Happy Public Spaces

A Guide with 20 Ingredients to Design for Urban Happiness

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Table of contents

Introduction

A Guide with 20 Ingredients to Design for Urban Happiness

Streets, sidewalks, parks, and plazas are the vital shared places of a city that combine to the stage of our everyday environment and public life: our public space. This space plays a fundamental role in shaping our happiness, as individuals and as communities. The combined impact of all qualities of the public space is expressed with the concept of urban happiness.

Understanding how the shared spaces influence our happiness and lived experiences is key to addressing happiness in public spaces. Unfortunately, a coherent understanding of how to combine major design considerations with urban-space ingredients to influence happiness is currently not available. As a consequence, our public space is often planned and designed without explicit consideration of citizens' happiness.

This booklet presents descriptions of 20 urban happiness ingredients. In doing so, it aims to contribute to the awareness about the happiness impact of public space design decisions. Some ingredients refer to objective aspects of public space, and others to subjective. Some focus on physical qualities, others on social or organizational qualities. The overview of design ingredients was synthesized from research and expertise in urban planning and design, focusing on effective ingredients on happiness viewed through the lens of public spaces.

Each ingredient is presented with the following components:

- label
- example images
- description
- key references
- measurement tips

The happiness ingredients aim to provide a guideline for leveraging happiness through public spaces, supporting conceptualization, communication, and evaluation. They apply to the publicly accessible outdoor spaces that we occupy in our everyday lives, represent sites of sociability and face-to-face interaction, and provide distinct happiness and wellbeing benefits to both individuals and communities.

1 Connectivity, Accessibility, and Mobility

Connectivity represents the degree to which one public space is connected to other locations. It enables people to satisfy their travel needs and goals. Public spaces must be accessible to the public at all times and provide equal access for all functions to all users.

Urban happiness can be supported with an integrated network of pavement walkways around activity centers, integrated and connected cycle paths for daily commuting, convenient access to efficient public transportation, and reduced traffic and commuting time.

Tips for measurement

- Geographic Information System(GIS)
- Interview
- Self-report satisfaction
- Space Syntax (Depth map software)

Key references

Auma & Stavropoulos (2015); Kent, Ma & Mulley (2017); Mavruk, Kıral & Kıral (2021); Yin, Shao, Dong & Wang (2019).

2 Mixed Land Use

Mixed land use represents the co-existence of a variety of diverse functions in the same public spaces, such as business centers, restaurants, facilities for local community events, retail and services, commerce, and hospitality.

Urban happiness can be supported through the presence of mixed amenities and the proximity to multiple destinations, enhancing the attractiveness of particular areas, and shaping people's perception of their quality of life.

Tips for measurement

- Documentation (photos, films, and measurements)
- Geographic Information Systems (GIS)
- Objective measure (multi-functional land use-min 3 different functions)
- Self-report satisfaction

Key references

Bernini, Cerqua, and Pellegrini (2020); Montgomery (2013); Mouratidis & Yiannakou (2022); Putri (2015).

3 **Friendly Urban Furniture**

Friendly Urban Furniture represents the characteristics and arrangements of public outdoor components, ranging from fixed and temporary seating to streetlamps and rubbish bins, that enable the urban space to become livable.

Urban happiness can be achieved through the use of ergonomic, safe, and well-maintained furniture for rest, leisure, sports, eating, social interactions, and vegetation. Well-designed furnishing design considers the needs of all user groups, including the disabled, children, and elderly, and it supports unpremeditated or spontaneous social interactions.

Tips for measurement

- Documentation (photos, films, and measurements)
- Interview
- Observations
- Self-report satisfaction

Key references

Arruda, Moroni, Bezerra, Silva, and Paiva (2017); Pizzato and Macedo Guimaraes (2018); Song, Siu, and Liu (2008); Vinarcikova and Basova (2017).

4 Public Art

Public art represents the presence of permanent or temporary artworks in public areas in various forms, from natural statues or monuments to graffiti painted on walls. Public art is intended to be physically and freely accessible to the public.

Urban happiness can be supported by public art's ability to strengthen interpersonal relationships, facilitate meaningful social participation, and promote personal growth through creative involvement in conventional art practices, such as painting, and crafts.

Tips for measurement

- Documentation (photos, films, and measurements)
- Interview
- Observations
- Self-report satisfaction

Key references

Happier by design (2017); Kelson, Phinney, and Lowry (2017); Negami, Mazumder, Reardon, and Ellard (2018); Nick (2018).

5 Greenery

Greenery represents access to nature and landscape elements, such as parks, street trees, grassed areas, woodlands, and riversides. Green public spaces can facilitate physical activity, have positive effects on health and mental wellbeing, provide stress relief, and offer natural coolness and shade.

