phases, all strongly interrelated:

1. ASD2. Exchange with
experts3. Space + ASD4. Application

- 1. To understand the disorder, focusing on those unmet needs that can be at least partially addressed through spatial interventions (broadly speaking)
- 2. To organize several meetings (in-depth, non-structured interviews, focus groups, questionnaire, ...) with **experts of autism at different levels**: associations of parents, special-needs teachers, and child neuropsychiatrists

Four distinct phases, all strongly interrelated:

3. To define a set of **spatial requirements** for the design of an **autism friendly urban environment**, based on a review of the available contributions (i.e. Mostafa) and actual projects (i.e. GA-Architects)

METHODOLOGICAL PROCESS

Four distinct phases, all strongly interrelated:





Fig.11-12 Spazio di circolazione Fonte: GA-Architects

Source: Talu V., Tola G. (2018), La città per immagini. Verso la definizione di un insieme di requisiti spaziali per la progettazione di città autism friendly, LISt Lab

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Fig.10 Planimetria

Fonte: GA-Architects

Four distinct phases, all strongly interrelated:

4. To "put to the test" the assumptions attained since the first stages on a real urban context, in order to translate them into a set of real interventions (Sacro Cuore neighborhood, Sassari).



Two **recurring behavioral problems** that characterize the relationship between the individual with autism and the urban environment

I. The sensory perception problems (conflictual relationship with the environment)



Two **recurring behavioral problems** that characterize the relationship between the individual with autism and the urban environment

II. The need to communicate using the **support of images/pictures/symbols,** to follow a **routine** and to use schedules and visual instructions to know in advance the actions to carry out to complete one or more actions and to acknowledge the successful completion of a given accomplishment



Example of a sequence of PECS image cards for the action **«GO TO SCHOOL»** Source: Dixon J. (2007). *Facilitare la comunicazione nell'autismo*. Trento: Erickson In strict connection with the three recurring problems, two main objectives have been identified.

Each one refers to a specific set of requirements useful to design urban policies and extra-small urban design projects able to enhance the autonomy of people with ADS in urban space:

- I. The reduction of sensory overload
- II. The use of visual supports and visual agenda

THE REDUCTION OF SENSORY OVERLOAD Traffic regulation policies





- Defining a pedestrian priority macro-blocks is an indispensable precondition for the implementation of other actions.
- 2. Car parking is **limited** to the access areas or to dedicated sites.



ONE-WAY STREET SYSTEM TO DISCOURAGE
PASSING TRAFFICImage: Discourage stateImage: Discoura

3. Solutions that further **discourage passing traffic** (e.g. pedestrian crossings on a raised platform, sidewalk extended at intersections, vehicular viability organized on one way.

THE REDUCTION OF SENSORY OVERLOAD Quiet space

Micro-spaces characterized by a high sensory quality that can be used to escape from a potentially problematic situation and to rebalance the senses.



- 1. Extra small spaces
- 2. **Continuity** with the sidewalk
- **3. Good visual relationship** with surroundings
- Limited use of materials and textures

"[...] it is important for me to find **quieter «escape» areas**, just for a few minute, which allow me **to be calm and peaceful**, and **to recharge** ready for the next phase of the visit" (Beale-Ellis 2017, p.155)

THE USE OF VISUAL SUPPORTS AND VISUAL AGENDA Urban signage – Visual agenda



HORIZONTAL SIGNAGE

- 1. i.e. Blue (cold, relaxing color) to direct and **to accompany** people with autism along the path
- i.e Red (warm color) to draw attention in case of changes or dangerous/ambiguous situations



VERTICAL SIGNAGE

 schedules and visual instructions placed at the beginning of preferential paths and before potentially dangerous or ambiguous situations (i.e. pedestrian crossing)

CONCLUSIONS

According to this vision, the promotion of the autonomy of people with autism through the adoption of the policies and the micro tactical urban projects proposed, can represent an opportunity for promoting and improving the **overall quality of urban life**.

"Individuals with autism add an additional level of health to cities" (Decker, 2014)





THANK YOU FOR YOUR ATTENTION

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