Urban happiness can be supported by the investment in green (or blue) infrastructure, reducing environmental hazards such as air pollution or noise, protecting urban biodiversity, developing a long-term vision of a green city within the local authority, and engaging the local community.
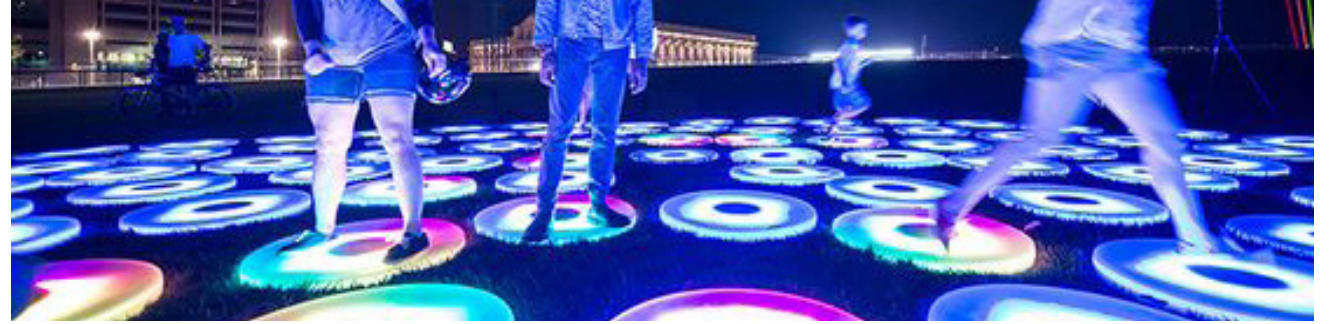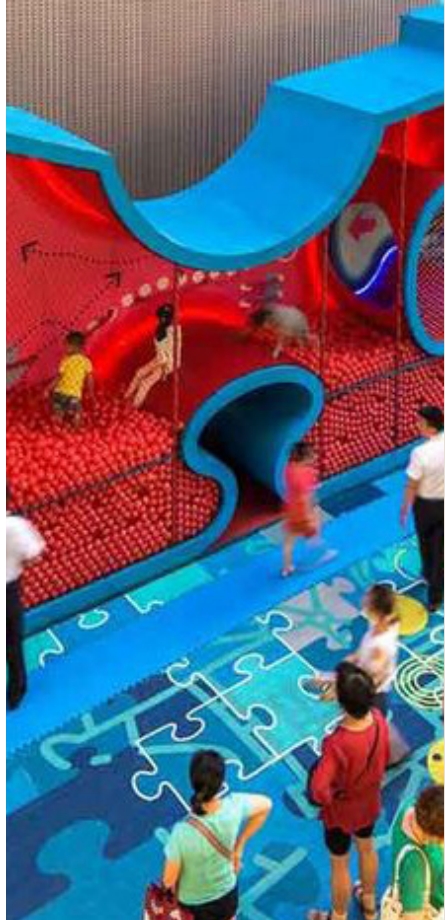
Tips for measurement

- Documentation (photos, films, and measurements)
- Geographic Information Systems(GIS)
- Observations
- Self-report satisfaction

Key references

Birch, Rishbeth, and Payne (2020); Krekel and MacKerron (2020); Kwon, Hong, Yang, Wohn, Jung, and Cha (2021); Navarrete-Hernandez and Laffan (2019).
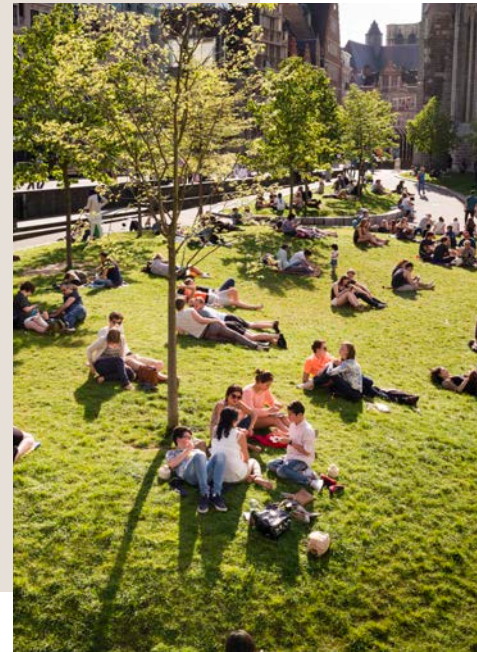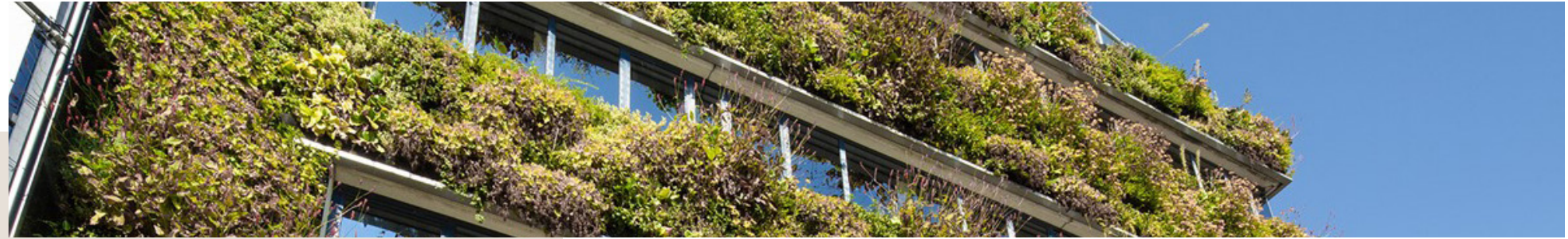
6 **Interactive Design**

Interactive public space represents various innovative artifacts and playful elements that are deliberately designed to elicit exploratory, social, and enjoyable behaviors. Examples are digital displays, street games, and other forms of entertaining technology.

Urban happiness can be supported with varied experiences and access to active facades (compared to blank buildings) and floor projections, which can promote collaborative engagement with real-world objects in public spaces.

Tips for measurement

- Documentation (photos, films, and measurements)
- Interview
- Observation
- Self–report satisfaction

Key references

Fortin (2015); Her and Hamlyn (2009); Nikolic and Yang (2020); Suurenbroek, Nio, and De Waal (2019).

7 Compatibility with User Needs

User needs represent the fundamental physical and psychological needs shared by all humans. Examples are the need for relatedness, autonomy, competence, and stimulation. Public spaces can provide platforms for citizens' needs and satisfaction.

Urban happiness can be supported in public spaces when citizens can satisfy their fundamental needs, such as relaxation, passive and active engagement, security, and the excitement of novel discoveries within the public space.

Tips for measurement

- Interview
- Observation
- Self–report satisfaction

Key references

Desmet and Fokkinga (2020); Happier by design (2017); Hutomo and Fuad (2020); Knemeyer (2006).

8 **Environmental Comfort**

Environmental comfort represents a sense of physical or psychological ease in relation to the external surroundings. It can be achieved by avoiding sensory displeasure, and by the presence of familiar objects or elements that are associated with pleasant memories.

Urban happiness can be supported through the reduction of unpleasant (natural or artificial) sensory influences, such as unpleasant light, temperature, draught, humidity, noise, and smells. Comfort can be supported with the presence of greenery, water, protection from rain and wind, sunlight, or shade.

Tips for measurement

- ENVI Met digital microclimatic model
- Geographic Information System (GIS)
- Interview
- Self-report satisfaction

Key references

Alijani, Pourahmad, Nejad, Ziari, and Sodoudi (2020); Krekel and MacKerron (2020); Panagopoulos, Duque, and Dan (2016); Vukmirovic, Gavrilovic, and Stojanovic (2019).

9 Visual Aesthetics Qualities

Visual Aesthetic Qualities represent the perception of beautiful visual attributes of architectural characteristics and features, landscape design, and morphology. Beauty arises when sensation gives rise to pleasure, either directly in the form of sensory pleasure or through contemplation or aesthetic judgment.

Urban happiness can be supported with a certain extent of interesting and exciting views, especially those that reflect local culture or natural history, openness, and the height of the surrounding enclosure.

Tips for measurement

- Interview
- Self-report satisfaction
- Semantic differential method
- Visibility graph analysis (VGA)

Key references

Ferdous (2013); Garcia-Domenech (2015); Pringle, Guaralda, and Mayere (2019); Seresinhe, Preis, MacKerron, and Moat (2019).Laffan (2019).

10 Multisensory Richness

Multisensory Richness represents designing public space with valuing the role played by other senses, such as sound, touch (including proprioception, kinesthesis, and the vestibular sense), smell, and even taste.

Urban happiness can be supported with enhancing people's sensory impressions of the spaces they visit and use, developing experiences that congruently engage more of the senses, and creating more immersive, engaging, and memorable multisensory experiences.

Tips for measurement

- Documentation (photos, films, and measurements)
- Interview
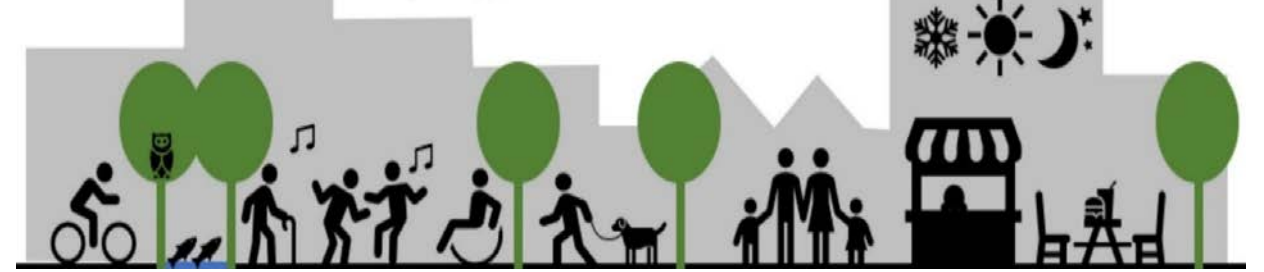- Scenic ratings using smart platforms
- Self-report satisfaction

Key references

Dai and Zheng (2021); Grahn and Stigsdotter (2010); Spence (2020); Takagi, Hiramatsu, Tabei, and Tanaka (2015).

11 Inclusiveness and Diversity of Users and Activities

Diversity represents equal access and opportunities for all human beings to enjoy and use public space in diverse ways. Inclusive public space allows participation and representation of all people, regardless of their income, ability, ethnicity, gender, age, or any other qualifications.

Urban happiness can be supported by putting the diversity of people, activities, or cultures at the heart of public space strategies, locating public spaces in areas where they can serve multiple communities, designing for different abilities, and considering gender dynamics.

Tips for measurement

- Documentation (photos, films, and measurements)
- Observation
- Self-report satisfaction

Key references

Biswas (2019); Gawlak, Matuszewska, and Ptak (2021); Low (2013); Ouf and El-Zafarany (2018).

12 Leisure Time and Recreational Places

Recreational Place represents a place for recreational activities; a place that enables an experience of being away from unpleasant obligations. It refers to a variety of space platforms, facilities, and landscapes that can provide people with leisure and entertainment activities.

Urban happiness can be supported with providing a context for passive or active leisure activities such as urban parks, city museums, urban libraries, and so on. These places allow citizens to refresh their minds or bodies and make leisure time enjoyable.

Tips for measurement

- Documentation (photos, films, and measurements)
- Interview
- Observation
- Self-report satisfaction

Key references

Kang, Yang, and Han (2021); Liu and Da (2020); Nawijn and Veenhoven (2013); Robertson (2016).
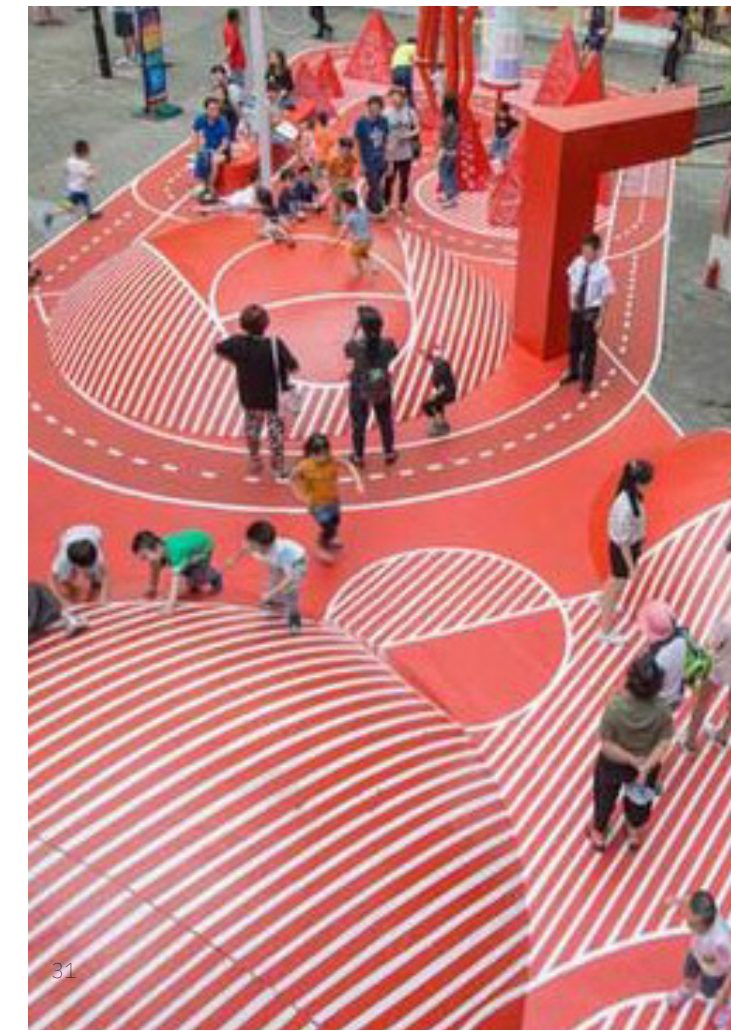
13 Events and Festivals

Events and festivals represent an organized gathering for a primary purpose, usually of some cultural significance, or to celebrate special occasions. They can include mega-events, socio-cultural events, political events, sports events, religious events, and local community events.

Urban happiness can be supported by making public spaces more inviting, convivial, and dynamic. Consider how events such as food festivals, markets, games, movies, music, art, and/or sports can be accommodated at various times of the year.
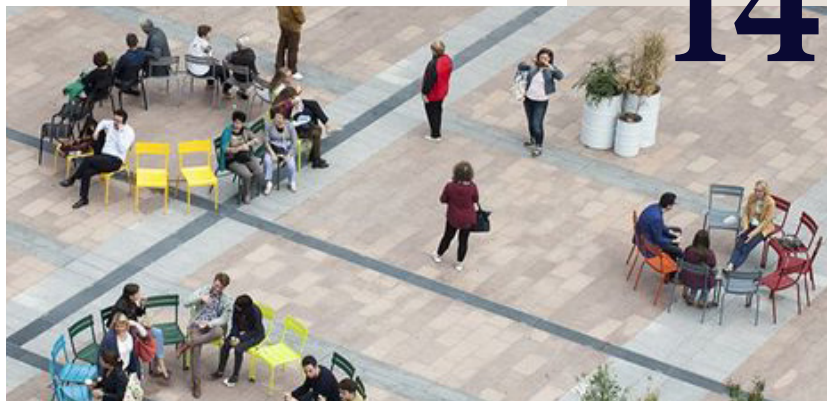
Tips for measurement

- Documentation (photos, films, and measurements)
- Number of community events (e.g., festivals, street fairs, sporting tournaments, etc.)
- Percentage of community-led public events and programs
- Self-report satisfaction.

Key references

Armbrecht and Andersson (2020); Brownett and Evans (2020); Samavati, Ranjbar, and Perree (2020); Smith (2015).

14 Promoting Vibrant and Diverse Social Interactions

Social Interaction represents the pattern, frequency, and quality of our social activities in urban spaces. Social connections help improve cognitive, physical, emotional, and mental health.

Urban happiness can be supported providing a place where people can maintain a sense of connectivity and social engagement through activities such as talking, meeting with friends, groups meeting through common interests, face-to-face interaction, and children playing.
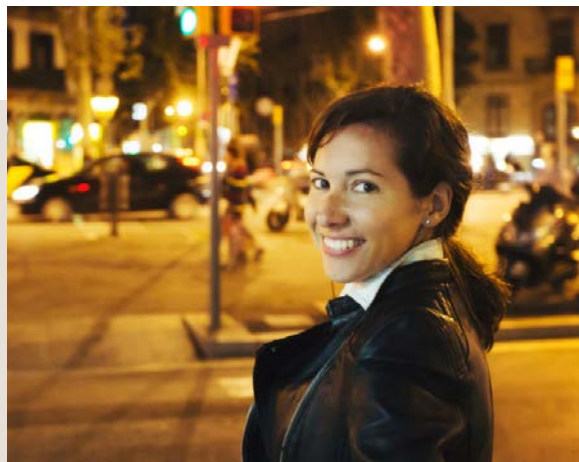
Tips for measurement

- Interview
- Documentation (photos, films, and measurements)
- Self-report satisfaction
- Self-reported frequency of experience interacting with people in public space.

Key references

Guevara and Lopez (2016); Hornecker and Buur (2006); Khoram (2019); Zhang, Chen, He, Jiang, and Xue (2022).

15 **Sense of Safety and Security**

A Sense of Safety represents the feeling of being protected from physical or psychological harm, risk, or danger. Being safe in public space allows the pursuit of relationships, bonds, and receiving or sharing attributes that create urban happiness.

Urban happiness can be supported by the presence of people (especially vulnerable groups such as women and children), locating lighting to indicate paths and areas at night, the absence of crime and drug use, traffic safety, and providing visibility and active applications.

Tips for measurement

- Documentation (photos, films, and measurements)
- Interview
- Presence of Crime Prevention Through Environmental Design (CPTED) strategies
- Self-report satisfaction

Key references

Jasinski (2020); Lucchesi, Larranaga, Ochoa, Samios, and Cybis (2021); Tulumello (2015); Visvizi and Lytras (2020).

16 Place Identity, Memorability, and City Image

Place Identity represents a set of characteristics that make a place unique and recognizable, such as location-related memories that contribute to our sense of recognition and familiarity. The identity of a place connects it to its users and the city.

Urban happiness can be supported with addressing the physical and symbolic attributes of specific public spaces, contributing to place identity by addressing history, ethnicity, and group experiences, and designing unique signage or branding that reflects the community's character.

Tips for measurement

- Cognitive map
- Interview
- Self-report satisfaction

Key references

Anholt (2016); Jiang, Lu, and Sato (2012); Sepe (2016); Toolis (2017).

TEHRAN Picture Agency
Photo Mohammad Mohsenifar

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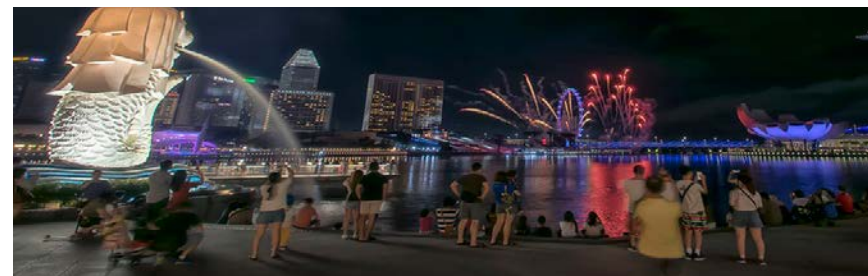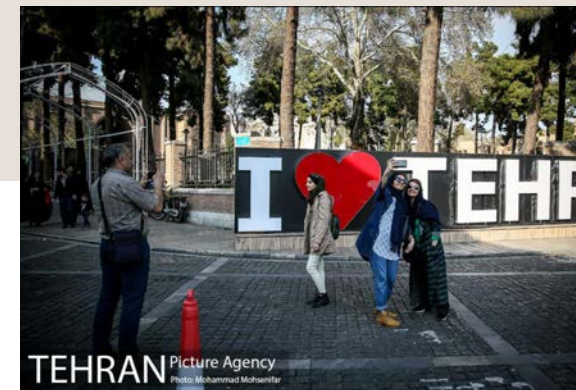
17 Foster Grassroots Projects

Fostering Grassroots Projects represents the funding necessary to provide, construct, and implement a variety of programs, projects, and assets that advance the community's economic, social, and infrastructure development in public spaces.

Urban happiness can be supported with the presence of reliable financial capital institutions dedicated to public space maintenance or improvements, the development of local capacities for care, such as stewards or volunteers, and strengthening community development.
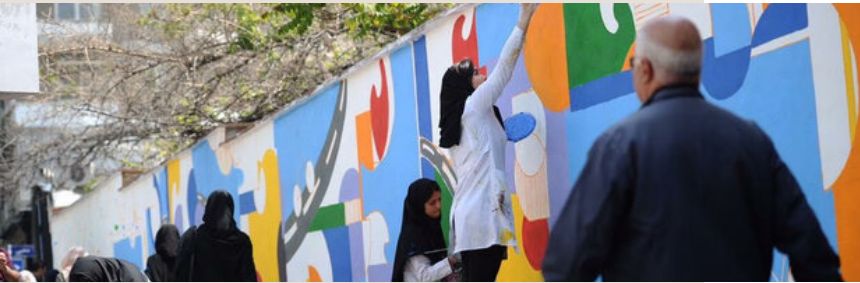
Tips for measurement

- Documentation (photos, films, and measurements)
- Interview
- Policy evaluation
- Self-report satisfaction

Key references

Cassarino, Shahab, and Biscaya (2021); Chuluun and Graham (2016); Wu (2014); Zhu and Fan (2018).

18 Promote Trust and Participation

Participation represents citizens' involvement in activities that foster interaction with others in the urban space or their community. Participatory public space provides opportunities for expression and creativity.

Urban happiness can be supported with involving citizens in decision-making and designing processes, providing space for collective events such as festivals, in a way that encourages them to take responsibility.
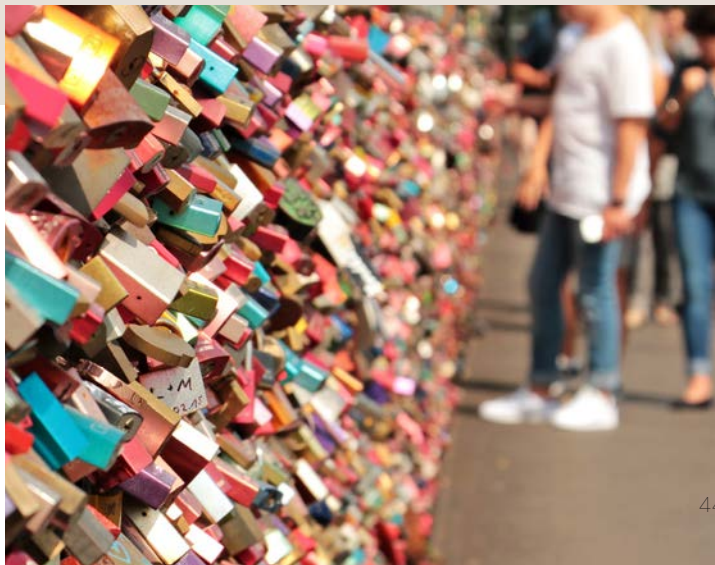
Tips for measurement

- Interview
- Participatory and co-creation method
- Self-report satisfaction
- Self-reported rate of civic participation

Key references

Corbett and Le Dantec (2018); Guillen, Coromina, and Saris (2011); Lopez-Ruiz, Huete-Alcocer, Alfaro-Navarro, and Nevado-Peña (2021); Westhoff (2021).

19 Place Attachments

Place Attachment, or sense of belonging, is a key concept in environmental psychology that represents the emotional bond between a person and a place, emerges as the result of the cultivation of meaning and personal experiences in public spaces.

Urban happiness can be supported with a higher level of connection to the community, providing opportunities to participate in meaningful activities, meeting the needs of a diversity of users in public space, and enabling them to achieve their goals.

Tips for measurement

- Interview
- Self-report satisfaction
- Self-reported perceived belonging to the place
- Self-reported perceived value of public spaces

Key references

Bornioli, Parkhurst, and Morgan (2018); Francis, Giles-Corti, Wood, and Knuiman (2012); Maricchiolo, Mosca, Paolini, and Fornara (2021); Ujang, Kozlowski, and Maulan (2018).

20 Adaptability and Flexibility

Adaptability represents a public space's openness to respond to changing needs and socio-cultural developments while maintaining stable core qualities. Flexible public spaces enable individuals and communities to explore, use, and live these spaces on their own terms.

Urban happiness can be supported by emphasizing the flexibility of use, predicting social patterns and paying attention to them during the design phase, determining the spaces required for various events throughout the year, and arranging temporary street markets.

Tips for measurement

- Interview
- Documentation (photos, films, and measurements)
- Ratio of allocated space for flexible programming
- Self-report satisfaction

Key references

El Khateeb and Shawket (2022); Elewa (2019); Sanei, Khodadad, and Khodadad (2018); Sass (2020).

References

Alijani, S., Pourahmad, A., Nejad, H. H., Ziari, K., & Sodoudi, S. (2020). A new approach of urban livability in Tehran: Thermal comfort as a primitive indicator. Case study, district 22. Urban Climate, 33, 100656.

Anholt, S. (2016). Places: Identity, image, and reputation. Springer.

Armbrecht, J., & Andersson, T. D. (2020). The event experience, hedonic and eudemonic satisfaction, and subjective well-being among sports event participants. Journal of Policy Research in Tourism, Leisure and Events, 12(3), 457-477.

Arruda, A., Moroni, I., Bezerra, P., Silva, P., & Paiva, R. B. F. D. (2017). Practical urban: The urban furniture and its relationship with the city. In Advances in Ergonomics Modeling, Usability & Special Populations (pp. 413-423). Springer, Cham.

Auma, S., & Stavropoulos, S. (2015). Connectivity and Happiness, Assessing the Impact of Accessibility on Well-being, MSc Program in Urban Management and Development. Erasmus University, Rotterdam,

Bernini, C., Cerqua, A., & Pellegrini, G. (2020). Endogenous amenities, tourists' happiness, and competitiveness. Regional Studies, 54(9), 1214-1225.

Birch, J., Rishbeth, C., & Payne, S. R. (2020). Nature doesn't judge you—how urban nature supports young people's mental health and wellbeing in a diverse UK city. Health & Place, 62, 102296.

Biswas, A. (2019). A framework to analyze inclusiveness of urban policy. Cities, 87, 174-184.

Bornioli, A., Parkhurst, G., & Morgan, P. L. (2018). The psychological wellbeing benefits of place engagement during walking in urban environments: A qualitative photo-elicitation study. Health & Place, 53, 228-236.

Brownett, T., & Evans, O. (2020). Finding common ground: The conception of community arts festivals as spaces for placemaking. Health & Place, 61, 102254.

Cassarino, M., Shahab, S., & Biscaya, S. (2021). Envisioning happy places for all: a systematic review of the impact of transformations in the urban environment on the wellbeing of vulnerable groups. Sustainability, 13(14), 8086.

Chuluun, T., & Graham, C. (2016). Local happiness and firm behavior: Do firms in happy places invest more? Journal of Economic Behavior & Organization, 125, 41-56.

Corbett, E., & Le Dantec, C. A. (2018). Going the distance: Trust work for citizen participation. In Proceedings of the 2018 CHI conference on human factors in computing systems (pp. 1-13).

Dai, T., & Zheng, X. (2021). Understanding how multi-sensory spatial experience influences atmosphere, affective city image, and behavioral intention. Environmental Impact Assessment Review, 89, 106595.

Desmet, P., & Fokkinga, S. (2020). Beyond Maslow's pyramid: introducing a typology of thirteen fundamental needs for human-centered design. Multimodal Technologies and Interaction, 4(3), 38.

El Khateeb, S., & Shawket, I. M. (2022). A new perception; generating well-being urban public spaces after the era of pandemics. Developments in the Built Environment, 9, 100065.

Elewa, A. K. A. (2019). Flexible public spaces through spatial urban interventions, towards resilient cities. European Journal of Sustainable Development, 8(4), 152-152.

Ferdous, F. (2013). Examining the relationship between key visual characteristics of urban plazas and aesthetic response. SAGE Open, 3(2), 2158244013485581.

Fortin, C. (2015). Harvesting the interactive potential of digital displays in public space: The poetics of public interaction. Doctoral dissertation, Communication, Art & Technology: School of Interactive Arts and Technology.

Francis, J., Giles-Corti, B., Wood, L., & Knuiman, M. (2012). Creating a sense of community: The role of public space. Journal of environmental psychology, 32(4), 401-409.

Garcia-Domenech, S. (2015). Urban aesthetics and social function of actual public space: a desirable balance. Theoretical and Empirical Researches in Urban Management, 10(4), 54-65.

Gawlak, A., Matuszewska, M., & Ptak, A. (2021). Inclusiveness of Urban Space and Tools for the Assessment of the Quality of Urban Life—A Critical Approach. International Journal of Environmental Research and Public Health, 18(9), 4519.

Grahn, P., & Stigsdotter, U. K. (2010). The relation between perceived sensory dimensions of urban green space and stress restoration. Landscape and urban planning, 94(3-4), 264-275.

Guevara, M. M., & Lopez, E. M. C. (2016). The urban public space and design as tools to promote social interaction. Blucher Design Proceedings, 8(2), 296-301.

Guillen, L., Coromina, L., & Saris, W. E. (2011). Measurement of social participation and its place in social capital theory. Social Indicators Research, 100(2), 331-350.

Happier by Design. (2017). Shore to core. Research Team Final Report. Accessed October 17, 2018. https://thehappycity.com/project/shore-to-core/.

Her, J. J., & Hamlyn, J. (2009, September). Meaningful Engagement: Computer-Based Interactive Media Art in Public Space.

In International Conference on Arts and Technology (pp. 17-24). Springer, Berlin, Heidelberg.

Hornecker, E., & Buur, J. (2006, April). Getting a grip on tangible interaction: a framework on physical space and social interaction. In Proceedings of the SIGCHI Conference on Human Factors in computing systems (pp. 437-446).

Hutomo, S., & Fuad, H. (2020). Engagement and Well-Being in Public Space. Case Study: Suropati Park Jakarta. Evergreen, 7(1), 138-143.

Jasiński, A. (2020). Public space or safe space—remarks during the COVID-19 pandemic. Technical Transactions, 117(1).

Jiang, S., Lu, M., & Sato, H. (2012). Identity, inequality, and happiness: Evidence from urban China. World Development, 40(6), 1190-1200.

Kang, L., Yang, Z., & Han, F. (2021). The impact of urban recreation environment on residents' happiness—based on a case study in China. Sustainability, 13(10), 5549.

Kelson, E., Phinney, A., & Lowry, G. (2017). Social citizenship, public art, and dementia: Walking the urban waterfront with Paul's Club. Cogent Arts & Humanities, 4(1), 1354527.

Kent, J. L., Ma, L., & Mulley, C. (2017). The objective and perceived built environment: What matters for happiness? Cities & Health, 1(1), 59-71.

Khoram, A. (2019). Effective Indicators of Promoting Social Interactions in Urban Public Spaces with a Happy City Approach. Socio-Spatial Studies, 3(7), 49-61.

Knemeyer, D. (2006). Applied Empathy: A design framework for meeting human needs and desires. UX matters.

Krekel, C., & MacKerron, G. (2020). How environmental quality affects our happiness. World happiness report, 95-112.

Kwon, O. H., Hong, I., Yang, J., Wohn, D. Y., Jung, W. S., & Cha, M. (2021). Urban green space and happiness in developed countries. EPJ data science, 10(1), 28.

Liu, H., & Da, S. (2020). The relationships between leisure and happiness-A graphic elicitation method. Leisure Studies, 39(1), 111-130.

López-Ruiz, V. R., Huete-Alcocer, N., Alfaro-Navarro, J. L., & Nevado-Peña, D. (2021). The relationship between happiness and quality of life: A model for Spanish society. Plos one, 16(11), e0259528.

Low, S. (2013). Public space and diversity: Distributive, procedural and interactional justice for parks. The Ashgate research companion to planning and culture. Ashgate Publishing, Surrey, 295-310.

Lucchesi, S. T., Larranaga, A. M., Ochoa, J. A. A., Samios, A. A. B., & Cybis, H. B. B. (2021). The role of security and walkability in subjective wellbeing: A multi-group analysis among different age cohorts. Research in Transportation Business & Management, 40, 100559.

Maricchiolo, F., Mosca, O., Paolini, D., & Fornara, F. (2021). The Mediating Role of Place Attachment Dimensions in the Relationship Between Local Social Identity and Well-Being. Frontiers in Psychology, 12.

Mavruk, C., Kıral, E., & Kıral, G. (2021). Spatial effects over time-framed happiness. Journal of Happiness Studies, 22(2), 517-554.

Montgomery, C. (2013). Happy City: Transforming our lives through urban design. Penguin UK.

Mouratidis, K., & Yiannakou, A. (2022). What makes cities livable? Determinants of neighborhood satisfaction and neighborhood happiness in different contexts. Land Use Policy, 112, 105855.

Navarrete-Hernandez, P., & Laffan, K. (2019). A greener urban environment: Designing green infrastructure interventions to promote citizens' subjective wellbeing. Landscape and urban planning, 191, 103618.

Nawijn, J., & Veenhoven, R. (2013). Happiness through leisure. In Positive leisure science (pp. 193-209). Springer, Dordrecht.

Negami, H. R., Mazumder, R., Reardon, M., & Ellard, C. G. (2018). Field analysis of psychological effects of urban design: a case study in Vancouver. Cities & Health, 2(2), 106-115.

Nick, s, (2018) can public art make you happier?

One study says yes, https://www.kunc.org/

Nikolic, P. K., & Yang, H. (2020). Designing playful cities: audio-visual metaphors for new urban environment experience. Mobile Networks and Applications, 25(3), 846-852.

Ouf, A. S. E. D., & El-Zafarany, N. A. (2018). Diversity and inclusion in the public space as aspects of happiness and wellbeing. Journal of Urban Research, 28(1), 109-129.

Panagopoulos, T., Duque, J. A. G., & Dan, M. B. (2016). Urban planning with respect to environmental quality and human well-being. Environmental pollution, 208, 137-144.

Pizzato, G. Z., & Macedo Guimarães, L. B. D. (2018). Emotional attributes of urban furniture. In Congress of the International Ergonomics Association (pp. 2087-2097). Springer, Cham.

Pringle, S., Guaralda, M., & Mayere, S. (2019). Urban environment characteristics and their implications on emotional happiness and well-being: Proposal of a theoretical and conceptual framework. In Proceedings of the 12th Livable Cities Conference (pp. 33-66). Association for Sustainability in Business Inc.

Colophon

The Happy Public Spaces booklet was created by researchers at the Delft Institute of positive design (TU Delft). It was based on a synthesis of research and expertise in urban design by Sahar Samavati.

Researchers at the Delft Institute of Positive Design seek to advance our understanding of the ways design can foster human happiness. We develop tools that designers and organizations can use to tap into the vast potential of lasting wellbeing. On our website, you will find more tools and a library of open-access research. See www.diopd.org.